

Planning in emergencies and disasters

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In surgery, emergencies are a common occurrence. Management of surgical emergencies is a component of surgical training - although this mainly comprises the clinical aspect of it. A disaster is a large-scale emergency and thus involves many other disciplines other than medical.

In the last decade, Kenya has been through many disasters such as the terrorist bombing of the American Embassy in Nairobi in 1998.

Definitions

An emergency is an event, actual or imminent, which endangers or threatens to endanger life, property, or the environment and which requires a significant and coordinated response.

A Disaster is a serious disruption to community life which threatens or causes death or injury in that community, and damage to property which is beyond the day to day capacity of the prescribed statutory authorities and which requires special mobilization and organization of resources other than those normally available to those authorities.

A hazard is a source of risk.

Emergency Risk Management is the systematic application of management policies, procedures, and practices to the tasks of identifying, analyzing, evaluating, treating and monitoring risks.

Emergency Management is the range of measures to manage the risks between the community and its environment. This assists communities to minimize their risk through preparation of comprehensive plans for prevention, preparedness, response, and recovery.

Emergency planning refers to the analytical and consultative processes which enable the management of risks from various hazards.

Disaster Medicine is the prevention, redemption and mitigation of the effects of disasters on the health of

communities, appropriate treatment to those affected and restoration of health services and facilities to the predisaster situation. This will thus involve rescue, first aid, casualty clearing, emergency surgical procedures, hospital treatment, mental health and environmental health measures.

Disaster Epidemiology is the study of the incidence and distribution of diseases as concerns disasters. Factors contributing to this can therefore be measured and described.

This involves disease surveillance, public health impact and natural history of disasters and their acute health effects

Disasters damage property and cause pain and suffering on a massive scale.

The focus of planning thus has the aim of preservation of life, effective management of the injured and restoration of the general health and well being of the affected community.

Emergency and Disaster management are thus measures taken to manage risks to communities and the environment.

The management of health effects of disaster must be integrated with other elements of emergency management.

CLASSICAL MANAGEMENT

It has been said that "if you fail to plan, you plan to fail" and this saying has been proved true time and again, often with dire consequences for those involved. It results in unnecessary loss of lives and causes unnecessary suffering.

There are many theories of management. As an introduction, let us look at Fayol's classical management theory. This is prudent because management of disasters involves a cross section of personnel from various disciplines other than just medical.

Henri Fayol (1841 - 1925) outlined the managers' role as encompassing the following functions:

1. Planning
2. Organizing
3. Commanding (leadership)
4. Co-ordinating
5. Controlling

Planning involves having objectives and goals from which policies can be made. Resources are obviously required and involve manpower, money, materials and of course time.

Organizing involves structuring and defining roles i.e. who should do what and when.

Commanding is basically providing leadership. This involves motivating and communicating.

Coordinating is basically using individuals (or groups of individuals) that complement each other to accomplish specific objectives.

Controlling is maintaining standards, controlling costs, quality and quantity. Guidelines are issued and rules established where individual limits for decision-making are defined. Basically this sets the limits of "freedom to act" and involves budgeting, terms of service and terms of reference.

Planning concepts must take into account hazard evaluation and disaster epidemiology.

Hazards affect communities depending on the type and intensity. They give an idea of the vulnerability of a community and once identified impact on prevention, demographic profile and preparedness.

Hazards can be broadly classified into two: -

1. Natural hazards that result from the climate, geophysical and biological factors (e.g. cyclones, bush fires, floods)

2. *Technological hazards*; these result from human fault and hostile action such as war. These involve nuclear, biological or chemical accidents or acts of war.

Kenya at various times has had: -

- drought
- flooding
- **train accidents** (e.g. Ngai ndeithya bridge)
- Fires (Athi River train disaster, Kyanguli school fire)
- Plane crashes - Lufthansa, Busia
- Road Traffic Accidents - buses, matatus
- Oil spills -
- **Terrorist activity** - American Embassy bombing, paradise hotel

Disasters will usually have an effect on the economy of a country or region involved owing to the deterioration effect on infrastructure. There is damage to buildings, businesses collapse and jobs are lost. Often tourism also suffers and insurance premiums rise.

Three approaches and combinations thereof can be used.

1. **Integrated:** in this various agencies work together
2. **Comprehensive approach:** involves prevention, preparedness, response, recovery and rehabilitation. (in the long run, it will also involve legislation & advocacy). These are aspects of disaster management and **are not** necessarily sequential phases. **Human resource**, finance, materials, equipment and tools as well as time is required.
3. **Hazards Approach:** different types of hazard may cause similar problems in a community. Thus a single set of management arrangements capable of encompassing all hazards are put in place.

All hazards can thus be listed, with arrangements made capable of catering for all to the greatest extent possible.

A prepared community develops an effective disaster management arrangement. They thus are alert, informed and active.

The scale of the problem also varies in magnitude, a stepwise scale being Disaster site management, (Ambulance/transport) Medical incident management (Hospitals) Regional level disaster management state level (National).

The scope of preparation involves:

Site response and triage

Education and training for medical and other personnel.

Clinical management (acute medical care and first aid)

Transport (ambulance, evacuation)

Hospitals

Public Health response

- Water
- Shelter
- Food
- Sanitation
- Infectious diseases (disease control)

Mental health both acute and long term with focus on groups with particular needs such as children, the old, refugees and migrants

Other aspects that should not be ignored include **legal issues, crowd control** and movement including spectators.

Post Disaster Activities, which will involve rehabilitation, documentation, restoration of normal function and emotional impact.

Integral elements of emergency management are: -

- an alert, informed and prepared community
- identification and assessment of risks to the community
- a programme of prevention and mitigation of emergencies and disasters
- Identification of key persons or organizations for emergency management planning and prevention, response, recovery and rehabilitation.

Various committees and subcommittees can be formed to address specific aspects;

for example

- public safety
- health
- communications
- welfare (catering, clothing)
- transport
- engineering
- agriculture

There should be a hierarchy of plans which "dovetail" into each other to deal with various scales of emergency or disaster. Thus local - Provincial- National.

Planning should result in:

- assessment of community hazards and risks
- strategies to tackle those risks

- understanding of roles/responsibility of the various players
- a comprehensive written plan

The planning procedure could follow the following model: -

Planning process

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graph TD; A[- Determine authority to plan] --> B[- Review the plan]; B --> C[- Establish planning committee]; C --> D[- Conduct risk assessment]; D --> E[- Set planning objectives]; E --> F[- Apply management structure]; F --> G[- Determine responsibilities]; G --> H[- Analyze resources]; H --> I[- Develop emergency management]; I --> J[- Arrangements and systems]; J --> K[- Document the plan]; K --> L[- Test the plan]; L --> M[- Activate the plan];
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## RELATIVES

There should be a **relative reception area** with adequate information, lists, catering services, and essential amenities available (volunteers very useful here).

Patients can be released to the relatives' reception area when well enough.

## VOLUNTEERS

Plans should be made on how to handle volunteers. There should be a separate facility, preferably away from the hospital, for registering, identifying, and deploying volunteers. Only take as many volunteers as can be properly supervised.

## PUBLIC RELATIONS (PR)

Good PR is essential in all organizations. Often, criticism is a result of failed PR.

Do not antagonize the media by failing to provide accurate information.

All managers of all organizations must be aware of their responsibilities. PR should be the opening of a window of opportunity.

## VIP's

VIP visits are important in publicizing the problems and soliciting assistance. They can however be very disruptive of the work in progress. Appropriate arrangements should be made and suitable escorts assigned to VIP's.

## THE MEDIA

The media needs to be handled correctly. Being newsmen, they tend to be dramatic. Their presence has to be viewed positively to spread information. Disasters are a significant source of news. It is estimated that they comprise 25% of all news stories. The plan must include a media policy. The media provides an important distribution of information. They can provide warnings, alert response personnel and disseminate information on how to minimize the effects of disaster.

They can advise on psycho-social effects and provide a medium of communication. They can stimulate and direct donations and support.

Managers should **plan with the media rather than for the media**. Many questions by the media are predictable thus adequate preparations should be made e.g. the number of dead and injured. News conferences are good for dissemination of information.

Guidelines are: -

- be prepared
- do not give "off the record" information
- be honest (to avoid backfire)
- manage ambiguity
- relate to the audience
- avoid technical jargon but maintain a professional dimension
- take the initiative (remember the interviewee is the expert).

## THE DEAD

Management of the deceased is an important part of disaster management and should not be overlooked in planning. Plans should be made for disposal of persons or parts of persons that **respect religion and**

cultural beliefs of the community and families involved.

Arrangements should be made to enable identification, location, time and cause of death. Some investigations should be conducted into each death for clarification of issues, as once disposed evidence may be lost. Thought should be put into the preservation, dignity and respect of the dead. Persons coming to a disaster scene or whose relatives have died should be appropriately prepared. Body bags should be available with careful labeling and documentation.

The following factors - **proximity, security, screen and access** should be considered for storage.

Fridge and not freezer facilities should be utilized if available. The psychological effects of mass death must always be kept in mind. The trauma and stress is usually accentuated when persons are exposed to the deaths of children.

There may be a delayed response, thus efforts should be made to reduce exposure, provide adequate information and have some empathy and human understanding.

**Psychological effects** of trauma are reduced by persons, especially rescue workers and volunteers, working in teams, developing a buddy system, support groups and having clear roles and responsibilities.

## CONCLUSION

Emergency and Disaster management planning is crucial to minimize ill effects of disasters and there is no dispute as to the positive aspects. The cost of ignoring planning is high in terms of human and material cost and there should be no excuse for not planning.

The message is: **put effective plans in place.**