



DISASTER RISK MANAGEMENT AND PLANNING FOR HOSPITALS & HEALTHCARE FACILITIES

14 OCTOBER 2009

UNISDR - LEJWELEPUTSWA DISTRICT, FREE STATE

Cluster: Hospitals And Health Facilities Management

Directorate: Emergency Medical Services & Disaster Management



health

Department: 1
Health
REPUBLIC OF SOUTH AFRICA

UNISDR – 2008/09



International Strategy for Disaster Reduction



World Health
Organization



THE WORLD BANK

2008-2009 World Disaster Reduction Campaign

Hospitals Safe from Disasters

Reduce Risk, Protect Health Facilities, Save Lives

“The price we pay for the failure of hospitals or health facilities due to disasters is too high. In comparison, the cost of making hospitals safe from disasters is tiny.

Disaster damage to health systems is a human tragedy, results in huge economic losses, deals devastating blows to development goals, and shakes social confidence.

Making hospitals and health facilities safe from disasters is an economic requirement, and also a social, moral and ethical necessity.”



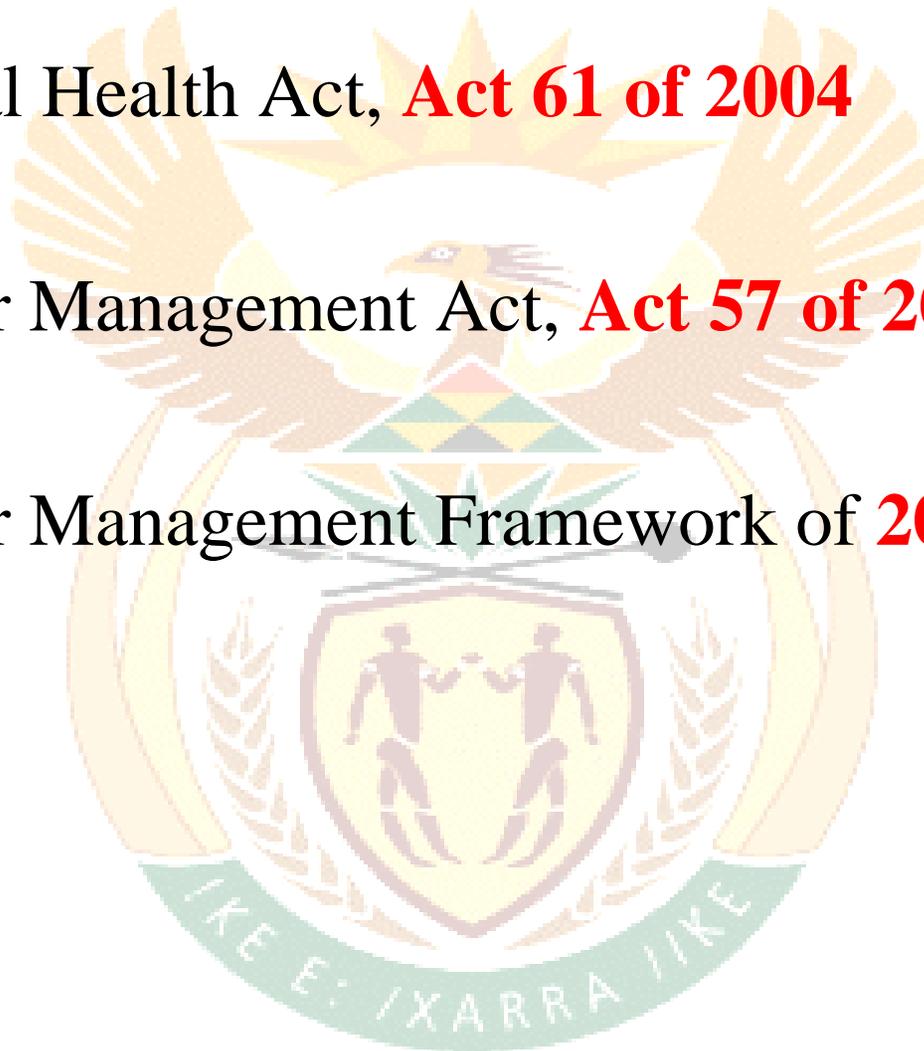
health

Department:
Health
REPUBLIC OF SOUTH AFRICA



LEGISLATION

- National Health Act, **Act 61 of 2004**
- Disaster Management Act, **Act 57 of 2002**
- Disaster Management Framework of **2005**



health

Department: 3
Health
REPUBLIC OF SOUTH AFRICA



TSHWANE DISTRICT HOSPITAL - APRIL 2007





WHO - DISASTER DEFINITION

“Any occurrence that causes damage, economic disruption, loss of human life and deterioration in health and health services on a scale sufficient to warrant an extraordinary response from outside the affected area or community”



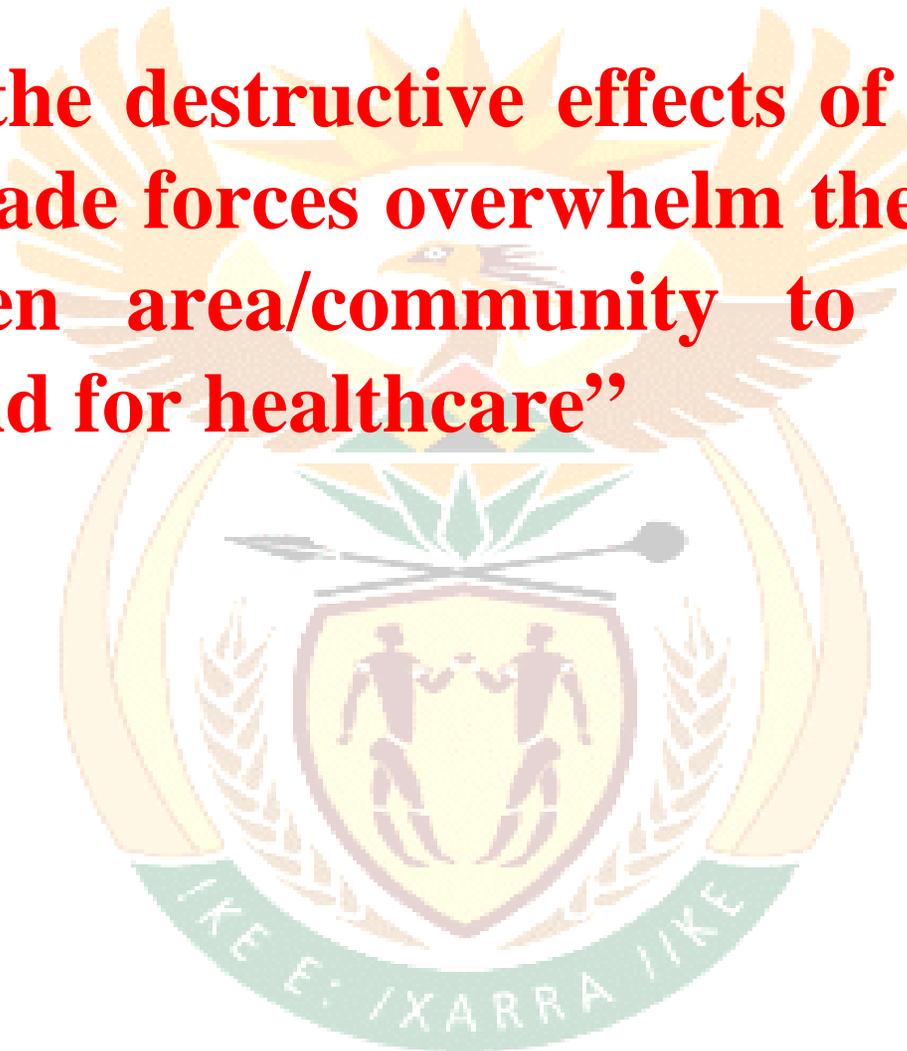
health

Department: 5
Health
REPUBLIC OF SOUTH AFRICA



AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

“When the destructive effects of nature or manmade forces overwhelm the ability of a given area/community to meet the demand for healthcare”



health

Department: 6
Health
REPUBLIC OF SOUTH AFRICA



VAALMED HOSPITAL A&E - 21 JULY 2004



- 
- Disasters are NOT simply large scale occurrences! They have a significant impact upon the community, people, infrastructure and upon the resources required to respond effectively.
 - Disasters produce long-term problems pertaining to recovery and rehabilitation. They usually overwhelm the capacity of the community, its resources and infrastructure.
 - Disasters produce death, injury and disability!



health

Department: 8
Health
REPUBLIC OF SOUTH AFRICA



COMMON DENOMINATORS

- Disruption is of such a magnitude that the organization, infrastructure and/or resources are overwhelmed.
- Inability for an institution to return to normalcy post event without external assistance.
- Generally, the term disaster refers to a natural event in combination with its damaging effects eg. Loss of life and limb, destruction of infrastructure, inability to provide adequate healthcare, etc.



health

Department: 9
Health
REPUBLIC OF SOUTH AFRICA



DISASTER CLASSIFICATIONS

- **Slow/insidious onset OR Creeping Disasters**
 - Drought
 - HIV/AIDS
- **Sudden / Rapid Onset**
 - Earthquakes
 - Tornadoes
 - Floods
 - Fires
 - CNBR
 - Strike Action
- **In the case of healthcare facilities, disasters can be either internal and/or external.**





DISASTER CLASSIFICATIONS

- **Internal:**
 - Structural (Building, Oxygen, Electricity, etc)
 - Functional (Strike action, Surge of patients, CNBR, etc)
- **External:**
 - Floods
 - Mass Casualty Incidents
- Natural & Human induced disasters continue to strike and increase in magnitude, complexity and economic impact.
- Worldwide, the poor and socially disadvantaged groups suffer most from disasters and are usually least equipped to deal with them.



health

Department 1
Health
REPUBLIC OF SOUTH AFRICA



GLOBAL TRENDS

- The majority of the world's most prolific disasters occur in the regions between the Tropic of Cancer in the North and the Tropic of Capricorn in the South, with approx. 20 major disasters annually.
- 90% of all deaths from disasters occur in “Third World” Nations (Alexander, 1993)
- Globally, disasters cause approx. 250,000 deaths per annum and lead to economic losses of approx. US\$ 50 Billion (ZAR 400,000 Billion). (UN 2006)



health

Department of Health
REPUBLIC OF SOUTH AFRICA



If **readiness** (and capacity) is insufficient

If **vulnerabilities** are too great

If the scale of **hazard** is too big

Then, the **risk** is too high, **emergencies** may not be managed locally, the communities may not cope,

DISASTER occur.



will
health

Department:
Health
REPUBLIC OF SOUTH AFRICA



**From Disaster
Management**

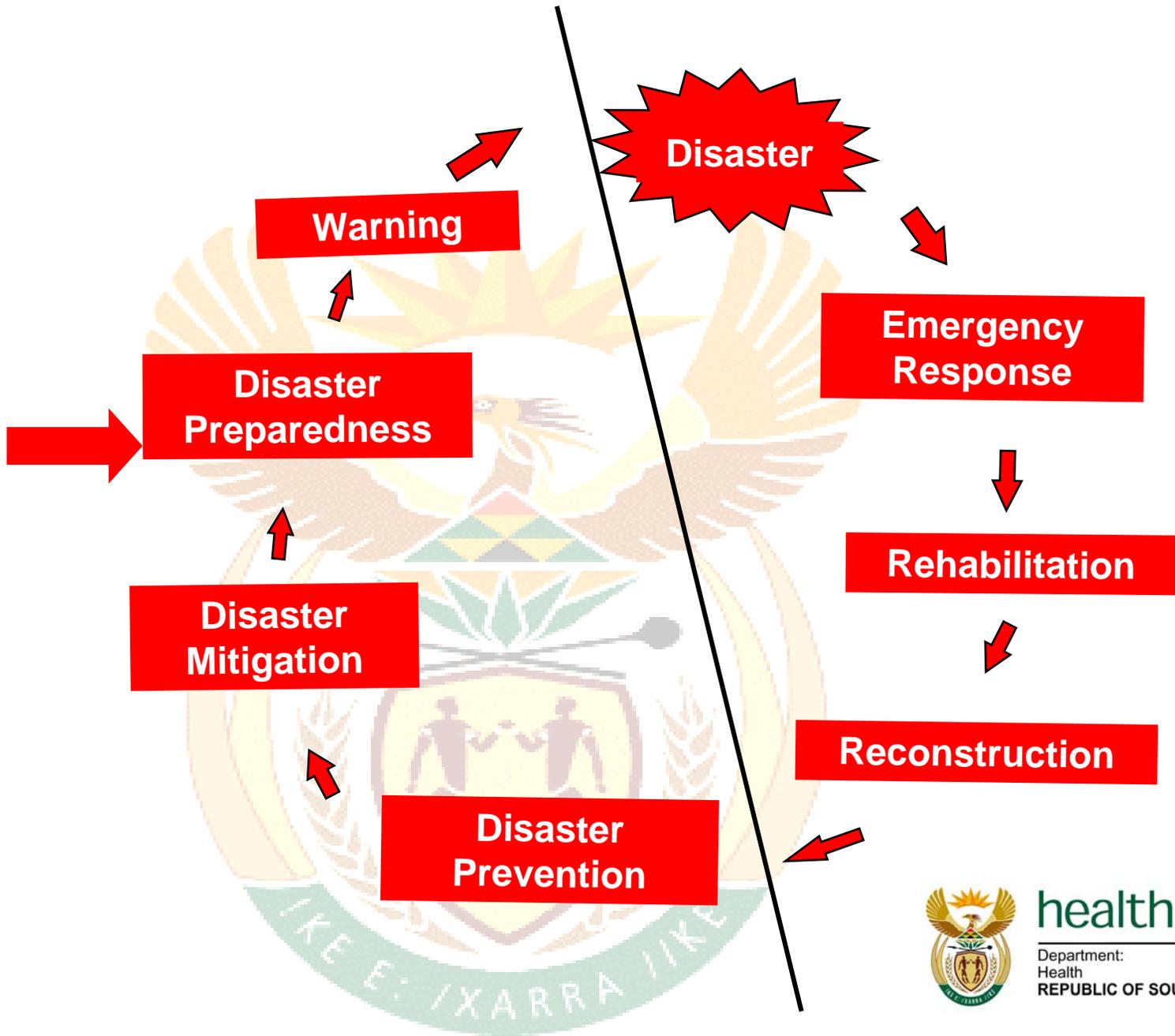


**To Comprehensive Disaster Risk
Management**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA





Disaster Risk Management

- Public safety issues at local levels
- Complex process involving a multitude of stakeholders
- Implemented by multidisciplinary/multisectoral team working within both the healthcare facility and the community
- Effective implementation can only occur if there's a mutually agreed upon planning process



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Disaster Risk Management

- Hospital planning should ensure that special interest groups within the drainage community are included in disaster risk management and preparedness plans:
 - Rural communities
 - Aged persons
 - Women
 - Children
 - Disabled persons
 - Mentally ill persons
 - Refugees
 - Homes for the aged
 - Homes for the disabled
 - Informal settlements



health

Department of Health
17
REPUBLIC OF SOUTH AFRICA



ALL HIGH RISK HAZARD APPROACH

- An agreed set of arrangements encompassing all high risk hazards/vulnerabilities, both natural and man-made.
- Rather than developing different plans and procedures for each hazard (**silos effect**), a single set of management arrangements (Hospital Major Medical Incident Management System) should be and applied to all the hazards a community is facing.



COMPREHENSIVE APPROACH

1. Prevention & Mitigation

- Vulnerability reduction and mitigation through programs such as socio-economic activities and addressing root causes.
- Regulatory and physical measures to prevent disasters from occurring, or to mitigate their effects



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



COMPREHENSIVE APPROACH

2. Preparedness

- Plans and programs, systems and procedures, training and education to ensure that when and if disasters do occur, resources (personnel and equipment) can be mobilized and deployed efficiently and effectively.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



COMPREHENSIVE APPROACH

3. Response

- Actions taken leading up to and immediately after the impact of a disaster to minimize the effects, and to provide immediate rescue, relief and support to the community.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



COMPREHENSIVE APPROACH

4. Recovery

- The long-term restoration and rehabilitation of an affected community. It's a complex and protracted process, taking many years . Recovery activities should be connected with prevention and mitigation



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



INTEGRATED APPROACH

- Effective disaster risk management requires an active partnership between all relevant agencies and authorities.
- It means that all organizations with a role to play have to work together in **MANAGING RISK REDUCTION**. A cooperative and integrated working relationship is essential.
- The entire system needs to operate with a common goal: local up to national and vice-versa.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Disaster Mitigation in Hospitals

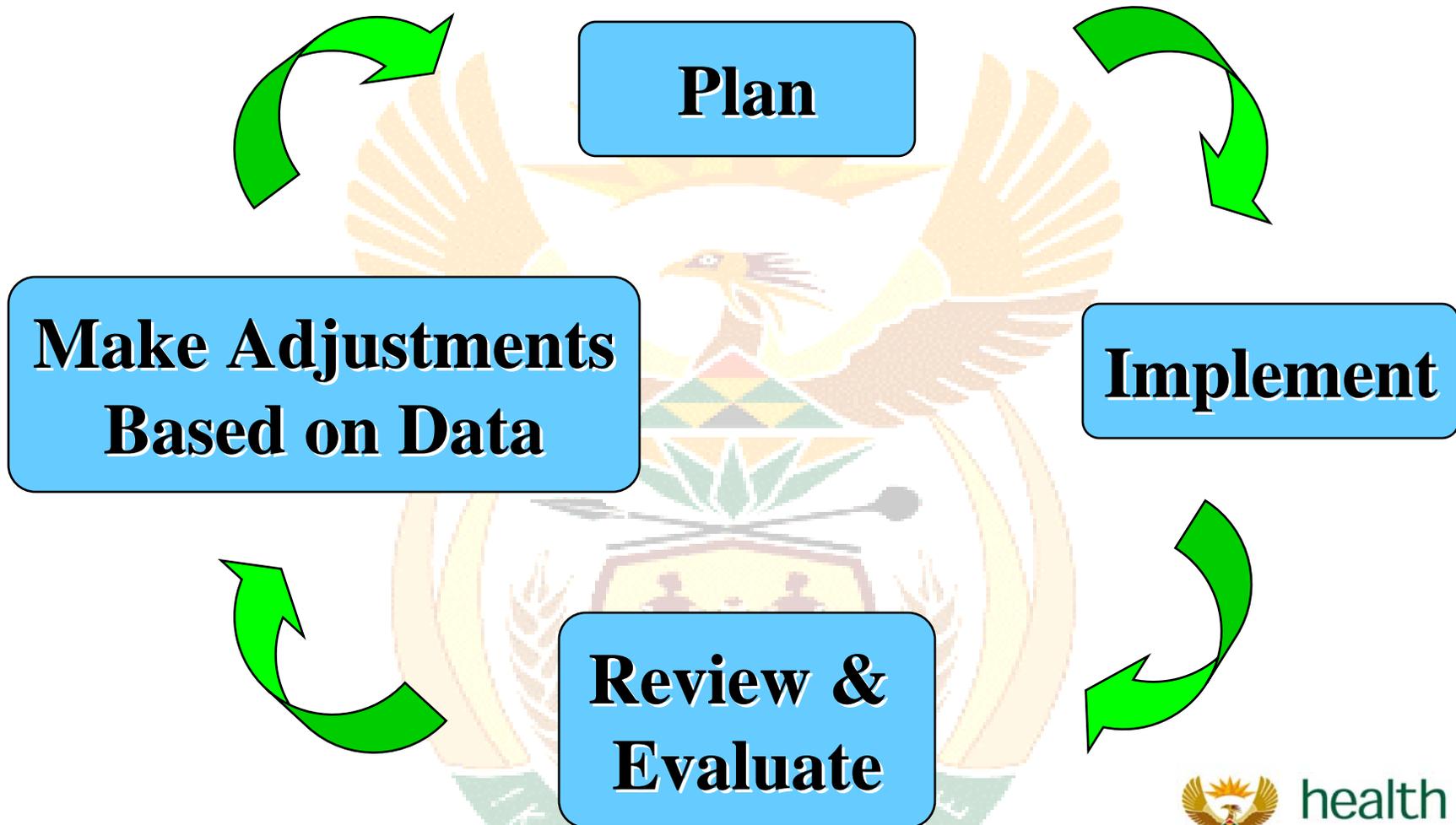
- Improved design of new healthcare facilities
- Retrofitting of old healthcare facilities
- National policy & guidelines
- Hospital Disaster Preparedness Plan
- Testing the plan
- Revising & updating the plan
- Vulnerability Analysis



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

Process of Disaster Preparedness Planning



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Process of Disaster Preparedness Planning

- Disaster preparedness planning is a **continuous process**
- Written hospital preparedness plans must be **dynamic** in order to be effective
- **Training** needs to be done regularly
- plans need to be **exercised** regularly
- plan **reviewed and amended** in light of those events/exercises.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Process of Disaster Preparedness Planning

The planning process is the production of a written plan,

but it is the process that is critical:

- **People must work together**
- **Identify hazards and their potential**
- **Assess the vulnerabilities of the hospital**
- **Understand the roles and responsibilities of each department and other agencies**
- **Develop emergency systems and procedures**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 1

Leadership resolves to plan

- **The authority to develop an emergency preparedness plan within the healthcare facility should be established**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 2

Establish planning committee

- **representatives of each hospital department**
- **representatives of the community health system including public health and mental health**
- **external emergency services such as the Emergency Medical Services, South African Police Service, South African Military Health Services and Fire/Rescue Services, to name but a few.**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 3

Conduct hazard risk assessment

- **analysis of hazards (internal and external to the hospital)**
- **a detailed hospital vulnerability analysis to determine the scope and priorities for planning**
- **hazard risk assessments continue throughout the planning process and are**
- **constantly monitored and evaluated for any changes**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 4

Set planning objectives

- **based on the results of the risk analysis**
- **identify the disaster management strategies agreed upon by the committee**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 5

Determine responsibilities

- **Sorting of the responsibilities of hospital departments and personnel**
- **Other health agencies in the community (State, Private and NGO's)**
- **Tasks must always be allocated to people and organisations who are capable of carrying them out effectively and efficiently**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 6

Analyse resources

- identify what a facility will require, rather than identifying at what it has.
- If a gap/s exist, the planning committee must identify sources of personnel and equipment which can be called upon speedily and efficiently
- Mutual aid agreements with other health care facilities within the immediate area and/or region must be implemented



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 7

Develop systems and procedures

- **identify its strategies for prevention and mitigation, preparedness, response and recovery from mass casualty incidents and disasters.**
- **HMIMMS, communication systems, public information, education, relations (P.I.E.R), and resource management systems.**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Step 8

Write the plan

- The document **must** be distributed to all who will use it, both internal and external role-players
- The document **must** be **simple** and **straightforward**
 - Or people won't read it and/or understand it.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Steps 9 & 10

Train personnel - Test plans, personnel and procedures

- **This is the critical foundation of emergency preparedness**
- **response activities will require personnel to function outside of their normal day-to-day roles and responsibilities and;**
- **to assume tasks with which they are less familiar and that must be carried out within a highly stressful environment**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

The Planning Process

Steps 9 & 10 (cont'd)

- personnel **must** be trained and regularly tested in their emergency management tasks
- Personnel need the opportunity **to practice** their emergency management roles and responsibilities

“A plan which has not been tested and reviewed may be worse than no plan at all - it can build a false sense of security in the healthcare facility about its level of preparedness”



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



The Planning Process

Steps 11 & 12

Review and amend the plan

- Plans – **must** tested, reviewed and updated on a regular basis (at least annually)
- Each time the plan - or part of the plan - is activated for an exercise or an actual event, - identify improvements needed, etc (SWOT Analysis)



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

The Planning Process

Steps 11 & 12 (cont'd)

- planning is a **DYNAMIC** process; it never stops
- The written plan is simply one outcome of the planning process, but it's not an end point, only a piece of the planning process
- The written plan is a living document which must be constantly tested, reviewed and updated. **NOT RESUSCITATED!**



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



**EXAMPLE OF HEALTHCARE FACILITY "ISOLATED" DUE TO FLOODING – NAMIBIA
MARCH 2008**





HOSPITAL MEDICAL INCIDENT MEDICAL MANAGEMENT & SUPPORT (HMIMMS)

- NDoH approved course
- Envisaged training for Lejweleputswa = December 2009
(funded by the NDMC)
- UK based course however, has been “South Africanized”
- Currently utilized in 47 countries and NATO approved
- Provides a structured approach to hospital disaster response
- Ideal for all hospital staff, outlining key responsibilities and actions during the response phase

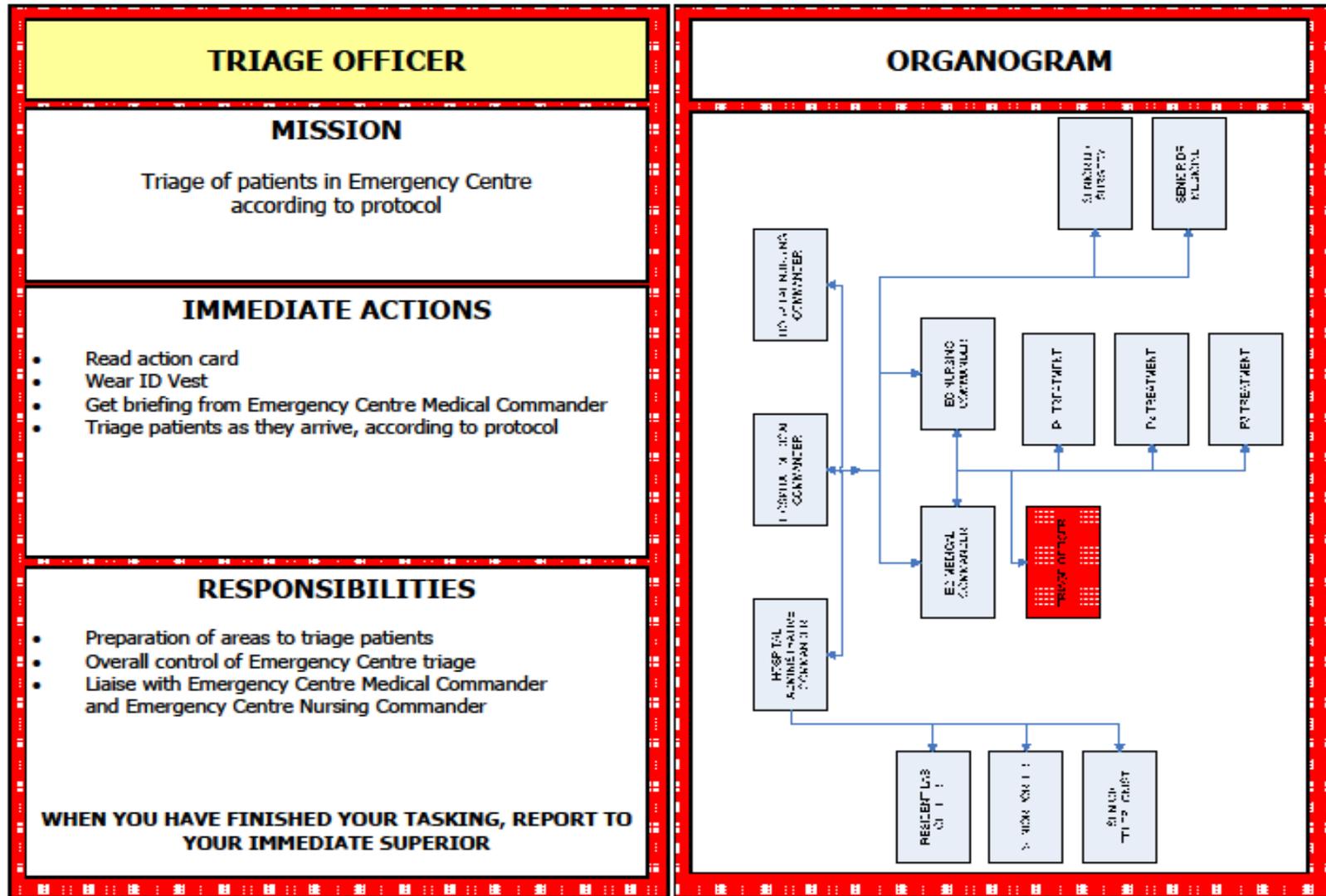


health

Department:
Health
REPUBLIC OF SOUTH AFRICA



National Health Incident Management System (Based on HMIMMS)





**"TO FAIL TO PLAN
IS TO PLAN TO
FAIL!!!"**



**"DISASTER
MANAGEMENT IS
EVERYONES
RESPONSIBILITY"**



health

Department of
Health 43

REPUBLIC OF SOUTH AFRICA

THANK YOU!!!!

“A System to Save Lives”

EMERGENCY MEDICAL SERVICES

TEL : 10177

CELL : 112



health

Department of Health
REPUBLIC OF SOUTH AFRICA