

Factors Affecting the Organization and Management of Emergency Mass Casualty Events Public Health Institutions: Lazio Region ARES Experience.

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Background: Mass Casualty Events also referred to as Disasters, are those occurrences causing damage, ecological disruption, loss of human life or destruction of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area.

Methods: The study was carried out in Rome between 2008/2009 while based at Sapienza University Dipartimento Esperimentale at Policlinico emergency hospital. Data was collected by interviews from key professional informants in the organization and management of disasters in Lazio region referred to as Azienda Regionale di Emergenza Sanitaria (ARES) using interview guides, questionnaires and focused group discussions. Additional data on identified sites and installations was collected by the observational survey method (transect visits/walks) around Rome installations that the authority considers prone to disasters including tourist parks and public parks, hotels, stadia, train stations and Vatican. Observations were analyzed qualitatively. This study was approved through the institutional review board of Rome University through the Dipartimento Medicina Esperimentale and Dipartimento d'Emergenza Accettazione (DEA).

Results: Disaster Management was found to be prioritized always and effectively represented for ready intervention by prepared pre-organized multi-agency teams at every site visited. These on-scene project squads comprised a representation from the armed forces, police, fire department, medical and ambulance service all under a unified command of leadership with a specified job description. Factors identified were: Political will, human resource planning, appropriate communication utilization, time management and sufficient preparedness for disasters in Region Lazio.

Conclusion: Disaster Management is a necessity since liability to disasters is open to all to humanity around the world. Factors affecting disaster management enable an efficient forecasting and prompt response to avoid worsening that chaotic situation upon disaster intervention in any affected community.

Keywords: Disasters, Calamity, Catastrophes, Mass emergency Casualty events, Organization

DOI: <http://dx.doi.org/10.4314/ecaajs.v21i2.10>

Introduction

Tragedies have occurred since history of our planet Earth. Man made or natural situations resulting in massive numbers of casualties are termed as disasters or catastrophes or mass casualty events or calamities.

World over, new technology is being developed in all spheres of life. As a result, pressure is unexpectedly onto all players that consist of the people, environment and all necessary resources for production. As a way of survival, sophisticated weapons; chemicals; biological, and nuclide compounds are resorted to as a source of defense or weaponry. In addition, man has become so hopeless or senseless that some no longer value life and hence resorted to suicidal terrorism.

In all these situations, the future is no longer certain for all inhabitants of the universe. Accidental or terroristic incidents have already been experienced in countries including Italy,

Japan, United States of America and East Africa. Massive numbers of casualties have been experienced with unprepared overwhelmed teams. Disaster platforms have been legitimized and endorsed/ratified by most world leaders through their respective Prime Minister's Offices however their function ability leaves a lot to be desired. No country is immune to disasters be them natural, technologic or terroristic.

Specialized preformed and prepared teams are needed in these events to ameliorate the situation fast and safely. The absence of these teams from disaster scenes aggravates them even amidst resources.

The entire world population must be ready for these tragic uncertainties in order to reduce loss of life in case they strike. Italy and Lazio region in particular has fared well in this field despite not using extremely advanced technology but through organization and management of their disaster preparedness (Emergency Service) system. This study was for determining and describing factors affecting the organization and management of disaster response service in public health system. Adoption and utilization of this information could be a utility in designing, advocating, creating and managing a relatively similar Emergency/Disaster team in Uganda and other disasters prone countries.

Methods

This was a cross-sectional study done in Rome between September 2008 and March 2009. Resource persons were conveniently selected to provide the required information after approval of the study by the institutional ethical research committee. Cannon or Snow ball sampling was employed to reach out for these resource persons and divergent responses avoided by using an interview guide. Interviews were solely conducted by the principal investigator as a participant investigator while on a 7 month assigned practical emergency training period in the various units of Policlinico Umberto 1 Emergency Department of Sapienza, Rome University and sister emergency centers in the city of Rome. Additional data was gathered secondarily through review of hospital and Government records and by a survey method conducted by the principal investigator by visiting 20 key installations around Rome that included recreational squares and amusement parks (Fontana Trevi, Piazza Dipopolo and Spagna), Roman tourist sites (Coloseo and Stadi Olympico), Vaticans (San Pietro, Giovanni, San Paolo and Santa Maria Majora) and train/bus stations at Termini).

The 60 participants recruited in the study included were persons with:

- a. Central roles in the organization, management and coordination (Medical Managers, Police officers, Fire Brigade officers and Army officers, Chemicobiologicoradionuclear (CBRN) security experts, Aeronautics and Prime Ministers officials)
- b. Central roles in utilization of resources (nurses and doctors)
- c. Vital roles in the evacuation of victims (Ambulance service coordinators, managers and squads)
- d. Central roles in planning of operations (Trainers)

This study examined 3 parameters:

1. Methods of preparedness in case of a disaster.
2. Methods of understanding victim needs, prioritizing of transportation and level of care of victims.
3. Methods of avoiding confusion states during disaster interventions.

The data collected by the various methods was triangulated in a way of supplementing and validating the observations made. Data analysis was conducted qualitatively by thematically and inductively generating ideas from the data using the study parameters as a frame work for analysis.

Results

The outlined study observations constituted the factors influencing the organization and management of emergency casualty events by ARES in Lazio region:

1. Presence of a well organized and committed multi-agency squads/team/units comprised by fire department, army, police, military police, civil security, medical and ambulance services at every vulnerable installation.
2. Continuously up dated reliable information on emergency hospital bed capacity and specific hospital expertise availability in the entire Lazio region
3. Pooled and assigned ambulance systems centrally managed under a single line of command and stationed at specified centers ready for only prescribed prompt orderly intervention missions.
4. Confusion deterred through prior specified job allocation and sole unitary leadership recognition with mandatory prompt job evaluation on adherence to the planned prescribed role description of each participant in any disaster exercise after every activity (audit).
5. Information flows along a dedicated emergency communication network and coordination effected at the Central coordinating centre.
6. Confirmed ability of each squad member to carry out triage in an acceptable manner through unified certification to all team members that are trained and drilled in emergency victims need assessment.
7. Total government/Political involvement at initiation and monitoring of emergency system management as stipulated in the Italian Constitution by an Article of Parliament.

Discussion

On subjecting the observed factors in this study to thematic qualitative analysis⁵, the resulting deductions led into this research discussion and drawn conclusions. Disaster occurrences cause damage, ecological disruption, loss of human life or destruction of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area (WHO 1995)^{7,8} hence the need for all governments to ensure the quality and offered full support for disaster management programs as demonstrated in Lazio region ARES approach^{1,2,9}. As it is with the World Health organization (WHO)⁸ Emergency Teams, public health institutions in Lazio region of Italy have prepared emergency teams through ARES^{2,9} that are capable of making rapid assessment of the health status and needs of affected populations at the start of the emergency, and giving direction to regional community response to the given crisis.

Representative of all public health institutions emergency team, ARES has a core of senior personnel serving as Emergency Health Coordinators, staff members as well as respected experts from institutions in Lazio region who are available to help in carrying out its role in disaster management^{1,2,9}. Logisticians and Administrators are always available to support its disaster response in territorial settings by helping to mobilize the project's financial, supply and manpower resources comparably as it is with WHO Emergency teams during disasters^{10,11,12}. Public Health Institutions in Lazio region have the ability to call on resources of the Central Emergency Coordinating Centre/ARES to meet immediate needs at the beginning of the response the disaster after the assessment made always along a dedicated phone line for emergency services code named 118.

ARES uses Central Emergency Resources to carry out its role in disaster management which is later reimbursed when funds from the government become available. ARES maintains Emergency Response Resources at its Central Regional Coordinating centre but encourages and coordinates all public Emergency Departments to create and maintain an institutional emergency stock pile of essential supplies^{2,9}.

Comparably to United Nations Department of Humanitarian Aid (UNDHA)⁷ when disaster strikes, ARES fields a joint Inter-Agency Disaster Intervention Team to ensure that effective assistance is brought to stricken areas with a minimum of delay, in keeping with an objective, credible assessment of urgent needs at field levels⁹.

Leadership is pivotal in the management of disaster in Lazio region public health institutions². The Disaster /Emergency Team is composed by a specific type of disaster experts suitable for the needs of standardized rapid assessment and treatment mass casualty protocols, and led by a Disaster Team Leader in form of a Medical Disaster Manager (MDM) or Hospital Disaster Manager (HDM) to ensure a unified line of command to minimize confusion during the intervention¹³.

Conclusion

1. Joint inter-Agency Disaster Teams should be embraced by all public health institutions and totally supported by their governments because they ensure effective assistance to stricken areas with a minimum delay.
2. Since no country is safe from the impact of disasters and complex emergencies that are becoming more frequent and more severe, today is the time to adopt the Italian ARES strategy of emergency approach since it has proven to be efficient since 1994.

Acknowledgement

We acknowledge the support we received from the Italian Co-operation and Ugandan Ministry of Health.

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