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GLOSSARY

CARPHA  Caribbean Public Health Agency
CC  Climate Change
CDM  Comprehensive Disaster Management
CMO  Chief Medical Officer
DID  Dangerous Infectious Disease
DMO  District Medical Officer
DCC  Disaster Command Centre
EHO  Environmental Health Officer
EOC  Emergency Operations Centre
HDC  Health Disaster Committee
HDMO  Health Disaster Management Officer
HEOC  Health Emergency Operation Centre
Hosp.EOC  Hospital Emergency Operation Centre
HSC  Health Services Committee
ICS  Incident Command System
IPCC  Intergovernmental Panel on Climate Change
MCM  Mass Casualty Management
MOH  Ministry of Health
SMOH  Senior Medical Officer of Health
NaDMAC  National Disaster Management Advisory Council
NaDMA  National Disaster Management Agency
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<th>Abbreviation</th>
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<td>NEAC</td>
<td>National Emergency Advisory Council</td>
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<tr>
<td>NMHSDEMP</td>
<td>National Multi-hazard Health Sector Disaster Emergency Management Plan</td>
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<tr>
<td>PAHO</td>
<td>Pan American Health Organization</td>
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<td>PS</td>
<td>Permanent Secretary</td>
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<tr>
<td>RN</td>
<td>Registered Nurse</td>
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<td>WHO</td>
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Disasters and emergencies can occur as a result of the impact from different types of hazards on an entire country, community or individuals in a community. The extent of the impact may vary based on the type and magnitude of the impacting hazard, degree of vulnerability of the society and its capacity to respond. Invariably, the Health sector is required to provide health services to prevent deaths, diseases and disabilities.

Health disasters are, by definition, any event in which the health needs of the affected individuals overwhelms the health resources available in the community. Evidently, a health disaster for one community may be considered normal daily activity for another community whose health resources are more extensive. Conversely, a health emergency is any event in which the health needs of the affected individuals or community can be adequately addressed utilizing the health resources in that particular community.

The optimal management of any disaster or emergency requires proper coordination, cooperation and collaboration amongst key responders. Command and control must be well established and roles and responsibilities of responding agencies clearly defined. The Police department, particularly, fire and search and rescue initiates the first response and ensures safety and security of the scene. The Health Sector is directly responsible for the provision of health services whilst overall coordination of the event is conducted by the National Disaster Management Agency (NaDMA).

The purpose of the National Multi-hazard Health Sector Disaster Management Plan (NMHSDEMP) is to provide a comprehensive user friendly guide to health sector stakeholders that will enable prompt and effective health service response in the event of any disaster or emergency. The main objectives of the plan are to prevent death, diseases and disabilities resulting from the impact of any hazard. Strong emphasis is placed on the procedures to be taken in the management of specific hazards identified as potential threats that can directly affect the health sector and that would require health services interventions. The plan incorporates various health sector entities Sub-plans as well as Standard Operating Procedures (SOP’S) for the management of specific health threats. It also includes roles and responsibilities of healthcare individuals and stakeholder entities. Prevention, Preparedness, Response and Recovery activities are also highlighted in the plan.

Key to the success of this plan is the following elements: input by all health sector stakeholder entities and departments, ongoing planning and preparedness, continuous training especially in disaster risk reduction and first response, regular exercising of the plan, individual and corporate commitment and continuous monitoring and evaluation.
USER GUIDE

What is This Guide?

This plan outlines the Health Sector response to disasters/emergencies. The plan itself is composed of several sections, compartmentalized to allow individual departments and agencies to identify with those sections that pertain to their role in disaster/emergency management.

A Guide for Action

The National Multi Hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP) is a policy and procedures document to be used in the event of incidents and emergencies which have an effect on the public health of individuals, communities and the Nation as a whole. This plan provides a guide for action and sets out policies, procedures and guidelines for the management of such disasters/emergencies. It must be recognized that in a disaster/emergency situation there will be need for great flexibility. The receiver of emergency information must ensure that it is forwarded to the most appropriate personnel to guarantee speedy and efficient action.

Users need to be familiar with the entire plan.

All persons using this plan need to be aware of the entire plan and not only their respective section, as well as the roles that their colleagues play whether it is in an emergency or in any other unanticipated situation. Because of the nature in which emergency management plans operate, personnel should also be familiar with other relevant documents.

- Identify their anticipated role(s). It is important that, in reviewing the plan, users identify their roles and areas of responsibility within their area of expertise/responsibility.
- Review roles and responsibilities of their particular unit/department/agency.

The NMHSDEMP incorporates specific Sub-plans and SOP’s.

These Sub-plans and SOP’s are intended to guide the actions of the health sector in the management of disasters and emergencies highlighting areas of prevention, preparedness, response, recovery and rehabilitation for specific hazards. Procedures, roles and responsibilities of individuals and stakeholder healthcare entities are also outlined paying particular attention to persons with disabilities and special need groups. These sub-plans include Hospital Services, Community Health Services, Private Healthcare facilities, NGO’s and other social partners. They include the following among others to be annexed:
➢ **Mass Casualty Management Plan**  This plan addresses the management of disasters/emergencies in which there are greater than 5 casualties.

➢ **Mass Fatality Management Plan**  This plan addresses the management of large numbers of fatalities and incorporates the responsibilities of other sectors.

➢ **General Hospital Multi-hazard Disaster Emergency Management Plan**  This plan guides the actions of all staff at the General Hospital in ensuring that they respond in the appropriate manner when dealing with a particular disaster/emergency.

➢ **Princess Alice Hospital Multi-hazard Disaster Emergency Management Plan**  This plan guides the actions of all staff at the Princess Alice Hospital in ensuring that they respond in the appropriate manner when dealing with a particular disaster/emergency.

➢ **Princess Royal Hospital Multi-hazard Disaster Emergency Management Plan**  This plan guides the actions of all staff at the Princess Royal Hospital in ensuring that they respond in the appropriate manner when dealing with a particular disaster/emergency.

➢ **Mt Gay Psychiatric Hospital Multi-hazard Disaster Emergency Management Plan**  This plan guides the actions of all staff at the Mt. Gay Psychiatric Hospital in ensuring that they respond in the appropriate manner when dealing with a particular disaster/emergency. It also includes the psychosocial interventions to be initiated involving the wider public.

➢ **Richmond Home for the Elderly Multi-hazard Disaster Emergency Management Plan**  This plan guides the actions of all staff at the Richmond Home for the Elderly in ensuring that they respond in the appropriate manner when dealing with a particular disaster/emergency.

➢ **Community Health Services Multi-hazard Disaster Emergency Management Plan**  This plan provides general guidelines for the Community Health Services in its role in the management of disasters/emergencies. However, each Health District will have its own plan to guide that particular Health District. Health Centres and Medical Stations will have their individual plans dealing with emergencies in their clinic and surrounding area.

➢ **Environmental Health Services Multi-hazard Disaster Emergency Management Plan**  This plan guides the specific actions to be taken by the Environmental Health Department in the management of a particular disaster/emergency. Aspect of that plan may also be reflected in the Community Health Services Disaster Management plan.
Infectious Diseases Management Plan  This plan guides the actions to taken in the management of infectious diseases including SOP’s for the management of specific diseases.

Mitigation/Prevention Plan This section of the plan identifies actions that can be taken to prevent, reduce or eliminate the impact of hazards on individuals, communities or facilities.

Preparedness Plan This section of the plan identifies the actions to be taken by the Ministry of Health, NGOs, and other social partners in preparing for possible disasters/emergencies.

Response Plan  This identifies the actions to be taken by the Ministry of Health, NGOs, and other social partners in preparing for a possible disaster/emergency.

Procedures  This outlines the steps to be taken to manage specific areas of delivery of health services in a disaster or emergency.

Recovery  This is a guide for the health personnel to rebuild the infrastructure necessary to resume and deliver adequate health services following a disaster or emergency.

Important Considerations

Each emergency situation is different and it may be necessary to use procedures other than those outlined in this document. The Ministry of Health, therefore, retains the authority to make such changes, as it deems necessary.

Team Approach

Staff from the Ministry of Health, all the Hospitals, the Community Public Health Section, and all other categories of health workers as well other healthcare stakeholders must work together to manage any disaster/ emergency in the most effective and efficient manner. In an emergency, all staff may be asked to work for extended hours with short or no advanced notice. This work must take priority over less critical duties and may involve working outside of the normal work environment. This pertains also to other emergency response agencies including private Hospitals and health related NGO’s

Responsibility to Update Plans

Plans must be updated regularly and each version must carry the date of publication on the front cover.
1.0 INTRODUCTION

1.1 Authorities and Boundaries

The three-island state of Grenada, Carriacou and Petit Martinique are small islands that are classified as Small Island Developing States and as such are very vulnerable to any type of hazard. In particular, the health sector will be impacted should any one of these hazards occur. The need for a plan for the Health Sector that focuses on the management of disasters/emergencies resulting from the impact of different hazards is therefore of prime importance and is envisaged. This plan includes clearly defined Standard Operating Procedures (SOPs) for the management of specific hazard.

The current National Health Sector Disaster Management Plan was last revised in 2006 but that revision was incomplete as the focus was mainly on the management of Hurricanes in particular and not on other hazards.

The purpose of the National Multi-Hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP) is to provide guidance to the Health Sector in the management of an event whether natural or human made ensuring that the health sector is able to respond, with the goal to save as many lives as possible. This Multi hazard approach is being adopted in recognition of CDEMA's Strategy of Comprehensive Disaster Management (CDM) which is strongly supported and promoted by Grenada's National Disaster Management Agency (NaDMA). It is in keeping with this approach that the current Disaster Plan of the Ministry of Health, Grenada, is being revised to include a multi-hazard approach. A special steering committee has been appointed to accomplish this task.

As part of the overall Disaster Risk Management Program for the Ministry of Health, the National Multi-hazard Health Sector Disaster Emergency Management Plan has been developed and the following areas have been outlined:

- Purpose
- Objectives
- Legal Framework
- Concepts of Operation
  - Scope of the plan
  - Command and Coordination
  - Activation
- Deactivation
- Reporting Procedures
- Definitions
- Plan Review and Updates

• Roles and Responsibilities of Key HealthCare Stakeholders
• Mitigation/Prevention
• Pre-event Planning and Preparedness
• Response
• Recovery
• Surveillance and Confirmation Impact
• External Assistance, Bilateral Arrangement and MOU’s
• Continuity of Operations and Recovery Management
• Hazard Incidents and Hazard Codes
• Health Sector Entities Sub –Plans and SOP’s
• Mutual Aid Agreements and MOU’s Annexes
• Hazard Specific Procedures and Appendices
• Attachments
Caribbean Countries, located in the Caribbean Sea, are comprised of tropical islands and due to their small size are shaped by the sea. The State of Grenada consists of three (3) Islands which are Grenada, Carriacou and Petit Martinique and combined area of one-hundred and thirty-three (133) square miles or (344km²). The country is home to an estimated 105,897 people according to the 2013 population estimates. Grenada lies at 12 degrees North, 61 degrees West and is part of a chain of Islands called The Lesser Antilles, an 850 km arc. They form the southern tip of the Windward Islands. Grenada is located less than 150 km north of Venezuela. It is the largest of the three islands and the centre for commerce. Grenada is 12miles (18km) wide by 21 miles (34km) long. The interior of the island has steep rugged topography with many peaks and ridges making farming difficult. Surface drainage covers most of the Island and coastlines are covered in black sand beaches. However, Corals sands have given white sands on the southern beaches. Most of the population live on the gentler slopes to the southwest of the island where it is easier to farm and clear space for buildings and roads.
1.2.2 Political and Administrative Context

Grenada is a Commonwealth country with a Governor General who is the Queen’s Representative. The Parliament is comprised of the Senate, which is made up of thirteen (13) nominated members and the House of Representatives, fifteen (15) elected members. Since the last general election held in February 2013, the New National Party (NNP) controls all the fifteen (15) Seats in the House of Parliament. The National Democratic Congress (NDC) is the main opposition party. Grenada is a member of the Organization of Eastern Caribbean States (OECS) group and shares its currency, the Eastern Caribbean Dollar (ECD).

1.2.3 Economy

Tourism has become the major industry for the island, with natural attractions such as the Grand Anse beach and Concord Water Falls. The country is also known for its world class resorts and the 18th century Fort George, which overlooks the picturesque Carenage Harbor, a narrow Bay. Historic church buildings and the Sheila Buckmire Memorial Library are common sites to visit. The Maurice Bishop International Airport and St. Georges University located on the south coast have given great economic boost to the Island.

The capital St. George’s is a busy market town on the south-western coast of the island. Grenada is a democracy with a constitutional monarchy structure. Independence was gained on the 7th February 1974. With first French and then British history, the island has a rich heritage. Fishing and boat building are major industries in the Island. Growth in Yellow fin tuna, which is exported, has occurred with an increase in the use of ice-boats equipped for multi-day fishing trips. Smaller boats use lines and fish pots to supply the local demand for fish like dolphin, groupers, hinds and snappers. Sport fishing tournaments are popular too. Annual regattas are held with International and local boats competing. The National Cricket Stadium, Athletics and Football stadia are located in the area known as Queen’s Park on the outskirts of the capital City St. Georges.

1.2.4 Demography

Of the three (3) Islands, Grenada has the largest population of about 100,000 persons, Carriacou 5, 000 and Petit Martinique 900 comprising a total population of 105,897, in 2013. With a falling birth rate and low death rates, the nation is experiencing an aging population. Life Expectancy is 77.7 years for women and 74.5 years for men. Some migration has taken place as school-leavers seek jobs in and out of the region. Traditional farming populations have been migrating into towns to be close to jobs and services. Rural mountainous interiors are being neglected and some suburban developments have occurred outside of St. George’s.
Graphs below show the Composition of the population by Age Groups

2001 POPULATION PYRAMID

2011 POPULATION PYRAMID
1.2.5 Hazard Vulnerability and Historical Impacts

Natural hazards are threats to human life, property and economic wellbeing by naturally occurring disruptions in the earth’s environment. A disaster/emergency can occur if people are injured, killed, livelihood disrupted and property destroyed. Therefore adequate warning systems are essential.

The three (3) Islands are part of an island arc formed due to volcanicity above a subduction zone. This gives the islands their volcanic history and rugged terrain with the highest point on Grenada, being Mt. St. Catherine which stands at 2,757 feet. Kick ‘em Jenny, a submarine volcano lies 150m under the sea, 8km north of Grenada and has been experiencing small eruptions during the last ten (10) years. Theses small eruptions can pose a danger to nearby ships so a 5km exclusion zone around the volcano was instituted and should be strictly adhered, to ensure safety. A major eruption can also trigger a tsunami which would be a risk for the coastlines of the nearby Islands. Whenever there is a small eruption of Kick’ em Jenny, it is often felt in the Northern parts of Grenada as volcanic earthquakes.

The most common type of natural hazards in the Caribbean is hurricanes. Grenada is in the southern part of the hurricane zone and was struck by Hurricane Ivan, a category 3 hurricane in 2004, which killed 39 people and destroyed crops like nutmeg, homes, tourism businesses and infrastructure. In 2005, Hurricane Emily also impacted Grenada resulting in widespread flooding, damages to houses and crops and partial evacuation of sections of the population.

In 2003, major drainage areas like the St. John’s River experienced severe flooding and many low lying areas are also at risk. Smaller streams can become raging rivers during heavy continuous showers. The Black Bay River had boulders in its bed moved down the valley when the river was in flood. Storm surges have impacted the western coastline, especially during Hurricane Lenny, in 1999. Landslips can disrupt traffic. Power outage can occur if there is damage to the power station or grid. Emergency generators and fuel will be needed to provide essential services such as emergency care, transportation and communications should such events occur.

Civil unrest and bomb threats are man-made hazards which have to be planned for so as to minimize the impact on public health.

Economic impacts following Ivan on the nutmeg industry were significant and the industry has still not returned to its pre-Ivan level. Nutmeg and mace (the outer part of the nutmeg seed) was a major export crop prior Hurricane Ivan. Cocoa production was 1000-1500 tons per year before Hurricane Ivan in 2004, and Emily 2005. Problems with an invasive vine and rats feeding on young pods caused production to be low, being 900 tons in 2006.
Human activities can increase the impact of natural hazards. In Grenada, problems exist with the planning of house spots and sites for industrial development. Some farmers using the ‘slash and burn’ technique can make hillsides more unstable by destroying vegetations and causing soil erosion.

### 1.2.6 Impact of Climate Change on Health

Climate change can have a negative effect on countries and in particular the health of the population. The direct effects of climate change can be listed as:

- an increase in air and sea temperatures, increase in hurricanes or more intense storm activity, sea level rise, increase drought or rain in geographical regions, damage to tourism infrastructure, reduce fish catches, loss of beaches and inland migration of mangroves.

The Indirect effects as:

- Increase in Vector Control Disease transmission, heat stress, allergies, dermatitis, water borne disease transmission, food borne disease transmission, food and water security, social and economic dislocation and population displacement.

The Caribbean countries contribute very little to climate change in terms of greenhouse gases but can be greatly impacted by the forces of nature. Already there is a rise in sea level, with islands like Caymans, St. Vincent and the Grenadines and Grenada likely to be affected by this sea level rise and bleaching of the coral reefs, as a result of increase in ocean temperatures. Other facts include:

- Climate change affects the fundamental requirements for health – clean air, safe drinking water, sufficient food and secure shelter.

- The global warming that has occurred since the 1970s is projected to be directly responsible for excess deaths annually.

- Many of the major causes of death such as diarrheal diseases, malnutrition, malaria and dengue are highly climate-sensitive and are expected to worsen as the climate changes.

- Areas with weak health infrastructure – mostly in developing countries – will be least able to cope without assistance to prepare and respond.

- Reducing emissions of greenhouse gases through better transport, food and energy-use choices can result in improved health.
Because of the global effects on health the WHO Assembly in 2009 endorsed a work plan for Countries to follow. This included:

- **Advocacy**: to raise awareness that climate change is a fundamental threat to human health.

- **Partnerships**: to coordinate with partner agencies within the UN system, and ensure that health is properly represented in the climate change agenda.

- **Science and evidence**: to coordinate reviews of the scientific evidence on the links between climate change and health, and develop a global research agenda.

- **Health system strengthening**: to assist countries to assess their health vulnerabilities and build capacity to reduce health vulnerability to climate change.

- **Small Island Developing States (SIDS)** for whom Grenada served as a Lead State consider climate change as a very important issue and have repeatedly addressed this issue at international Conferences and Fora. It is for this reason that Climate change has to be considered in the preparedness and mitigation components, giving consideration to the location of facilities as well as the impact on the population in any disaster/emergency management plan.

Consequently, Grenada is advanced in its implementation of a District Health Information System (DHIS) that will enable the capture of data from Health clinics that can be analysed to ascertain the direct impact of climate change on human health. The implementation of the DHIS is supported by the German government.

### 1.3 Organization of the Health Sector

The Grenada Health Sector is comprised of the Public healthcare sector as well as the private health care sector. The Ministry of Health is responsible for the overall management of the Public Healthcare sector but also has direct responsibility for regulating and licensing the Private Healthcare sector.

The Government of Grenada through the Ministry of Health provides a range of services at the primary and secondary levels free or at a nominal cost to the general public. Memoranda of Understanding (MOU) and other bilateral service arrangements are established with private healthcare providers, NGOs, Non-profit/Service Organizations and friendly Governments to ensure the provision of a range of specialized health care services. Technical Cooperation agreements also exist with local regional and international partners, to enhance service delivery.
The Public healthcare sector is divided into three (3) main sections based on services offered, namely, Administrative Services, Hospital Services and Community Health Services. The Permanent Secretary, being the Principal Officer for the Ministry of Health, has overall responsibility for the management of these three (3) sections but with directly responsible for the Administrative Services.

Consistent with the trend of other Caribbean countries, Grenada is also experiencing an increase in morbidity and mortality due to chronic non-communicable diseases but the threat of emerging and re-emerging infectious diseases, high levels of injuries and violence as well as an ageing population has all resulted in an increased demand for public healthcare services.

1.4 Brief overview of the Health Care Services

1.4.1. The Administrative Services include Policy formulation and regulations, Planning, Finance, Personnel, Procurement, Epidemiology and Health Information, Registration of Births and Deaths, Information Communication Technology and Health Disaster Risk Management.

1.4.2 Hospital Services are delivered through five (5) facilities which include the main Hospital and four (4) subsidiary Hospitals. The General Hospital which is the main referral hospital located in the capital, St. Georges, has a capacity of one-hundred and ninety-eight (198) beds and provides a diverse range of medical, surgical, diagnostic (laboratory and radiology), pharmacy and acute emergency services. Specialized services are also provided for both in-patients as well as out-patients in areas such as obstetrics, gynecology, ophthalmology, nephrology, oncology, pediatrics, orthopedics and physiotherapy among others; Princess Alice Hospital which is a forty-five (45) bed community hospital is located in the rural Parish of St. Andrew; Princess Royal Hospital which is a thirty-four (34) bed community hospital is located on the Sister Isle of Carriacou; Mt. Gay Psychiatric Hospital which is an eighty (80) bed facility provides acute and rehabilitative mental health services and the Richmond Home for the Elderly provides geriatrics services and has a capacity of seventy-six (76) beds. These facilities have very limited surge capacities and varying degrees of vulnerabilities.

Management of Hospital Services is provided by a team of Hospital Directors inclusive of the Medical Director, Director of Nursing Services and Director of Hospital Services who are ably assisted at each subsidiary hospital by a Health Services Administrator and Senior Nursing Officer.

1.4.3 Community Health Services are delivered at Health Districts, five (5) of which are located on mainland Grenada and one (1) on the Sister Isles of Carriacou and Petit Martinique. These services are provided through a network of six (6) Health Centres and thirty (30) Medical Stations, strategically located within an approximate radius of three (3) miles of each other. Community Health Services are largely driven by the Primary Health Care approach and includes the provision of Medical, Diagnostics and Treatment, Mental Health, Health Promotion and Education, Pharmaceutical, Dental and Environmental Health services. The Chief Medical
Officer, through his Senior Medical Officers is responsible for the management of Community Health Services.

1.4.4 Environmental health services are provided by a team of Environmental Health Officers under the direction of the Chief Environmental Health Officer based at the MOH Headquarters. Some EHO’s offices are located at District Health Centres and the Officers work closely with the Communities. There is at least one Environmental Health Officer assigned to each Community Health District. The Environmental Health Department is responsible for the enforcement of the public health laws as it pertains to vector control, food safety, water quality and waste management, among others.

1.4.5 Medical and pharmaceutical services for the public healthcare sector are centralized and are provided as an Administrative responsibility of the Ministry of Health. The Procurement Officer, who reports directly to the Permanent Secretary MOH, is directly responsible for the management of the Central Procurement Unit and ensures the availability of appropriate and adequate quantities of domestic, medical and pharmaceutical supplies and accessories.

1.4.6 Pharmacy services for the public healthcare sector are provided as an Administrative responsibility of the Ministry of Health. The Chief Pharmacist, whose office is located at the MOH headquarters, is directly responsible for the assignment of Pharmacists to the Community Health services and Hospital services. These Pharmacists, apart from their regular duties, are also responsible for maintaining stocks of emergency medical and pharmaceutical supplies and for providing emergency pharmacy services. The Chief Pharmacist is also responsible for the registration and licensing of Pharmacists and Pharmacies in both the public and private healthcare sectors, as well as the inspection of properties used for storage and distribution of pharmaceuticals. The private sector pharmacy services are highly recognized and are represented as a key stakeholder on the Health Services Committee.

1.4.7 Laboratory services are mainly provided through the government laboratory located at the General Hospital. Private laboratory services including the Windward Islands Research and Education Foundation (WINDREF), which is the St. Georges University’s public health research laboratory, provides support in cases of emergencies and disease outbreaks.

1.4.8 Disease surveillance and information services are provided through the Epidemiology Unit of the Ministry of Health. This unit is managed by an Epidemiologist and weekly statistical reports are prepared and disseminated to stakeholders. There is a Surveillance Committee, lead by the Epidemiology Unit, which convenes once monthly. The Epidemiologist and Surveillance Nurse are also members of the Health Disaster Committee.

1.4.9 Health promotion and public education services are rendered through the Health Promotion Department which provides health promotional and educational services to various health clinics, government ministries and public and private entities throughout the tri-island state. The Health Promotion Department is responsible for developing a disaster /emergency response plan, to include the duties and responsibilities of staff and also communication
strategies for managing hazards. The staff is also responsible for the preservation and protection of equipment, materials and other resources of the Department. The Public Relations Officer for the MOH works in close collaboration with the Health promotion department and is an integral member of the Health Promotion team.

1.4.10 Mental health and psychosocial services is provided by the Mt. Gay Psychiatric Hospital which is an eighty (80) bed facility that provides long term and rehabilitative mental health services. Acute mental health care is initiated at the General Hospital. Monthly community mental health outreach services are delivered at health centers by visiting healthcare personnel from the Mt. Gay Psychiatric hospital; however, there are community mental health nurses and social workers attached to each Community Health District.

1.4.11 The St. Georges University (SGU), which is an educational institution that provides training in a range of medical related areas including General medicine, Veterinary medicine and Public health. Outpatient medical services are also provided at the University’s out-patient clinic as well as diagnostic services through its public health research laboratory. The SGU is also represented on the Surveillance Committee, Health Services Committee and the National Emergency Advisory Council (NEAC).

1.4.12 St. Augustine’s Medical Services Inc (SAMS) is a private hospital which provides medical, maternity, surgical and diagnostic services for both in-patients and outpatients. It has a capacity of twelve (12) in-patient beds, an operating theatre, 64 slice CT scanner, private ambulance service and a hyperbaric chamber. It also has limited surge capacity.

1.4.13 Private Medical Clinics and Doctors’ Offices, Laboratories, Nursing Homes and Non-Governmental Organizations, Faith Base Organizations and Service Organizations such as the Salvation Army, Grenada Red Cross Society and St John Ambulance exist and some provide training in areas such as First Aid as well as the provision of Medical First Responders. These are key health sector stakeholders and they are represented on the Health Services Committee.

1.4.14 Nutrition Services are provided through the Grenada Food and Nutrition Council which is a statutory body that provides guidelines and training to government institutions such as hospitals and schools in matters related to nutrition. The nutrition needs of persons in disasters/emergencies have also been mainstreamed as a priority area in Disaster Risk Management. Nutrition in Disaster /Emergencies Guidelines for Grenada will be developed and annexed to the NMHSDEMP.
Responsibility for Comprehensive Disaster Management in Grenada lies with the National Disaster Management Agency (NaDMA). The National Disaster Management Advisory Council (NaMAc) is chaired by the Prime Minister. This agency was established to enhance the country’s preparedness, response and recovery mechanisms to any disaster. The Executive Group comprises the Prime Minister, the Permanent Secretary, in the Office of the Prime Minister who also is the deputy Chair and three Cabinet members. NaDMA is further comprised of the National Disaster Office (NDO) which is the NaDMA Secretariat, comprising thirteen (13) National Committees chaired by Permanent Secretaries/Heads of Departments at national level, and seventeen (17) District Disaster Management Committees, chaired by a volunteer District Coordinator. NaDMA has responsibility for emergency management, development of the national disaster plans and coordination of any international assistance. The day to day programme management is executed by the NaDMA Secretariat while operational functions are the responsibility of the National Committees. NaDMA also seeks to improve the capacity of the population of Grenada to prepare for, respond to and recover from disasters, as well as to protect the economic development plans of the government so as to enhance the development process.
2.2 Organizational Structure of NaDMA
3.0 Health Sector Disaster Emergency Management Program

3.1 Health Sector Disaster Emergency Management Sub-committees

There are two (2) main Health Sector Disaster Emergency management sub-committees under the auspices of the MOH, namely, the Health Services Committee (HSC) which is a management sub-committee of NaDMA and the Health Disaster Committee (HDC) which is a sub-committee within the MOH itself. Each committee has its own roles and responsibilities.

The Health Services Committee is chaired by the Permanent Secretary (MOH) and convenes once every month to conduct its roles and functions. This committee is comprised of public, private and NGO healthcare stakeholders and is responsible for ensuring the health services response in the event of a national disaster. The composition and terms of reference of the HSC is currently being reviewed to incorporate other healthcare related entities and sectors such as the Ministry of Social Development and Ministry of Agriculture.

The Health Disaster Committee (HDC) which is comprised of Senior Ministry of Health Officers and Heads of key MOH departments meets once monthly and is also chaired by the Permanent Secretary (MOH). This committee guides the actions of the MOH in all phases of a disaster and is pivotal to the successful management of any health disaster or emergency. It is specifically responsible for the management of events peculiar to the health sector that may or may not have a national impact. The Health Disaster Management Officer (HDMO) is a member of the HDC and is responsible for ensuring that the Annual Work plans of the (HDC) are developed and implemented. The (HDC) also ensures that the Health Disaster Risk Reduction (HDRR) programs of PAHO/WHO are implemented including the SMART/Safe Hospitals initiatives and the conducting of training in disaster/emergency response and management. The (HDC) provides the lead in health disaster risk management and some senior members of the (HDC) are also members of the (HSC).

These two (2) sub-committees work in tandem to ensure the implementation of the Health Sector Disaster Emergency Management program, which focuses on areas of Mitigation/Prevention, Preparedness, Response and Recovery in conformity with the National Disaster Management Agency (NaDMA) priorities, Comprehensive Disaster Management (CDM) strategy, International Health Regulations (IHR) and PAHO/WHO initiatives for Disaster Risk Reduction (DRR) in the health sector.
3.2 Health Sector Disaster Emergency Management Key Focus Areas.

The key focus areas of health sector disaster emergency management are Mitigation/Prevention, Preparedness, Response and Recovery.

**Mitigation/Prevention:** This involves actions that will reduce the impact of hazard on health infrastructure. The application of the SMART/ Safe Hospitals Assessment tools have been administered at all public healthcare facilities. The structural and non-structural vulnerabilities of these facilities have been identified as well as other associated risks. Improvements measures are ongoing on some existing facilities whilst strict adherence to the national building codes and SMART/Safe Hospital Standards are strongly advocated especially in the construction of new facilities.

**The Preparedness Activities:** This involves the revision and development of the multi-hazard health sector disaster emergency management plans for Hospitals and Community Health Facilities, development of SOP’s for the management of specific hazards, procurement of emergency medical and pharmaceutical supplies, capacity building in disaster risk management and medical first response, establishment of emergency medical teams, identification of alternative buildings and safety zones for evacuation of healthcare facilities and conducting of exercises to test disaster/ emergency response plans.

**The Response Activities:** This involves the activation of emergency response plans and deployment of resources to affected individuals and communities in an effort to minimize the effects of an impacting hazard. It also involves coordination and collaboration with other response agencies and healthcare stakeholders. The objective is to ensure the continuous provision of optimum health services during and immediately after the impact of a hazard.

**The Recovery Activities:** This involves action that focuses on the salvaging of property, reduction of further losses, restoration of critical health services and return to a state of normalcy. The objective is to restore health services to optimum levels as existed before impact and to build back better in an effort to reduce future impacts, paying particular attention to vulnerabilities and the strict adherence to National Building Codes and the SMART/ Safe Hospitals Standards.
4.0 National Multi-hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP)

4.1 Purpose
The purpose of this plan is to have a documented set of activities that identifies the actions to be taken by all Health Sector Entities, whether public or private, to reduce disaster risks and respond to emergencies and disasters in the most effective and prompt manner. The plan is designed to manage all identified hazards that may impact the Health Sector.

4.2 Objectives
The objectives of this plan are:

- To outline a coordinating mechanism for health sector response.
- To outline mitigation/prevention, preparedness, response and recovery measures and mechanisms.
- To identify the roles and responsibilities of key health sector entities and their departments.
- To outline a response mechanism that returns the impacted population to a state of normalcy in the shortest possible time.

Each division, institution/hospital within the health sector must have their own Disaster/Emergency Plan that works in tandem with the National Multi-Hazard Health Sector Disaster Emergency Management Plan and should cover all identified hazards.

4.3 The Legal Framework
There are a number of statues that provide guidance in the mitigation, preparedness, response and recovery efforts in Grenada. These can be found in regulations pertaining to Customs, Immigrations, Town Planning, and Natural Resources. The following are some of the legislative framework under which this plan operates:

- The Public Health Act 1958 (Revised 1990)
- The Hospital Act 1953 (Revised 1990)
- Health Practitioners Act 2010
- Public Health (School Children Immunization) Act 1980
- Pharmacy Act 1988
- Waste Management Act 2001
- Food Safety Act 2015
4.4 Concept of Operations

4.4.1 Scope of plan

This plan is multi-hazard in scope and focuses on the management of specific hazards. It covers the general actions to be undertaken by the MOH and its associated divisions and departments, including Administration, Hospital Services, Community Health Services, Environmental Health Services and any other programs of the MOH and affiliated private sector services. It follows the guidelines and protocols established by NaDMA and covers specific issues related to Disaster Risk Reduction (DRR), and the management and coordination of response to disasters/emergencies within the health sector. These include command and coordination, execution and activation, communications, alert and warnings, triggering mechanism and all clears.

4.4.2 Command and Coordination

As part of the national structure for disaster management, the health sector plays an integral role and as such is represented on the NaDMAC. At the MOH level, mechanisms are expected to be in place to enable all the divisions and departments to perform their responsibilities in relation to the management of events that particularly require health services response e.g. disease outbreaks. In that regard, the Health Disaster Committee (HDC) comprising senior Ministry of Health officers and Heads of Department is established. In order to facilitate the national health response in the event of a disaster, NaDMA has also established the Health Services Committee (HSC) which comprises a cross-section of healthcare stakeholders in accordance with the national mandate. The membership and terms of reference of the HSC are indicated below.
Health Services Committee Membership

1. Permanent Secretary, Ministry of Health – Chairperson
2. Chief Medical Officer, - Deputy Chairperson
3. Chief Environmental Health Officer
4. Director of Hospital Services
5. Chief Nursing Officer
6. Procurement Officer (Supplies requisition and distribution)
7. Representative, Grenada Red Cross Society
8. Representative, St. John's Ambulance
9. Representative, Grenada Chamber of Commerce (Pharmacy Group)
10. Grenada Solid Waste Management Authority
11. NAWASA
12. St. Augustine’s Medical Services Inc and other private entities
13. Saint George’s University
Terms of Reference of the Health Services Committee

1. To ensure that an adequate supply of emergency medical supplies is available.

2. To coordinate with the relevant public/private health related voluntary organizations, to ensure that the medical and first-aid assistance required before, during and after a disaster is available and provided.

3. To monitor post-disaster public and environmental health conditions and maintains public health standards including those within public shelters.

4. To ensure the requisitioning of medical supplies through the relevant departments as necessary.

5. To ensure the proper identification of health service workers and first aid personnel and First-Aid stations for information of field personnel and the public.

6. To coordinate the arrangements with the Transport sub-committee for the use of additional vehicles to augment existing ambulance services where necessary.

7. To make provision for the establishment of an Advanced Medical Post (AMP) at the scene of any mass casualty incident and the placement of a field hospital unit at a designated area if the situation so warrants.

8. To coordinate with Search and Rescue – L & S subcommittees.

9. To organize training of health service workers and emergency First-Aid personnel in the operations needed at all emergency shelters and other First-Aid Stations established in the Districts.

10. To ensure the provision of environmental health services for the country including at emergency shelters and the development of plans for quick deployment of health personnel to all pre-determined points.

11. To develop a list of all health facilities including pharmacies, in Grenada, that can be used in the event of a disaster.

12. To develop guidelines for the identification and disposal of the dead.

13. To develop a program for prevention and management of epidemics.

14. To ensure that counseling is provided to the affected population after a disaster.

15. To develop plans for management of mass casualty situations and stress management in disasters.

16. To design and conduct an annual exercise to test the Health disaster plans.
The Health Services Committee (HSC) and Health Disaster Committee (HDC) have to be in a position to fulfill their respective mandates and so there are certain procedures and actions to be undertaken before, during and after any disaster. It is expected that certain protocols will be adopted and followed. Included are:

1. The sub-Committee(s) will meet as determined to review the program of the Ministry of Health and NaDMA and set goals as necessary. Plans and procedures of all the departments in the MOH and other health sector stakeholder entities will be reviewed and members familiarized on their respective roles and responsibilities.

2. The sub-committee(s) will meet at least once monthly.

3. The sub-committee(s) will ensure that all necessary information bulletins and leaflets are prepared for distribution if and when necessary.

4. The sub-committee(s) will ensure that lists of essential emergency drugs, medical supplies and equipment are prepared and that these items are available to be used if and when needed.

5. The sub-committee(s) will meet at any other time at the request of the chairman.

6. This sub-committee(s) must maintain a relationship with NaDMA and during a disaster there must be constant liaising with the health sector representative at the National Emergency Operation Centre (NEOC).

Pre-Disaster Response plan

If there is an event that has a warning phase, the sub-committee(s) will meet to review details of the impending hazard and to take the necessary action. These can be outlined as follows:

1. The sub-committee(s) will meet punctually at the time determined by the Chairman.

2. The Chairman will appoint an appropriate officer to act as the secretary to record all decisions taken by the Committee, and to present a written report as soon as possible after the meeting.

3. The Chairman will inform the sub-committee(s) of the latest information concerning the impending hazard.

4. The sub-committee(s) will review the disaster preparedness arrangements and advise and/or agree on the activation of the National Multi-hazard Health Sector Disaster Emergency Management Plan, whether fully or partially. Assignments will be given as necessary.

5. The sub-committee(s) will decide whether the HEOC will be activated if necessary and the hours during which it will operate in the pre-disaster phase. The Chairman will authorize the activation of HEOC plan and assignment of responsibilities in accordance with the HEOC plan.
6. The sub-committee(s) will communicate with health sector stakeholders through their respective representatives.

7. The sub-committee(s) will approve health related press releases or messages prepared for the Media. The Chief Medical Officer or alternate will approve such messages in emergency situations. All presentations to the media on plans or ongoing operations must be cleared by the Permanent Secretary and/or CMO.

8. If a sudden disaster occurs, the sub-committee(s) will meet as soon as possible to evaluate the implementation of the Health Sector Disaster Emergency Management plan.

### 4.4.3 Activation

The triggering mechanisms for the activation of the National Multi-hazard Health Sector Disaster Emergency Management Plan are as follows:

- Where the disaster/emergency is beyond the capacity of the first responders and large enough to require the mobilization of local resources from other health sector entities e.g. A Mass Casualty Event
- Where the disaster or threat of a hazard is large enough that the predicted or actual impact warrants a national or international coordinated response e.g. natural, chemical, biological and radio nuclear events.
All entities involved in health care delivery will come under the direction of the PS once a disaster has been declared. The pre-disaster plan should be followed with the different entities assuming their respective roles. Once the ‘ALL CLEAR’ is given or requests made to report then the activation procedures go into play.

(a) The Permanent Secretary:
- In consultation with the CMO activates the National Multi-hazard Health Sector Disaster Emergency Management Plan
- In consultation with the CMO activates the Health EOC in accordance with the standing procedures and gives full authority to direct the emergency operations. If the HEOC is not in continual operations, then meetings must be held daily or as often as necessary to receive reports, evaluate the situation and plan further action.
- Ensures that the MOH and by extension the Health sector is represented at the NEOC by its designated representative or his/her alternate.
- Ensures that a suitable room is available for the HEOC to meet and conduct its duties and that essential resources are allocated to it.

(b) The Health Disaster Management Sub-committee(s):
- Determines and maps areas and populations that are affected by the disaster/emergency
- Determines the extent and the level of the disaster from reports received and by conducting actual surveys of the areas, if necessary.
- Establishes means of communication with regular reporting from senior health personnel in the disaster area.
- Assesses reports of casualties and evaluates the ability of local health staff to deal with the situation. Arranges for the deployment of additional health personnel into the area, if necessary. Alerts hospitals and other facilities outside the area to receive casualties, if necessary.
- Notes the estimated number of homeless people and ensures that measures necessary for the protection of public health are established and implemented in the reception centres.
- Implements preparedness plans for ensuring the provision of safe drinking water and sanitary facilities as well as for the prevention of infectious diseases.
- Liaises, through the Ministry representative, with NaDMA to give all possible assistance to relevant agencies to ensure that they function efficiently.

- Identifies and mobilizes transport for emergency use if, needed.

- Publicizes the telephone numbers of the HEOC and ensures that all requests for assistance and all health relief measures, are channeled through the HEOC.

- Advises on the acceptance, postponement or rejection of international assistance for health.

- Verifies that effective and appropriate diseases surveillance is established in the disaster area.

- Decides when the health emergency situation is over, program the phasing out of relief operations for health, and direct the prompt return to normal procedures.

### 4.4.4 Deactivation

The PS in consultation with the CMO will declare the deactivation of the NMHSDEMP and of the HEOC when it is felt that the emergency/disaster can be managed within the usual management structure of the MOH. The Stand Down will be given after consultation with NaDMA.

### 4.4.5 Reporting Procedures

All Ministry of Health Staff, Doctors, Nurses, Environment Health Officers, Administrators, Secretarial and general workers including those on leave at the time must report for duty at their assigned area after the ‘ALL CLEAR’ is given or if requested to do so after an emergency. If the assigned area is not accessible, or it is physically impossible to do so, they will report to the health facility or health post in a shelter nearest to their location at the time of the disaster.

### 4.4.6 Definition of Disasters/ Emergencies

The difference between a disaster and an emergency can be clarified by the following definitions/explanations:

**Disaster**- A serious disruption of the functioning of a community, society or country causing widespread human, material, economic or environmental losses which exceed the ability of the affected community, society or country to cope, using its own resources.
Levels of Emergencies and Disasters

When a disaster occurs the Ministry of Health responds depending on the severity of the situation, the type of disaster and the amount of assistance needed. In Grenada, there are three levels of emergency/disaster response:

**Level I** - This is when the event is localized and it can be managed by the regular operating systems of the Ministry of Health.

**Level II** - This occurs when the emergency/disaster overwhelms the capacity of the local area to manage the event but it does not overwhelm the capacity of the country to respond and recover from the event. In such cases the localized area can be designated a disaster area.

**Level III** - This happens when the emergency/disaster event overwhelms the country/national capacity to respond and recover from it. This is then designated a national disaster.

**Emergency** - An unexpected event that negatively impacts lives and property but which the affected community, society or country is able to cope, using its own resources and normal arrangements.

When an event occurs that requires immediate and urgent attention it can be designated as an emergency. These types of situations usually threaten life such as motor vehicle accidents and collapse of buildings or walls and which would entail the need for emergency attention, medical treatment, and search and rescue. In such instances, they maybe level I and level II emergencies that can be managed by local or national resources, depending on the extent of the event.

**National Disaster** - This occurs when the country or national capacities are overwhelmed and require regional and international aid to assist the country to respond and recover.
4.4.7 Plan review and updates

As with any plan there must always be a review and revision of its content and procedures. This is usually done after a simulation or drill has been conducted and recommendations made following the exercise. It is proposed that this multi hazard plan be reviewed every three (3) years and that the necessary drills and simulations be conducted before the review. These exercises should be evaluated using external evaluators.
5.0 Roles and Responsibilities of Key Health Services Stakeholders

Phase 1

• Before disaster/emergency occurs and involves proactive, preventative, preparedness and mitigation activities that are to be undertaken.

Phase 2

• During and immediately after the disaster/emergency event and involves the response actions to be taken.

Phase 3

• Involves recovery, restorative and rehabilitative activities to be undertaken after the immediate disaster/emergency response has been safely and appropriately mounted and the “ALL CLEAR” is issued.

Roles and Responsibilities of the National Disaster Management Agency (NaDMA)

NaDMA is responsible for the overall coordination and management of disasters/emergencies at the Districts’ and National Levels. Its main role is to ensure that individuals as well as public and private sector organizations and entities are sensitized, mobilized and prepared to respond to disasters/emergencies and to coordinate the response, recovery and rehabilitation efforts of response agencies to the impact of such events.

Phase 1

- Conduct planning meetings of the NEAC and Management Sub-committees
- Organize trainings, workshops, consultations in varied aspects of Disaster Risk Management and Plan and Conduct National and Sectoral Exercises
- Participate In Sectoral disaster/emergency Management related meetings and activities
- Solidifies Regional and International arrangements for Humanitarian and Emergency relief assistance.
- Inspect and publish buildings identified as Emergency Shelters
- Procure emergency relief supplies and Establish MOUs with Service Providers

Phase 2

- Activates/deactivates the National Disaster Plan and NEOC
- Lead/ Coordinate National disaster/emergency response
- Request and Coordinate Humanitarian and Emergency relief assistance
- Advise on “All Clear” and resumption to normalcy

Phase 3

- Identify priorities and Advise on the Recovery, Restoration and Rehabilitation Process
Roles and responsibilities of the Ministry of Health (MOH)

Phase 1
- Facilitate the activities of the Health Sector in Disaster Risk Management
- Develop, Review and Update the NMHSDEMP and related Sub-plans
- Lead the Health Sector overall management of the effects on Public Health resulting from the impact of Disasters/Emergencies
- Convene meetings of the Health Services and Health Disaster Committees
- Establish the Health Emergency Operation Centre (HEOC)
- Coordinate and Provide training for First Response Personnel
- Register and License Emergency Medical Response Personnel
- Provide Identification Badges and Access Passes for Emergency Medical Response Personnel
- Maintain Register and Contact Information of Emergency Medical Response Personnel and Healthcare Facilities
- Procure Emergency Medical and Pharmaceutical supplies, Equipment and Vehicles
- Develop, Establish and Maintain MOU’s with key Healthcare Stakeholders and other Service Providers
- Conduct Vulnerability Assessments of Healthcare Facilities and Recommend and Implement Safety Improvement measures
- Identify buildings for use as alternative Health Facilities and Establish MOU’s with property owners
- Conduct and Participate in Exercises to test Response Agencies Disaster/Emergency Management Plans
- Establish Legal Frameworks, Policies, Plans and Monitoring and Evaluation Standards
- Ensure provisions are made for Staff welfare and Psychosocial Support

Phase 2
- Provide Health Services response during and immediately after impact.
- Activate and Deactivate the NMHSDEMP
- Activate and Deactivate the HEOC
- Authorize the use of Health Sector resources including personnel
- Assign Health Sector Representatives to serve at NEOC
- Monitor Health Services Response and Provide reports to the NEOC, accordingly.
- Assess impact on Public Health and advise on interventions.
- Identify, Request and Coordinate Medical and Humanitarian Assistance
- Establish and Maintain communication with Stakeholders

Phase 3
- Lead Health Sector Recovery and Rehabilitation efforts
- Identify Health Sector Priorities and Initiate Health Services Interventions
- Access Funding and Implement, Monitor and Evaluate Health Services Interventions
- Provide Staff welfare including Psychosocial Support
Roles and responsibilities of the Health Disaster Committee (HDC)

Phase 1
- Lead the Development and Implementation of MOH Disaster Emergency Risk Management Programme
- Convene Monthly meetings of the Health Disaster Committee
- Develop, Review, Test and Update NMHSDEMP and related Sub-plans
- Develop and Implement MOH Annual Operational Disaster Emergency Risk Management Plan
- Establish the Health Emergency Operation Centre (HEOC)
- Implement WHO/PAHO Health Disaster Risk Reduction (HDRR) Initiatives
- Prepare MOH to respond to Localized and Nationwide impact on Public Health resulting from the Disasters/Emergencies.
- Identify and Train Emergency Medical Response Personnel
- Identify MOH Emergency Medical Response Personnel for Deployment
- Maintain Register and Contact Information of MOH Emergency Response Personnel
- Prepare Identification Badges and Access Passes for Emergency Response Personnel
- Plan and Participate in Exercises and DRR related Workshops and Meetings
- Procure Emergency Medical and Pharmaceutical Supplies, Equipment and Vehicles
- Conduct Vulnerability Assessments of MOH Facilities and Implement Safety Improvement Measures
- Identify Buildings for use as alternative Healthcare facilities and Establish MOU’s with property owners
- Recommend and Assign MOH Officers to serve on various NaDMA Sub-Committees.

Phase 2
- Plan and Lead the MOH response to disasters and emergencies.
- Advise on Activation/Deactivation of NMHSDEMP and HEOC
- Allocate resources and deploy response personnel accordingly
- Assess and advice on response actions to be undertaken
- Provide information to local and regional stakeholders
- Sensitize public on actions to be taken
- Determine assistance needed and make requests accordingly
- Monitor and evaluate response interventions
- Provide reports to relevant agencies

Phase 3
- Guide the Recovery and Rehabilitation process
- Advise on priority interventions
- Implement Business Continuity Plans
- Monitor and Evaluate Recovery and Rehabilitative initiatives
- Provide Staff welfare including Psychosocial Support
Roles and responsibilities of Health Service Committee (HSC)

Phase 1
- Prepare the Health Sector to provide the National Health Services response in disasters/emergencies
- Convene monthly meetings to plan the Health Sector response to National Disasters/Emergencies
- Participate in Disaster/ Emergency Management related meetings, workshops trainings and exercises
- Ensure adequate quantities of emergency medical and pharmaceutical supplies are available for National Emergencies response
- Organize trainings of Health Sector Emergency Response Personnel
- Identify and Maintain Register of trained Health Sector Emergency Response personnel, equipment and facilities
- Develop and Establish MOU’s with Health Sector Stakeholders and other Service Providers
- Ensure proper identification, registration and authorization of Health Sector Emergency response personnel
- Provide Identification Badges and Access Passes for Health Sector Emergency Response Personnel

Phase 2
- Advise on Activation/ Deactivation of the NMHSDEMP and HEOC
- Coordinate and Lead the National Health Sector response to disasters/emergencies
- Mobilize and Deploy Health Sector resources accordingly
- Provide representation at the National Emergency Operation Centre (NEOC)
- Provide representation at the Health Emergency Operation Centre (HEOC)
- Assess and Advise on National Health Services interventions
- Monitor and Evaluate National Health Services interventions
- Advise on request for Regional and International assistance

Phase 3
- Advise on the Recovery and Rehabilitation process
- Advise on priority interventions
- Advise on funding options for Recovery and Rehabilitative initiatives
- Ensure implementation of Business Continuity Plans
- Monitor and Evaluate Recovery and Rehabilitative initiatives
- Provide Staff welfare including Psychosocial Support
Roles and responsibilities of Hospital Services (HS)

Phase 1
- Develop and Update Hospital Services Multi-hazard Disaster Emergency Management Plans (HSMDEMP)
- Convene monthly Hospitals’ Disaster Emergency Management Committee Meetings
- Conduct periodic Risk Assessments of Hospitals’ Facilities
- Develop and Implement Hospitals’ Safety Improvement Measures
- Procure essential emergency medical, pharmaceutical, domestic and food supplies
- Identify and Schedule Emergency Response Staff
- Develop Individuals and Departments Action Cards
- Identify alternative sites for relocation of Hospital Services
- Conduct routine checks and preventative maintenance of emergency equipment, vehicles and physical plant
- Maintain emergency supplies of water, fuel and medical gases
- Conduct and Participate in Sectoral and National trainings and exercises
- Maintain, update and train Personnel in use of communication equipment and accessories
- Identify suitable areas and Establish Hospitals’ Emergency Operation Centres
- Develop and Establish MOU’s with Health Services Stakeholders and other Service Providers
- Identify training needs and conduct trainings for Hospital Services Personnel
- Maintain Staff Contact Information and provide Identification Cards and Assess Badges

Phase 2
- Activate and Deactivate HSMDEMP
- Activate and Deactivate the Hospitals’ EOC
- Allocate resources and Deploy Hospital Services response staff accordingly
- Conduct Situational/ Impact assessments and report to HEOC
- Provide emergency Medical, Surgical and Diagnostic Services
- Maintain communication with HEOC
- Determine discharge of non-critical patients
- Assess, Advise and Request assistance, as needed
- Activate MOUS’s with Service Providers
- Protect Hospitals’ equipment, vehicles, physical plant and supplies
- Provide reports to MOH and others Stakeholders

Phase 3
- Evaluate the effectiveness of implementation of the HSMDEMP
- Prioritize and Advise on Recovery and Rehabilitative efforts
- Implement Business Continuity Plans and Restore critical Health Services
- Provide staff welfare including Psychosocial Support for staff and patients
- Replenish essentials stock of Emergency Medical, Pharmaceutical and domestic supplies and service equipment and vehicles
- Monitor and Evaluate implementation of Recovery and Rehabilitative initiatives

Roles and responsibilities of the Community Heath Service (CHS)

Phase 1
- Develop and Update Community Health Districts’ Multi-hazard Disaster Emergency Management Plans (CHDMDEMP)
- Convene monthly Community Health Districts’ Disaster Emergency Management Committee Meetings
- Conduct and Participate in Disaster Risk Management Trainings and Exercises
- Develop a register of high risk/vulnerable groups
- Collaborate with District Disaster Coordinators to establish medical facilities in shelters
- Maintain support mechanisms such as backup power supply and refrigeration
- Conduct disaster/emergency related health education programs
- Monitor communicable disease profile and report outbreaks
- Conduct periodic risk assessment of Community Health Facilities
- Develop and Implement Community Health Facilities Safety Improvement measures
- Procure essential emergency medical and pharmaceutical supplies
- Develop Action Cards for individual staff
- Establish Staff call out List
- Identify and schedule Emergency Medical Response personnel
- Identify alternative sites for relocation of healthcare services
- Assess emergency shelters and advise on health care services required

Phase 2
- Activate and Deactivate Community Health Districts’ Multi-hazard Disaster Emergency Management Plan (CHDMDEMP)
- Allocate resources and Deploy Response staff accordingly
- Conduct situation/impact assessments and submit report to HEOC
- Provide emergency healthcare services to affected individuals and communities
- Provide reports and maintain contact with MOH and HEOC
- Assess drinking water, food supplies, sanitation and nutritional status of Individuals and Communities
- Monitor disease outbreaks, heighten surveillance and provide reports

Phase 3
- Assess and monitor population for spread of communicable diseases, injuries and deaths
- Assess impact on health infrastructure and recommend priority interventions
- Restore critical healthcare services
- Replenish stock of essential emergency medical and pharmaceutical supplies and equipment.
- Maintain records and Submit reports to MOH
- Conduct after action review/debriefing and Evaluate implementation of the CHDMDEMP
- Provide staff welfare including psychosocial support

Roles and responsibilities of Environmental Health Department (EHD)

Phase 1
- Update and test the Environmental Health Services Multi-hazard Disaster Emergency Management Plan (EHSMDEMP)
- Sensitize and train staff on the EHSMDEMP
- Establish staff call out List
- Participate in training for key response personnel in DRM
- Conduct public awareness exercises
- Conduct needs assessment and acquires resources for the department
- Collaborate with other Agencies
- Communicate actions with staff and other stakeholders
- Identify and schedule Emergency Response Personnel
- Establish means of communication for the department

Phase 2
- Activate the EHSMDEMP
- Allocate resources and deploy assessment and response teams accordingly
- Provide reports to HEOC and recommend interventions
- Communicate with staff and other stakeholders
- Implement risk prevention and control measures

Phase 3
- Evaluate effectiveness of implementation of the EHSMDEMP
- Collaborate with stakeholders for restorative and rehabilitative interventions
- Advise on restorative and rehabilitative interventions
- Provide Staff welfare including psychosocial support
- Deactivate the EHSMDEMP
- Document best practices
Roles and responsibilities of Health Information/National Disease Surveillance (Epidemiology Unit)

**Phase 1**
- Develop and update the Ebola preparedness plan into the Multi-Hazard Infectious Diseases Management Plan (MIDMP)
- Sensitize staff about the MIDMP
- Establish staff call out List
- Participate in training for first response personnel in DRM
- Convene monthly meetings of Surveillance Committee
- Collaborate with Health District Teams to monitor and assess incidence of communicable and infectious airborne and water borne diseases.
- Provide weekly reports to Stakeholders

**Phase 2**
- Activate and deactivate the MIDMP
- Establish sentinel reporting sites and conduct active surveillance
- Allocate resources and Deploy response teams accordingly
- Conduct situation/Impact assessments
- Monitor and report disease outbreaks
- Advise HEOC on potential threats and appropriate interventions
- Identify priorities for Public Health intervention

**Phase 3**
- Evaluate effectiveness of the implementation of the MIDMP
- Maintain National Disease Surveillance System
- Advise on restorative and rehabilitative process
- Provide staff welfare including psychosocial counselling
Roles and responsibilities of Health Promotion Department (HPD)

Phase 1
- Develop and update the Health Promotion Department Multi-hazard Disaster Emergency Management Plan (HPDMDEMP)
- Assign staff individual roles and responsibilities
- Develop a Risk Communication Plan for Health
- Establish staff call out list
- Participate in training for first response personnel in DRM
- Facilitate communication training for internal, external and associate staff
- Develop specific messages to be used in disasters/emergencies
- Contribute to and participate in public sensitization programmes
- Communicate pre-disaster/emergency related health messages
- Liaison between MOH and Media
- Participate in Health Disaster Committee and Surveillance Committee meetings
- Identify an official MOH spokesperson for the dissemination of disaster/emergency information
- Plan for Staff welfare and psychosocial support before, during and after the incident
- Secure office supplies/equipment

Phase 2
- Activate and deactivate the HPDMDEMP
- Allocate resources and deploy response staff accordingly
- Conduct Situation/Impact assessments
- Provide report to HEOC
- Disseminate health messages
- Record and coordinate incoming and outgoing information
- Assist with relief efforts including receipt, inventory management distribution
- Ensure that all communications matters are sanctioned by the relevant authority

Phase 3
- Evaluate the effectiveness of the implementation of the HPDMDEMP
- Maintain vigorous health promotion and information dissemination programmes
- Advise on the restorative and rehabilitative process
- Ensure Staff obtained welfare including psychosocial counselling
Roles and responsibilities of Central Procurement Unit (CPU)

Phase 1
- Develop and update Central Procurement Unit Multi-hazard Disaster Emergency Management Plan (CPUMDEMP)
- Sensitize staff about the CPUMDEMP
- Establish staff call out List
- Participate in training for first response personnel in DRM
- Establish MOU’s with suppliers to access medical, domestic and pharmaceutical supplies
- Maintain stocks of essential emergency medical, domestic and pharmaceutical supplies
- Conduct SUMA/LSS training for Staff
- Maintain support mechanisms like backup power supply and refrigeration
- Pre-position essential emergency medical, domestic and pharmaceutical supplies
- Provide safety containers and protective coverings for securing supplies and equipment
- Identify alternative sites or storage spaces for continuation of services post disaster
- Conduct safety assessment of the CPU and implement safety improvement measures

Phase 2
- Activate and deactivate the CPUMDEMP
- Allocate resources and deploy response staff accordingly
- Conduct situation/impact assessment
- Provide report to HEOC
- Provide relevant supplies to affected areas
- Monitor usage /stock levels
- Provide updates to the HEOC
- Advise on types and quantities of supplies needed

Phase 3
- Evaluate the effectiveness of implementation of the CPUMDEMP
- Restock and maintain adequate stock levels
- Advise on restorative and rehabilitative process
- Provide Staff welfare including psychosocial support
Roles and responsibilities of Pharmacy Department (PD)

Phase 1
- Develop and update the Pharmacy Department Multi-hazard Disaster Emergency Management Plan (PDMDEMP)
- Sensitize staff about the PDMDEMP
- Establish staff call out List
- Participate in training for first response personnel in DRM
- Requisition and Maintain stocks of Emergency Medical and Pharmaceutical supplies
- Distribute and Monitor emergency medical and pharmaceuticals supplies issued to Clinics and Service areas
- Rotate and replenish emergency stocks nearing expiration dates
- Conduct safety assessments of pharmacies and implement safety improvements measures
- Maintain support mechanism like back up power supply and refrigeration
- Procure safety containers and protective coverings for securing supplies
- Identify alternative sites or office spaces for continuation of services post disaster

Phase 2
- Activate and Deactivate the PDMDEMP
- Allocate resources and deploy response staff accordingly
- Conduct situation/impact assessment
- Provide reports to HEOC
- Provide relevant supplies to affected areas
- Monitor usage/ stock levels and provide reports to Central Procurement Department
- Advise on types and quantities of supplies needed

Phase 3
- Evaluate the effectiveness of implementation of the PDMDEMP
- Restock and Maintain adequate stock levels
- Advise on restorative and rehabilitative process
- Provide Staff welfare including psychosocial support
Roles and responsibilities of General Hospital Laboratory (GHL)

Phase 1
- Develop and update the General Hospital Laboratory Multi-hazard Disaster Emergency Management Plan (GHLMDEMP)
- Sensitize staff about the GHLMDEMP
- Establish staff call out List
- Maintain current contact information on staff
- Participate in training for first response personnel in DRM and blood Collection/procurement practices
- Maintain equipment and supplies
- Maintain refrigeration and backup power supply system
- Promote increase donors/collections initiatives

Phase 2
- Activate and deactivate the GHLMDEMP
- Allocate resources and deploy response staff accordingly
- Conduct situation/impact assessment
- Communicate with Hospital EOC and staff
- Activate blood donor protocol
- Provide blood donor counseling
- Collect and test samples for communicable infectious diseases
- Conduct testing of emergency samples
- Communicate results timely

Phase 3
- Evaluate the effectiveness of implementation of the GHLMDEMP
- Restock blood bank and other supplies
- Advise on restorative and rehabilitative process
- Provide Staff welfare including psychosocial support
Roles and responsibilities of Registrar General Department (RGD)

Phase 1
- Develop and Update the Registrar General Department Multi-hazard Disaster Emergency Management Plan (RGDMDEMP)
- Sensitize staff about the RGDMDEMP
- Establish staff call out List
- Participate in training for key response personnel in DRM
- Procure water resistance containers, fire resistance vault and metal shelves and protective coverings for records and equipment
- Identify safe areas for storage of records and equipment
- Identify alternative areas for relocation post disaster
- Liaise with District Officers

Phase 2
- Activate and deactivate the RGDMDEMP
- Allocate resources and deploy response personnel accordingly
- Conduct situation/impact assessments
- Provide report to HEOC
- Embark on salvaging records and equipment

Phase 3
- Evaluate the effectiveness of implementation of the RGDMDEMP
- Resume service provision
- Advise on restorative and rehabilitative process
- Provide staff welfare including psychosocial support
- Conduct post analysis with the District Offices
Role and responsibilities of Hospitals’ Medical Records Department (HMRD)

Phase 1
- Develop and Update the Hospitals’ Medical Records Department Multi-hazard Disaster Emergency Management Plan (HMRDMDEMP)
- Sensitize staff about the HMRDMDEMP
- Establish staff call out List
- Participate in training for first response personnel in DRM
- Procure water resistance containers, fire resistance vault and metal shelves and protective coverings for records and equipment
- Identify safe areas for storage of records and equipment
- Identify alternative areas for relocation post disaster
- Plan for Staff welfare and psychosocial support

Phase 2
- Activate and deactivate the HMRDMDEMP
- Allocate resources and deploy response personnel accordingly
- Conduct situation/impact assessments
- Provide report to Hospitals’ EOC
- Embark on salvaging records and equipment

Phase 3
- Evaluate the effectiveness of implementation of the MRDMEMP
- Advise on restorative and rehabilitative process
- Resume service provision
- Ensure staff obtained welfare including psychosocial support
Roles and responsibilities of St Augustine’s Medical Services Inc (SAMS)

Phase 1
- Develop and Update the St. Augustine’s Medical Services Inc Multi-hazard Disaster Emergency Management Plans (SAMSMDEMP)
- Convene monthly Hospital Disaster Emergency Management Committee meetings
- Sensitize staff about the SAMSMDEMP
- Establish staff call out List and maintain current staff directory, including issuing of ID’s
- Participate in Disaster Risk Management trainings, exercises and work shops
- Participate in Health Services Committee meetings
- Conduct periodic Risk Assessments of Hospital Facility
- Develop and Implement Hospital Safety Improvement Measures
- Procure and maintain stocks of emergency medical, pharmaceutical, domestic and food supplies
- Maintain emergency supplies of water, fuel and medical gases
- Maintain communication equipment and accessories
- Identify response personnel to serve on Emergency Medical Teams
- Develop Action Cards for Individuals and Departments
- Identify alternative sites for relocation of Hospital Services
- Conduct routine checks and maintenance of emergency equipment, vehicles and physical plant
- Develop and Establish MOU’s with Health Services Stakeholders and other Service providers

Phase 2
- Activate and Deactivate SAMSMDEMP
- Activate MOU’s with Stakeholders
- Allocate resources and deploy response personnel accordingly
- Conduct Situation/Impact assessments and report to HEOC and NEOC
- Provide emergency Medical, Surgical and Diagnostic Services
- Maintain communication with HEOC
- Assess and request assistance needed
- Protect Hospital equipment, vehicles, physical plant and supplies
- Provide reports to MOH and others Stakeholders

Phase 3
- Evaluate the effectiveness of implementation of the SAMSMDEMP
- Advise on recovery and rehabilitative efforts
- Implement Business Continuity Plan
- Restore critical health services
- Provide staff welfare including psychosocial support for both staff and in-patients
- Replenish stock of Emergency Medical, Pharmaceutical and Domestic supplies
- Service equipment and vehicles
- Monitor and Evaluate implementation of recovery and rehabilitative initiatives

Roles and responsibilities of St Georges University (SGU)

Phase 1
- Develop and update the St. Georges University Multi-Hazard Disaster Emergency Management Plan (SGUMDEMP)
- Sensitize staff about the SGUMDEMP
- Establish staff call out List
- Identify response personnel to serve on Emergency Medical Response Teams
- Participate in Disaster Risk Management Trainings, exercises and Workshops
- Participate in Sectoral and National Exercises
- Conduct internal emergency drills including evacuation of facilities
- Conduct periodic Safety Assessment of facilities
- Develop and Implement Safety Improvement measures
- Participate in Health Services Committee meetings and Surveillance Committee meetings
- Provide training for Healthcare Stakeholders in various areas of Emergency Response
- Procure and maintain stock of essential emergency medical, pharmaceutical, domestic and food supplies
- Maintain emergency supplies of water, fuel and medical gases
- Conduct routine checks and maintenance of emergency equipment, vehicles and physical plant
- Maintain communication equipment and accessories
- Establish MOU’s with MOH and Other Stakeholders

Phase 2
- Activate and Deactivate SGUMDEMP
- Activate MOU’s with Stakeholders
- Allocate resources and deploy Emergency Response Personnel accordingly
- Conduct Situation/Impact assessments and report to HEOC and NEOC
- Provide emergency Medical, Diagnostic and other support Services
- Maintain communication with HEOC and NEOC
- Assess and request assistance needed
- Protect equipment, vehicles, medical records, physical plant and other supplies
- Provide reports to MOH and others Stakeholders

Phase 3
- Evaluate the effectiveness of implementation of the SGUMDEMP
- Advise on recovery and rehabilitative efforts
- Implement Business Continuity Plan
- Restore critical health services
- Provide Staff welfare including psychosocial support
- Replenish stock of Emergency Medical, Pharmaceutical and Domestic supplies
- Service equipment and vehicles
- Monitor and Evaluate implementation of recovery and rehabilitative initiatives

Roles and responsibilities of Grenada Red Cross (GRD)

Phase 1
- Develop and update the Grenada Red Cross Multi-hazard Disaster Emergency Management Plan (GRDMDEMP)
- Sensitize staff about the GRDMDEMP
- Establish staff call out List
- Facilitate training and certification of emergency response personnel in Basic First Aid
- Participate in training for First Response Personnel in DRM
- Participate in Sectoral and National planned Exercises
- Participate in Health Services Committee Meetings
- Provide trained personnel to serve on Emergency Medical Teams
- Provide Ambulance Support Services
- Conduct Community Emergency Response Exercises
- Conduct Disaster Risk Reduction activities including home construction
- Procure and pre-position Disaster Relief supplies

Phase 2
- Activate and deactivate the GRDMDEMP
- Allocate resources and deploy response personnel accordingly
- Conduct situation/Impact assessment
- Provide reports to HEOC and NEOC
- Provide disaster relief
- Collaborate with other Health Services Stakeholders

Phase 3
- Evaluate the effectiveness of implementation of the GRDMDEMP
- Advise on the restorative and rehabilitative process
- Continue provision of Disaster Relief including housing assistance
- Provide staff welfare including psychosocial support
- Collaborate with other stakeholders in providing psychosocial support to affected individuals
Roles and responsibilities of St John Ambulance (SJA)

Phase 1
- Develop and update the St. John Ambulance Multi-hazard Disaster Emergency Management Plan (SJAMDEMP)
- Sensitize staff about the SJAMDEMP
- Establish staff call out List
- Facilitate training and certify response personnel in Basic First Aid
- Participate in training for First Response personnel in DRM
- Participate in Sectoral and National planned Exercises
- Participate in Health Services Committee Meetings
- Provide trained personnel to serve on Emergency Medical Teams
- Conduct Community Emergency Response Exercises

Phase 2
- Activate and deactivate the SJAMDEMP
- Allocate resources and deploy First Response personnel accordingly
- Conduct situation/Impact assessment
- Provide reports to HEOC and NEOC
- Collaborate with other Health Services Stakeholders

Phase 3
- Evaluate the effectiveness of implementation of the SJAMDEMP
- Advise on the restorative and rehabilitative process
- Provide Staff welfare including psychosocial support

Roles and responsibilities of Ministry of Agriculture (MOA)

Phase 1
- Develop and Update the Ministry of Agriculture Multi-hazard Disaster Emergency Management Plan (MOAMDEMP)
- Ensure the Development of the Nutrition Services in Emergency Plan (NSIEP)
- Sensitize staff about the MOAMDEMP
- Establish a staff call out List
- Participate in training for first response personnel in DRM
- Participate in Surveillance Committee meetings
- Maintain databases for livestock and food production
- Maintain geo-reference maps of livestock farms, livestock facilities and processing facilities
- Conduct sensitization sessions on food security, safety and preservation
- Maintain stock of seeds and seedlings for replanting post disaster
- Conduct surveillance for animal diseases including emerging animal diseases
- Conduct zoonosis assessments
- Inform and advise on animal disease outbreaks
- Maintain animals’ vaccination programmes
- Advise on quantities, types and storage of emergency food items
- Procure and maintain stocks of farm implements, machinery and accessories

Phase 2
- Activate and deactivate the MOAMDEMP
- Advise on activation and deactivation of NSIEP
- Allocate resources and deploy response personnel accordingly
- Conduct damage/impact assessment on animals, livestock farms, livestock facilities and food production
- Report outbreaks and potential threats to HEOC and NEOC
- Ensure proper disposal of dead animals
- Monitor food distribution and nutritional status of affected individuals and special groups
- Maintain animal diseases Surveillance activities
- Liaise and collaborate response activities with MOH

Phase 3
- Evaluate the effectiveness of implementation of the MOAMDEMP and NSIEP
- Continue monitoring livestock and food production
- Continue surveillance activities for disease outbreaks and threats
- Provide Staff welfare including psychosocial support
- Monitor animal disease outbreaks and report accordingly

Roles and responsibilities of Ministry of Social Development (MOSD)

Phase 1
- Develop and update the Ministry of Social Development Multi-hazard Disaster Emergency Management Plan (MOSDMDEMP)
- Sensitize staff about the MOSDMDEMP
- Establish a staff call out List
- Identify key response personnel including Counsellors and Volunteers
- Participate in training for key response personnel in DRM
- Participate in Health Services Committee meetings
- Conduct need assessment including the medical needs of vulnerable individuals, elderly and persons with disabilities
- Identify and Establish List of vulnerable individuals including location, nature of disability and type of assistance needed
- Collaborate and share information with other Response Entities including MOH and RGPF
- Procure essential relief supplies
- Identify housing/facilities for relocation of persons post disaster

**Phase 2**
- Activate and deactivate the MOSDMDEMP
- Allocate resources and deploy response personnel accordingly
- Conduct situation/impact assessments
- Provide reports to the NEOC
- Recommend and provide humanitarian assistance to impacted individuals/population
- Coordinate relief efforts and monitor inventory management procedures

**Phase 3**
- Evaluate the effectiveness of the implementation of the MOSDMDEMP
- Advise on restorative and rehabilitative process
- Maintain support services
- Provide welfare services including psychosocial support to first response personnel, and affected individuals and groups

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**Roles and responsibilities of the Ministry of Education (MOE)**

**Phase 1**
- Develop and update the Ministry of Education Multi-hazard Disaster Emergency Management Plan (MOEMDEMP)
- Sensitize staff about the MOEMDEMP
- Establish a staff call out List
- Identify key response personnel
- Participate in training for key response personnel including Counsellors in DRM
- Conduct annual assessment of Shelters
- Advocate and recommend safety improvements to shelters
- Facilitate dissemination of disaster related health messages
- Facilitate drills at Schools in collaboration with NaDMA

**Phase 2**
- Activate and deactivate the MOEMDEMP
- Allocate resources and deploy response personnel accordingly
- Activate shelters and manage operations
- Conduct situation/impact assessments
- Provide reports /updates to NEOC
- Report to MOH any health threats identified
Phase 3
- Evaluate the effectiveness of implementation of the MOEMDEMP
- Assist with relief efforts and psychosocial counselling
- Advise on restorative and rehabilitative process
- Monitor situation/impact assessments in collaboration with NaDMA

Roles and responsibilities of Grenada Solid Waste Management Authority (GSWMA)

Phase 1
- Develop and update the Grenada Solid Waste Management Authority Multi-hazard Disaster Emergency Management Plan (GSWMAMDEMP)
- Sensitize staff and Contractors about the GSWMAMDEMP
- Establish a Solid Waste Management Disaster Emergency Management Committee
- Establish staff call out List
- Participate in training for key response personnel in DRM
- Participate in meetings of the Health Services Committee
- Disseminate messages on effective Solid Waste Management
- Promote, monitor and ensure adherence to proper solid waste management practices
- Procure emergency supplies, equipment and accessories
- Report non-adherence to Regulations and Policies
- Identify gaps in Regulations and Policies and make recommendations

Phase 2
- Activate the GSWMAMDEMP
- Allocate resources and deploy response personnel accordingly
- Conduct situation/impact assessments
- Provide reports /updates to HEOC and NEOC
- Report to MOH/NEOC any health threats identified
- Advise and monitor proper solid waste disposal practices

Phase 3
- Evaluate the effectiveness of implementation of the GSWMAMDEMP
- Advise on restorative and rehabilitative process
- Provide staff welfare including psychosocial counselling
- Deactivate the GSWMEMDEMP
Roles and responsibilities of the National Water and Sewerage Authority (NAWASA)

Phase 1
- Develop and update the National Water and Sewerage Authority Multi-hazard Disaster Emergency Management Plan (NAWASAMDEMP)
- Sensitize staff about the NAWASAMDEMP
- Establish a staff call out List
- Identify key response personnel
- Participate in training for key response personnel in DRM
- Participate in meetings of the Health Services Committee
- Disseminate water management disaster related health messages
- Disseminate sewerage management disaster related health messages
- Promote proper water usage and liquid waste disposal practices
- Monitor and ensure adherence to proper water usage and liquid waste disposal practices
- Procure emergency supplies, equipment and accessories
- Improve water storage capacities and security
- Maintain optimum water quality and safety
- Report non-adherence to Regulations and Policies

Phase 2
- Activate and deactivate the GSWMAMDEMP
- Allocate resources and deploy response personnel accordingly
- Conduct situation/impact assessments on water and sewer systems
- Provide reports /updates to HEOC and NEOC
- Report to MOH any health threats identified
- Advise and monitor proper water management and liquid waste disposal practices

Phase 3
- Evaluate the effectiveness of implementation of the GSWMAMDEMP
- Advise on restorative and rehabilitative process
- Maintain the monitoring of water and Sewer systems
- Provide Staff welfare including psychosocial support
Roles and responsibilities of the Royal Grenada Police Force (RGPF)

Phase 1

- Develop and update the Royal Grenada Police Force Multi-hazard Disaster Emergency Management Plan (RGPFMDEMP)
- Sensitize staff about RGPFMDEMP
- Establish a staff call out List
- Identify key response personnel
- Participate in training for key response personnel in DRM
- Participate in meetings of Health Services Stakeholders
- Participate in Exercises involving Health Services Stakeholders
- Procure emergency supplies, equipment and accessories
- Facilitate training in Fire Suppression and Evacuation

Phase 2

- Activate and deactivate the RGPFMDEMP
- Allocate resources and deploy response personnel accordingly
- Provide initial first response including search and rescue, scene safety, preservation of evidence and Incident Command
- Provide traffic and crowd control
- Provide security services to Healthcare facilities and staff
- Provide reports /updates to HEOC and NEOC
- Report to MOH any health threats identified

Phase 3

- Evaluate the effectiveness of implementation the RGPFMDEMP
- Advise on restorative and rehabilitative process
- Provide staff welfare including psychosocial counselling
- Monitor potential threats and report accordingly
6.0 Overview of Health Risks

The history of Grenada indicates that the Island has had its share of catastrophic events but the provision of healthcare services were adequately handled without the need for overseas intervention. However, due to the small size of the Islands, and their geographic location, the Country continues to be vulnerable to various natural and man-made hazards. The following is a risk analysis for Grenada’s Health Sector.

The risk assessment is a method for identifying hazards and vulnerability, and for determining their possible effects on the entire country, a community, health facility, or the environment. The information provided by the risk assessment is essential for:

- **Sustainable development** – following a disaster the sustainable development of the country will be at risk unless programmes and strategies to reduce vulnerability are instituted beforehand; This would ensure that the resources for future generations are protected:

- **Emergency prevention and preparedness** – threats and risks must be identified before a disaster so that adequate plans can be put in place to minimize the effects of the disaster/emergency;

- **Emergency response** - most emergencies can cause major disruption to transport and communications - under these conditions information can be either unreliable or non-existent, if a risk assessment was conducted, this could assist in identifying where the damage may have occurred and the possible effects it may have had;

- **Emergency recovery** – if a vulnerability assessment was conducted before the event it can provide a ‘baseline’ against which to compare the effectiveness of recovery work, by describing the prior condition of the community or area:

Considering the historical impact and occurrences that have taken place before the disaster, the risk assessment will provide the information needed to be inputted to the prevention and preparedness program of the Ministry, to guide the response and emergency recovery of the health sector.
### Matrix 1

| Natural/Man-made Phenomenon | Hazard/Threat | Potential Impact from a Health perspective | Frequency of Occurrence | Area of Potential Damage | Health Facility/Institution at risk | RISK ASSESSMENT | F=Frequency  
S=Severity |
|-----------------------------|---------------|------------------------------------------|-------------------------|--------------------------|----------------------------------|-----------------|----------------|
| Hurricane/Storms            | • Strong winds  
• Fast moving bodies of water | • Death and injuries  
• Damage to buildings  
• Displaced persons  
• Disease outbreak  
• Psychosocial effects  
• Damage to utilities | Moderate | Localized/Entire country | Potentially all Facilities with some more vulnerable. | Hurricane  
F= Low  
S= High  
Storm  
F=Moderate  
S=Moderate |
| Floods                     | • Accumulation of water  
• Fast moving water | • Disease outbreak  
• Death and injuries  
• Displaced persons  
• Psychosocial effects | Moderate | Low lying areas under sea level (Coastal) | Hospitals and Health centers on the coast or in low lying areas and close to rivers. E.g.  
• Sauteurs  
• General Hospital | F=Moderate  
S=Moderate |
<table>
<thead>
<tr>
<th>Natural/Man-made Phenomenon</th>
<th>Hazard/Threat</th>
<th>Potential Impact from a Health perspective</th>
<th>Frequency of Occurrence</th>
<th>Area of Potential Damage</th>
<th>Health Facility/Institution at risk</th>
<th>RISK ASSESSMENT F=Frequency S=Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Damage to buildings and property</td>
<td>Low</td>
<td>All Coastal Areas</td>
<td>Victoria</td>
<td>F=Low S=High</td>
</tr>
<tr>
<td>Tsunami</td>
<td>Powerful fast moving body of water</td>
<td>• Death and injuries</td>
<td></td>
<td>All within 1 mile of the coast</td>
<td>St. Georges Health Center</td>
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<td></td>
<td></td>
<td>• Contamination of water and food</td>
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<td></td>
<td></td>
<td>• Damage to utilities</td>
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</tbody>
</table>
| Earthquake                  | Shaking of the earth   | • Death and injuries  
• Displaced persons  
• Psychosocial effects  
• Damage to buildings and property  
• Damage to utilities | moderate                | Localized/Entire country                               | All facilities                      | F= Moderate  
S= Low                                      |
| Fires                       | Excessive heat with flames and smoke | • Death and injuries  
• Displaced persons  
• Psychosocial effects  
• Damage to buildings and property  
• Damage to utilities | High                   | Localized areas and properties                        | All health facilities              | F=High  
S= Moderate                                 |
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<tr>
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<th>Hazard/Threat</th>
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<th>Area of Potential Damage</th>
<th>Health Facility/Institution at risk</th>
<th>RISK ASSESSMENT</th>
</tr>
</thead>
</table>
| Drought                     | Prolonged shortage of water           | • Water and food shortage  
• Increased fires  
• Disease outbreaks  
• Loss of livelihood  
• Psychosocial effect  
• Deaths and illnesses  | Low                     | Entire country | All Health facilities would be affected                       | F= Moderate  
S= Moderate   |
| Disease Outbreak            | Contagious spread of infectious diseases | • Increased morbidity and mortality                                              | unpredictable           | Entire country | All Health facilities would be affected and can overwhelm existing capacity of health services     | F=Moderate  
S= Moderate-High |
| Accidents (Mass Casualties) | Concussive forces, crushing forces and suffocation | • Death and injuries  
• Damage to property                                                             | Moderate               | Throughout the country | Can overwhelm existing capacity of health services                                                   | F= Moderate  
S= Moderate-High |
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<th>RISK ASSESSMENT</th>
</tr>
</thead>
</table>
| Landslide/Rock falls        | Land slippage | • Death and injuries • Damage to property/infrastructure | Low                    | Localized to mountainous areas and western coastline | Health Facilities in the localized area | F=Low  
S=Moderate-High |
| Heat Waves                  | Excessive increase in atmospheric temperature | • Death  
• Heat stroke  
• Dehydration | Low | Entire country | All Health facilities would be affected | F=low  
S=moderate |
| CBRNE Events                | • Oil spills  
• Chemical spills  
• Radiation leaks  
• Explosions  
• Bio-terrorism | • Death and injuries  
• Damage to property/infrastructure  
• Increased morbidity and mortality  
• Displaced persons  
• Psychosocial effects | Low | Localized/Entire country | Can overwhelm existing capacity of health services | F=Low  
S=Moderate-High |
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<thead>
<tr>
<th>Natural/Man-made Phenomenon</th>
<th>Hazard/Threat</th>
<th>Potential Impact from a Health perspective</th>
<th>Frequency of Occurrence</th>
<th>Area of Potential Damage</th>
<th>Health Facility/Institution at risk</th>
<th>RISK ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyber-attacks</td>
<td>Disruption of I.T Services and communication networks</td>
<td>• Psychosocial effects</td>
<td>Low</td>
<td>Entire country</td>
<td>Disruption in some Health services</td>
<td>F=Low S=Moderate-High</td>
</tr>
</tbody>
</table>
For the purposes of this Qualitative Risk Assessment the following terms are described as outlined:

**Phenomena** - (natural/manmade) are unwanted events that can act upon the world and cause some form of harm if they should take place.

**Hazard** - refers to the adverse consequences of some primary event, sequence of events or combination of circumstances.

**Risk** - is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.


**Frequency** - refers to the degree of probability that the phenomenon will occur and is a qualitative estimate.

**Severity** - refers to the degree of probability that the impact of such an occurrence will be severe. The ascribed (qualitative) values are as follows:

<table>
<thead>
<tr>
<th>Severity</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>41% and greater</td>
</tr>
<tr>
<td>Medium</td>
<td>21-40%</td>
</tr>
<tr>
<td>Low</td>
<td>0 – 20%</td>
</tr>
</tbody>
</table>

7.0 Mitigation/Prevention

The Administrator/Manager of each Health Facility is responsible for the protection, maintenance and safety of the buildings, equipment, supplies and physical surrounding of the property.

Each staff member is responsible for making physical arrangements to ensure the protection of the Facility’s equipment and materials normally found in his/her work area.

In the absence of the Department’s Manager /Supervisor it is the responsibility of the most Senior Staff on duty to undertake physical arrangements to ensure the protection of equipment and supplies. Where possible, staff will perform actions to:

a) Prevent hazards identified at **Matrix 1** from developing and

b) Seek to reduce the effects of hazards should they occur
Periodic vulnerability assessments of Healthcare Facilities should be conducted utilizing approved Assessment Tools such as the Safe Hospitals Assessment Tool for larger Healthcare Facilities and the SMART Healthcare Facilities Assessment Tool in the case of smaller Healthcare Facilities. Safety Improvement Plans should be developed for each Healthcare Facility and Safety Improvements Measures prioritized and implemented.

Prevention is part of the regular mandate of all Health Agencies within the Nation. These Agencies should work together on strategies to prevent or reduce risks to Healthcare Facilities as well as on the public health of individuals and communities.

8.0 Pre-event Planning and Preparedness

8.1 Training

The outcome of any disaster is determined by the magnitude of the event and the extent of preparedness of the population, including first responders. One of the main ways to increase preparedness is by conducting training at all levels. The training must be expansive and should include multiple areas ranging from sensitization of the public on hazards and their effects to more in-depth professional training for responders and health personnel, such as Mass Casualty Management (MCM), Emergency Care and Treatment (ECAT), Incident Command System (ICS) among others. While NaDMA has the overall mandate to conduct training for the entire country, the MOH has the mandate to conduct training that pertains to aspects of health. A training plan with time lines and persons responsible for all aspects of the training has to be developed early, preferably at the beginning of the year, by the disaster management sub-committees and an evaluation has to be done at least annually to assess the extent and effectiveness of the training conducted. These training should also include the conducting of drills and simulations to test the disaster plans and to make recommendations for improvement.

8.2 Exercising of the plan

Once a plan is written and institutionalized it has to be tested from time to time. It is logistically difficult to test all aspects of the plan at any one time but sections can be tested successfully.
The HDMO in collaboration with NaDMA and PAHO should design and conduct periodic drills and simulations to test specific aspects of the health sector plan. The tests should also encompass specific elements in the individual plans of the various health divisions and organizations to ascertain how they respond to the disaster scenario and fit into the overall plans of the health sector. The different aspects of the plan that are tested should then be evaluated and the plan should then be reviewed and revised accordingly to accommodate the recommendations. These tests should be conducted at least annually during a convenient time and resources should be made available to conduct the test.

8.3 Disaster Related Information

Information on health in regards to disasters has many areas that need to be examined. These can cover the health information that the public needs to know before a disaster, the information they need to be given on how to react during a disaster and the health aspects that they can expect after a disaster. These points also relate to personnel who work in health and health related areas. The Health Services Committee (HSC) and /or Health Disaster Committee (HDC) have the responsibility of preparing the necessary information that has to be disseminated to the public advising them on their role before, during and after a disaster. However, the Health Promotion and Public Education department of the Ministry of Health could be delegated that responsibility since they possess the expertise. This could take the form of brochures, leaflets, videos, talk shows and interviews. The messages have to be sustained and not be one off and should be done in collaboration with NaDMA, the private sector and the Government Information Service. Examples of these could be tips on how to protect and purify water supply, what to do before and after the impact of a hurricane, measures to undertake if a tsunami is expected, among others.

8.4 Emergency Communication and Alerting System

In any disaster, communication is vital and attention needs to be given, well before any impact, in ensuring the necessary infrastructure is in place. Appropriate communication equipment e.g. VHF radios, land lines, cellular telephones and IT systems with computers must be present in the EOC. This will facilitate contact with the National EOC as well as with the various health facilities. The computers will facilitate rapid access to the contingency plans of the health sector and the logging of information as it comes to hand. These radios must be maintained in good working condition and radio checks should be done with the national EOC daily or at least once per week. Radios must be placed in all health facilities so that reports and directions can be given and received. Monthly checks should be done with the health facilities to ensure that the system is up and running and that there are trained operators to manage these calls. Persons
must be trained in the use of the radios and in their maintenance, a responsibility of the HSC and HDC. Backup power supply sources must also be provided. NaDMA’s communication system, once operational, is designed to provide linkages with key responders especially Police and Health and therefore should be well understood by key stakeholders. The system is expected to activate an alerting system that is linked by radios to the key responding agencies in Grenada, in the case of a disaster.

The national alerting system is the responsibility of NaDMA but any level 1 or level 11 emergencies especially those requiring a health response may well be first reported to the health facility and this report will be communicated to the MOH who in turn will notify NaDMA.

8.5 Asset Management and Mobilization

**Asset management** begins in the preparedness phase when lists of essential items are developed for all divisions in the health sector. The items on these lists can be divided into fixed and disposable items. In regard to the fixed items, e.g. buildings and large pieces of equipment, these have to be safeguarded by putting in place mitigation methods, like installation of hurricane shutters, insurance coverage and regular maintenance in the hope that, depending on the type of hazard and extent of the disaster, they are available after to perform their function. The more tangible items should be managed differently as in the case of pharmaceuticals, medical supplies and materials, that would be essential after a disaster. Lists of these essential items should be developed and basic quantities stockpiled in a safe room or warehouse. The quantity stocked will depend on the facility, its size and the expected need following the type of hazard. These items will have to be managed following the first in first out rule and should be monitored and checked annually. In countries where supplies and materials are sometimes in short supply it is crucial that if these stores are used in the routine day to day operations that they are replaced as soon as possible. This is important in the aftermath of any disaster as the management of assets is of prime consideration and competent persons have to be tasked with this responsibility.

**Mobilization** is the process of making something capable of movement or to have personnel and resources ready to move or act when necessary in as short a time as possible. This involves the training and management of assets and the putting in place of procedures to initiate mobilization. Taking the example of human resources, there has to be a list of all human resources available in the health sector and the contact numbers and addresses. The persons need to be trained as to their role and responsibilities if mobilized to respond to a disaster. In the case of supplies and materials that are stockpiled then accessing these supplies would depend on the need. The mechanism to mobilize and use these resources will depend on the extent of the disaster and should be initiated by the Health Services Committee in case of a
National disaster or the Health Disaster Committee in the case of a localized event that do not require the mobilization of national resources.

8.6 Resource Mobilization

No program can be effective if resources are not allocated to it, whether human or financial. In the case of disaster management there is always the notion that resources spent when there is no disaster or event are resources lost. This is not necessarily the case and the MOH has to ensure that resources are placed at the disposal of the HMDO to conduct training and other activities to minimize the effects of any hazard impacting the country. Financial resources are not the only consideration as personnel, supplies and equipment are all needed before and after a disaster. A line item in the annual budget should be included so that funds will be available to conduct some of the activities necessary to mitigate potential risks.

8.7 Shelter/ Evacuation Planning

The main responsibility for shelters is with the Ministry of Education but the MOH needs to be involved in the planning and inspection process to determine the number of persons who could be accommodated and at which shelters as well as the suitability of buildings that can be used as shelters. The inspection of amenities in the shelters remains the responsibility of the MOH. The identification of buildings that could be used as alternative public healthcare facilities as well as evacuation orders of existing healthcare facilities in the event of disasters are also the responsibility of the MOH. The MOH should also ensure that medical posts/rooms are available at each shelter.

8.8 Application of Assessment Tools

PAHO has developed two (2) assessment tools to assess the integrity of hospitals as well as small primary care facilities. These tools should be applied during the pre-disaster phase and the recommendations made should be implemented. If these are done much loss and destruction to health facilities will be averted. Simple measures can be implemented which could mitigate and save lives as well as financial and material resources. Application of the Safe Hospitals Assessment Tools was conducted at the General Hospital in 2008 and repeated in 2014. The results indicated the need for the implementation of safety improvement measures to that facility. In 2015-2016 the SMART Hospitals Assessment tool was applied to all the smaller public healthcare facilities including Princess Alice Hospital and Princess Royal Hospital. As a result, five (5) facilities have been selected for improvements in accordance with the SMART Hospitals standards.
9.0 Response

9.1 Health Emergency Operation Center (HEOC)

The Health Emergency Operation Center (HEOC) is the unit initiated by the MOH to manage a disaster/emergency that impacts public health. It is the role of the PS on the advice of the CMO to activate and convene the HEOC when he/she deems it necessary, likewise to deactivate the HEOC or call the stand down. The composition of the HEOC is as follows:

- The Permanent Secretary
- The Chief Medical Officer
- Senior Medical Officer
- Chief Planner
- Health Disaster Management Officer
- Chief Nursing Officer
- Director of Hospital Services
- Chief Environmental Health Officer
- Chief Community Health Nurse
- Senior Health Promotion Officer
- Public Relations Officer
- Finance Officer
- Senior Administrative Officer
- Private Health Sector Representative
- Chief Pharmacist
- Medical Officer of Health (Epidemiologist)

The roles and responsibilities or Action Cards of Key Ministry of Health Personnel or HEOC members are detailed in Appendix (D). The current area identified as the HEOC is the conference room of the MOH on the first floor of the Ministerial Complex adjacent to the CMO’s office. The alternative location is to be determined. The HEOC should be equipped with the necessary items to enable members to perform their tasks. These should include communication equipment, electricity, chalk board, markers, masking tape, lanterns, dry food items, water and lap tops, among others. The function of the HEOC has to do with the management of the disaster/emergency and to maintain constant contact with the National Emergency Operational Centre (NEOC) so that decisions made at the HEOC and NEOC are not at variance. It must be noted that a member of the HEOC will be expected to represent the Health Sector at the NEOC in the event of a Level 111 event; therefore provisions have to be made for members’ inter-operability. The HEOC needs to be a secure room with adequate space to house the various sections of a standard EOC and the necessary reference documents e.g. the plans for all the health sector entities both private and public. Communications with the NEOC and HEOC as well as with all health facilities is essential and the positioning of radio equipment...
at the HEOC and all health facilities must be a priority. This center (HEOC) will receive frequent reports from the various departments and sections of health, including public and private and control the operations of the health sector response. It will liaise with the international health agencies in the event of level 111 disasters and advise on any aid offered. A member of the HEOC should take part in the International donor’s meetings and assist in guiding this group as to what health areas their assistance is needed. Should a grant proposal have to be developed members of the HEOC should be involved in approving the document before it can be submitted.

9.2 Reporting and Documentation

Accurate information is essential if informed decisions are to be made. The designated reporting forms have to be used and reports made to the HEOC on a regular and predetermined frequency by all health sector agencies. These reports have to be logged in at the HEOC and records kept of the actions taken. All radio calls or any type of information received by the HEOC has to be logged in and kept in a chronological order. These documents will form the records of the management of the disaster. The HEOC has also to make regular reports, at least twice daily, to the NEOC and the Minister of Health to keep them informed of the actions taken in the management of the disaster.

9.3 Shelter/ Evacuation Planning

The surveillance of infectious diseases post disaster also has to be conducted by the MOH. Before an evacuation order is given the advice of the MOH is needed since there are certain situations that warrant an evacuation whilst others may not. Potentially hazardous chemical spill, fires or flooding are examples where the MOH may be called upon to give advice on evacuation. This exercise is not to be taken lightly as injuries, loss of life and property can all occur in the evacuation process.

9.4 Readiness, Assessment and Report

Before a disaster strikes all sectors should have prepared a plan, conducted drills and exercises to test their respective plans and put measures in place to be able to respond to any hazard. Reports on the sector’s state of readiness should be communicated to NaDMA and any areas of weakness addressed.

When a disaster occurs, a needs assessment has to be conducted at the local/district level and it should include the following:
• Definition of the affected population - geographic areas affected; estimated size of
the population; sex, age and distribution; number of deaths, number of casualties,
types of injuries,

• Determining the immediate health needs of the population - this will vary depending
on the hazards (water, food, medical resources such as re-hydration salts, first aid
for scratches and bites, plaster of paris and other materials for broken limbs,
ventilators, types of drugs needed etc.)

From this, a fairly detailed listing of needs must be generated as part of the overall “Action
Plan”. This information must be forwarded to the HEOC for processing. The information
generated must be transferred as part of the basic reporting system or by maps, charts or
simple word documents.

Means of acquiring this information

• Aerial observation
• Reports from Health Centres, DMO, etc.
• Reports from the Media (NB not always accurate)
• Surveys

Responsible Parties

• Senior Hospital Services Personnel
• Senior Community Health Services Personnel
• Private Healthcare Providers

This will be coordinated and forwarded to the HEOC or CMO or other relevant authority in the
coordinating mechanism. The information must reach the HEOC. The Health Services
Committee (HSC) will finalize and authorize the Health Needs List and circulate to international
partners through the established lines of authority.

9.5 Media Strategy

All matters related to the sharing of information with the media will be handled by the Health
Promotion and Public Relation Department of the Ministry of Health. This Department will
develop a media strategy and a designated liaison for communicating with the media. He or
she will be part of the planning committee and will advise the media of the situation. The
Minister may also choose to address the media after being fully briefed by the CMO, PS or
HDMO.
9.6 Action Plans

The Action Plan is a set of activities developed to manage a specific event. Pre-determined hazard specific action plans and action cards detailing specific roles and responsibilities of individuals and response agencies are usually developed and established but there will be instances when the development of spontaneous action plans will be inevitable. The activities to be undertaken will be prioritized based on the extent of the impact of the hazard and the availability of resources. The activation of the HEOC will also be dependent on the extent of the impact. In the case of a Level 1 or Level 11 disaster, the Health Sector Disaster Management Committees namely; the Health Disaster Committee (HDC) and Health Services Committee (HSC) will determine and initiate the appropriate action where as in the case of a Level 111 disaster, the input of the NaDMA and other stakeholder agencies will be solicited.

9.7 Stand Down Operations

As agencies continue to implement the action plan and monitor the health status, recommendations can be made to close operations. This should only be done after the disaster/ emergency conditions have been sufficiently addressed and there is some semblance of normalcy. The PS or HEOC manager, after consulting with the CMO and HDMO and in the case of a Level 111 event with NaDMA, will give the ‘All Clear’ to stand down operations and deactivate the HEOC and the response plans of other health stakeholder entities. This standing down will relate specifically to the HEOCs and other health emergency response agencies. Recovery activities will then be initiated in order to return to normalcy.

9.8 Staff Welfare

The ripple effects after the impact of any hazard on the population may be significant. These effects may include physical injuries, displacement, damage to property and even loss of lives. Individuals as well as their loved ones can be severely affected. The emotional, physical and financial tolls can be jarring and traumatizing and no one in the community is immune. Healthcare providers and staff who maintain facility operations are no exception and yet they are a critical component in the emergency response phase. They are expected to care not only for their own loved ones but community members at large as well as the Health Services facilities.

Leadership plays a vital role in ensuring health services staff and their loved ones feel cared for and are safe. Therefore provisions must be made to cater for the immediate and short term needs of staff including emergency first response personnel. The immediate needs of healthcare providers to be catered for, include but are not limited to Shelter, Transportation,
Food, Water, Hygiene, Care for loved ones, Behavioral health care, Funding, Communication/charging stations, Flexible working hours and Daycare facilities and services. The short term needs may include Clothing/Laundry, Transportation, and Nourishment, Home improvement, Pay emoluments, Leave and Volunteers assistance, among other. Notwithstanding the impact of the hazard on the general population, priority consideration for welfare assistance, including psychosocial support, should be given to healthcare providers and emergency first response personnel since they would still be expected to maintain the provision and delivery of healthcare services despite being impacted themselves.

10.0 Recovery

The aim of recovery is to ensure the salvaging of buildings, equipment and supplies and the restoration and resumption of services to pre-impact levels and standards. It involves the conducting of damage assessments and prioritization of facilities and services to which attention should be given. In essence, it is the implementation of the Business Continuity Plan. It involves:

- Preparation and implement of procedures necessary to facilitate and support the recovery of all operations and functions.
- Coordination with personnel and external individuals and organizations.
- Preparation of procedures necessary to facilitate the relocation and migration of operations to the new or repaired facility.
- Preparation of procedures for protection against a continuing threat.
- Preparation of procedures for the search of secondary threats and actions to be taken, if discovered.

Following is a suggested Recovery Phase Organizational Chart
11.0 Surveillance and Confirmation of Impact

11.1 Alerts and Warnings

An Emergency Alert is a national warning system and it is one of many ways emergency services such as police, fire and NaDMA, can warn a community/country of a likely or actual emergency. Emergency Alert is not used in all circumstances as it will depend on the nature of the incident. It is the responsibility of NaDMA to issue alerts and warnings when they have been briefed on a certain situation.

A warning is the period of time between knowing and receiving a message that a particular hazard is likely to strike a community to the time it actually impacts. The warning phase may be quite short as in the case of an earthquake (second to minutes) or quite long as in the case of a hurricane (hours to days). The warning system sends messages to pre-determined agencies or individuals within a specific area, informing about likely or actual emergencies such as fire, flood, or extreme weather events. Individuals should act as soon as they become aware of the warning. The warning is also an analysis and forecasting of the nature of a possible hazard.

11.2 Initiation of Evacuation

At any stage of a disaster there may be need for an evacuation. This may be for small localized communities that are at risk to a particular hazard e.g. a chemical fire, or for an entire area e.g. persons in low lying areas during a flood. The initiation of an evacuation is not a decision taken lightly, but with pre-disaster hazard mapping and planning the decision could be made easier. Evacuation may be partial or full, i.e. when only persons, in at risk areas, are ordered to evacuate and not everyone e.g. persons in large well-constructed houses may not be asked to leave but their neighbors in shanty areas may be told to do so if a hurricane or flood is threatening.

The evacuation order is normally issued by NaDMA acting on informed intelligence supplied by professionals in that particular field, e.g. Meteorological Office and authorized by the Minister of National Security. The Police Department would be the executing agency working on behalf of the NaDMA in this situation.

11.3 Linkages with National Emergency Operation Centre (NEOC)

Once a disaster is declared and the NEOC has been activated, it is the duty of all agencies under the NaDMAC/NEAC to activate their own disaster plans and set up their respective EOCs. The activities that take place in the respective EOCs can be looked at as the everyday tasks and duties that that particular agency is expected to perform but only that it is in a disaster situation and it will be more intense and far reaching. The information gathered in the EOC along with the responses taken must be transmitted to the NEOC, in order that the National Level is kept fully abreast of the situation and accurately informed as to the actions taken by
that particular EOC. The HEOC should also have links with EOC’s from other agencies so that if and when assistance is needed it can be provided in a timely manner. These intersectoral linkages will help to manage a disaster in a much more efficient manner and prevent duplication.

11.4 Monitoring and Initial Reports
In order to facilitate the different linkages there has to be regular reports to the NEOC from the HEOC. A reporting schedule will be developed and the frequency of reports will be determined based on the severity of the event. Reports will be submitted on prescribed reporting forms or via telecommunication or electronic media. When the stand down has been issued the PS/CMO or designate will be responsible for keeping the NEOC or NaDMA informed of the situation in the aftermath of the disaster.

11.5 Activation of Health Sector Disaster Emergency Management Plan
The PS on advice from NaDMA will activate the National Multi-hazard Health Sector Disaster Emergency Management Plan. The different departments and agencies included in that plan will in turn activate their respective emergency plans if warranted and so advised. If the HEOC is “stood up” then provisions will be made for the members to meet immediately and begin managing and coordinating the disaster. All individual members of the health sector will be expected to perform their duties assigned to them in their respective plans to the best of their ability. Where physically or mentally unable to do so, then alternative arrangements will have to be found by the EOC or their department head.

Triggering mechanisms for the National Multi Hazard Health Disaster Emergency Disaster Management Plan:

The triggering mechanisms for the activation of the National Multi-hazard Health Sector Disaster Emergency Management Plan are as follows:

- Where the impact of a disaster is large enough to require the resources from health facilities (hospitals, health centres) and is beyond the capacity of the first responders e.g. aircraft crashes, ferry/vehicular accidents, floods.

- Where the disaster or impending disaster is one that cannot be managed without the activation of national and/or international support e.g. pandemic.
Where the threat or hazard is large enough that the predicted or actual impact warrants a national or international response e.g. tropical storm or hurricane, heavy or persistent rainfall with the potential for massive flooding, landslide that may damage or destroy several structures with possible fatalities.

11.6 Activation of the Health Sector Emergency Operating Centre (HEOC)

When the National Multi Hazard Health Sector Disaster Emergency Management plan is activated the CMO in collaboration with the HDMO will open the Health EOC which will support the implementation of the plan. The Health Emergency Operations Centre (HEOC) is the coordinating hub for the management of emergencies and disasters by the Health Sector. The HEOC will work in close collaboration with the National Emergency Operation Centre (NEOC) at NaDMA. The designated person stationed at the NaDMA will be selected by the Permanent Secretary.

The purpose of the HEOC is as follows:

- To facilitate the management of the health disaster
- To ensure that all information regarding the threats or impacts to health are consolidated in one place

The functions of the HEOC are as follows:

- To generate an overall health situation report from the Health Sector
- To devise a plan of action in close collaboration with the various Health Departments and healthcare support services and agencies
- To devise the methodology for the implementation of the action plan
- To implement through the various entities of the Health Sector the plan of action to ensure that the management of health resources are coordinated (this includes personnel, equipment, vehicles, etc.)
- To prioritize the health impact and allocate resources as required
- To provide the NEOC with information on the national status of health before, during and after impact
- To make decisions (in collaboration with the NEOC) on the use of national resources
11.7 Plan Execution

Once the event has occurred a response has to be initiated. The response mechanism is tied to the varying levels of emergencies identified above and itemized below.

**Level I**

For emergencies at Level 1 the response stays within the First response agencies which are responsible for daily emergency service.

**Level II**

Where the emergency exceeds the capacity of the First Response agencies and the management span of the Incident Manager, the HEOC may be activated to support operations.

**Level III**

Where the emergency triggers activation of multiple Health departments plans and may exceed national capacity, the HEOC will be activated in coordination with the NEOC to support operations.

The response mechanism is intricately tied to the type of hazard or threat and involves the following:

1. Alert and Notification
   - Call Out Procedures
2. Activation and deactivation
3. Mobilization and deployment
4. Resource allocation
5. Incident management procedures
6. Scene stabilization
7. Triage and Treatment
8. Transport and hospital care
1. Alert and Notification:

This generally describes a call out of all responsible persons to alert them on the existing or impending hazard and/or emergency. There are different categories of alert and notification depending on the hazard. It should always follow a chain of command.

2. Activation and Deactivation:

Once the responsible persons have been alerted, and the triggering mechanisms identified, the Multi-hazard Health Sector Disaster Emergency Management Plan may be activated and the MOH will go into emergency operations for a particular hazard. This means activating the Health Emergency Operations Centre or Disaster Command Centre. It is important to ensure orders of deactivation are issued to all response agencies that were activated once a state of normalcy and safety has been determined and declared by the relevant authorities.

3. Mobilization and Deployment:

The provision of human and material resources in an emergency requires a considerable amount of organization. Systems must be put in place beforehand as part of pre-disaster activities to ensure efficient and effective response. This includes the identification and zoning of on-call staff, vehicles, equipment, materials and supplies.

On-site medical treatment is required for multiple casualties, such as a road traffic accident, collapsed buildings, landslides and large scale food poisoning; in such a case hospital, will activate the Mass Casualty Management Plan and mobilize and deploy MCM teams to the scene. In addition, The HEOC as well as the relevant departments will react as per their Standard Operating Procedures and plans.

4. Resource Allocation:

This process involves the identification and deployment of the necessary personnel, equipment and other resources required to respond.

5. Incident Management Procedures:

The Incident Command System would be used for coordinating the response effort at the scene of the incident. The health response team will collaborate with the Incident Commander who is usually a Senior Police Officer.
6. Scene Stabilization:

This is primarily the role of the Police and Fire Service and Healthcare responders should ensure the scene is stabilized and entry authorized by the Incident Commander.

7. Triage and Treatment:

This refers to the sorting and treatment of victims. This is usually undertaken at the Hospital or at the scene of an incident. This process is further elaborated in the Mass Casualty Management plan referred in the Appendix.

8. Transport and Hospital care:

The identification and coordination of appropriate vehicles to transport casualties, personnel and equipment is critical to the response. There is a Transportation Plan referred in the Appendix which will be activated. Hospitals also need to be prepared and organized to receive and manage the patients from mass casualty events. These procedures are outlined in the respective Hospitals’ Disaster Management Plans.

11.8 Management of Dead Bodies

In any disaster, inevitably there are people who will die, either at the site due to the disaster or afterward in a medical facility. Those dying at the site of the event or in the AMP should have all particulars logged and after being secured they should be transported to an undertaker identified before the disaster so that they can be processed and any forensics done. Those dying at the General Hospital or at any of the other hospitals or healthcare facility may first be accommodated there in a designated secure area before transfer to the morgue in that hospital. If, however, the hospitals’ morgue capacity is overwhelmed, the MOH on the advice of the Environmental Health Department is to make arrangements for the accommodation of the bodies in other suitable areas. This maybe a large cold storage facility or cold storage refrigerated trucks belonging to the private sector. The preservation of the bodies is important for the later identification of the bodies and the handing over to families for closure. The meticulous logging of the belongings and where found and the collection of parts is important not only to identify the individual but also to assist in the forensic case if necessary. The use of mass graves is not the first line of disposal to be instituted and is only considered as the last
resort. The Mass Fatality Management Plan which is annexed will provide specific guidelines for the management of mass fatalities.

11.9 Mass Casualty Management

Mass casualty management is a means whereby organizations and emergency response agencies work jointly through institutionalized procedures, to minimize morbidity and mortality in a mass casualty event through efficient use of existing human and material resources. In the case of Grenada when there are more than 5 victims in a single event this will warrant the declaration of a mass casualty incident because that number of causalities outstrips the local emergency medical services, particularly the General Hospital’s ability to respond in a normal way. The procedures to be followed are contained in the Mass Casualty Plan.

11.10 Treatment and Triage

It is the raison d’être of the health sector to treat any victim(s) of a disaster. The Mass Casualty Management (MCM) plan gives details on the number of victims that constitute a mass casualty event in Grenada and the procedures involved in the activation and execution of the plan. The method of triage and the processing of the victims are also contained in that plan. The establishment of the Advanced Medical Post (AMP) at the site of the disaster and the stabilization of the victims are also outlined therein. In cases where the incident is confined to only a few victims that can be handled by the usual emergency response mechanisms, the regular procedures are followed. If a level 111 disaster is declared, then local response mechanisms are activated and where possible every effort should be made to minimize pain and suffering. An appeal for international assistance must then be initiated through the NaDMA.

11.11 Transportation Plan

In cases of Level 1 or Level 11 disasters the local national health response should be initiated and the victims transported by ambulance to the nearest health facility or hospital. The MOH Transportation Plan (Appendix E) as well as the services of private ambulances may have to be requested if the situation warrants. Victims on the sister islands that need specialist treatment may have to be transported to the mainland by air ambulance or ferry at the earliest convenience. Transportation may also be needed to transport health response personnel from their homes to and from the health facility or incident site when and if there is no availability of public transport or if the roads are impassable. Ingenious ways should be included in the plan to
facilitate transportation of personnel and materials. In the case of a Level 111 disaster a field hospital or health post may have to be positioned near the incident site to treat and care for the victims. In this case the medical personnel, supplies and equipment would have to be transported to the impacted area.

12.0 External Assistance, Bilateral Arrangements and MOU’s

Before the disaster, a list of the resources available would have been compiled and available to the HEOC. However, in a disaster especially of a level 111 magnitude that requires international assistance much of these may not be available and a rapid needs assessment would have to be done. The mechanism for external assistance is that the local agencies as part of their regular reporting to the NEC would indicate the help needed in their area. The HEOC will collate this information for the health sector of the entire country and inform NaDMA about what is required. NaDMA will then inform CDEMA who will inform the international donor agencies, such as PAHO, accordingly.

During the preparedness phase, there is need to plan and have discussions with interested parties and establish MOU’s and agreements that would take effect should a level 111 disaster impact the Country. These MOU’s would be between local entities e.g. Private hospital, medical clinics and distributors of pharmaceuticals. The idea would be for their products and facilities to be accessed and made available to the HEOC for use as needed. Included in these MOU’s would be some form of compensation for the resources used. Having an MOU would greatly facilitate the rapid deployment of resources in a disaster.

Bilateral agreements with neighboring states will help to initiate and simplify the process of obtaining any assistance from these Countries in a rapid and less cumbersome manner. In the case of Grenada there are bilateral agreements with Cuba and Trinidad for emergencies but these arrangements must be revisited and extended to include other Countries, especially to cater for disaster situations.

13.0 Continuity of Operations and Recovery Management

13.1 Business Continuity Plan

After any disaster, especially a Level 111 event, it is important that the country return to a state of normalcy as soon as possible. For this reason, a business plan should be developed that will help to guide the process. From the health sector point of view, the idea of such should not be too difficult as health is known to be very resilient. All agencies in the public and private sectors must develop their respective business continuity plans and should be aware of each other’s
plans as well. Health has to be considered as a business and plans put in place to ensure the return for “business as usual” as soon as possible after any disaster.

13.2 Identification of Alternative Facilities for Operations

All critical areas of operation, as well as healthcare facilities, should have an alternative site designated to perform duties after a disaster, if adversely affected. A template, as shown below, should be developed indicating possible designated areas and alternative sites, in case the first choice is unavailable for operation post disaster. The Ministry of Health, and other public and private health facilities and agencies, need to include in their respective plans and MOU’s to facilitate movement of operations after a disaster, if it becomes necessary.

NB. These sites are to be determined based on type and extent of impact and availability of buildings and MOU’s established. Potential alternative sites may include government buildings, community centres, public halls or public buildings.

<table>
<thead>
<tr>
<th>Current Sites</th>
<th>Primary Site</th>
<th>Potential Alternative Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOH Head Quarters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health EOC</td>
<td>Ministry of Health</td>
<td></td>
</tr>
<tr>
<td>Telecos and message room</td>
<td>Conference Room</td>
<td></td>
</tr>
<tr>
<td>Minister Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMO Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief Nursing Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief Environmental Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief Planning Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Promotion Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Health Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Hospital</td>
<td></td>
<td>OTMC, Stadium, Norton’s Hall</td>
</tr>
<tr>
<td>Mt. Gay Psychiatric Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Princess Alice Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Princess Royal Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richmond Home for the Elderly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District Health Centres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Stations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St Georges University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Augustine Medical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. John Ambulance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grenada Red Cross Society</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
14.0 Hazard Incidents and Hazards and Threats Codes

A.1 Natural hazards
  A.1.1 Fires
  A.1.2 Floods
  A.1.3 Earthquakes
  A.1.4 Hurricanes
  A.1.5 Landslides
  A.1.6 Tsunamis
  A.1.7 Droughts
  A.1.8 Volcanoes

B.1 Public Health threats
  B.1.1 Dangerous Infectious Diseases

C.1 Man-made hazards
  C.1.1 Chemical, Biological, Radiological, Nuclear Events (CBRNe)
  C.1.2 Accidents (road, air and sea)
  C.1.3 Explosions/bomb threats
  C.1.4 Cyber attacks
## D.1 Hazards and Threats Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| **CODE BLUE** | **MEDICAL EMERGENCY**  
Cardiac Arrest, Asthmatic Crisis,  
Hypovolemia, Hypoglycaemia, Hyperglycaemia, Seizures |
| **CODE YELLOW** | **INTERNAL EMERGENCY**  
Plumbing / Sewerage Disruption, Chemical Spills, Electrical problems |
| **CODE RED** | **FULL EVACUATION**  
Fire/Smoke, Volcanic Eruption,  
Radiological/Bio-nuclear incidents/accidents, Tsunami |
| **CODE ORANGE** | **PARTIAL EVACUATION**  
Infectious disease/Isolation |
| **CODE PURPLE** | **MISSING PATIENT**  
BOMB THREAT |
| **CODE GREEN** | **PERSONAL THREAT**  
Threat to staff/clients |
| **CODE BROWN** | **EXTERNAL EMERGENCY**  
Vehicular Accidents, Aircraft Accidents, Boat accidents |
15.0 Health Sector Entities Sub -Plans and SOP’s

Each health sector agency or entity has to develop plans for internal and external disasters and emergencies. These plans should be hazard specific and contain Standard Operating procedures (SOP’s) for the management of specified hazards as indicated in Section 12.0 “Hazard Incidents”. These plans should be annexed to comprise the National Multi-hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP). They include:

15.1 Ministry of Health Head Quarters Multi-Hazard Disaster Emergency Management Plan

15.1.1 Surveillance Manual/Plan
15.1.2 Infectious Disease Management Plan
15.1.3 Health Emergency Operation Centre Plan
15.1.4 Health Promotion and Public Education Disaster Emergency Management Plan
15.1.5 Pharmacy Services Multi-hazard Disaster Emergency Management Plan
15.1.6 Procurement Services Multi-hazard Disaster Emergency Management Plan
15.1.7 Administrative Section Multi-hazard Disaster Emergency Management Plan
15.1.8 Mass Fatality Management Plan
15.1.9 Transportation Plan
15.1.10 Nutrition Services Multi-hazard Disaster Emergency Management Plan
15.1.11 International Health Regulations (IHR) and SOP

15.2 Hospital Services Multi-hazard Disaster Emergency Management Plans

15.2.1 General Hospital Multi-hazard Disaster Emergency Management Plan
15.2.2 Princess Alice Hospital Multi-hazard Disaster Emergency Management Plan
15.2.3 Princess Royal Hospital Multi-hazard Disaster Emergency Management Plan
15.2.4 Mt .Gay Psychiatric Hospital Multi-hazard Disaster Emergency Management Plan
15.2.5 Richmond Home for the Elderly Multi-hazard Disaster Emergency Management Plan
15.2.6 Mass Casualty Management Plan
15.2.7 Laboratory Services Multi-hazard Disaster Emergency Management Plan
15.3 Community Health Services Multi-hazard Disaster Emergency Management Plan

15.3.1 St. George Health District Multi-hazard Disaster Emergency Management Plan
15.3.2 St. David Health District Multi-hazard Disaster Emergency Management Plan
15.3.3 St. Andrew Health District Multi-hazard Disaster Emergency Management Plan
15.3.4 St. Patrick Health District Multi-hazard Disaster Emergency Management Plan
15.3.5 St. Mark/ St. John Health District Multi-hazard Disaster Emergency Management Plan
15.3.6 Carriacou /Petit Martinique Health District Multi-hazard Disaster Emergency Management Plan
15.3.7 Environmental Health Services Multi-hazard Disaster Emergency Management Plan

15.4 Private Sector and NGO Healthcare Stakeholders Multi-hazard Disaster Emergency Management Plan

15.4.1 St Augustine’s Medical Services Multi-hazard Disaster Emergency Management Plan
15.4.2 St .George’s University Multi-hazard Disaster Emergency Management Plan
15.4.3 Grenada Red Cross Society Multi-hazard Disaster Emergency Management Plan
15.4.4 St. John Ambulance Multi-hazard Disaster Emergency Management Plan
15.4.5 National Water and Sewage Authority Multi-hazard Disaster Emergency Management Plan
15.4.6 Grenada Solid Waste Authority Multi-hazard Disaster Emergency Management Plan

16.0 Mutual Aid Agreements and MOU’s (Annexes)

16.1- PAHO Agreements
16.2 - CARPHA Agreements
16.3 - Medical Evacuation Agreements
16.4- St. Georges University
16.5- St. Augustine’s Medical Services
17.0 Appendices

Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-1

HURRICANES

GENERAL INFORMATION
Storms and hurricanes can cause both wind and water damage to the physical buildings and their contents. Fortunately, they can be predicted in many cases so that several preparedness measures can be taken in advance of an approaching storm to minimize destruction.

BEFORE
On first notice of an approaching storm:
The building and grounds:
Inspect the building for structural deficiencies.
Make sure all windows and doors are closed and securely locked.
Check grounds and remove loose-lying objects.

Inside:
Unplug all lights and electrical appliances and turn off electricity at main switch.
Close and lock windows and doors.
Set alarm if present.

AFTER
Once personal and family needs are taken care of, try to report to your designated position if it is safe to do so. Staff should have been assigned locations before the hurricane. For safety, do not venture out into the storm affected area unless absolutely necessary and after the all clear has been issued. When doing so proceed with caution while making your way to the Office/Department premises. Hurricane movement and early warnings are to be monitored at the National and International levels by listening to radio and television broadcasts.

Hurricane Warning

If the situation warrants it, the following procedures will be implemented before a hurricane is expected to impact the area. These procedures are applicable on regular working days, weekends or holidays.
Inside the Building

Furniture, Equipment and Materials

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>All equipment and materials must be placed or wrapped in plastic bags and securely tied to ensure water does not penetrate.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>Furniture and equipment too large for plastic bags must be covered with plastic sheeting.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>Plastic sheeting must be rendered waterproof by securing the ends and edges with masking or waterproof tape.</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>

Electrical Equipment

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>All electrical equipment must be disconnected, placed in large heavy duty garbage bags and tightly fastened to prevent water penetration.</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>

Files, loose documents, books and other printed materials.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Files, loose documents, books and other printed materials must be placed in metal filing cabinets whenever possible.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>If this is not possible then loose files and paper must be placed in large garbage bags fastened and labeled with a list of their origin and content.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>They should then be raised from the floor to prevent water penetration.</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>

Offices

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>The contents of any given office should not be moved to another location unless</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>
their removal will ensure their safety.
Filing cabinets must be locked and turned so that their drawers are facing a wall. (name of post)
Louvers windows must be closed tightly. (name of post)
All office doors must be kept closed and where possible locked to minimize the entry of water or wind within the building. (name of post)
The keys for the doors leading to these offices will be kept in their usual location or given to a designated officer. (name of post)

Outside the building

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurricane shutters, if available, must be secured on the outside of the windows by the staff members designated to do so.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>Vulnerable radio antenna must be removed from the roof and placed in a protected area.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>Tree limbs which may become dangerous to the building must be pruned.</td>
<td>(name of post)</td>
</tr>
<tr>
<td>Debris and other materials which are potentially dangerous should be cleared away.</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>

Procurement of non perishable items

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-perishable items such as batteries, sanitation products and non perishable food and drinks shall be purchased and then stored within the premises for use as necessary in the period following the aftermath</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>

Electrical Power and LPG Gas

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>The facility electrical supply and if applicable LPG Gas must be turned off to prevent possible short circuits and fires.</td>
<td>(name of post)</td>
</tr>
</tbody>
</table>
Staff Personal Safety

Hurricanes provide sufficient warning for the evacuation of the office building or for hospitals to activate their hurricane specific plan. Staff members’ main responsibility once they have returned home is to make the necessary preparedness arrangements to protect themselves and their property.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>RESPONSIBLE PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal effects including documents, clothes, valuables, which are not kept in cupboards, must be secured in plastic bags or other waterproof containers.</td>
<td>(name of person/family member)</td>
</tr>
<tr>
<td>A stock of drinking water, batteries, hurricane lanterns, flashlights, canned food and other non-perishables must be kept. This stock should have sufficient food and water to last for at least seven days.</td>
<td>(name of person/family member)</td>
</tr>
<tr>
<td>The officer in charge must be provided with the address or location of all staff members, during and immediately after the hurricane strikes.</td>
<td>(name of person/family member)</td>
</tr>
</tbody>
</table>
#HSP-2

**FIRE IN THE BUILDING**

**GENERAL INFORMATION**

In the health sector there are many different types of equipment that use electricity and an increasing emphasis being placed on the use of computers and other electrical equipment. This places a greater risk for an electrical fire occurring. In addition, health facilities by their very nature have a vast amount of combustible and flammable materials in the facility be it a hospital or a health clinic. Oxygen is often in use and other flammable gasses are on the compound. With this in mind, all staff must be aware of what to do in the event that fire is ignited.

Upon discovery of a fire, the following procedures should be followed:

- Immediately report the fire to the local fire department.
- The manual alarms should be activated and all personnel notified of the fire.
- If the fire is small in size, an attempt should be made to extinguish it with the use of a portable extinguisher.
- For electrical fires, shutting down the power to the area or facility should be considered.
- If the fire cannot be extinguished locally, all personnel including patients should vacate the building by way of the nearest exit, which should be clearly marked and report to the designated assembly area immediately. These should be clearly marked.
- At the assembly area a personnel accountability check (PAC) should be conducted.
- Advise external individuals and organizations.

**NOTE: HOWEVER, IF THE FIRE IS LARGE, AND RAPIDLY SPREADING, DO NOT TRY TO EXTINGUISH IT - LEAVE THE BUILDING!!!**

All health facilities should be outfitted with smoke detectors and a sprinkler system and these should be tested periodically. In the event that the smoke detectors or manual alarms are activated, everyone should proceed with the evacuation procedure. It is highly beneficial to everyone to test these procedures occasionally, and determine the efficiency of this routine. Everyone in the building should be aware of the nearest alarms, extinguishers and exits. Following these procedures will help facilitate the manner in which a small fire is extinguished, as well as help expedite a calm and speedy evacuation of the premises in the event of a larger fire. Evacuation of in patients is of concern as many of them maybe bed ridden or immobile and many staff is needed to evacuate them to safety.
FIRE DRILL PROCEDURES

Fire drills are necessary features of the disaster preparedness and emergency planning programs and should be practiced on a regular basis. These drills enable us to react quickly and sensibly when confronted with a real fire or other emergencies which may require the building to be evacuated immediately. Practice drills are therefore necessary and all possible safe routes, which lead to open air safety, must be used.

Fire and evacuation drills should be done with the support and supervision of the local fire departments.

The sequence of a Fire drill is as follows:

1. Alarm sounded.
2. Building evacuated
3. Assembly at pre-determined point (state point)  
   ............................................................................................................
4. Head count taken
5. Briefing takes place
6. All staff waits until the all clear is given before re-entering the building.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Alarm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Extinguisher</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A – Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-3

FLOODING OR WATER DAMAGE

GENERAL INFORMATION
Flooding or water damage can come from internal or external sources. Internal sources are usually from a leak in a water pipe, the cistern or machinery like an air-conditioner. External sources can come from heavy rains, leaks in domestic water supply or rising water. If water and electricity mix it can be a very dangerous situation. Extreme care should be taken when dealing with this scenario.

If flooding is from an internal source and above the lowest floor of the building, the floors below should be checked for flooding also and the ceiling covering of them for possible collapse.

If flooding is from an external source, other areas may be impacted and other guidelines, national plans and EOC procedures should be reviewed and followed for actions to be taken if needed.

When flooding or water damage is discovered, the following procedures should be followed to minimize the impact:

- Investigate to determine the source of the water.
- Assess the situation and determine if outside assistance is needed.
- Have qualified person shut water supply off to the area or building if needed.
- Have a qualified person shut down power to the area or building.
- Take action such as moving or covering equipment to protect it from water damage.
- Take action to prevent water intrusion to phone and Ethernet lines.
- Build a dike to channel water away from equipment or to the outside of building.
- Conduct a personnel accountability check.
- Advise all personnel and external individuals and organizations.
- Conduct survey of area around the facility to determine possible hazards and accessibility to and from the facility.
Appendix A – Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-4

**EARTHQUAKE**

**GENERAL INFORMATION**

Usually there is no forewarning of an impending earthquake but if there are procedures in place when an earthquake strikes and drills have been performed personnel will know how to react in a real situation and lives could be saved. Drills will give some idea of what to expect and will help prepare for any situation.

It is unlikely that an earthquake will occur and be just a localized incident. If an earthquake should strike, personnel should follow these procedures to help reduce their exposure.

If you are inside:

- If you can exit the building, do so quickly and proceed to a location away from the building, trees, and power lines.
- Watch for falling objects.
- Crawl under a table or desk and hold on to it.
- Brace yourself in an inside corner of the building.
- Stay away from windows, mirrors, overhead fixtures, bookcases and electrical equipment.

If you are outside:

- Stay outside.
- Move to an open area away from buildings, trees and power lines.
- If forced to stand near building, watch for falling objects.

**Immediately After the earthquake:**

- Be prepared for aftershocks.
- Conduct a personnel accountability check.
- Do a damage assessment to the facility.
- Help injured and provide first-aid. Do not move seriously injured persons unless they are in immediate danger of further injury.
- Turn off appropriate utilities. DO NOT USE matches, lighters or open flames, appliances or electrical switches until you are sure that it is safe to do so.
- Conduct survey of area around the facility to determine possible hazards and accessibility to and from the facility.

Important Note: It is important to note that each situation is going to be different, and that a situation may not allow for the above procedures to be implemented in this specific order.
Appendix A – Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-5

TSUNAMI

GENERAL INFORMATION

It is unlikely that a Tsunami will occur and be just a localized incident to any health facility. The threat from a tsunami is mainly to coastal and low lying areas. The standard procedure for every person is to reach high ground before the impact of the Tsunami. An elevation of 100 ft above sea level has been set as the safety mark in most small islands.

Depending on the location of the health facility evacuation of the facility may/may not be required.

After a Tsunami:

- Conduct a personnel accountability check (PAC).
- Conduct survey of area around the facility to determine possible hazards and accessibility to and from the facility.

The closest tsunami evacuation point or *Muster Point* should be identified, labeled and evacuation routes clearly marked.
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-6

Accidents- Land, Sea and Air (Mass Casualty Incident- MCI)

GENERAL INFORMATION

MCI is any single event that impacts negatively on a community, causing a number of casualties that overwhelms that community’s ability to respond using its normal arrangements and resources. Mass casualty management involves many agencies working together in an unfamiliar environment to preserve life. It may be caused by incidents/accidents on sea land or air.

Before

A mass casualty management plan should have been developed and tested involving the working of all agencies.

After

1. All agencies and personnel should carry out their responsibilities as determined under the laws of Grenada
2. Coordination of the activities within the incident command center (ICC) will be responsibility of the commissioner of police in coordination with other senior representatives NaDMA
3. All rep request/information should be channeled through the ICC, which will communicate these requests to the relevant authorities.
4. All agency officers in the ICC should have direct radio contact with their operations personnel.
5. Agency personnel shall await “area is safe” before entering the impact zone.
6. All agency personnel should clearly display their official identification badge.
7. Only designated information officers will be authorized to issue press statements
8. Written records of the proceedings must be sent to the NaDMA and the MOH at the end of the event.

All staff with in respective health facilities will be expected to respond according to their role and responsibilities.
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-7

Dangerous Infectious Diseases (e.g. Pandemic Influenza and Ebola)

GENERAL INFORMATION

In any situation when a dangerous infectious disease is likely to occurs or does occur in Grenada the health sector has to be ready to respond in a quick and efficient manner in order to save lives and to reduce morbidity. They must therefore be prepared for any likely/imminent threat. The preparation phase is critical and includes Surveillance and Alerting.

Surveillance

Public health personnel should continuously monitor international surveillance and implement programmes to enhance local surveillance for dangerous infectious diseases (DID), as may become necessary from time to time.

The alerting process

The level of the threat of human cases of DID, should be based on international and local epidemiological profiling.

There are several protocols that have to be adopted when a DID occurs. These should all be included in the respective DID plan. An outline of these is as follows:

- Protocol for Patient Screening Area
- Protocol for Layout & Outfitting of Examining Room
- Checklist for Examination Room
- Protocols for hand washing
- Protocol for Correct Usage of PPE
- Putting on the PPE
- Removal of PPE
- Protocol for Sanitizing the Triage Room
- Protocol for general cleaning
General infection control procedures

RECOMMENDATIONS FOR AMBULATORY CARE SETTINGS:

• Patients with symptoms suggestive of DID should proceed to the designated screening area.

• Patients in the screening area should be provided with mask and tissues to contain respiratory secretions when coughing or sneezing.

• No-touch receptacles/ uncovered bins should be provided for disposal of used tissues.

• Automatic anti-viral hand sanitizers should be provided in all waiting areas and hand hygiene encouraged after contact with respiratory secretions.

• Eliminate or decrease the use of items shared by patients such as pens, clipboards, and telephones.

• Clean and disinfect surfaces in waiting room when visibly soiled (e.g. chairs, doorknobs) and patient care areas between patients.

• Ensure that medical devices are appropriately cleaned and disinfected between patients.

• Healthcare workers should use standard hygiene precautions when working with patients with suspected DID.

• If a patient with a suspected DID is referred to another health care facility, notify the receiving facility.
Protocol for Contact Management of DID

CONTACTS

SYMPTOMATIC

TRIAGE

SUSPECTED

NO

YES

SUSPECTED CASE PROTOCOL

ASYMPTOMATIC

COMPLETE CONTACT FORM

NOTIFY

ISSUE DID KIT:

- Information package
- Masks
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-8

CBRNE INCIDENTS

GENERAL INFORMATION

The acronym CBRNE stands for chemical, biological, radiological, nuclear and enhanced conventional weapons. Presently these hazards are rare in Grenada but planning for anyone of them needs to be done and staff must be prepared to assume their respective role if such an event should occur. Exposure to hazardous chemicals is probably the most likely one to occur and as such much of this SOP will address this.

SOP for handling hazardous chemicals or substances

There are a set of rules that should be followed when handling hazardous chemicals or substances.Outlined below are 11 such step that all should follow:

1. Follow all established procedures and perform job duties as you have been trained
2. Be cautious and plan ahead. Think about what could go wrong and pay close attention to what you are doing while you work
3. Always use required PPE—and inspect it carefully before each use to make sure it is safe to use. Replace worn out or damage PPE; it will not provide adequate protection.
4. Make sure all containers are properly labeled and that the material is contained in an appropriate container. Do not use any material not contained or labeled properly. Report any damaged containers or illegible labels to your supervisor right away.
5. Read labels and the material safety data sheet (MSDS) before using any material to make sure you understand hazards and precautions.
6. Use all materials solely for their intended purpose. Do not, for example, use solvents to clean your hands, or gasoline to wipe down equipment
7. Never eat or drink while handling any materials and if your hands are contaminated, don’t use cosmetics or handle contact lenses.
8. Read the labels and refer to MSDSs to identify properties and hazards of chemical products and materials.
9. Store all materials properly, separate incompatibles, and store in ventilated, dry, cool areas.
10. Keep you and your work area clean. After handling any material, wash thoroughly with soap and water. Clean work surfaces at least once a shift so that contamination risks are minimized.
11. Learn about emergency procedures and equipment. Understanding emergency procedures means knowing evacuation procedures, emergency reporting procedures, and procedures for dealing with fires and spills. It also means knowing what to do in a medical emergency if a co-worker is injured or overcome by chemicals.

**General Procedures that need to be followed should a CBRNE incident occur**

There are 4 main areas that need to be considered. These are:

1. Information gathering, assessment and dissemination. The procedure involves
   - Recognizing that a CBRN incident has or may occur
   - Gathering, assessing, and disseminating all available information to First Responders
   - Establishing an overview of the affected area
   - Providing and obtaining regular updates to and from first responders

Actions by First Responders:

- Approach scene with caution and upwind (the wind at your back and blowing to the incident)
- Carry out scene assessment
- Establish Incident Command (each responding agency)
- Recognize the signs and indicators of CBRN
- Determine whether CBRN or Hazmat
- Estimate number of casualties/ victims
- Estimate resource requirements
- Consider specialist advice/ resources requirements
- Provide situation report to emergency control rooms etc and request assistance if necessary
- Carry out risk assessment
- Undertake Hazard identification
- Do not approach or touch suspect objects/packages— do not operate radios, mobile phones, or other electronic devices within vicinity
- Consider secondary devices/ target
- Establish and agree multiagency response plan
- Identify safe rendezvous point for additional first responder vehicles
- Search for secondary devices
- Consider critical infrastructure
Scene management. It is important to isolate the scene

- Initially:
  - Consider wind direction
  - Established multi-agency command point in safe area (cold zone)
  - Establish inner and outer cordon (hot/warm/cold zone)

- Containment:
  - Contain contaminant material/liquid
  - Establish quarantine(holding) area for contaminated victims/casualties (where necessary)
  - Establish decontamination and triage areas
  - Cordon off contaminated areas

Saving and protecting life. Saving of life is the first priority of all responding agencies and should include the following:

- Determine immediate actions and priorities
- Evacuate inner cordon (to quarantine area)
- Restrict inner cordon access (protected first responders only)
- Provide safe system of work for rescuers
- Carry out necessary rescues
- Implement decontamination as appropriate (emergency, mass, clinical)
- Consider decontamination of personal property
- Implement medical triage and treatment
- Implement responder/rescuer decontamination
- Consider requirements and provide transport for victims/casualties
- Provide timely warning and advice to the public (immediate vicinity and beyond as necessary)
- Consider evacuation (immediate vicinity and beyond as necessary)
- Consider utility shutdown
- Consider public order
- Consider hospital defense (self-presenters)

Additional/specialist support. Following the immediate operational response, specialist advice should be sought to assist with consequence management

- Notification:
  - Notify appropriate authorities at local, regional, and national level (governmental and responder agencies)
  - Notify specialists (chemical, biological, radiological/nuclear, medical)
  - Consider international support and conventions (IAEA, WHO, OPCW)
  - Provide situation report to all notifications
Assessment:
- Prepare impact assessment (en-route/on site)
- Establish effect on population
- Establish effect on critical infrastructure
- Establish effect on environment
- Carry out incident specific and environmental sampling
- Hazard prediction
- Dispersion modeling
- Radiation monitoring
- Consider emergency provision requirements for immediate and wider area

Other areas that should be considered are:
- Integration of support:
- Substance identification:
- Victim/casualty support
- Information to public
- Site decontamination/ restoration and remediation
- Post incident and long term considerations
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

#HSP-9

Droughts and Heat Waves

GENERAL INFORMATION

Should a drought occur it is expected that it would normally affect the entire country as Grenada is a small island and vulnerable to this situation when rainfall is reduced. Grenada relies on rainfall for its water for potable, irrigation and washing purposes.

Before

Measures should be put in place before these conditions occur to store and preserve rain water, to reduce usage and prevent wastage. These should be practiced by all citizens and corporate entities as it would need to be a national effort. The health sector would need to have a plan to deal with persons suffering from dehydration and elevated body temperatures. These would include use of IV fluids with the increased need for purchase and storage of IV fluids, giving sets and other necessary paraphernalia. Air conditioning of vital areas may need to be considered especially at the hospital or clinics.

During

The above preservation measures would have to be continued along with legal rules and regulations to prosecute persons breaching these regulations. Alternate cleaning and sanitizing methods may have to be employed. The importation of potable water would have to be considered depending on the extent of the drought. Work conditions and times may have to be adjusted but should be guided by the NaDMA. Welfare for staff and their families must be addressed in all facilities as well as at headquarters.

All health facilities will be expected to open and deliver the necessary services. This means that staff will be expected to report for work unless ordered otherwise. The regular services may have to be reduced or altered but this will be the decision of the health services committee.
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-10

Volcanic Eruption

GENERAL INFORMATION
A volcanic eruption can be an awesome and destructive event. Here are some tips on how to avoid danger and what to do if you are caught near an eruption.

Safety Tips
- Stay away from active volcanoes.
- If you live near an active volcano, keep goggles and a mask in an emergency kit, along with a flashlight and a working, battery-operated radio.
- Know your evacuation route. Keep gas in your car.

If a Volcano Erupts in Your Area
- Evacuate only as recommended by authorities to stay clear of lava, mud flows, and flying rocks and debris.
- Avoid river areas and low-lying regions.
- Before you leave, change into long-sleeved shirts and long pants and use goggles or eyeglasses, not contacts. Wear an emergency mask or hold a damp cloth over your face.
- If you are not evacuating, close windows and doors and block chimneys and other vents, to prevent ash from coming into the house.
- Be aware that ash falls may put excess weight on roof and need to be swept away. Wear protection during clean-ups.
- Ash can damage engines and metal parts, so avoid driving.
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-11

Hazardous Material

GENERAL INFORMATION
A hazardous material is any item, product or agent (biological, chemical, physical) which has the potential to cause harm to humans, animals, or the environment, either by it or through interaction with other factors.

A hazardous material may come from many different sources, such as materials used in construction of the building, common products used in everyday activities or systems, the burning of certain substances, terrorist acts, nature, and others. Hazardous materials can be found in all states of matter; solid, liquid, and gas. Some hazardous materials cannot be seen or smelt. Hazardous materials can be transmitted from one place to another or from one person to another by physical contact, air movement, water movement, and radiation.

Based on the source and form of the product, such as an accidental spill of a bottle of hydrochloric acid or a powder found in an envelope received in the mail from an unknown person, different actions should be taken. It is impossible to foresee every possible scenario that could involve a hazardous material. Therefore, anytime an unknown product or suspected hazardous material is of concern, the following procedures should be followed.

If the type of hazardous material is known:

- Secure the area and notify all personnel of the situation.
- If there is no immediate danger to the safety of personnel, contact a qualified person to remove the hazardous material.

If the type of hazardous material is unknown or there is concern for the safety of personnel:

- Leave the area immediately
- Secure the area and notify all personnel of the situation
- If unsure of the risk, secure and evacuate the building to an up wind location
- Contact the local fire and police departments

If the hazardous material is thought to be able to travel through air currents, consider having a qualified person shut down the air conditioning system to the building from outside.

If any person has been exposed to the product, decontamination may be required.
If any person has been exposed to the product, isolation may be required. If any person is showing signs of a reaction from exposure to the product, do not expose yourself to also becoming contaminated by providing first aid. Conduct a personnel accountability check.
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-12
Bomb Threat

GENERAL INFORMATION
Upon receipt of a bomb threat, it is impossible to know if it is real or a hoax. Therefore, precautions need to be taken for safety.

If you receive a bomb threat over the phone, follow these procedures:

- Keep the caller on the line as long as possible.
- Ask the caller to repeat the message.
- Ask the caller his name.
- Ask the caller where the bomb is located.
- Record every word spoken by the person making the call.
- Record time call was received and terminated.
- Inform the caller that the building is occupied and the detonation of a bomb could result in death or serious injury to many innocent people.
- Complete the bomb threat form in the attachments to record the caller's characteristics.
- If possible, during the call, alert another staff member, who should assist with the following actions:
  - Call the Police Department.
  - Notify all personnel of the event
  - Evacuation the building
  - Conduct a personnel accountability check.

If a suspected bomb is located within the building, the responsibility for investigation will be that of the law enforcement officials having jurisdiction over such matters.

After the threat has been dealt with and the building has been evaluated. The next steps may follow:

- If the threat was not real:
  - Return to building.

  - Assume normal activities.
  - Prepare a report for police on the incident.
- If the threat was real:
  - Evacuate the area.
  - Activate Contingency and Continuity Plan.
Follow directives from Police.
Advise external individuals and organizations

Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-13

Dangerous and Threatening Situations

GENERAL INFORMATION
This section will consider all types of dangerous and threatening situations that may face the Health Facility and its personnel. These would include such examples as irate and disoriented person or personnel, as well as armed and unstable individuals off the street. Due to the fact that there are many circumstances that may be placed in this category, it would be virtually impossible to address them all. Therefore, the following is a list of suggested procedures to be utilized in one of these crisis situations.

Some things to consider are:

- Have someone (more than one person is suggested) designated to alert the local authorities of the problem.
- Make sure that everyone is always prepared for this type of crisis (the last thing needed is a panicked state that may "light the fuse" of this person).
- Make it known that the personnel should never argue with these people, in fact it is recommended that personnel keep a smile on their face and do everything in their power to appease them.
- An attempt should be made to reason with the person and portray a feeling of understanding towards them.
- Consideration should be given to the possibility of evacuating the building.
- Having people seek shelter is a final option.
- Conduct a personnel accountability check (PAC).
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-14

Communications Loss

GENERAL INFORMATION
Communications loss for the Health Facility may include, land line phones, cell phones, Internet, and radios

If the communications loss is due to equipment failure within the Health Facility, alternative equipment sources such as personal mobile phones may be utilized.

For a localized event occurring at the Health Facility, the following procedures should be followed:

Loss of land line phone communication
- Use cell phones, radios, or internet
- Contact provider for information as to why and how long service may be down
- Advise personnel and external individuals and organizations

Loss of cell phone communication
- Use land line phones, radios, or internet
- Contact provider for information as to why and how long service may be down
- Advise personnel and external individuals and organization

Loss of Internet communication
- Use land line phones, cell phone or radios.
- Contact provider for information as to why and how long service may be down
- Advise personnel and external individuals and organizations

Loss of Radio communication
- Use land line phones, cell phone, or internet
- Advise personnel and external individuals and organizations
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-15

Electrical Power Outage

GENERAL INFORMATION
Power outages can last from minutes to days. A long lasting power outage can have a major impact on any Health Facility. The Health Facility may/may not have an emergency generator that will allow critical operations and functions to continue should a power outage occur.

When a power outage occurs, the following procedures should be followed:

Save all work being done on computers before computer backup power is also lost.

Contact the Grenada Electricity Company Limited for information as to why and how long the power outage may last. Remember that the land line telephones may not work without power and alternative sources of communication should be utilized such as the use of mobile phones.

Have a qualified person start the backup generator and transfer power feeds from the generator to the Health Facility.

Conserve power usage while on backup generator.

If the backup generator is going to be used for long periods, plan for refueling and maintenance requirements.
Appendix A- Hazard Specific Emergency Procedures (HSP)/SOPs

# HSP-16

Staff Medical Emergencies (Internal)

GENERAL INFORMATION
While a medical emergency is not an uncommon hazard that to which the Health Facility can provide response, a serious medical emergency or death of a co-worker or visitor to the Health Facility could have a major impact on all personnel. Therefore it is important to have procedures in place should one occur.

A list of staff known allergies and medical conditions should be included on the emergency contact list of the Health Facility. This list should be checked if the medical emergency involves any of the Health Facility’s personnel and priority medical attention should be given to these personnel.

When any person at the facility has a medical emergency or accident the following procedures should be followed.

Notify others of the situation.

Activate the Emergency Medical Response System.

Provide emergency medical assistance to the individual if qualified to do so.

Notify the Administrator / Manager or most Senior Staff on duty, of the incident.

Based on the incident, crisis counseling should be considered for all of the personnel.
APPENDIX B – LOGISTICS PLAN

**Personnel** – Each Health Facility should have at least one local AMP team. The Administrator/Manager is responsible for ensuring that there are enough trained personnel available at the Health Facility at any time to staff one AMP for at least one period/shift.

**Reinforcement** – The Administrator/Manager is responsible for arranging reinforcement of the Health Facility’s AMP/Mass Casualty Response Team. Potential sources of support are may include Public Healthcare Facilities, Private Healthcare Facilities, Medical First Response Agencies e.g. Grenada Red Cross and St. John Ambulance, Community First Response Groups e.g. Youth Emergency Action Committee (YEAC)and Regional and International Partners e.g. PAHO

**Transport** - The Administrator/Manager is responsible for arranging transportation for all Medical First Response Personnel to and from the Incident Site.

**Communications**

- **Alerting** - The primary method of alerting AMP/Mass Casualty Response Personnel is through landline, mobile telephone, VHF or Ham Radios.
- **Operations** - Communication during a Mass Casualty Operation may be by landline, mobile telephone, VHF, Ham Radio or word of mouth.

**Catering Support** - The Administrator/Manager is responsible for arranging food and drink for AMP/ Mass Casualty Response Personnel, as may be required.

**Equipment and Supplies** - It is essential that the equipment and supplies required for any Mass Casualty Response by the Health Facility are always available and in sufficient quantities, for immediate use. The Nursing Manager in collaboration with the Health Facility’s Pharmacist is responsible for compiling the necessary Medical Kit(s) for the Advanced Medical Post and Mass Casualty Response.

The list of equipment and medical supplies must be review regularly and items nearing expiration rotated or if expired, replenished.

The Nursing Manager and Pharmacist is responsible for ensuring that the Medical Kit List(s) items are in stock, current and ready for immediate use.
**Safety** – Medical Response Personnel **must** obey Police and Fire Officers’ Safety Instructions at the Incident Scene/Site and also ensure their personal safety, colleague’s safety and the safety of patients.

**Training** - If the National Multi-hazard Health Sector Disaster Emergency Management Plan is to work effectively, all those involved must be fully conversant with the Plan and in particular with their roles as individuals and that of team members. Individuals must:

(i) study the plan and understand their responsibilities, if these are different from their normal tasks,

(ii) be ready to undertake further training provided by the Ministry of Health and other Health Related Stakeholders and Agencies.

(iii) participate in Exercises (Drills and Simulations) with their colleagues in the immediate team and the wide Stakeholder Community.

Good inter-agency cooperation is essential. A Mass Casualty Incident will require close and efficient cooperation and coordination between the various Health Sector Departments/ Agencies, such as Hospital Services, Community Health Services, Police, Fire, the National Disaster Management Agency (NaDMA), and Community Volunteers ie Grenada Red Cross, St. John Ambulance, Youth Emergency Action Committee 9YEAC), among others. The Heads of these Organizations must understand the roles of their counterpart organizations and how they interact with each other. Regular exercises and coordination meetings will help to identify problems and facilitate joint solutions.
### Administration (MOH)

- **Min.of. Health (PABX)**
  - Hot Line: 440-3177; 440-2962; 440-3485; 403-7656
- **Permanent Secretary (Ms. P. Peters)**: 449-6208; 420-2607
- **Permanent Secretary**
- **Chief Medical Officer (Dr. Mitchell)**: 405-6178 / 534-5331
- **Senior Medical Officer (Dr. Martin)**: 405-0311
- **Senior Medical Officer (Dr. Nixon)**: 404-1122 / 440-3225 / 534-5133
- **Medical Officer of Health (Dr. Shawn Charles)**: 458-6350 / 417-2562
- **Chief Planner (Mr. Gabriel)**: 538-7756
- **Planning Officer (Ms. St. Louis)**: 406-1929
- **Chief Nursing Officer (Ms. Edwards)**: 417-5184
- **Chief Environmental Health Officer (Mr. Andre Worme)**: 417-5246
- **Chief Community Health Nurse (Ms. Lydia Francis)**: 417-8101; 410-4293; 440-8859
- **Senior Health Promotion Officer (Ms. Lydia Phillip Jones)**: 449-5900 / 417-2631 / 442-7846
- **Public Relations Officer (Mr. Fredrick)**: 415-9463
- **Health Disaster Management Officer (Mr. Osbert Charles)**: 418-1969
- **Surveillance Officer (Ns. McQueen)**: 536-5882 / 457-6522
- **Senior Administrative Officer (Ms. Kerran Phillip)**: 534-5302
- **Senior Program Officer (Mr. Terrance Walters)**: 405-0110; 534-5300

### General Hospital

- **PABX**: 440-2051; 440-2052; 435-9291
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<td>A&amp;E Department</td>
<td>440-2113; 435-4018; 435-7109</td>
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<tr>
<td>A&amp;E Registrar (Dr. Sonia Phillip)</td>
<td>416-0551/407-0425/440-9848</td>
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<td>Ambulance</td>
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<td>Medical Director (Dr. Dragon)</td>
<td>415-2809/ 440-2898</td>
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<tr>
<td>Director of Hospital Services (Ms. Fleary)</td>
<td>417-3835 / 459-5389 / 440-2898</td>
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<td>Deputy Director of Hospital Services (Sr. Joanna Humphrey)</td>
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<tr>
<td>Director of Nursing services (Ms. Hazelene Benjamin)</td>
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<tr>
<td>Deputy Director of Nursing Services (Ms. Anoris Martin-Charles)</td>
<td>449-9172</td>
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<tr>
<td>Head Driver (Mr. Stephen Mc Ewen)</td>
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<tr>
<td>Mechanic (Mr. Micheal Francis)</td>
<td>417-3652/ 403-3189</td>
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<tr>
<td>Senior Biomedical Tech. (Mr. Prince)</td>
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<td>Doctor (Dr.Ulacia)</td>
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<td>440-1829</td>
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<td>Director (Mr. Terry Charles)</td>
<td>403-4824</td>
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<tr>
<td>St. Johns Ambulance</td>
<td>Commissioner (Mr. Sylvan Mc. Intyre) 405-7451</td>
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<tr>
<td>St. Augustine’s Medical Services Inc</td>
<td>440-6173 Administrator (Ms. Allyson Amechi) 407-1768/ 440-6175 Dr. L H Amechi 407-0107</td>
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<tr>
<td>Spice Isle Imaging Centre</td>
<td>444-7679</td>
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<tr>
<td>National Disaster Management Agency</td>
<td>440-8390-94; 440-6674 Dep. National Disaster Coordinator (Ag.) (Ms. Samantha Dickson) 534-5108 / 405-2587</td>
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<tr>
<td>St Georges University (Provost)</td>
<td>(Mr. Steven Babiak - Security Services 444-4175 459-0558 (Dr. Theresa McCann - Disaster Mgt.) 405-9015 (Dr. Kathy Yearwood - Dir. of University Health Services) 405-9076</td>
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APPENDIX D – ACTION CARDS FOR KEY MINISTRY OF HEALTH PERSONNEL

ACTION CARD I

MINISTER OF HEALTH

The Disaster Management Policy of the Ministry of Health is in concert with the policy of the Government of Grenada, National Disaster Management Agency (NaDMA), Caribbean Disaster Emergency Management Agency (CDEMA) and with that of other Government and Non-Government Agencies involved in Disaster Risk Management.

1) Considers for approval, policy recommendations of the Health Disaster Committee (HDC) and the Health Services Committee (HSC).

2) Consults regularly with the Permanent Secretary, Chief Medical Officer and the Health Disaster Management Officer, to ensure that a continuous state of readiness exists in the Ministry of Health in the event of a disaster/emergency.

3) Informs the Prime Minister and his Cabinet colleagues of the Disaster Management Policy of the Ministry of Health.

4) Ensures that funds for Disaster Management are included in the annual budget of the Ministry before submission to the Minister of Finance.

5) In the event of a disaster, submits status reports to the Prime Minister and Minister of Finance.

6) Requests funds from the Minister of Finance for emergency, extraordinary expenditure.

7) Submits reports to Cabinet describing the performance of the Ministry of Health during the post-disaster period.
ACTION CARD II

PERMANENT SECRETARY

1) Functions as Chairperson of the Health Disaster Committee (HDC) and Health Services Committee (HSC).

2) Ensures that meetings of the Health Disaster Committee (HDC) and Health Services Committee (HSC) are convened, monthly.

3) Represents or designates a representative from the Ministry of Health to attend the meetings of the National Emergency Advisory Council (NEAC).

4) Advocates budgetary provisions for Health Sector Disaster Risk Reduction (DRR) activities

5) Ensures that plans for the various Public Sector Divisions and Departments, as well as, Private Health Sector Entities, for all types of Hazards, are prepared, reviewed, updated and tested, annually.

6) Ensures the coordination and execution of the Health Disaster Risk Management Programme by the Health Disaster Management Officer (HDMO).

7) Appoints Ministry of Health Officers to serve on the various NaDMA Management sub-committees.

8) Activates/deactivates the National Multi-hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP), on the advice of the CMO, when an “ALERT” is declared or a disaster /emergency occur.

9) Activates / deactivates the Health Emergency Operation Centre (HEOC) after consultation with or on the advice of the Chief Medical Officer.

10) Authorizes the Health Disaster Management Officer (HDMO) to mobile the resources of the Health Sector in the event of a disaster/ emergency

11) Keeps the Minister of Health informed about the disaster/emergency and the actions being taken by the Ministry of Health.

12) Liaises with the Minister of Health, Chief Medical Officer, and Health Disaster Management Officer to determine whether requests for external assistance are required.

13) Authorizes all releases to be made to the Media.
ACTION CARD III

CHIEF MEDICAL OFFICER

1) Represents the Permanent Secretary at meetings of the National Emergency Advisory Council (NEAC).

2) Attends monthly meetings of the Health Disaster Committee (HDC) and Health Services Committee (HSC).

3) Represents the Health Sector at the National Emergency Operation Centre (NEOC), when activated.

4) Provides technical advice on matters/ issues related to public health in the event of disasters /emergencies.

5) Reviews the Multi-hazard Disaster Emergency Management Plans of the various Health Sector Entities, Divisions and Departments.

6) Advises on the activation/deactivation of the NMHSDEMP

7) Advises the Permanent Secretary on the selection of the Ministry of Health Representative to serve on the various NaDMA Management sub-committees and attendance at other Disaster Management related meetings/workshops.

8) Keeps informed of all plans, proposals and decisions of the National Emergency Advisory Council (NEAC) and National Emergency Operation Centre (NEOC) as they relate to public health, and ensures that this information is conveyed to the appropriate Technical Officers.

9) Consults with the Permanent Secretary when an “ALERT” is declared, or a disaster/emergency occurs and advises on the activation/deactivation of the Multi-hazard Health Sector Disaster/ Emergency Management Plan and /or Health Emergency Operation Centre (HEOC).

10) Ensures that the Health Emergency Operation Centre (HEOC) is established according to guidelines, and that a duty roster is prepared and circulated.

11) Provides advice for the technical aspect of health relief services.

12) Evaluates data collated after the impact of a hazard and determines what internal and external relief assistance is required for the health sector.

12) Advises on post-event Recovery and Continuity of Healthcare Services
ACTION CARD IV

HEALTH DISASTER MANAGEMENT OFFICER

1) Coordinates meetings of the Health Disaster Committee and Health Services Committee.

2) Serves as the Recording Secretary to the Health Disaster Committee (HDC)

3) Represents the Permanent Secretary/Chief Medical Officer at meetings of the National Emergency Advisory Council (NEAC)

4) Represents the Health Sector at Disaster Management related meetings/workshops/seminars locally, regionally and internationally.

5) Advises the Permanent Secretary on all matters related to Health Disaster Risk Management.

6) Coordinates the Health Sector Disaster Emergency Risk Management Programme

7) Develops the Ministry of Health Disaster Risk Management Annual Work Plan and Budget

8) Coordinates the revision/development of the National Multi-hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP) and respective Sub-plans and Policies

9) Assists and coordinates activities of the different health sector units and agencies related to Health Sector Disaster Emergency Risk Management

10) Assists in the Identification and Procurement of essential Emergency Equipment and accessories, Domestic, Sanitary, Medical and Pharmaceutical supplies.

11) Identifies and coordinates training for Emergency Medical First Response Personnel

12) Maintains Register of all trained Emergency Medical First Response Personnel

13) Maintains Register of the National Emergency Medical Response Team

14) Coordinates participation of Health Sector Medical First Response in Exercises (Drills and Simulations)

15) Coordinates procurement of essential Emergency equipment, Domestic, Sanitary, Medical and Pharmaceutical supplies and Accessories

16) Sensitizes Health Sector entities on potential threats or occurrence of disaster/emergency events
17) Coordinates and mobilizes health sector resources for Disaster/Emergency response.

18) Coordinates Staff Welfare and Psychosocial Support for Health Services Personnel

19) Provides updates and prepare report for submission to the Permanent Secretary on disaster/energy response activities.

20) Conducts needs analyses and identifies and recommends relief assistance locally, regionally and Internationally

21) Coordinates and facilitates the request and receipt of relief assistance in conjunction with the CMO and PS

22) Coordinates the post disaster damage and needs assessments of health Sector

23) Evaluates the response of the Health Sector to the disaster/emergency.

24) Advises and Monitors the Recovery and Resumption of Services process

25) Prepares and submits reports to the Permanent Secretary on the performance of the Health Sector during and post-disaster/emergency period.
ACTION CARD V

SENIOR MEDICAL OFFICER (S)

1) Represents the Community Health Services on the Health Disaster Committee
2) Serves as designate to the CMO on the Health Services Committee
3) Represents the Community Health Services at the HEOC
4) Serves as designate to the CMO at the NEOC
5) Coordinates the development, revision/update and implementation of the Infectious Diseases Management Plan (IDMP) and Community Health Services Multi-hazard Disaster Emergency Management Plan (CHSMDEMP)
6) Coordinates the development, revision/ update and implementation of Community Services respective Districts’ Multi-hazard Disaster Emergency Management Plans
7) Advises on the activation/deactivation of the IDMP and CHSMDEMP
8) Assists in the Identification and Procurement of essential Emergency Equipment and accessories, Domestic, Sanitary, Medical and Pharmaceutical supplies.
9) Identifies and recommends District Medical Officer to participate in Disaster/ Emergency Management Trainings and Exercises.
10) Identifies and recommends District Medical Officers to serve on the National Emergency Medical Response Team and on Medical Teams established for major Sporting and Cultural events.
11) Provides disaster/ emergency management related information to Districts’ Medical Officers
12) Receives reports from Districts’ Medical Officers on situations of public health significance
13) Submits disaster/emergency related reports from Community Health Services to the CMO and Health Disaster Committee
14) Initiates and implements Community Health Services Disaster/ Emergency Management measures
15) Monitor, evaluate and report on implementation of Disaster/Emergency Management initiatives at Community Health Districts.
16) Advises on post-event Recovery and Continuity of Community Healthcare Services
17) Coordinates Staff Welfare and Psychosocial Support for Community Health First Response Personnel
ACTION CARD VI

MEDICAL OFFICER OF HEALTH (EPIDEMIOLOGIST)

1) Represents the Epidemiology Unit on the Health Disaster Committee.

2) Represents the Epidemiology Unit at the HEOC.

3) Coordinates the development, revisions/ updates and implementation of the Disease Surveillance Manual/Plan.

4) Coordinates ongoing diseases surveillance activities, nationally.

5) Monitors diseases trends and identifies possible outbreaks/threats

6) Advises on the activation/deactivation of the Disease Surveillance Manual/Plan

7) In the event of a disease threat/ outbreak activates the Disease Surveillance Plan and implement diseases surveillance measures

8) Receives and analyses data and provides reports

9) Recommends actions to minimize disease spread and new outbreaks

10) Advises on post-event Recovery and Continuity of Healthcare Services

11) Coordinates Staff welfare and Psychosocial support for First Response Personnel
ACTION CARD VII

CHIEF ENVIRONMENTAL HEALTH OFFICER

1) Represents the Environmental Health Department on the Health Disaster Committee

2) Represents the Environmental Health Department on the Health Services Committee

3) Represents the Environmental Health Department at the HEOC and Serves on Disaster/Emergency Management related Sub-committees such as the Hazardous Materials and Oil Spill Committees

4) Coordinates the development, revision/updates and implementation of the Environmental Health Department Multi-hazard Disaster Emergency Management Plan (EHDMDEMP)

5) Assists in the development of Disaster/Emergency Management related Sub-plans such as the Mass Fatality Plan, Infectious Diseases Management Plan, Disease Surveillance Plan

6) Identifies and recommends Environmental Health Personnel to participate in Disaster/Emergency Management Trainings and Exercises.

7) Identifies and recommends Environmental Health Officers to serve on the National Emergency Medical Response Team and on Medical Teams established for major Sporting and Cultural events.

8) Advises on the activation/deactivation of the EHDMDEMP

9) Provides technical advice on Environmental Health issues in disaster/emergency situations and recovery activities.

10) Procures essential supplies for Environmental Health related response in Disaster/Emergency situation

11) Monitors and evaluates the implementation of the EHDMDEMP and submits reports to MOH, HDC and HSC

12) Advises on post-event Recovery and Continuity of Healthcare Services

13) Coordinates Staff Welfare and Psychosocial Support for Environmental Health First Response Personnel
ACTION CARD VIII

CHIEF NURSING OFFICER

1) Represents the Nursing Division on the Health Disaster Committee.
2) Represents the Nursing Division on the Health Services Committee.
3) Represents the Nursing Department at the HEOC.
4) Assists in the development, revisions/updates of various Disaster /Emergency Management Sub-plans such as Infectious Disease Management Plan, Surveillance Plan, Community Health Services Plan, Hospital Services Plan.
5) Identifies and recommends Nursing Personnel to participate in Disaster/ Emergency Management Trainings and Exercises.
6) Identifies and recommends trained Nursing Personnel to serve on the National Emergency Medical Response Team and on Medical teams established for major sporting and Cultural events.
7) Authorizes deployment of First Response Nursing Personnel to provide medical care in Disaster /Emergency situations.
8) Monitor and evaluate the involvement of Nursing Personnel in Disaster /Emergency Response.
9) Submits reports related to Nurses participation in Disaster/ Emergency Management activities.
ACTION CARD IX

CHIEF COMMUNITY HEALTH NURSE

1) Represents Community Health Nursing Services on the Health Disaster Committee

2) Represents Community Health Nursing Services at the HEOC

3) Coordinates the development, revisions/updates and implementation of the Community Health Services Multi-hazard Disaster Emergency Management Plan (CHSMDEMP)

4) Advises on the activation/deactivation of the CHSMDEMP

5) Assists in the Identification and Procurement of essential Emergency Equipment and accessories, Domestic, Sanitary, Medical and Pharmaceutical supplies.

6) Identifies and recommends Community Health Nursing Personnel to participate in Disaster/ Emergency Management Trainings and Exercises

7) Identifies and recommends trained Community Health Nursing Personnel to serve on the National Emergency Medical Response Team and on Medical Teams established for major Sporting and Cultural events.

8) Authorizes deployment of First Response Community Health Nursing Personnel to provide medical care in Disaster /Emergency situations

9) Monitor and evaluate the involvement of Community Health Nursing Personnel in Disaster /Emergency Response.

10) Submits reports to the Chief Nursing Officer related to Community Health Nursing participation in Disaster/ Emergency Management activities.

11) Advises on post-event Recovery and Continuity of Community Healthcare Services
12) Coordinates Staff Welfare and Psychosocial Support for Community Health Nursing Personnel

**ACTION CARD X**

**PROCUREMENT OFFICER**

1) Represents the Central Procurement Unit on the Health Disaster Committee.

2) Represents the Central Procurement Unit on the Health Services Committee

3) Coordinates the development, revisions/updates and implementation of the Central Procurement Unit Multi-hazard Disaster Emergency Management Plan (CPUMDEMP)

4) Advises on the activation/deactivation of the CPUMDEMP

5) Ensures that a list of essential emergency medical, pharmaceutical, domestic and sanitary supplies, accessories and materials are maintained and regularly updated.

6) Procures and maintains adequate stocks of essential emergency medical, pharmaceutical, domestic and sanitary supplies, accessories and materials

7) Coordinates and advises on the establishment of MOUs with suppliers for obtaining emergency medical supplies, accessories and materials.

8) Distributes and pre-positions adequate stocks of essential emergency medical, pharmaceutical, domestic and sanitary supplies, accessories and materials

9) Advises on the receipt, storage and distribution of Emergency Relief Supplies and submit reports

10) Maintains records of Emergency Relief Supplies


12) Coordinates Staff Welfare and Psychosocial Support for Central Procurement Unit Personnel
ACTION CARD XI

CHIEF PHARMACIST

1) Represents the Pharmacy Department on the Health Disaster Committee

2) Represents the Pharmacy Department at HEOC

3) Assists in the development, revisions/updates and implementation of the Central Procurement Unit Multi-hazard Disaster Emergency Management Plan (CPUMDEMP) and Community Health Services Multi-hazard Disaster Emergency Management Plan (CHSMDEMP)

4) Coordinates the development, revisions/updates and implementation of the Pharmacy Department Multi-hazard Disaster Emergency Management Plan (PDMDEMP)

5) Advises on the activation/deactivation of the (PDMDEMP)

6) Assists in the Identification and Procurement of essential Emergency Equipment and accessories, Domestic, Sanitary, Medical and Pharmaceutical supplies.

7) Ensures adequate stocks of essential medical and pharmaceuticals supplies are maintained for distribution.

8) Assists in the receipt and distribution of Emergency Relief Medical and Pharmaceutical supplies

9) Identifies and recommends Pharmacists to participate in Disaster/ Emergency Management Trainings and Exercises

10) Submits reports to MOH and Health Disaster Committee


12) Coordinates Staff Welfare and Psychosocial Support for Pharmacy Department Personnel
ACTION CARD XII

SENIOR HEALTH PROMOTION OFFICER

1) Represents the Health Promotion Department on the Health Disaster Committee

2) Represents the Health Promotion Department at the HEOC

3) Coordinates the development, revisions/updates and implementation of the Health Promotion Department Multi-hazard Disaster Emergency Management Plan (HPDMDEMP)

4) Advises on the activation/deactivation of the (HPDMDEMP)

5) Identifies and recommends Health Promotion Personnel to participate in Disaster/Emergency Management Trainings and Exercises

6) Coordinates the preparation of Disaster/Emergency Management related educational materials and monitors dissemination.

7) Ensures the ready availability of adequate quantities of Disaster/Emergency Management related educational materials for distribution.

8) Ensures standardization of disaster/emergency related health messages.

9) Assists in the preparation and dissemination of Media Releases related to Disaster/Emergency events

10) Submits reports to MOH and Health Disaster Committee

11) Assists in the receipt and distribution of Disaster/Emergency Relief Supplies


13) Coordinates Staff Welfare and Psychosocial Support for the Health Promotion Department Personnel
ACTION CARD XIII

CHIEF PLANNER

1) Represents the MOH Administrative Department on the Health Disaster Committee

2) Represents the MOH Administrative Department at the HEOC

3) Ensures the development, revisions /updates and implementation of the National Multi-hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP) and respective Sub-plans and Policies

4) Collaborates with the Health Disaster Management Officer in the preparation of the National Multi-hazard Health Sector Disaster Emergency Management Plan (NMHSDEMP) and respective Sub-plans and Policies

5) Submits budgetary proposals to the Ministry of Finance for funding the execution of the Health Disaster Risk Management Programme.

6) Monitors and evaluates the implementation of the Health Disaster Risk Management Programme

7) Advises on Disaster/Emergency Relief and Humanitarian Assistance.


9) Advocates Staff Welfare and Psychosocial Support for the Health Services Personnel
ACTION CARD XIV

FINANCE OFFICER

1) Represents the MOH Finance Department at the HEOC.

2) Familiarizes him/herself with the provisions and expectations of the NMHSDEMP.

3) Ensures that Disaster Risk Management is taken into consideration when the annual estimates of expenditure of the Ministry of Health are being prepared.

4) Monitors the financial aspects of the NMHSDEMP to ensure that while funds are made available to support the plan, strictest economy is maintained and unnecessary expense avoided.

5) Ensures that, in an emergency, arrangements are in place to obtain supplies not routinely stocked by the Ministry of Health e.g. gasoline.


7) Facilitates funding for Staff Welfare and Psychosocial Support for Health Services Personnel.
ACTION CARD XV

SENIOR ADMINISTRATIVE OFFICER(S)

1) Represents the MOH Human Resource Department at the HEOC.

2) Coordinates the development, revisions/updates and implementation of the MOH Administrative Division Multi-hazard Disaster Emergency Management Plan

3) Familiarizes him/herself with the provisions and expectations of the NMHSDEMP

4) Assigns Clerical support staff for the HEOC.

5) Ensures that necessary transfers are facilitated when staff members are redeployed during an emergency.

6) Ensures the timely submission of names of appropriate staff members for workshops, seminars and other training programmes locally and abroad.

7) In the event of a Disaster/Emergency ensures additional vehicles and drivers are sourced to augment the MOH fleet of vehicles


9) Ensures the provision of Staff Welfare and Psychosocial Support for Health Services Personnel
ACTION CARD XVI

PUBLIC RELATION OFFICER

1) Represents the Public Relations Department on the Health Disaster Committee.

2) Represents the Public Relations Department at the HEOC.

3) Assists in the preparation and dissemination of Disaster/Emergency related information and Health Messages in collaboration with the Health Promotion Department.


5) Liaises with the Media and make arrangements for Media Releases and Press Conferences on matters related to Disasters/Emergencies.
ACTION CARD XVII

DIRECTOR OF HOSPITAL SERVICES

1) Represents Hospital Services on the Health Disaster Committee.

2) Represents Hospital Services on the Health Services Committee.

3) Represents Hospital Services at the HEOC.

4) Coordinates the development, revisions/updates and implementation of Hospital Services Multi-hazard Disaster Emergency Management Plan (HSMDEMP) and respective Departments Sub-plans e.g. MCM Plan, Laboratory Services Plan

5) Advises on the activation/deactivation of the (HSMDEMP)

6) Identifies and recommends Hospital Services Personnel to participate in Disaster/Emergency Management Trainings and Exercises

7) Procures and maintains adequate stocks of essential emergency medical, pharmaceutical, domestic and sanitary supplies, accessories and materials.

8) Ensures the proper maintenance and availability of Emergency Response Vehicles and Personnel

9) Ensures the proper maintenance and safety of buildings, equipment and surroundings

10) Identifies and recommends trained Hospital Services Personnel to serve on the National Emergency Medical Response Team and on Medical Teams established for major Sporting and Cultural events.

11) Authorizes deployment of First Response Personnel and medical supplies to provide medical care in Disaster/Emergency situations

12) Monitor and evaluate the involvement of Hospital Services Personnel in Disaster/Emergency Response.

13) Submits reports to the MOH, HDC and HSC related to Disaster/Emergency Events
14) Advises on post-event Recovery and Continuity of Hospital Services

15) Coordinates Staff Welfare and Psychosocial Support for Hospital Services Personnel

**ACTION CARD XVIII**

**DIRECTOR OF NURSING SERVICES**

1) Represents Hospital Nursing Services on the Health Disaster Committee.

2) Represents Hospital Nursing Services at the Hospital Emergency Operation Centre (Hosp.EOC).

3) Assists in the development, revisions/updates and implementation of Hospital Services Multi-hazard Disaster Emergency Management Plan (HSMDEMP) and respective Departments Sub-plans e.g. MCM Plan, Laboratory Services Plan.

4) Advises on the activation/deactivation of the (HSMDEMP)

5) Identifies and recommends Hospital Services Nursing Personnel to participate in Disaster/Emergency Management Trainings and Exercises.

6) Requisition of adequate stocks of essential emergency medical, pharmaceutical, domestic and sanitary supplies, accessories and materials.

7) Identifies and recommends trained Hospital Services Nursing Personnel to serve on the National Emergency Medical Response Team and on Medical Teams established for major Sporting and Cultural events.

8) Authorizes deployment of Hospital Services Nursing Personnel and medical supplies to provide medical care in Disaster/Emergency situations.

9) Monitor and evaluate the involvement of Hospital Services Nursing Personnel in Disaster/Emergency Response.

10) Submits reports to the MOH, HDC and HSC related to Disaster/Emergency Events.


12) Coordinates Staff Welfare and Psychosocial Support for Hospital Services Nursing Personnel.
ACTION CARD XIX

REGISTRAR OF ACCIDENT AND EMERGENCY DEPARTMENT

1) Represents Hospital Services Accident and Emergency Department on the Health Disaster Committee

2) Assists in the development, revisions/updates and implementation of Hospital Services Multi-hazard Disaster Emergency Management Plan (HSMDEMP)

3) Spearheads the development, revisions/updates and implementation of the MCM Plan

4) Advises on the activation/deactivation of the MCM Plan

5) Identifies and recommends Accident and Emergency Department Personnel to participate in Disaster/Emergency Management Trainings and Exercises

6) Identifies and recommends trained Emergency Medical Response Personnel to serve on the National Emergency Medical Response Team and on Medical Teams established for major Sporting and Cultural events.

7) Deploys Personnel and medical supplies to provide medical care in Disaster/Emergency situations

8) Leads the Emergency Medical Response Team

9) Serves as the AMP Manager

10) Submits reports to the MOH, HDC and HSC related to Disaster/Emergency Responses

11) Advises on post-event Recovery and Continuity of Hospital Services

12) Coordinates Staff Welfare and Psychosocial Support for Accident and Emergency Department Personnel
ACTION CARD XX

HEAD DRIVER

1) Familiarizes him/herself with the provisions of the NMHSDEMP and ensures that he fully understands how, when and where transport may be required.

2) Collaborates with Accident and Emergency Department for the Activation of the Transportation Plan

3) Ensures the proper maintenance of Emergency Response Vehicles and ready availability of Drivers

4) Ensures communication equipment on Emergency Response Vehicles are functional

5) Provides support and assistance to the Emergency Medical Response Team, where possible

6) Advises on post-event Recovery and Continuity of Hospital Transportation Services

7) Coordinates Staff Welfare and Psychosocial Support for Transport Department Personnel
APPENDIX E - TRANSPORTATION PLAN

Grenada is a small country with an excellent network of roads thus enabling efficient transportation linkages and communication throughout the entire country.

Ambulances are based at:-

- The Sauteurs Health Complex in St. Patricks
- Princess Alice Hospital at Mirabeau, St. Andrews
- The St. David’s Health Centre, St. Davids
- The Victoria Police Station at Victoria, St. Marks
- The General Hospital, St. Georges
- St. Augustine Ambulance
- Red Cross Ambulance

MOVEMENT OF AMBULANCE IN THE EVENT OF A MASS CAUALTY

Location of Events - St. Andrew

- St. Patrick’s Ambulance will continue to cover the northern part of the island and St. Andrews

- The St. David’s Ambulance, one from St. Georges and the one based at St. Andrews (PAH) will respond and assist in the transport of victims.

- Supplies and extra staff will be transported from St. Georges to the AMP (Princess Alice Hospital or Grand Bras Health Centre)

Location of Event - St. Patrick
- The St. David’s Ambulance will be asked to provide coverage for St. Andrews and St. Davids. The Ambulance based at St. Marks and St. Andrews (PAH) will be asked to report to St. Patricks

- Depending on the number of victims, an ambulance from St. Georges will also be deployed.

**Location of the Event –St. David**

- St. Patrick’s ambulance will cover both St. Patricks and St. Andrews. An ambulance from St. Georges will proceed to St. Davids with staff and extra supplies. The St.Andrew’s (PAH) ambulance will also proceed to St. Davids

**Location of the Event –St. Mark**

- St. Patrick’s ambulance will report to the area. St.Andrew’s (PAH) ambulance will cover both St. Andrews and St. Patricks. An ambulance from St. George’s will report on the site

**Location of the Event- St. Georges**

St. David’s ambulance will report to St. Georges. A minimum of two (2) ambulances will be deployed from the General Hospital Compound. Any ambulance present on the compound will be asked to assist. However, coverage of the outlying parishes will be maintained. In the event of an incident at the International airport the aforementioned will be the initial response. Changes will be made if necessary during or after the rescue effort, depending on the number of casualties.

The ambulance will be deployed by the Head Driver in conjunction with the Accident & Emergency department. In the absence of the Head Driver, the officer- in- charge of the Accident & Emergency Department will be responsible for the deployment of ambulances.
The ambulances are all equipped with hand-held radios and base stations which allow communication between ambulances, the respective Health Centres, Hospitals and the Accident & Emergency Department.

The Ambulance Services of St. Augustine Medical Services Inc and Grenada Red Cross will be in-cooperated to augment the Ministry of Health fleet.

18.0 Attachments

18.1 National Disaster Management Plan