Conclusion: The findings of this research are consistent with previous studies following Hurricanes Katrina and Rita. In order to design a public health intervention to minimize occupational-related illness following a disaster, health departments should understand the most susceptible populations for the development of mold-related illness and implement strategies that specifically target the high-risk exposures in these populations.

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The Occupational Health and Safety of First Responders and Health Care Professionals in Magway, Myanmar

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Study/Objective: To examine the occupational health and safety (OHS) of first responders and health care professionals in Magway, Myanmar.

Background: Myanmar has had a long-standing commitment to the OHS of its workforce. There are data supporting the OHS standards across the country. However, there are limited data on the comparison of OHS among first responders including firefighters, volunteers, and health care professionals in times of disaster versus their daily occupation.

Methods: An epidemiological study was conducted in Magway, Myanmar in July 2016, using a written survey in the local Burmese language with 119 items that assessed demographics, occupational and physical health, and type of disaster response with associated illness and injury. 234 participants, 48 (21%) health care professionals, 45 (19%) firefighters, and 141 (60%) volunteers including NGO workers and farmers, completed the survey. 160 were male, 73 were female, and the average age was 33 years. The data were organized using Excel and analyzed using SPSS.

Results: The study revealed that the highest incidence of injuries and illness during a disaster occurred during floods (63.7%) as compared to cyclones (18.9%) and landslides (16%). There was no significant difference with respect to the incidence of cuts, burns, sprains, broken bones, and diarrhea in farmers, firefighters, and health care professionals in the regular setting versus a disaster setting. However, the incidence of heat stroke in farmers (17% and 24%, respectively), vomiting in firefighters (0% and 16%, respectively), and coughing for both farmers (17% and 21%, respectively) and firefighters (18% and 37%, respectively) was significantly higher than that of health care workers.

Conclusion: The results of this study revealed that first responders, including firefighters and farmers, have a higher risk of injury and illness than health care workers both during the course of their regular employment and during times of disaster.

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Implementation of Tabletop Exercises and Simulations to Improve Practical Skills in a Public Health Disaster Curricula

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Study/Objective: To enhance understanding of disaster management by adding "hands on" practical training to a public health training curricula.

Background: Feedback from emergency managers in our region indicates a lack of practical skills in individuals seeking disaster relief employment. The Colorado School of Public Health offers a Certificate in Public Health Preparedness & Disaster Response Methods. This program is a blended online and in person curricula. As part of designing this certificate we sought to provide practical skills for individuals interested in emergency management.

Methods: To enhance the ability of students to function in disaster response, practical disaster exercises were added to the curricula. We chose typical disaster training formats, both to solidify learning as well as directly train to disaster management. These elements were integrated into a more typical curricula. This included both drills and exercises. Drills involved hands on training such as communication with radios and decontamination. Exercises were carried out in both a tabletop format as well as full scale simulation events.

Results: The new curricula was successfully implemented over two cycles of domestic and international response course training. Course evaluations showed very high engagement of students with a clear understanding of principles taught.

Conclusion: Introduction of practical training, typical of disaster responders into public health curricula, enhances student engagement and learning.

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An Analysis of Student Engagement Patterns and Course Outcomes in a Public Health and Disaster Online Course

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Study/Objective: To reveal the pattern of student engagement (the amount of time a student logged in) in Public Health Principles in Disaster and Medical Humanitarian Response (PHPID) online course, and to examine whether the pattern is associated with the course outcome (the probability of certificate attainment).
Background: Student enrollment in online courses has increased in the past decade and continues to grow. Online courses become an effective platform to teach students globally in public health and disaster. However, how students engage in, and how the engagement pattern is associated within the course outcomes, was unknown.
Methods: This research collected registration information and time-stamped Model login data from four completed cohorts of PHPID online courses (2014-2016). Descriptive analysis, chi-square test, and multiple logistic regression were conducted via SPSS.
Results: In total, 3,457 participants, from 150+ different countries registered, and 20.6% had passed the examination and obtained certificates. On average, each student spent 4.3 hours, 15.7 hours for certificate obtainers, and 1.3 hours for non-certificate obtainers. Males invested 18.3% more time than females. The participants with qualification in public health or medicine spent 30.7% more time than others. The student engagement was confirmed to have a significant and strong effect on their course completion, and in obtaining certificates, with adjusting gender, age, and education level (AOR = 1.401; 95%CI, 1.367-1.436).
Conclusion: The patterns of student engagement in PHPID online courses were varied, associated with socio-demographic variables. Spent more hours in able to increase the probability of course completion and certification obtainment. Further research should be conducted to meet the needs of online course training in disaster and public health education.
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A Public Health Emergency Simulation Tool for Enhanced Training in Emergency Preparedness and Response

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Study/Objective: This workshop will introduce an innovative emergency preparedness and response simulation tool for training public health professionals. The tool, developed by KFL&A Public Health, enhances the traditional emergency preparedness exercise with simulated "real-time" surveillance data using two tools, the Acute Care Enhanced Surveillance system (ACES) and Public Health Information Management System (PHIMS). Through group role-play, workshop attendees will actively participate in managing a simulated public health incident in a local public health agency setting involving different health system roles and collaboration. Participants will gain knowledge and skills in core emergency management competencies such as risk assessment, risk communication, and the incident management system; and in using ACES and PHIMS to inform action in a public health emergency. Participants will reflect on the activity and provide feedback on the simulation tool to facilitators. This workshop will develop skills and knowledge that can be applied to future training and planning for public health emergencies.
Background: In the absence of a real-life public health incident or emergency, residents are best trained and assessed for the related EPAs through simulation activity. Currently used, table top simulation methods are insufficient.
Methods: Through this workshop, Emergency Managers and Public health physicians will have experience with a scenario which allows them to use real-time surveillance tools for improved situational awareness and improved decision making. The two main tools will be ACES and PHIMS.
Results: This workshop will enable improved training and decision making by Public Health officials during a public health emergency.
Conclusion: This workshop will explore simulation training for improved outcomes for public health emergencies.
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The Development of a Bioterrorism Response, A Guideline for Citizens in Korea

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Study/Objective: The study objective is to understand the adequate development of a bioterrorism response guideline for citizens.
Background: Although the possibility of bioterrorism occurrence exists, the citizen awareness and knowledge of bioterrorism is inadequate and lacking. Furthermore, the threat of bioterrorism still exists with changing international sociopolitical situations and advantages of bioterrorism for terrorists, so the behavioral bioterrorism response guideline for citizen was needed.
Methods: The terrorism and disaster response guidelines and recommendations for citizens were collected and examined, and then the parts for bioterrorism response were extracted and revised for citizen understanding and access. Researchers used a 3-step approach to develop the guidelines; (1) collecting data (2) organizing data as a guideline (3) revision of the guideline for level control adequate for citizens. The result was evaluated by sampled citizens.
Results: The guidelines and recommendations are composed of (1) basic; (2) individual diseases and syndromes; (3) situation/target person/location related contents. They are organized for various types of printable material. Initially, 3 types of public relations material were developed; a manual book, a leaflet, and a small poster. Also, the forms of information type are related and matched to individual methods of public relation access.
Conclusion: Because of the inadequate citizen awareness and knowledge of bioterrorism, it is necessary to develop the educational content on bioterrorism for citizens, especially based on the contents and levels related to individual settings.
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