



## Improving Disaster Site Management Education in Nepal through Bilateral Cooperation

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### INTRODUCTION

In 2015, an earthquake of magnitude 7.8 struck Nepal, with a resultant death toll of more than 8800 people. At a national workshop in 2016 with Nepali stakeholders, participants felt that a more coordinated disaster response would have enabled a speedier and targeted response, reaching out to all affected communities; with suggestion for an “emergency response team” on 24/7 standby. A lack of practical exercises and drills were also cited as to why disaster plans failed to materialize. In 2017, the Nepal Ministry of Health and Singapore Health Services (SingHealth) began a 2-year collaboration to enhance the post-disaster capacity of the Nepalese medical community. One of the areas identified for collaboration was in the organization of medical support at disaster sites. A three full-days program was organized by SingHealth to train healthcare workers in these aspects. After three runs of these courses, we conducted this study to evaluate the effectiveness of the Basic On-site Disaster Program held by Singhealth for the Nepalese healthcare community.

### METHOD

Multiple-choice questions-based assessments were conducted both pre- and post-course for 118 participants to assess the effectiveness and learning value of the lessons taught. Topics tested included disaster definitions and terminology, roles of disaster response-related agencies, field team deployment, on-site command and control of medical elements, triaging, first-aid post organization, casualty management and evacuation as well as basic hospital level medical support in disasters. Comparisons of the participants performance in these assessments were with paired t-tests.

### RESULTS

The Basic On-site Disaster Course improved the participants' knowledge and concepts of management in multiple areas of disaster site medical management. Overall mean test scores for all participants increased from  $4.30 \pm 1.44$  to  $6.63 \pm 2.18$  ( $p$  value  $<0.0001$ ). Areas of major improvements were best noted in disaster definitions and terminology with 23.4% to 82.3% correct responses; as well as casualty evacuation from disaster site, from 6.3% to 52.1% and on-site medical management of casualties from 18.0% to 57.3%.

Areas of moderate improvement were seen in hospital level medical management in disaster in 2 questions, improving from 3.3% to 47.9% and 34.2% to 53.1% respectively. Area of least improvement was noted in the topic of roles of disaster response-related agencies, from 64.9% to 44.8% correct response

### CONCLUSION

Conduct of a focused on-site disaster management program can help improve understanding of disaster definitions and terminology as well as certain aspects of basic on-site medical response and management. However, there is still room to improve upon in the post-test scores and a practical exercise or drills in these specific areas may help further enhance understanding of disaster site management concepts



Figure 1: Photo Collage of members of Nepalese Hospital Stakeholders attending the 3-day Basic On-site Disaster Program with Singhealth Faculty.