

## Introduction

A plan of action is desirable in order to co-ordinate and operate disaster relief services, since any disaster will make it necessary to work from a plan to ensure the delivery of the services using a well worked-out and methodical approach to minimize the incidences of injuries, disease and loss of life and property.

A National Disaster Relief Plan is of greatest importance especially in a country like ours so prone to a multiplicity of natural and man-made disasters, viz; hurricanes, floods, mass-fire, air transport disasters, sea transport disasters and sea pollution.

The occurrences of these disasters will therefore necessitate a rapid mobilisation of health services, resources and personnel to effectively cope with the consequences of these disasters.

The health services are primarily affected in the immediate emergency phase and the post-disaster period, and this creates additional pressures on this essential service. A plan is most crucial.

A Disaster Plan within the Health Services will be critical to the smooth operation of disaster relief activity in ensuring the safety, health and welfare of disaster victims, and the entire population.

The Government has designated the following tasks to the Health Services:

- (1) Sanitation
- (2) Water Supply
- (3) Immunization
- (4) Medical aid
- (5) Health Surveillance
- (6) Health Supervision
- (7) Public Health Education

## Resume of Past Disasters

<u>PERIOD</u>	<u>TYPE OF DISASTER</u>	<u>CONSEQUENCES</u>
1902	Volcanic Eruption	Extensive loss of life damage to livestock property & crops, change in the topography.
1955	Hurricane	"Janet" Damage to waterfront and harbour. Damage to fishing boats. Damage to homes. Damage to crops.
1958	Fire	Hazells - of property and jobs.
1962	Fire	Cotton Ginnery Destruction of Industry, loss of employment.
1962	Fire	Banfield & Layne commercial house, com- plete destruction, loss of employment.
1969	Sea Transport	"Federal Queen" Sinking in the channel, loss of life and pro- perty. "Speedy Queen" sinking in the channel, loss of life and pro- perty.
1970	Mass Poisoning	Consumption of aviation fuel, carib country. Loss of life and dis- abilities,

<u>PERIOD</u>	<u>TYPE OF DISASTER</u>	<u>CONSEQUENCES</u>
1971	Volcanic Eruption	La Soufriere Mass evacuation and loss of livestock.
1972	Air Transport	Soufriere Mountains Plane Crash, loss of life and property.
1974	Sea Transport	"Lady Angela" Loss of life and property
1977	Air Transport	Plane Crash. Loss of life and property.
1979	Volcanic Eruption	La Soufriere Mass Evacuation, Damage to crops, property. Loss of employment and live- stock.
1979	Hurricane	"David" Damage to homes and live- stocks.
1980	Hurricane	"Allen" Extensive damage to crops.
1980	Land Transport	"Sister Ophelia" Arnos Vale, extensive loss of life.
1981	Flash Flood	Leeward Damage to property, roads and bridges.
1981	Land Transport	Collision of Trucks in Kingstown. Loss of life and property.

<u>PERIOD</u>	<u>TYPE OF DISASTER</u>	<u>CONSEQUENCES</u>
1981	Flash Flood	Windward Damage to bridges, water systems and pro- perty. Loss of live- stock.
1982	Air Transport	Soufriere Mountains. Plane Crash. Loss of life and pro- perty.
1983	Fire	Kingstown Commerical Houses. Loss of property and employment. Damage to goods and property.

## Emergency Legislation

Legislation has been enacted to deal with aspects of Disaster Relief, viz.:

- (1) National Disaster (Relief) Ordinance No. 13 of 1947.
- (2) Emergency Powers (Hurricane, Earthquake, Fire, Flood or any natural disaster) Ordinance No. 5 of 1967.
- (3) Emergency Powers (Hurricane, Earthquake, Fire, Flood and any natural disaster) (Amendment) No. 24 of 1968.

S.R.O. of

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A Disaster Handbook published by the government, outlines parts of the legislative measures and their implementation during disasters and other emergencies..

The main act was introduced 36 years ago, and other subsequent legislation is scattered. They deal mainly with the exercise of emergency powers to be used during disasters.

It appears that Disaster Legislation is not modified and perhaps a new approach should be made to one (1) Central Emergency Relief ~~Organisation~~ Manual, 1980 to have all disaster-related laws compiled into a single statute, and be disseminated on a regular basis.

## Sectoral Plan (as part of National Plan)

The Health Plan is one of the Sectoral Plans of the overall National Disaster Plan. The Health Sector Plan addresses itself to the health component in the exercise of disaster relief actions. It covers all aspects of the health services, and its rapid implementation is crucial to the effective management of disasters.

### Role of the Sectoral Plan

The purpose of the Health Sectoral Plan is to organise the mobilisation of Health resources and personnel to ensure a safe and healthy environment during the immediate emergency phase of any disaster.

### Linkages with National Plan

The Health Component in National Disaster Relief is perhaps the most important to the efficient and timely management of disasters. This component is linked to the National Level through the Health Disaster Co-ordinator, who is the Permanent Secretary of Health.

The Health Disaster Co-ordinator shall be responsible for the co-ordination of all health services at the pre-disaster stage, in the Emergency Phase and the post-disaster period. He shall be a member of the National Emergency Relief Organisation and its Committee. He shall liaise with the Central Committee and report back to the Disaster Preparedness Committee for Health, and the Health Command Centre with policy directives and authorisations from the government.

The Health Services at District Level will be co-ordinated by the District Medical Officers and District Nurses under the direction and supervision of the Senior Medical Officer.

In the exercise of his duties, he shall seek the technical advice of the Senior Medical Officer, the Medical Officer of Health and the Public Health Superintendent.

The health resources within his portfolio include medical stores, medical aids, public health and sanitation services, hospitals, district clinics, health centres, epidemiology services and primary health care services.

Health Sub-Plans together constitute Health Disaster Plan

- (1) Hospital Plan forms part of the overall Health Sectoral Plan and will assist in the organised management of hospital facilities and personnel during the emergency phase.
- (2) Public Health Sub-Plan - The Object of the Public Health Sub-Plan is to highlight the specialised services and activities of the Public Health and Sanitation Department during a disaster. Disease surveillance is crucial to the preservation of health standards at camps and disaster sites ensuring a secure environment.
- (3) District Health Plan is also another sub-plan within the overall Health Plan. Health-related resources during disasters are methodically organised to dispense health services to disaster victims at emergency centres at the District level.

### Conclusion

The successful implementation of the Health Disaster Management Plan will depend on the following factors:

- (1) The awareness of all health personnel of the Plan.
- (2) Continuing education in related aspects of disaster preparedness and relief.
- (3) The convening of seminars and workshops by related health services as often as possible.
- (4) Simulation and practice exercises in the use of the Plan.
- (5) Assessment and evaluation of the Plan as a useful mechanism in disaster management.

### National Operation Centre

Personnel - Permanent Secretary

Co-ordinator - Assistant Secretary

## Functions

- (1) On declaration of a hurricane watch or other possible disaster, call a meeting of the Health Action Committee for Disaster Relief.
- (2) Consults the Senior Medical Officer to take charge of the Command Centre.
- (3) Keeps the Government and Central Emergency Committee informed concerning the emergency health situation.
- (4) Liaison with the Senior Medical Officer to decide what requests for assistance shall be sent to international agencies.
- (5) Ensures that all requests for assistance and health relief measures are channelled through the officer in charge of the Command Centre.
- (6) The Assistant Secretary shall work in close collaboration with the Permanent Secretary and document all incoming information received.
- (7) To relay and keep other centres informed of decisions made by the Permanent Secretary.

## Action Plan for the Disaster Preparedness Committee for Health

Chairman                - Permanent Secretary

Vice Chairman        - Senior Medical Officer

Members                - Manager W.A.S.A., Public Health Superintendent, M.O.H., Medical Superintendent Hospital, Senior Technicians Lab. and X-ray, Principal Nursing Officer, Senior Nursing Officer - Hospital and Community Health, Health Educator, Medical Store-Keeper, Family Planning Administrator and also Assistant Secretary and Nutrition Officer.

- (1) The Committee will meet in January each year to review and update guidelines for health for disaster preparedness and relief with particular reference to hurricanes and volcanic eruptions.



- (2) The Committee should meet again in April to ensure that all necessary preparations have been made for the onset of the hurricane season. Dates should be set by the Committee for meetings as frequently as felt necessary throughout the hurricane months ahead.
- (3) The Committee should maintain constant contact with the Central Emergency Relief Organization and the Emergency Operation Centres.

#### Functions of the Disaster Preparedness Committee for Health

- (1) To mount a public education programme for disaster preparedness.
- (2) To appoint members of the Health Action Committee for Disaster Relief.
- (3) To ensure that the roles of members of Health Action Committee are clearly defined and known by all members concerned.
- (4) To ensure that District Health and Hospital Disaster Committees have clear and well defined plans with which they are clearly and fully familiar.
- (5) To ensure that practice Disaster Preparedness and Relief drills are implemented on a regular basis.
- (6) To prepare and circulate to members of both the disaster preparedness committee for health and the health action committee for disaster relief, a list of telephones and addresses of all key persons within the Ministry. This is to be constantly reviewed, so that it is always currently correct.
- (7) To prepare and circulate to the members of both committees, names, addresses and telephone numbers of Medical Officers in charge, District Nurses, Nursing Officers and Medical Officer of Health and Superintendent of Public Health.
- (8) To prepare information regarding the location, telephone number etc. of private and voluntary health organisations and institutions in St. Vincent and the Grenadines.
- (9) To prepare and issue necessary directives and circulars especially those concerned with hurricanes and volcanic eruption preparedness to the responsible health personnel throughout the state.

- (10) To ensure that the required supplies of drugs, medical sundries and kits are available for nationwide distribution.
- (11) To ensure that methods of communication and emergency lighting systems are in place and in working order. Particular attention should be paid to radio, telephones, flashlights and storm lanterns.
- (12) To prepare a list of transport by April, which could be made available for emergency use in the event of a disaster.
- (13) To maintain a state of readiness at all times for disaster in the Health Sector.
- (14) To ensure that the health plan for Disaster Preparedness and Relief is in harmony with, and forms a part of the Central Emergency Relief Organisation.
- (15) Other personnel who are on sub-committees should:-
  - (a) know their function.
  - (b) be notified that in the event of a disaster, they should be on stand-by and report to their centres.

#### Health Command Centre

#### Personnel

Senior Medical Officer and Medical Officer of Health,  
Principal Nursing Officer, Senior Nursing Officer - Community,  
Executive Officer and Secretary.

#### Function

When the Permanent Secretary states that a disaster for Health has occurred, he will give instructions for the establishment of a Command Centre in the Ministry of Health. He will state room for the location of the Command Centre and arranges for the installation of direct telephone lines and other ancillary supplies.

### Method of Work

The Senior Medical Officer will be responsible for:

- (a) Supplies of medical stores.
- (b) Arranging daily visits by Medical Officer to evacuation camps.
- (c) All medical attention required.
- (d) Making provision for temporary privy accommodation and environmental sanitation.
- (e) Approving requests for the acceptance or rejection of offers of international assistance for health.
- (f) Advising Medical Officer of Health to liaison with the Red Cross and other voluntary groups.
- (g) Public Health Officer to keep disease surveillance daily report forms and return same to Medical Officer of Health.

### Disaster Plan for the Health Districts

St. Vincent and the Grenadines is divided into nine (9) Health Districts, but has twenty-one (21) assigned District Emergency Relief Committees. Each Health District will have a District Disaster Health Committee, which will be under the direct control of the Health Command Centre.

### Membership of the District Committee

The following resource personnel would be utilized:

#### Medical and Health

- 1. District Medical Officers/Chairmen.
- 2. Family Nurse Practitioners.
- 3. District Nurses, Health Aids and Nursing Assistants.
- 4. Hospital Nurses and Staff.
- 5. Public Health Inspectors.
- 6. Dispensers.
- 7. Public Health Nurses.

Where there is no District Medical Officer, the Family Nurse Practitioner shall be Chairperson, or alternatively the P.H.O.

### Non-Medical

8. Teachers.
9. Police Officers.
10. Community Development Workers.
11. Agricultural Officers.
12. Religious Leaders
13. Red Cross Officers.
14. Scouts.
15. Electricity Department.
16. Other Voluntary Groups.
17. Representative of Water Authority in the Area.
18. Maintenance Personnel, e.g. carpenters, plumbers.
19. Chairman can co-opt. persons whenever the need arises.

At the time of preparation for a disaster the District Health Committee will set up a District Operations Centre.

### Aims of the District Health Committee

- (1) To prevent and minimise injury, disease and loss of life.
- (2) To assist in seeking adequate transportation for drugs, supplies and the injured.
- (3) To ensure that food and shelter are readily supplied.
- (4) To ensure proper and satisfactory sanitary facilities.
- (5) To provide suitable dust bins and arrange for the disposal of refuse.
- (6) To assist in the rehabilitation of evacuees.
- (7) To work with the District Emergency Relief Committee in the identification of suitable shelters.
- (8) To co-ordinate with the District Emergency Relief Committee to ensure that adequate space is provided in the various areas to hold evacuees.
- (9) Promoting disaster preparedness among the Community.
- (10) To organise first-aid training for Community members.

## Responsibilities of Committee Members

- (1) D.M.D., F.N.P., Chairman/Co-ordinator responsible to the S.M.D./M.D.H. at the Command Centre
  - Responsible for determining the quantity and type of drugs required.
  - Must co-ordinate in collaboration with the District Nurses, the activities of the District Committee.

N.B. This is the pre-disaster period.
- (2) P.H.I. - Health Education, Water and Sanitation.
- (3) Dispensers - drugs, equipment and transportation of the necessary medical supplies.
  - Liaise with the District Emergency Relief Committee for provision of transportation for drugs and the injured.
- (4) Nurse in charge Hospital, Clinic and Health Staff - First-aid, Intensive Care Measures and referring all seriously injured persons to the General Hospital in the absence of the doctor, responsible for education and distribution of Family Planning Methods.
- (5) Red Cross for provision of utensils, linens, etc. to evacuees. Preparation of food.
- (6) Scouts - carrying messages.
- (7) Teachers - can be used as volunteers by the Red Cross to assist with the preparation of food etc.
- (8) Community Development - cots, mats, assist in preparing list for the number of shelters. Responsible for record keeping, i.e. the number of persons, names and addresses, also assisting in the location of displaced persons.
- (9) Agricultural Officers - to assist in any way requested by the team.
- (10) Police and Auxilliary - security and transportation (in addition to medical department vehicles).
- (11) Religious Leaders - spiritual and moral support, counselling, organising self help leadership among the evacuees.

During the pre-disaster phase it is the responsibility of the Committee to ensure:

- that each person is aware of duties and responsibilities.
- that there is an up-dated list of names and addresses of persons on the Committee. Each person should inform the Committee if he/she is leaving the area or country, so that arrangements can be made for his/her replacement.

#### Method of Work

#### Preparedness for the Hurricane Season

Before the start of the Hurricane Season, between April and June, the District Disaster Health Committees shall meet at specified times to ensure:

1. that each member of the Committee knows the details of the District Disaster Plan;
2. that all Health Centres/Clinics are properly equipped and stocked;
3. that buildings identified as shelters are known and have adequate sanitary facilities and water supply, and are structurally safe;
4. that the arrangements for the provision of food, clothing, transportation and communications are understood;
5. that education programmes to prepare the community are carried out; and
6. that Community members are trained in emergency first-aid.

#### First Warning

The Chairman shall:

1. Contact Committee Members to report at a pre-arranged meeting place.
2. Remind Committee Members of responsibilities.
3. Check available non-medical supplies (specify).

4. Check on shelters for readiness.
5. Contact Health Centres to verify the quantity and type of supplies available.
6. Review communication strategy.
7. Assign Committee Members to individual shelters.
8. Inform relatives with shut-ins who occupy dwellings that are deemed unsafe, of shelters to be taken in event of Final Warning.

#### Final Warning

1. Committee Members to report to shelters assigned to.
2. Committee Members in collaboration with camp co-ordinators must see to it that records are made. (No. of people, names, addresses, quantity of food and other supplies needed).
3. Ensure that proper means of communication and transportation are available.
4. Leave available space for Registration and Casualties.

#### Immediate Pre-disaster

1. Counter check the security of the building (make sure that persons mentioned on Records are within).

#### Immediate Post-disaster

1. Check for Casualties and deal with them accordingly.
2. Communicate with relatives and friends of the injured or dead.
3. Make sure that water supplies and food stored within are not contaminated. (Nursing mothers should be encouraged to breast feed babies.)
4. Get rid of all waste immediately.
5. Check for damages to shelter and take necessary actions.
6. Implement epidemiological surveillance system and be alert for contagious diseases.

7. Dead to be transported to the appropriate mortuary.
8. The District Medical Officer is responsible for liaising with the Police to waive the necessity for post-mortem examination on human bodies where death is clearly the result of the disaster.
9. The Police to be responsible for contacting next of kin for the removal of the bodies.
10. P.H.I. to ensure the removal of carcasses and burial of same in cases where owners can not be identified.
11. After all clear has been given by Central Committee encourage persons to return to their homes.

### Volcanic Eruption

In view of the nature of a volcanic eruption, most preliminary action taken during a hurricane watch should be employed. Due to the fact that the number of people to be evacuated and the areas affected will be already known, most of the problems will arise in the actual transportation and placing of those who are evacuated. The Committee should therefore pay particular attention to the following:

1. Removal of the sick, particularly the non-ambulant sick.
2. General Sanitation of Camps.
3. Daily Medical Care.
4. Preparation and distribution of Food.

At First Warning - take the same action as with Hurricane Warning.

### Evacuation Order

#### Medical Care and Removal of the Sick

1. At the time of Evacuation Order, Committee Members are to ensure that the identified shelters are safe and drugs are available.



2. Chairman to call Meeting and check supplies and send request to Headquarters for any additional supplies.
3. Ensure that Emergency Kit is at each shelter.
4. Ensure that drugs are relevant to the injuries that may be sustained, i.e. burns, respiratory disorders (adequate quantities to be available).
5. Arrange for the removal of drugs and other medical supplies from the danger areas.
6. The Committee must ensure that adequate transportation is available for the removal of the sick, utilizing not only the ambulance, but any other vehicles available.
7. Daily visits to be made by District Medical Officers to camps to take care of any medical problems.

#### General Sanitation of Camps

1. The Committee is responsible for the overall maintenance of cleanliness of the Camp.
2. The Public Health Inspector is to make regular inspection of the Camps' sanitary facilities and ensure that they are properly kept.
3. The Public Health Inspector must ensure that all waste are properly disposed of.
4. The Public Health Inspector in conjunction with the Water Authority representative on the Committee must make regular checks on the camp's water supply to ensure its safety.
5. Epidemiology surveillance system to be initiated,

#### Storage and Preparation of Food

1. The P.H.I. must advise the Camp's Coordinator on the storage and proper maintenance of food.
2. The Committee must ensure that the area where food is prepared is kept in a satisfactory condition at all times.
3. The D.M.O. must ensure that persons responsible for food preparation are medically fit.
4. The P.H.I. must make regular inspections of the kitchen and ensure that cleanliness is maintained at all times.

### Mass Casualties - District Level

Most serious casualties will only occur during the initial impact of any disaster and the numbers requiring treatment will therefore be known in the first few hours or two to three days. It is therefore important that trained personnel be available at the District Level at all times in order to determine:

1. The serious and not so serious casualties, which can be managed without additional assistance.
2. Those casualties which require hospital attention.

In the event of serious accidents, however, all health personnel working within the area must make themselves available at the Health Centre or Clinic within fifteen minutes and await instructions from the District Medical Officer.

Mass Casualties will include:

- (1) Road Traffic Accidents.
- (2) Air Disasters.
- (3) Sea Disasters.
- (4) Fires.
- (5) Floods.
- (6) Landslides.
- (7) Poisoning.
- (8) Earthquakes.

1. The plan for mass casualties will be initiated as soon as a warning is received at the Health Centre or Clinic.

2. The persons receiving such a message must immediately inform the District Medical Officer and the other medical personnel, who in turn will contact other Committee members in order to take the necessary action.

3. The District Medical Officer alerts the Health Command Centres and proceed to the disaster site with the Emergency Team.
4. The Police must ensure that the disaster area is cleared of unauthorised persons.
5. The Emergency Team will assess the extend of the casualties and treat and tag according to injury and arrange for the transportation of casualties to the Hospitals or Health Centres.
6. The District Nurse and her assistants must be responsible for the treatment of casualties sent to her Clinic.
7. The District Medical Officer must be responsible for requesting additional assistance from the Command Centre according to casualty assessment.
8. Accurate records on the scheduled forms must be made of all casualties and treatment given.
9. In the case of the dead, these will be sent to the mortuary or a pre-arranged place for identification.
10. The Red Cross in collaboration with the police will be responsible for tracing and contacting next of kin.

#### Public Health Plan

#### Water Plan - Pre-disaster Precautionary Measure

A survey of all public water supplies should be made, giving priority to drinking water distribution systems. In the event of the disruption of a water supply in any district, there is a supervisor from CWASA, who would be contacted, and whose

responsibility is to ensure a relatively safe and adequate potable water supply.

In case of heavy rains, or any other reasons such water supply is likely to accumulate foreign matters. The care-take in charge will close all inlets immediately, and switch-over to a stand-by supply. Meanwhile, the closed supply will be treated with chlorine. Water purification tablets will also be made available and distributed by P.H.I. to ensure safe drinking water.

In the case where a stand-by supply tank is not available, supplies of drinking water will be provided by trucking under supervision of CWASA and PWD.

### Sanitation Plan

All faecal matter and liquid waste must be disposed of properly. Therefore, the need for adequate and suitable sanitary toilet facilities must be constructed at all centres with consideration caused by observing proper health practices.

A supply of tetanus toxoid should be available to treat casualties who are not immunized.

Also, persons not previously immunized against D.P.T. and Polio should be given the opportunity to do so.

### Vector Control

Vectors are very good vehicles of transporting diseases and/or infections as gastro, leptospirosis and typhoid. Therefore, care must be taken of proper storage and handling of all foods, also proper disposal of garbage.

Controlling vector borne diseases, priority should be given especially where such diseases are known to be prevalent.

The public should be informed of measures to take to eliminate breeding places:

- (a) Reduce overgrowth around houses
- (b) Burn all discarded motor car tyres
- (c) Bury all empty cans, coconut shells, or any other receptacle capable of holding water.
- (d) Finally, rigid environmental sanitary practices and personal hygiene are acceptable measures.

A daily inspection of all camps would be made by the Public Health Inspector, and a report submitted to the Public Health Superintendent.

As far as refuse collection and disposal is concerned suitable bins should be provided at all centres. Evacuees must be educated as to the reasons for the proper collection and disposal of garbage. Burning and burying where possible must be encouraged. Obviously, this method will greatly reduce the fly, cock-roach and rat population. The Co-ordinator of the camp and members of the staff should encourage evacuees to participate in the cleaning of their surroundings.

In cases where central services are provided, the refuse will finally be disposed of by the Public Health Department. Temporary bathing, washing and cleaning facilities should be provided and personal hygiene encouraged.

### Epidemiology

Weekly reports are submitted to the Medical Officer of Health from the District Medical Officers. These reports reveal either communicable or any other diseases. Therefore, in the event of a disaster, the District Medical Officer and his team will know the diseases which are likely to occur in camps. Special attention will therefore be given to such areas as the dysenteries, e.g. gastroenteritis, typhoid, also leptospirosis and tetanus.

A daily disease surveillance report would be submitted by the District Medical Officer to the Medical Officer of Health.

PART II

KINGSTOWN GENERAL HOSPITAL  
DISASTER PLAN

KINGSTOWN GENERAL HOSPITAL  
DISASTER PLAN

Introduction

The hospital plays a great role in any national disaster and in all cases the community turns naturally to its hospitals for assistance.

In a developing nation as ours, where even in normal circumstances medical resources are limited, it is important that we be prepared to respond to the increased demand ~~for~~ medical personnel and supplies, which comes as a result of a disaster.

Our hospital staff must be able to put available resources to optimum use in the event of a disaster, e.g. floods, hurricanes, fire, epidemics, industrial explosions or transportation accidents, and our volcanic eruption - the La Soufriere, which erupted last in 1979.

It is with this in mind, that the disaster plan is being prepared. It outlines the role of various members of staff at the Kingstown General Hospital and provides for the use of volunteers. It is important that everyone concerned acquaint himself/herself with the procedures set out in this plan, so that one can be better prepared to deal with disaster.

Disaster

1.1. Definition of Disaster

A disaster is an emergency situation in which the number of injured persons to be received at the hospital exceeds the routine capability of the hospital to deal with them.

1.2. Purpose of the Disaster Plan

The purpose of the Hospital Disaster Plan is to establish the arrangements which have been made in order to enable hospital

personnel to respond in an organized and effective manner in case of any emergency.

### 1.3. General Consideration

This plan is to be functional and efficient. It must also be flexible, so that adaptations can be made to meet any situation. The plan provides for two (2) types of action:

- Evacuation
- Expansion

In this context, the meaning of these two terms are as follows:

Evacuation: This movement of in-patients from one place to another. It includes the procedure of discharging certain patients from hospital either for their own safety or to free additional beds for casualties.

Expansion: The reception and treatment areas to care for in-patient and out-patient casualties.

It is quite likely, that in any disaster situation, the hospital response will necessarily involve either one or both of these procedures.

## 2. Hospital Disaster Preparedness Committee

There will be a Hospital Disaster Preparedness Committee comprising the following persons: Hospital Administrator, Senior Nursing Officer, Senior Sisters of the Accident & Emergency Unit and Operating Theatre, Hospital Superintendent, Hospital Steward Maintenance Officer, Telephone Operator, Chief Laboratory and X-Ray Technicians, Medical Storekeeper and Housekeeper. The Hospital Medical Superintendent is Chairman of the Committee.

### 2.1. Functions of the Committee

- (a) To be familiar with the Ministry of Health Disaster Management Plan and more specifically, the Hospital Plan.



- (b) To ensure that each member of the Committee knows his/her role and responsibility in the event of a disaster.
- (c) To review and revise the hospital plan periodically.
- (d) To ensure that there is an adequate amount of hospital emergency supplies in stock.
- (e) To conduct drills to test the efficiency of the plan.
- (f) To be responsible for the hospital's continued preparedness for disaster.
- (g) To maintain a current list of names, addresses and telephone numbers of members of the Committee.

## 2.2. Role and Functions of Key Members of the Hospital Disaster Preparedness Committee

### 2.2.1. Medical Superintendent

1. Chairperson of the Committee.
2. Responsible for overall co-ordination of the entire Plan.
3. Responsible for organising the evacuation of wards to be used for housing casualties.
4. Shares with the Senior Nursing Officer the responsibility of managing control office and ensuring that all functions are carried out as defined by personnel.
5. Co-ordinates the activities of all medical personnel.
6. Collaborates with the Ministry of Health regarding re-housing of patients after evacuation.

### 2.2.2. Hospital Administrator

1. Responsible for ensuring that all non-medical supportive staff are aware of their roles in the event of a disaster.
2. Liaises with the storekeeper, the head of the maintenance staff and the catering supervisor to ensure that they all know, and are carrying out their functions.
3. Liaises with the Police to maintain security, crowd and traffic control in the event of a disaster.

### 2.2.3. Senior Nursing Officer

1. Ensures that all nursing personnel are aware of their roles, functions and responsibilities in the event of a disaster.
2. Ensures that the nursing staff report for duty.
3. Deploys nursing staff and volunteers as appropriate.
4. Liaises with the Medical Superintendent, the Hospital Administrator, the Principal Nursing Officer and other members of the Disaster Preparedness Committee.
5. Shares with the Medical Superintendent the responsibility of organising and directing the control office and ensuring that all functions are carried out.
6. Ensures that needs of nursing personnel are met, e.g. getting food to them, ensuring that there is a room for resting etc.

### 2.2.4. Chief Pharmacist

1. Liaises with Supplies Officer to ensure adequate supply of drugs.
2. Ensures continuing supplies of emergency drugs.

### 2.2.5. Supplies Officer

1. Makes available the necessary drugs and equipment that will be required after or during the disaster.
2. Liaise with the Chief Pharmacist, the Hospital Administrator and the Senior Medical Officer to determine the type and quantity of drugs and equipment needed.

### 2.2.6. Maintenance Supervisor

1. Ensures continuing operation of essential equipment and services.
2. Assigns staff specific responsibility for monitoring operation and supplies.
3. Arranges for extra supplies of fuel and oxygen.
4. Checks equipment to ensure all are in working order.

#### 2.2.7. Steward

1. Ensures that sufficient quantities of necessary food stuff are available in the event of a disaster.
2. Responsible for processing sufficient quantities of essential food stuff.
3. Ensuring that these foods become available to the catering department promptly when the need arises.

#### 2.2.8. Catering Supervisor

1. Responsible for assigning duties of available kitchen staff and getting others to report if necessary.
2. Ensures that safe, palatable, nutritionally adequate food is available in sufficient quantities to persons requiring it.
3. Advises the steward on kind, quality and quantities of food to be in emergency stock.
4. Consults with the Nutrition Officer or the Dietetic Technician on kind, quality and quantity of food that should be in emergency stock.

3. This diagram shows basic disaster situations which the hospital may encounter and the response required in each case.

DISASTER SITUATION	HOSPITAL SITUATION
1. <u>Internal Disaster</u> Disaster within the hospital e.g. fire, explosion	Evacuation of patients from threatened and affected areas,
2. <u>External Disaster</u> Minor disaster involving small numbers of casualties e.g. fire, flood, road-traffic accident, explosion	Expansion of treatment areas to care for casualties, Casualty Department
3. <u>External Disaster</u> Major community disasters involving large number of casualties, e.g. hurricane flood, fire, explosion, aircraft accident, epidemics	Expansion of reception and treatment areas to care for in-patient and out-patient casualties. Evacuation of some in-patient to free beds for casualties.

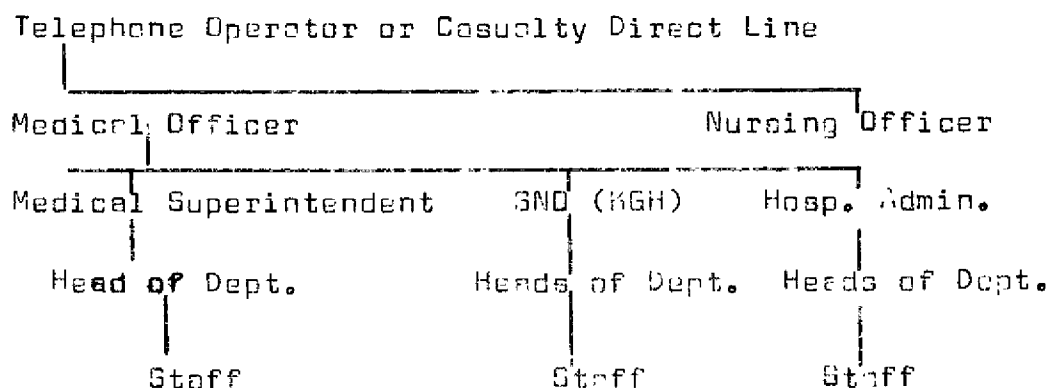
DISASTER SITUATION	HOSPITAL SITUATION
<p>4. <u>Disaster Threats</u></p> <p>Disaster threatening either the hospital or whole community, e.g. impending flood, hurricane, volcanic eruption etc.</p>	<p>Pre-cautionary evacuation partial or total, prepare reserve supplies and equipment. Alert staff, e.g. Medical supplies, blood, bank, food supplies etc.</p>

### 3.1. Organisational Arrangements for Disasters outside of the Hospital

#### 3.1.1. Notification Procedures and Initiation of Plan

The disaster plan will be initiated when warning of a disaster is received at the hospital, or when there is an inflow of injured persons exceeding twenty-five in number.

#### 3.1.2. Warnings



Warnings of a disaster will be received by the telephone operator, or Medical or Nursing Officer in charge of the Emergency Department. The Nursing Officer will then notify the following members of the Committee:

The Medical Superintendent  
 The Hospital Administrator  
 The Senior Nursing Officer  
 The Medical Officers - Emergency Unit  
 Heads of the following Departments:  
   Paediatrics, Obstetric, Medical and  
   Surgical Wards, Medical Stores, X-Ray  
   and Laboratory

3.1.3. The Medical Superintendent will be responsible for issuing a Radio Release to call out all hospital personnel on duty immediately.

3.1.4. Initiation of Plan

The Plan will be initiated by the Medical Officer on duty or the Administrative Sister on duty, if the former is not immediately available.

3.1.5. Communication

In the event that it is impossible to communicate by telephone with the above mentioned persons (3.1.2.), messengers would be dispatched to solicit help from the police in contacting and transporting health personnel to the hospital.

3.1.6. Lighting

There is a stand-by generator, which will be used in the event of a power failure.

3.2. Setting up of a Control Office

3.2.1. The Nursing Administration Office will serve for the purpose. The Hospital Superintendent will be in charge and the Senior Nursing Officer will deputise in managing the Control Office. A direct telephone line will be available in the Control Office to facilitate communications.

3.2.2. Functions of the Control Office

All members of the Disaster Preparedness Committee will report to the Control Office:

- To assess the situation
- To assign and deploy health personnel
- To assign volunteers according to specific skills
- To liaise with the police, radio station, funding scheme, Red Cross, Service Organizations and the press.



The triage officer will be the Medical or Nursing Officer on duty who will be responsible for sorting and tagging the casualties into the following groups:

<u>Group</u>	<u>Description</u>	<u>Tagging Colour</u>
Priority 1	Casualties requiring immediate resuscitation	RED
Priority 2	Casualties with serious injuries	GREEN
Priority 3	Casualties with minor injuries	BLUE
Priority 4	Dead	WHITE

If initial triage had been carried out at the scene of the disaster, the responsibility for the second triage will be the Chief Surgeon's or in his absence, the Surgeon on call.

#### 4.4. Transfer of Casualties from Triage Area

Casualties will be transferred to the following areas, immediately after tagging.

<u>Tagging Colour</u>	<u>Area</u>
RED	Accident and Emergency Unit
GREEN	Male Surgical and Male Medical Wards
BLUE	Casualty out-patient waiting area
WHITE	Mortuary

#### 4.5. Record Keeping

A volunteer will be assigned to collect and record the following information on each casualty:

names, addresses, age, sex, triage category and remarks.

#### 4.6. Evacuation Facility

According to the extent and nature of the disaster, the Hospital Superintendent will make arrangements for early discharge of patients and cancel all elective admissions until the emergency is over. Elective surgery will be postponed and the operating theatre will be prepared for receiving emergencies.

#### 4.7. Hospital Security

This will be done by members of the police on the request of the Hospital Administrator. Internal hospital security will be primarily the responsibility of the Hospital Administrator. He or she will be assisted by other supportive services attached to the Hospital. The gates of the Hospital will be manned by security guards, supported by orderlies, if necessary.

#### 4.8. Functions of the Police

The police will be informed of the disaster by the Hospital Superintendent or Administrator and will be responsible for the following:

- (a) Control of roads and traffic leading to the Hospital.
- (b) Control of Hospital area.
- (c) Identification of corpses.
- (d) Protection of corpses' and victims' possessions.

#### 4.9. Press Relation

Police and security guards are responsible for keeping representatives of the press from the Accident and Emergency Unit and on the wards. All enquiries will be directed to the Control Office. If it becomes necessary to make a news release, this will be the responsibility of the Hospital Superintendent.

#### 4.10. Transport

All available drivers of the hospital vehicles will be called on duty by the Hospital Administrator. Police, commercial or private vehicles may also be called in the event of a disaster.



#### 4.11. Relatives of Disaster Victims

Relatives of the disaster victims will obtain information from the Public Relations Officer at the Control Centre.

#### 4.12. Visitors and General Public

All visiting will be suspended for members of the public, except for close relatives of disaster victims and blood donors etc. Unauthorized persons would not be permitted on the Hospital premises.

### 5. Organizational Arrangement for Internal Disaster

In the event of an internal disaster the procedure will be the removal of patients and personnel from the threat of danger to their lives as a result of a natural or man-made hazard. Evacuation may be partial or total depending on the type and extent of the danger. Arrangements for managing internal disasters will be in most cases the same as for an external disaster.

#### 5.1. Authorization Plan

Authority for partial evacuation is vested in the officer in charge of the department, section or wards affected. Authority to re-house patients is vested only in the Hospital Superintendent acting on the advice received from the Ministry of Health.

#### 5.2. Notification of Personnel

In the event that an evacuation becomes necessary, whether partial or total, the Medical Superintendent will be immediately informed. The Sister in charge will notify the telephone operator who will in turn notify members of the Hospital Disaster Preparedness Committee. (A list of names, addresses and telephone numbers of members of the committee will be in the possession of all telephone operators), and in the Accident and Emergency Unit.

### 5.3. Disaster Site

The Hospital Superintendent, the Hospital Administrator, the Senior Nursing Officer and all others concerned will report immediately to the disaster site. The doctors on call to the Wards involved will immediately report to the disaster site to carry out triage procedures, if necessary.

### 5.4. Partial Evacuation

Patients will be moved to the nearest safe area,

### 5.5. Total Evacuation

This applies to the removal of all persons from the Hospital buildings. All patients will be tagged and their names and destination recorded.

### 5.6. Evacuation Procedures

Ambulatory patients will leave first. These patients will be accompanied by nurses to their destination. Non-ambulatory patients will be moved afterwards in wheel-chairs, stretchers and blankets or sheets. A nurse in charge of the Ward at the time of the disaster will keep a record of the names of the patients evacuated. Bath and toilets should be checked to see that all patients are evacuated. A patient count will be taken on arrival at the safe area to ensure that all patients are accounted for.

#### 5.6.1. Where to be Evacuated

- To another section of the hospital if it is possible.
- To a nearby building e.g. (Nurses Hostel & Nursing School)
- Nearby schools as designated by the Chairman of the Control Emergency Committee, or any other vacant government building.

#### 5.6.2. Transportation for Evacuation

If the entire or part of the hospital is evacuated full use will be made of all available hospital transport.

In addition assistance will be sought from the police, the Ministry of Communication and Works, Service Organizations and private vehicles, if necessary.

## 6. Special Department Responsibilities

1. Depending on the degree of disaster, all departments will begin twenty (24) hours of operation.
2. Staff will remain on duty until released. However, arrangements will be made for staff who have been victims to return home to take care of family responsibilities.

### 6.1. Clinical Departments

If it becomes necessary to free beds to accommodate disaster victims, the Medical Officers will work together in screening patients who could possibly be discharged.

All members of staff (Medical and Nursing) who are off duty will report on duty immediately. Senior staff of other supportive departments will also be expected to report on duty.

## 7. Evaluation

In the event of a disaster, this Plan will be evaluated and improved by the Hospital Disaster Committee, where necessary.

APPENDIX I

RECORD OF MASS CASUALTIES

Name	Address	Sex	Age	Triage Category	Remarks

DISEASE SURVEILLANCE DAILY REPORT

Health Facility

or

Relief Team..... Date .....

	Cases		Deaths (if any)	
	under 15 yrs.	over 15 yrs.	under 15 yrs.	over 15 yrs.
Injury.....				
Diarrhoea.....				
Fever.....				
Cough.....				
Skin Rash.....				
Others.....				

TAGGING IDENTIFICATION CONTROL REPORT  
FOR MASS CASUALTIES

Name of Patient .....

Age .....

Sex .....

Place of Origin .....

Diagnosis .....

Initial Treatment .....

Date .....

.....  
Name of Reporter

.....  
Status of Reporter

APPENDIX IV

Weekly Report for Environmental Sanitation  
Disaster Relief Camps/Centres

Name of Camp/Centre..... Location.....

Type of Building.....

State of Repair.....

Population - Adults

Males.....

Females.....

Children under 14

Males.....

Females.....

1. Water Supply

Adequacy

Quality

Regularity of flow

Liquid waste and excreta disposal

Type

Condition of structure

No. of sittings

Adequacy

Cleanliness

2. Food Handling Practices

Storage of food

Cooking Utensils

Type

No.

Adequacy

Condition of Kitchen

Evidence of Fly breeding

Evidence of Cockroaches

Evidence of Rats

3. Solid Waste Disposal

Method of Disposal

Type of Storage

Method of Collection

.....  
Name of Reporter

.....  
Signature

Basic Items for an Evacuee Camp

Water

Food

Garbage cans

Pails, buckets, basins

Disinfectant, soap

Toilet paper

Blankets

Cots

Brooms, Mops

First Aid Kit (complete)

Flash lights, Batteries, Bulbs

Lanterns, Kerosene

Matches

Pots, Pans

Kitchen Utensils

Fuel, Stove, Charcoal

Coal Pots

2 Cutlasses

1 Wheel barrow

2 rakes

2 Pick-axes, 2 Shovels

Baths and Toilets

Surveillance Forms

Pens and Paper

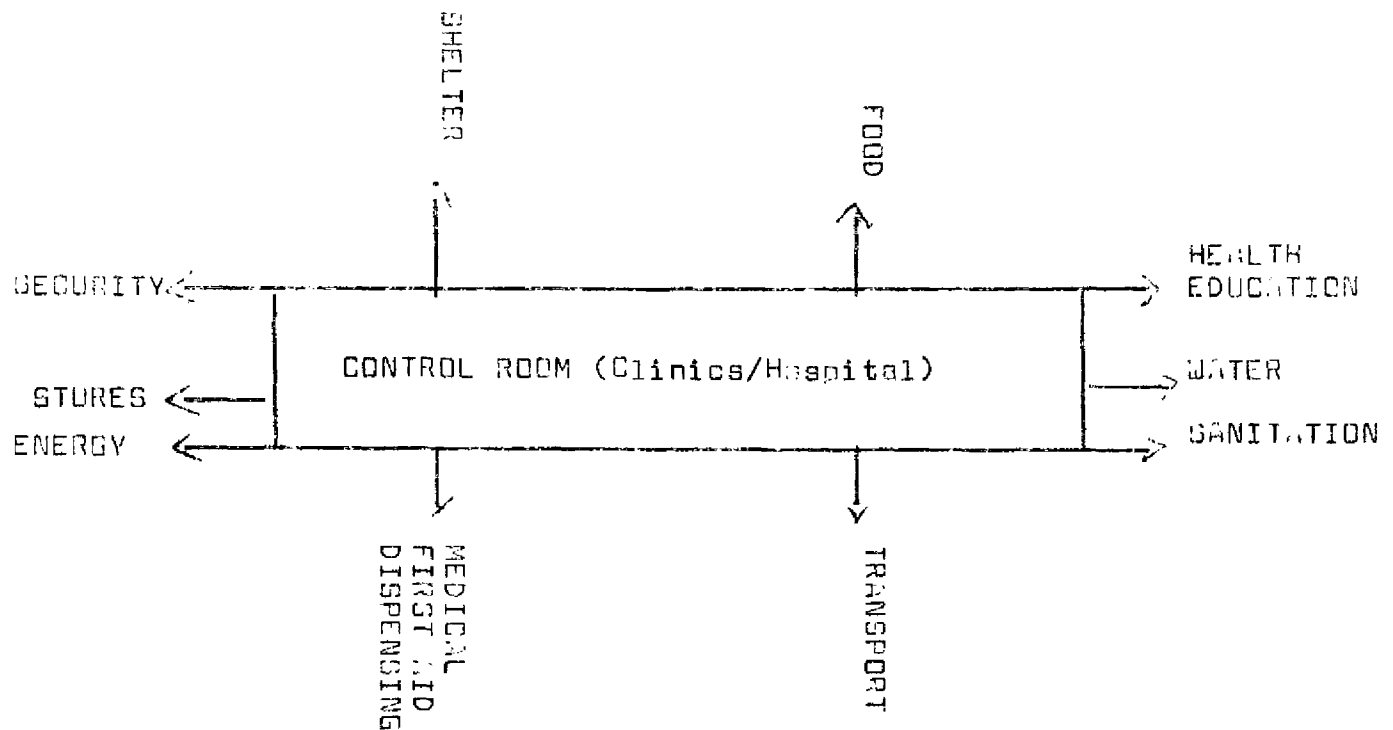
2 Hammers

Rope

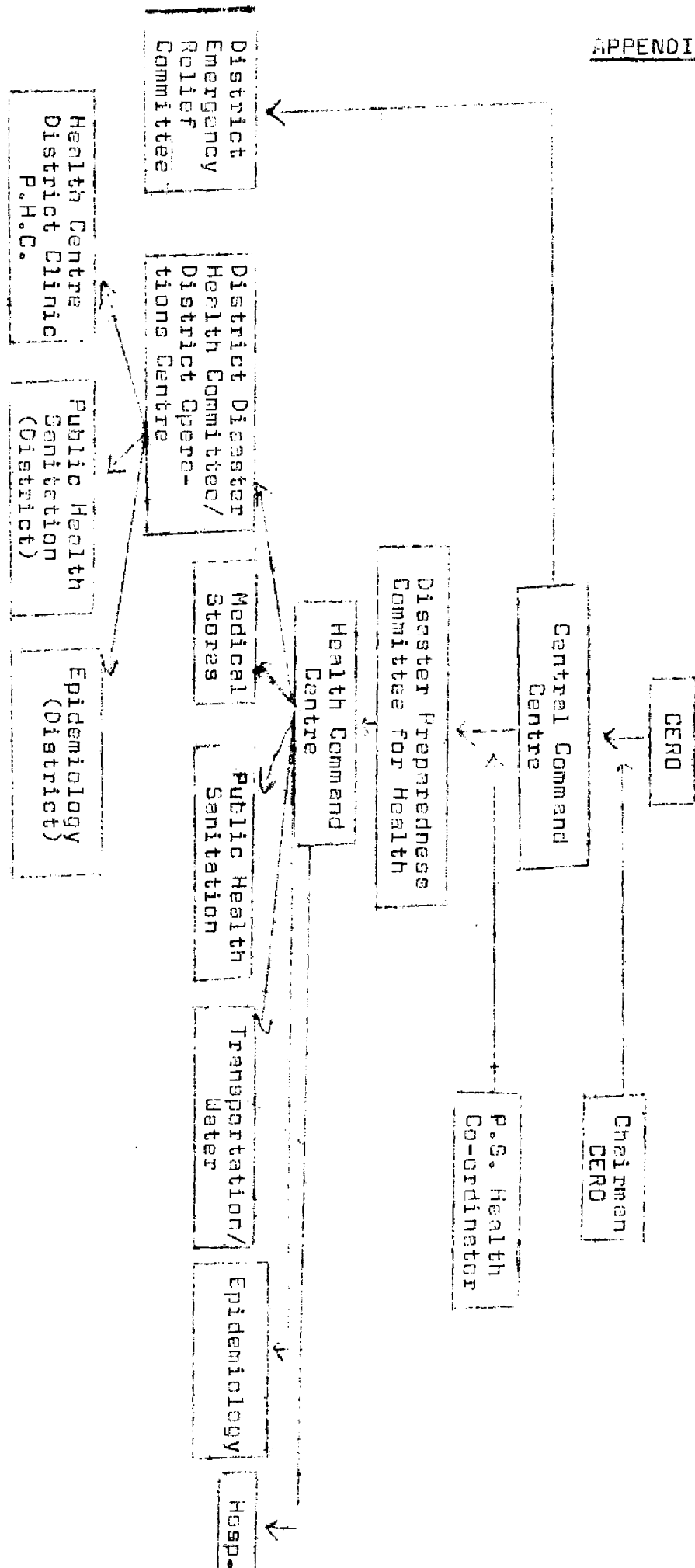
Nails



DISTRICT DISASTER PLAN FOR HEALTH  
PUBLIC HEALTH DEPARTMENT KINGSTOWN



Functional Chart with Control  
Room of the District Health  
Disaster Action Plan



Health Districts

District Emergency Relief Committees

1. Chateaubelair

1. Chateaubelair embracing Petit Bordel, Sharpes and Fitzhughes
2. Troumaca embracing Troumaca, Westwood, Rose Hall, Rose Bank, Spring Village and Cumberland

2. Layou

3. Barrouallie embracing Barrouallie, Wallilabou, Peters Hope and Mt. Wynne.
4. Layou embracing Layou, Rutland, Vale, Vermont, DuBois, Francois, Buccament and Cane Grove
5. Questelles embracing Clare Valley, Chauncey, Questelles, Piliand Hill, Campden Park and Lowmans.

3. Kingstown

6. Kingstown embracing Kingstown, Montrouse, Edinboro, Seiswood, Sion Hill, Cane Garden, Dorsetshire Hill, Arnos Vale, Belair, Gomen and Deuphine

4. Calliaqua

7. Calliaqua embracing Calliaqua, Villa, Ratho Mill, Prospect and Brighton
8. Stubbs embracing Stubbs, Diamond, Rivulet, Glamorgan, Victoria Village, Calder, Argyle, Belmont, Fairburn, Pasture, Enhams

5. Marriagua

9. Marriagua embracing Mesopotamia, Richland Park, Hopewell, Evesham, Evesham Vale and Carrierre
10. Lowman embracing Lowmans (wd), Launderers, Union, Diamond, New Adelphi and Greggs