

### (A94) Information for Action? Analysis of Needs Assessment Reports Available on the Internet Following the 2010 Haiti Earthquake

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On 12 January 2010, a powerful earthquake struck Port-au-Prince, Haiti. To help ensure outside assistance, information that describes and quantifies the severity of the disaster is needed urgently. Several studies have suggested that needs assessments are seldom performed, and that initial media images direct relief interventions rather than needs. This study sought to assess the extent of information on the situation that was available rapidly after the earthquake. The aim was to document and analyze information on severity and needs available on the Internet during the first week after the Haiti earthquake, and to compare the results with official severity data. Reliefweb is the most used information-sharing Internet portal following humanitarian disasters. All documents related to the Haiti earthquake published on Reliefweb during the first seven days after the earthquake were selected. Indicators that described the severity of the earthquake were searched for, including the number of affected and dead and the assumed needs of the population. Results were compiled and cross tabulated for frequency and compared with official outcome data. A total of 822 reports were posted. An estimate on the number of dead was available in 10% of the reports, ranging from 40,000 to 100,000. The most commonly reported number of affected was three million. The estimated numbers of dead and affected were similar to the official data. Not one posting described the method used for the estimates they provided. These results indicate that the severity of the earthquake was relatively well documented after four days. However, a striking finding was the lack of description of how the data had been collected. It remains difficult to determine the reliability of needs estimates, as they were done and posted by the relief organizations themselves. No independent attempt to estimate the needs was found.

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### (A96) Process Improvement in Disaster Relief: Improvement of Disaster Resource Utilization through Systematic Organization

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**Introduction:** Upon arrival of the SUNY Downstate Medical Center team for their disaster relief mission in Port au Prince, Haiti, it was observed that obstacles to patient care were directly related to difficulty in locating supplies and medications in a timely manner. In addition, staffing schedules had not been correlated to patient flow patterns.

**Methods:** A survey was conducted at L'Hôpital de l'Université d'Etat d'Haiti (HUEH) in Port au Prince, Haiti by Emergency physicians and nurses from SUNY Downstate Medical Center. The following variables were obtained to assess existing resources: number and types of providers available, provider

staffing schedules, medication/supply inventories and management systems. Basic ED operation and supply system flow maps were created.

**Results:** The assessment revealed a large volume of patients presenting in the early morning. Night shifts were inconsistently staffed with ED physicians. Although medications and supplies were reported to be available on-site, they were not tracked, inventoried, or centrally managed. As a result, this increased time to treatment and practitioner fatigue. Process improvements included: (1) Institution of swing and night shifts accommodated peak patient volumes, decreased waiting times, provided care for critical patients during off-peak hours, and decreased physician fatigue. (2) Identification and labeling of existing medications/supplies facilitated more accurate management of inventories and decreased time to treatment and disposition.

**Conclusion:** Process improvement through systematic analysis led to better disaster resource utilization in this tent hospital.

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### (A97) Social Media and Social Networks in Disaster Management: The Haiti Model

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Social media and social networks are integral components of our daily personal, professional, and community lives with Facebook, Friendster, and Twitter alone having > 750,000,000 registered users worldwide. All types of communication modalities are utilized in disasters for a variety of purposes. Experience with Exercise 24 and the Haiti Earthquake and public health response amplify both the power of social media and social networks and the need to research, understand, refine, and train in their utilization in disaster management. A Haiti Epidemic Advisory System was established to provide a mechanism for care providers to report health status in camps and treatment centers, exchange technical and logistical information, provide reach-back services such as GIS mapping and data shepherding, and provide a platform for emotional support. This information was incorporated into additional platforms including Haiti User Defined Operational Picture (UDOP) and Haiti Medical/Public Health Information Sharing Enterprise (MPHISE). Successes in the systems were seen in the early warning provided for cholera and social stress, the ability to link on-the-ground resources with local, national, and international assets, and the ability to inform policy makers through real-time reporting and advanced visualization. Many challenges were highlighted that deserve future study. These include: (1) how to manage the extreme volume of data flow including rating, ranking, filtering, and archiving; (2) how to effectively use social media and networks for response; (3) how to provide visualization in temporal and geospatial terms; and (4) how integrate social media with traditional media and official communications in an effective risk communication matrix.

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