

# Pilot workshops at the Palau Center for Emergency Health: a model for international collaborative operations training and planning

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## Introduction

Disasters affect the lives of over 4.5 million Pacific islanders each year. Yet, Pacific island public health and medicine practitioners have limited opportunities for training and education for emergency preparedness and response. This lack of educational opportunity contributes to their limited capacity both to prepare and respond to national health emergencies.

A 1998 Institute of Medicine Report, *Partnership for Health in the Pacific*, identified serious deficiencies among many Pacific island nations specific to the quality and accessibility of health-care and medical workforce training.<sup>1</sup> Public health emergency preparedness and response depends largely on a functional system of health-care.<sup>2</sup>

In October 2000, the Centers for Disease Control and Prevention (CDC) established the Pacific Emergency Health Initiative (PEHI). PEHI's Mission is to "strengthen the capacity for emergency health preparedness and response among Pacific island nations." One of the three objectives of PEHI is to "develop a sustainable indigenous source for emergency health training and education in Pacific island nations."

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In 2001, the Republic of Palau and Palau Community College, in partnership with CDC, founded the Pacific Center for Emergency Health (PCEH), the first Pacific regional training center for emergency public health and medical education. PEHI prioritizes the training of national and hospital-based responders who may also serve as future trainers. Activities surrounding the official opening of PCEH included workshops focused on two critical tracks of education: 1) public health emergency operations planning and 2) first responders emergency medical services (EMS).

As part of the PCEH planning workshop, a model for international collaboration among national public health and medical sectors was piloted. Representatives from six nations (American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, Kiribati, and the Marshall Islands) joined together to train and plan for national public health emergencies using a program developed by CDC. A template-directed approach guided international collaborative consensus-based writing of national public health disaster plans. By the end of the weeklong workshop, the six national had developed the foundation for public health emergency operations plans (EOPs).

While public health officials prepared for national emergencies, their medical counterparts prepared for individual medical emergencies. Together these public health and medical workers constitute the first wave of responders for any national health emergency. This report describes the pilot for international collaboration and mutual assistance as a model to promote regional capacity building in emergency public health.

## Curriculum development

Staff in the Emergency Preparedness and Response Branch (EPRB) at CDC reviewed the literature, including a number of US state and local public health plans, for models of EOPs.<sup>3-6</sup> Examples of each component of a basic EOP were collected for presentation to the workshop participants. EPRB staff also consulted with subject matter experts and persons experiences in emergency and disaster medicine about emergency planning and

EMS in the developing world. Finally, EPRB staff researched the historical record to identify hazards that have occurred in the Pacific region. Once these hazards, both natural and technologic, were identified, their predictable consequences were ascertained. This hazard analysis formed the basis for the training presented in the planning and first responder EMS workshops.

### **Educational and development workshops**

Eleven jurisdictions, representing the six Pacific island nations, participated in the two simultaneous workshops, which began on September 11, 2001. One track provided a week-long emergency public health planning workshop for public health workers. The other track taught first responder, prehospital emergency medical care. Members of the public, law enforcement, ambulance services, fire departments, and physicians and nurses attended this 2 week first responder EMS course.

Educational materials used during the workshops included student handbooks and basic emergency medical equipment and supplies used for EMS training. Each course attendee received a handbook containing a course agenda and syllabus, lecture notes, and background text for each presentation. Lecturers' presentations were projected on a screen in slide show format using Microsoft PowerPoint software. Group-based plan reviews and writings were projected on a screen in document format using Microsoft Word software.

### **Emergency Public Health Planning Workshop—September 10-14, 2001**

CDC's emergency public health planning workshop is a 40-hour course that introduces the basic concepts of emergency management as applied to the public health and medical effects of natural and technologic disasters. The course began with a 2-day, multimedia overview of hazards, (e.g., typhoons, floods, earthquakes, hazardous materials), facing the Pacific island nations, as well as the public health consequences of such events. After the hazards overview, the participants received a 1-day introduction to the four components of an EOP: the basic plan, functional annexes, hazard-specific appendices, and supporting standard operating procedures. Each of the 11 participating jurisdictions was prepared to develop the "basic plan" component of its public health EOP.

A template-directed approach to consensus-based writing of a public health EOP.

### *Establishing jurisdictional workgroups:*

After completing the hazard awareness training, course participants were divided into workgroups representing the ministries and departments of public health for each of the 11 Pacific jurisdictions (American Samoa, the Commonwealth of the Northern Mariana Islands, Federated States of Micronesia Ministry of Health as well as Chuuk state, Kosrae state, Pohnpei state, Yap state, Guam, Kiribati, the Republic of Palau, and the Republic of the Marshall Islands. One representative each from the US Agency for International Development in Tanzania, the South Pacific Applied Geosciences Commission, and the Secretariat of the Pacific Community also participated as invited observers.

### *Presentation of a standard planning template:*

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template and process for emergency operations planning also would facilitate mutual assistance among Pacific nations is reasonable to assume. For each section of the basic plan, CDC offered a template from among those collected for presentation to the workshop participants. Using a laptop computer and an

LCD projector, CDC staff projected the template overhead as a Microsoft Word document and facilitated a discussion of criteria for its selection.

### *Workgroup deliberation:*

Once an EOP template was proposed, participants were engaged in an open discussion aimed at gaining consensus regarding use or nonuse of the selected template by each of the participating nations. Consensus was defined as collective agreement within each national group where:

1. There was a majority opinion.
2. Those holding the minority opinion then consented to agree with the majority and allow inclusion of the item.
3. No member strongly disagreed with using the selected template.

Consensus was defined for the entire workshop group of 11 Pacific jurisdictions as unanimous vote.

Once the template was accepted, each jurisdiction reviewed and edited the template to make site-specific changes to account for unique characteristics of each island state. These edits were entered by laptop directly into an MS Word document that then became the first

**Table 1. Basic plan components developed by the Palau Center for Emergency Health workshop participants**

Introductory materials including the promulgation document; the signature page; a page for recording changes to the plan; a record of distribution; and the table of contents
The plan's Statement of Purpose
A section explaining the situations that necessitate the development of a plan and the assumptions upon which the plan's concept of operations is based
The concept of operations, which broadly explains the overall approach to the response
Organizational responsibilities, outlining which agencies are responsible for which functional response activities
A section on administration and logistics which includes information about the availability of staff and other resources, augmentation of staff and resources, and resource management, as well as an explanation of financial record keeping and reporting requirements
An outline of procedures for developing and maintaining the plan
The ordinances, statutes and regulations providing the legal authorities for the emergency response as well as any references to any supporting documents
Definitions for terms used in the plan
Peer review and documentation

draft of that jurisdiction's EOP. Within the 2-day period, every participating jurisdiction had completed all components of the basic EOP. (See Table 1 for basic plan components developed by the workshop participants.) Once each jurisdiction completed its own EOP, it presented the EOP to the group for review and comment.

Each jurisdiction also received for home use a recordable computer compact disc containing 1) one complete copy of its jurisdiction's EOP; and 2) the entire course of workshop lectures in MS PowerPoint presentation format.

### **First responder emergency medical workshop—September 11–21, 2001**

CDC's first responder emergency medical services workshop, an 80-hour course, provided basic training in the principles of low tech, prehospital emergency medical care. The objective of the EMS workshop was to train a cadre of Pacific islanders who can 1) train future EMS trainers, 2) provide village-based first aid in times of emergency and absence of ambulance availability, and 3) offer continuing medical education for jurisdictions with existing ambulance systems. This training included lectures in MS PowerPoint slide show format combined with hands-on skill demonstrations, using real medical equipment and supplies. The course comprised the following subjects: overview of a first responder, personal risks and safety, ethics, anatomy and physiology, airway management, assessment techniques, cardiopulmonary resuscitation, body mechanics and lifting techniques, bleeding, soft tissue, shock, medical emergencies, muscle and bone injuries, triage, documentation and handoff procedures, and miscellaneous and review topics.

Participants in the session included police officers, fire personnel, EMS, nurses and physicians from 10 jurisdictions. Because of the diversity of the participants' occupations, their medical knowledge ranged from basic first aid to advanced medicine. Therefore, the course focused on information useful to all first responders, including basic principles of prehospital emergency care, worker safety and personal protection, and mass casualty triage. A significant portion of the workshop also was dedicated specifically to worker health and safety. Moreover, these issues were emphasized whenever possible throughout the entire workshop. Consideration also was given to the topics of responder ethics and skill certification mechanisms.

### **Outcome**

The PCEH was founded at the Palau Community College to serve as the first regional focus for emergency public health and medical education. CDC loaned the center audio-visual and computer equipment for use in presenting the developed educational materials.

Sixty-five Pacific island public health and medical workers graduated from the CDC emergency public health planning and EMS workshops. The public health track graduated 31 persons. The EMS track graduated 34.

Eleven Pacific island jurisdictions successfully developed a basic plan for public health emergencies. For the first time, nations of an entire world subregion planned for emergencies together using a standard method.

**Table 2. Emergency health training recommended for each link in the chain of an emergency response**

1.	Family-based emergency preparedness and first aid courses
2.	Community-based emergency planning and village medical responders
3.	Public safety first responders: law enforcement, ambulance, fire service
4.	Hospital-based emergency planning and emergency care
5.	Public health emergency planning

## Discussion

Public health officials and health-care providers apply principles of emergency health to prevent and control both individual and national health emergencies. For this reason, emergency health education should be designed to include both public health and emergency medical curriculum tracks. Emergency health education is based upon a conceptual chain of responders who must collaborate during any emergency or disaster medical response. The first link in this chain of survival begins at home. Usually the family members are the first people to help during a health emergency or disaster. The next are neighbors in the village community. Third is EMS personnel (if ambulances are available in the community) or public safety officers. Fourth are dispensaries, then hospitals and, lastly, in the case of major events, public health officials. The PEHI system recommends training for each link in the chain of an emergency response (see Table 2).

International collaborative planning for national health emergencies has several obvious advantages. Most notable is the concept of standardization of planning methods, nomenclature, and concepts of operation. This standardization becomes especially valuable in emergency situations when it facilitates rapid mutual aid among neighbors. Other potential advantages include the economical political, societal and educational benefits of learning and planning for the future with regional neighbors.

## Summary

The Emergency Public Health Planning Workshop demonstrated that national with different backgrounds, capabilities, knowledge bases, and concepts of operations can work together to develop complementary emer-

gency public health plans. Results of the First Responder Emergency Medical Workshop demonstrated that, despite having similarly inconsistent backgrounds, emergency responders can develop complementary response protocols.

Lectures presented in both workshops are now available in the public domain. They can be used to improve regional public health emergency capabilities whether the region considered is local, state, or international.

## References

- 1 Feasley JC, Lawrence RS. *Pacific Partnerships for Health: Charting a Course for the 21<sup>st</sup> Century*. Committee on Health Care Services in the US-Associated Pacific Basin. Institute of Medicine. Washington, DC: National Academy of Sciences, 1998.
- 2 Keim M, Rhyne G. The Pacific Emergency Health Initiative: a pilot study of emergency preparedness in Oceania. *Australian Journal of Emergency Medicine* June 2001; (13): 157-164.
- 3 Noji EK. The nature of disaster: general characteristics and public health effects. In: Noji EK (ed.) *The Public Health Consequences of Disasters*. New York: Oxford University Press, 1997, pp 3-20.
- 4 Anonymous. *State and Local Guide 101: Guide for All Hazard Emergency Operations Planning*. Federal Emergency Management Agency. Washington DC. September 1996.
- 5 Task Force on Quality Control of Disaster Management. *Health Disaster Management: Guidelines for Evaluation and Research in the Utstein Style: Executive Summary*. *Prehospital and Disaster Medicine* April-June 1999;14(2): 11-20.
- 6 Auf der Heide E. *Community Medical Disaster Planning and Evaluation Guide*. Dallas, TX: American College of Emergency Physicians 1995. ■

For Pacificans it is not sufficient to be trained.  
We must be educated, for training only is for monkeys.  
**S A Finau, et al. 'Health and Pacificans'**