

Role of Health Care Workers During Emergency Preparedness in Selected Hospitals of Navi Mumbai

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Abstract

Introduction: Health services being the most crucial service from the point of view of caring and rehabilitation of injured patients. Medical Facilities for patients care, requires the highest state of preparedness around the clock all 365 days. As hospitals and emergency staff are the first persons to manage the consequences of any disaster, assessment of their preparedness, as well as the infrastructure facility is most important in public interest. Keeping this view in mind, the current research is an attempt, undertaken to ascertain how prepared are the hospitals to manage disasters, both natural and man-made.

Materials and Methods: This is a cross-sectional study. Qualitative research methods were used to gather data and gain an understanding of the attitudes, perceptions, and practices of healthcare workers regarding hospital emergency and disaster preparedness. This enabled to gain an insight into the nature of the Hospital emergency preparedness process. The research also looked at numerical descriptions through quantification of the differences in the knowledge, attitudes and practices of healthcare workers concerning hospital emergency and disaster preparedness, thereby utilizing quantitative research methods.

Results: The results indicate a positive attitude towards the disaster planning process by the majority of respondents to fight for future emergency situations. There was little confidence that the hospital would take care of their medical needs. There is a need for regular workshops and training related to disaster preparedness, to be imparted to the healthcare workers who had a positive attitude towards training and education in disasters and emergencies.

Conclusion: There were policies that governed emergency and disaster preparedness at various hospitals. However most of the laws are under work in Progress category. Hence for paradigm shifting, developing countries like India needs to have positive insight & planning like advance countries around the globe to handle emergency situations.

Key words: Disaster, Health care workers, Emergency Preparedness

BACKGROUND

The World Disasters Report 2015 reported an increase of 60% disasters events in the last decade (2004-2014). In addition, the number of reported deaths increases from

600000 to 1.2 million globally. Emergency preparedness is a long-term community preparedness activity. The objective is to increase the overall capacity of a country to manage efficiently all types of emergencies ensuring appropriate systems, procedures and resources. To provide timely effective assistance to disaster victims to facilitates relief measures and rehabilitation of services. Disaster management includes four stages which include; prevention (mitigation), preparedness, response, and recovery. Health care workers have unique skills for handling all aspects of disasters. It includes assessment, priority setting, collaboration, and addressing both preventive and acute care needs.

Access this article online



www.ijss-sn.com

Month of Submission : 04-2017

Month of Peer Review : 05-2017

Month of Acceptance : 06-2017

Month of Publishing : 06-2017

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Preparing for disaster is very essential and vital priority for everyone in every discipline for dealing with emergency situations. Health care workers have a significant role to play in terms of emergency or disaster preparedness.

Research Study Objectives

1. To study the role of health care workers during emergency preparedness in selected hospitals of Navi Mumbai.
2. To examine the policies and plan governing emergency and disaster preparedness at selected hospital.
3. To study disaster preparedness among hospital health care workers at various levels.
4. To verify their knowledge, attitudes, practices, and awareness of their roles as per hospitals emergency preparedness plan.

Hypothesis

- Null hypothesis: H_0 – Selected hospitals are adequately prepared to face any kind of disaster, eventually involving a large number of casualties and injuries requiring immediate care.
- Alternative hypothesis: H_a – Selected hospitals are not adequately prepared to face any kind of disaster, eventually involving a large number of casualties and injuries requiring immediate care.

METHODS

Study Design

This is a cross-sectional descriptive survey carried out between June and September 2016.

Study Population

The study population for this study includes all the health care workers working in selected hospitals in Navi Mumbai region.

Data Collection Tools

A total of 120 structured questionnaires were distributed to all the health care workers in selected hospitals the questionnaire was divided into five sections, A, B, C, D, and E. Where in Section A contained the sociodemographic data of the participants, Section B constitutes the understanding of the emergency preparedness. Section C focus on the role of health care workers during an emergency, Section D constitutes opinions of the participants on emergency tools, and Section E on factors affecting emergency preparedness.

Data Analysis and Management

Data collected from participants were coded and given a score out of 10 in Excel sheet. Which was statistically presented using graphical tools.

Ethics

Worded informed consent was obtained from an individual participant after permission to conduct the study was obtained from the study hospitals.

RESULTS

Participants Sociodemographic Features

Demographic characteristics

It provides a description of the demographic characteristics of the study participants based on the questionnaire, which was distributed. This section looks at the gender, age, education level, duty station, work experiences, and this position held by the respondents. The age distribution of the respondents is shown in Table 1.

In Figure 1, most of the respondents were in the 20-30 age group (35%). The 31-40 age group contributed to 26% of the respondents, while those in the 41-50 age group were 21% and those in the 51-60 age group were 18%.

Respondents were asked how many years they had worked in their current position and the result is summarized in Table 2.

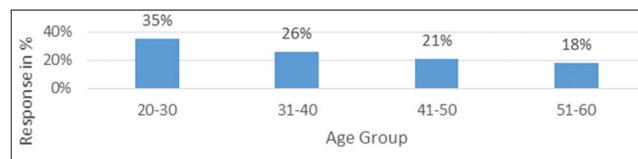


Figure 1: The age distribution of the respondents

Table 1: Distribution of respondents by age

Age group	Percentage
20-30	35
31-40	26
41-50	21
51-60	18
Total	100

Table 2: Work experience

Position	1-10 years %	≥10 years %	Grand total %
Medical superintendent	75	25	100
Administrator manager/ facility director	75	25	100
Security in charge	0	100	100
Fire safety officer	100	0	100
Nursing in charge	0	100	100
Nurse - (casualty)	25	75	100
Nurse - (general)	75	25	100
Nurse - (ICU)	25	75	100
Nurse - (maternity)	50	50	100
Pharmacist	100	0	100
Laboratory scientist	50	50	100
Sweeper 1	50	50	100
Sweeper 2	50	50	100
Grand total	54	46	100

As shown in Table 3 of Figure 2 most of the respondent worked in hospital wards (29%) mostly nurses, ward boys are following in this category, followed by outpatients department (OPD) (16%), then casualty (15%). Those working in casualty and OPD would be more when disaster will take place. The other duty station respondent represented was operation theatre (12%), laboratory (9%); cabins (6%), pharmacy (4%), ICU (3%) and other category is 22% which included the cabins, medical superintendents office, security in charge office, fire safety control rooms, housekeeping rooms, etc.,

Table 3: Duty station of the health care workers

No.	Duty Station	Percentage
1	Ward	29
2	Outpatients Department /OPD	16
3	Causality	15
4	Operation Theatre	12
5	Laboratory	9
6	Cabins	6
7	Pharmacy	4
8	ICU	3
9	Other	22
10	Grand Total	100

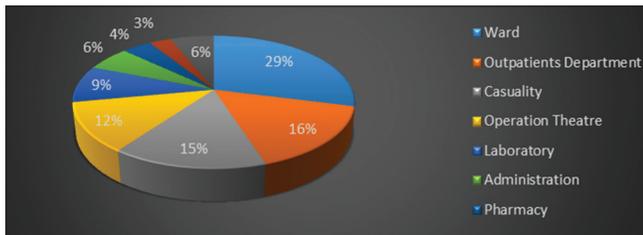


Figure 2: Duty station of the staff category

Table 4: Highest level of education for staff members

Education	Total (%)
Degree	14 (27)
Diploma	30 (59)
Undergraduate	4 (8)
Other	3 (6)
Total	51 (100)

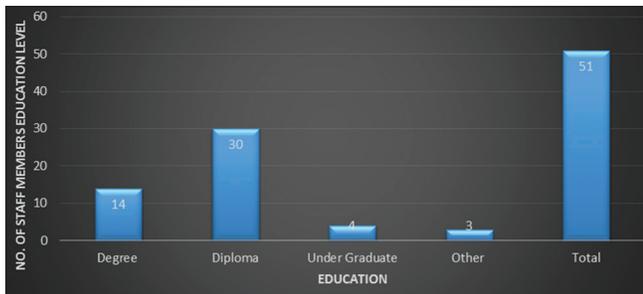


Figure 3: Highest level of education

As per Table 4 of Figure 3, the highest level of education of the respondent is shown in Table 4, namely, 30 nos. (59%) of the respondents had diplomas as their highest level of education. These are in the category of nurses, pharmacist, laboratory attendant, etc. Those who had attain postgraduate degree level is 14 nos. (27%) respondents followed this. The respondent in this category is medical superintendent, administrator/facility director, security in charges, matron, etc. Those who were undergraduate were 4 nos. (8%), higher secondary and secondary school certificate respondent were 3 nos. (6%). None of the respondents was in the “no schooling” category. There was no respondent with only primary school level.

The respondent was asked whether they were aware of any disasters that occurred in their area in the past 5 years. This was done to assess their knowledge on disasters and to find out whether they would concur with the disaster risk profile of the hospital presented in Table 5. The results are shown in Table 5.

Most of the key respondents (85%) indicated that they were aware of the disasters that occurred in their area in the past 5 years. All of the above staff categories had a greater percentage as compared to those who knew about it than those who did not know (for example of the Medical superintendent who completed the questionnaire, 88% indicated that they were aware of the disaster happenings. While 12% of them were not aware since they have joined recently). The respondent was asked to list down the disasters that occurred in the area. The disaster by the respondents includes dengue, malaria, and motor vehicle accidents on roads. Furthermore, fire incidences were reported on a higher scale.

The respondent was asked to list disasters that are likely to occur in their hospitals. The disasters listed by most of the respondents included motor vehicle accidents, disease epidemics, and fire occurrences. Some of the respondents included chemical explosions at a factory in nearby area as possible cases of disaster that could occur in the region.

Table 5: Disaster awareness

Disaster awareness	Are you aware of any disasters that occurred in your area in past 5 years		
	Yes %	No %	Total %
Medical superintendent	88	12	100
Administrator/facility director	80	20	100
Security in charge	95	5	100
Fire safety officer	92	8	100
Nursing in charge	100	0	100
Pharmacist	67	33	100
Laboratory scientist	71	29	100
Average	85	15	100

Some of the respondents included chemical spill as a possible disaster that could occur in the region. The reason behind is proximity of the hospital to the main national express highway which was used by heavy vehicles carrying harmful chemicals and gases. This means that the respondents had the knowledge of hazards that may affect the hospital.

Health Care Worker Defined Roles in Emergency Preparedness

It is a coordinated effort that requires a multidisciplinary approach, cooperations and participation of all sectors. It is a process of planning and preparation before a disaster event. It is a process that equips individuals with plans and resources that will ensure personal and family safety in a disaster event.

RECOMMENDATION

1. Training is essential on periodic intervals at staff level at every hospital.
2. Tools should be provided to hospital staff at all level to handle emergency situations.

3. Disaster management support should be from TOP down approach at all senior levels of management.

CONCLUSION

Disaster preparedness helps in the safe management of disaster practices in future. It decreases vulnerability and risk to individual and properties. The role of health care workers plays a key role in handling emergencies.

Study Limitation

The study was conducted in selected hospitals of Navi Mumbai. Finding of this study are confined to this region and cannot be generalized.

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How to cite this article: Desai SC. Role of Health Care workers during Emergency Preparedness in Selected Hospitals of Navi Mumbai. *Int J Sci Stud* 2017;5(3):77-80.

Source of Support: Nil, **Conflict of Interest:** None declared.