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RESEARCH ARTICLE

A STUDY TO ASSESS THE AWARENESS OF HEALTHCARE WORKERS ABOUT DISASTER PREPAREDNESS IN A CORPORATE MULTI-SPECIALTY HOSPITAL

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ABSTRACT

Background: hospitals are the backbone of a community's response mechanism to deal with disasters. A robust disaster plan exercised through all-inclusive activities like drills and trainings are a prerequisite to effective evaluation. **Material and Methods:** a cross-sectional survey was conducted among 100 healthcare workers at a corporate, super-specialty hospital with the help of a close-ended questionnaire. **Results:** 60% to 70% of the healthcare workers categorized as "others" had very poor or no knowledge of a hospital's role during the disaster and hospital's disaster plan and its contents; they had not even attended any trainings or drills. **Conclusion:** there is a need to implement the disaster plan in an equitable manner so that all healthcare workers have a sound knowledge of disaster preparedness.

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INTRODUCTION

Disasters, both natural and man-made, come unannounced and they possess an incredible potential to lay bare the vulnerabilities of systems, structures, processes and people^[1]. Very recently there was severe flooding in Chennai and 18 patients lost their lives because MIOT hospital and its employees were grossly unprepared to deal with such a situation^[2]. Hospitals are the backbone of any response mechanism to deal with common mass casualty events and catastrophic emergencies such as SARS epidemic or an attack of bio-terrorism^[3].

National Disaster Management Guidelines for Hospital Safety (2016) emphasize the need to generate awareness on the relevance of disaster management plan among all the stakeholders; it also recognizes the importance of disaster preparedness to ensure continuous delivery of healthcare services during and immediately after an emergency^[4].

Disaster planning is a continuous process. A plan that has not been revised and updated could give a false sense of preparedness – also called the "paper plan syndrome", which is even worse than being without a plan^[5]. Many hospitals today have a disaster plan but the staff members remain oblivious of

their roles in implementing the plan^[6]. A well-prepared hospital will regularly conduct training/workshop and drills to exercise the plan and recognize faults^[5,6].

Hospital disaster workshops and drills are often considered bothersome; they are planned and conducted in such a shoddy manner that the whole exercise is rendered futile^[7]. Some of the reasons why these drills are considered tepid are: casual announcement, giving a sense that the event being conducted is not important; exercises are conducted during regular business hours; and failure to include different hospital operations, units and employees^[7].

Preparedness activities must be planned keeping in view the events that are more likely to occur in a particular community. Specialized need-based training should be conducted for different categories of staff, so that they become aware of the authority relationships and their roles in case of an eventuality^[4]. Joint Commission suggests the hospitals to test their disaster management plans through actual participation in real events like drills at least twice a year^[8].

This study focused on gathering and analyzing awareness data related to the disaster preparedness among various hospital employees. The study was conducted in a corporate multi-specialty hospital with super-specialty in cardiac care

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MATERIAL AND METHODS

Study design: a cross sectional survey was conducted to assess the levels of awareness about the various aspects of disaster preparedness.

Study population: The target population for this research paper comprised of healthcare workers employed at a corporate, super-specialty healthcare facility. For the purpose of the study, the healthcare workers were divided into five categories based on their current position. The categories used were as follows: medical officers (doctors who are not specialists); nurses; pharmacists; laboratory technicians; and the rest of the staff were included in a collective group represented by “other” in the questionnaire. The “other” group consisted of general duty attendants (GDAs), housekeeping and security staff. A sample size of 100 healthcare workers was chosen.

Research instrument: Survey was conducted using a close-ended questionnaire, hand delivered to the healthcare workers. It included a total of 16 items. Close-ended questions restricted the responses, thus making the data set more amenable to statistical analysis.

Data analysis: Data obtained from the questionnaire was coded and analyzed using descriptive statistics with Microsoft Excel.

RESULTS

Table1 Percentage distribution of respondents according to different demographic variables

Demographics		Percentage (%)
Gender	Male	38
	Female	62
Profession	Medical Officer	10
	Nurse	50
	Pharmacist	10
	Lab Technician	10
	Others	20
Work experience	< 1 year	37
	1-5 years	50
	5-10 years	11
	10-15 years	2
	15-20 years	0

Table 1 shows that 62% of the respondents were females and the rest were males. Nurses comprised half, i.e. 50%, of the respondents. Medical officers, Pharmacists and Lab technicians together comprised 30% of the respondents, while the rest were either GDAs or members of the housekeeping and security services. More than a quarter (37%) of the respondents had less than 1 year of work experience and half the respondents had a work experience in the range of 1-5 years.

Table2 Overall percentage of responses to questions about disaster preparedness

S. No.	Questions	Yes	No
1.	Are you aware of the hospital’s role during disasters/ emergencies?	81%	19%
2.	Does your hospital have a disaster plan?	74%	26%
3.	Are you aware of the contents of this disaster plan?	68%	32%
4.	Have you attended any workshops or trainings related to disasters/ emergencies?	64%	36%
5.	Does your hospital conduct mock disaster drills?	68%	32%

Table 2 shows that 81% of healthcare workers were aware of the role a hospital plays during disasters. A quarter of the respondents were not even aware about the existence of a disaster plan. More than 30% of the respondents were not aware of disaster plan’s contents and about the trainings and drills conducted to test the plan.

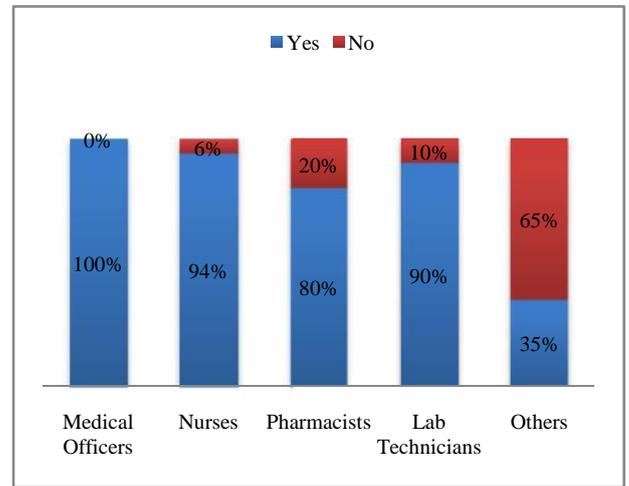


Figure1 Awareness of healthcare workers about hospital’s role during disaster

Figure1 depicts that all the medical officers and almost all the nurses were aware of the role that a hospital plays during disaster followed closely by lab technicians (90%) and pharmacists (80%). The level of awareness regarding this aspect was found to be least among the “other” category of employees.

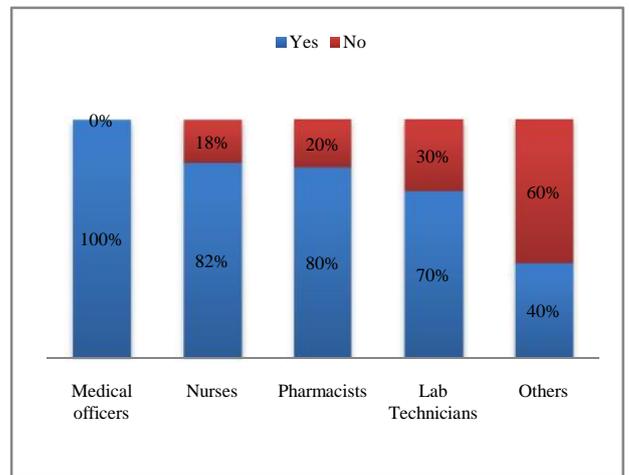


Figure2 Awareness of healthcare workers concerning hospital’s disaster plan

Figure2 illustrates that 60% of “other” healthcare workers had no idea about the existence of a disaster plan, while the other categories of staff seemed quite aware.

Figure3 shows that a quarter of the nurses and 10% medical officers were not acquainted with the contents of the hospital’s disaster plan. Level of awareness among pharmacists, lab technicians and “others” were 80%, 60% and 40% respectively.

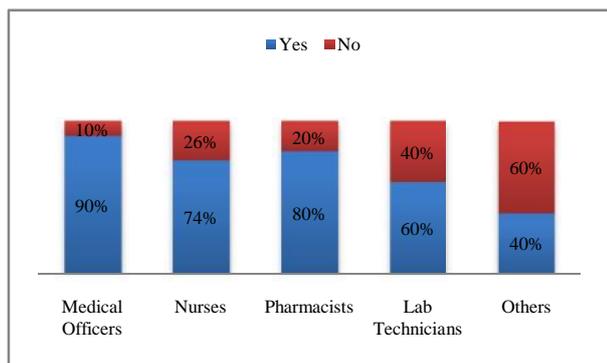


Figure3. Awareness of healthcare workers concerning contents of the disaster plan

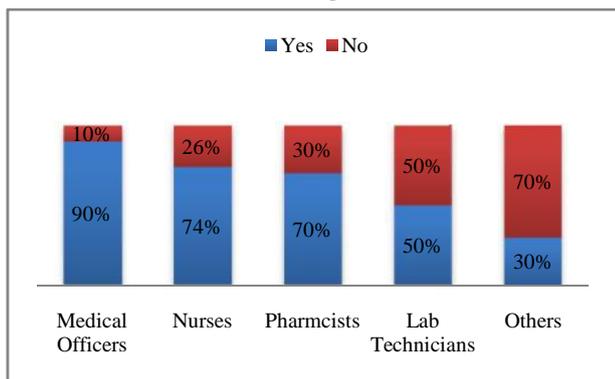


Figure4. Healthcare workers, whether they had attended any workshops/trainings concerning disasters

Figure4 clearly shows that 90% of medical officers had attended a workshop or training concerning disaster management, whereas only 30% of “other” staff had attended any such event.

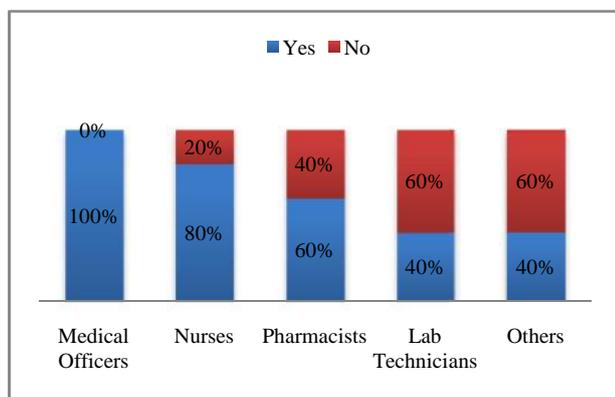


Figure5 Healthcare workers, whether they had attended disaster management drills

Figure6 represents that all the medical officers had attended drills concerning disaster management. However, only 40% of the lab technicians and “others” had attended such drills.

DISCUSSION

Surveys such as this are an objective way to assess the level of awareness that different categories of healthcare workers have concerning disaster management. They help to reveal shortcomings in a hospital’s disaster plan and caution the hospital administration about its callousness and

unpreparedness, which could cost them dear should a disaster occur.

Medical officers, it seems, were quite aware of the hospital’s disaster preparedness. Nurses on the whole were more aware as compared to pharmacists and lab technicians, probably because they are the most numerous amongst all healthcare workers and have to be a part of any disaster plan. The most plausible reason for some of the nurses, pharmacists and lab technicians not being aware about the contents of the disaster plan or for not having attended any training or drills could be due to the fact that they were fresh inductees.

As is evidenced by the above data, the level of awareness concerning disaster preparedness was least among “other” category of healthcare workers. This category comprises of GDAs, housekeeping and security staff, which are not directly employed by the hospital but are working on behalf of the outsourcing agencies. Neither the hospital nor the outsourcing agencies have made any concerted efforts to impart need-specific training to these personnel. Only a handful of security personnel are involved in a hastily conducted drills and the disaster-related information provided during induction is insignificant.

CONCLUSION

Results of the study show that there are severe deficiencies in the hospital’s disaster plan. Disaster preparedness is not all-inclusive. Outsourced staff has little knowledge of the disaster plan and its contents, and they seldom attend any workshops or drills. Hospital must change the status quo because “there’s no harm in hoping for the best as long as you’re prepared for the worst” [9].

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