

# Guam Assessment for a Continuing Health Care Professional Development Program

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## Abstract

*In 2003, the University of Hawai'i (UH) Department of Family Medicine and Community Health entered a 4-year cooperative agreement with the U.S. Health Resources and Services Administration to establish the "Pacific Association for Clinical Training" (PACT). PACT's goal is to develop effective distance education methods to improve the education and skills of healthcare professionals in the U.S.- Affiliated Pacific Island nations. To determine the situation existing in 2004, one of PACT's first projects was to perform site visits to each jurisdiction, conducting needs assessments through interviews with key healthcare professionals, hospital administrators, and government officials. This article highlights findings of PACT's Guam Assessment. Meant to establish a baseline for future reference, all data are those collected in 2004/2005 and have not been updated.*

*Key words: Guam; Clinical Training; Workforce Development; Distance Education. (PHD 2007 Vol 14 No 1 pp 46-52)*

## Introduction

This report was compiled from written surveys of key health administrators and personnel in conjunction with interviews and site visits performed by Drs. Tai-Ho Chen and Gregory Maskarinec in April 2004. A draft of this report was reviewed at the November 2004 Pacific Association for Clinical Training (PACT) Advisory Board meeting and the report was revised by the Advisory Board members from Guam. Additional information was obtained through ongoing communications with PACT partners on Guam.

Guam is an unincorporated territory of the United States with an estimated 2004 population of 166,090 living on the largest and southernmost island of the Mariana Islands archipelago. The island has an area of 212 square miles. The population is comprised of persons of Chinese, Japanese and Korean descent. Life expectancy is 78 years and infant mortality is 7.15 deaths per 1,000

live births. The estimated income per capita is \$21,000, the highest in the United States Affiliated Pacific Islands (USAPI) region.<sup>1</sup> There is one public hospital and one military hospital on Guam.<sup>2</sup>

## Health Workforce Demographics

The Guam Memorial Hospital Authority (GMHA) is the only civilian hospital on Guam, which serves the public sector. The U.S. Naval Hospital primarily serves the military population. There are two community health centers (one in northern and one in southern Guam), one public health (MCH and CDC)/dental clinic and social services (in central Guam) and a satellite site in the northern community health center. There are numerous private medical and dental clinics on Guam.<sup>3</sup>

Guam has 280 physicians, 609 (111 off-island) licensed professional nurses (NP, RN, and retirees), 126 licensed practical nurses (15 off-island), 5 midwives, 53 DDS/DO, 187 dental assistants, 10 extenders (health assistants, medex, and community health workers), 28 laboratory staff, 8 pharmacists or pharmacy technicians, 18 radiology techs, and 12 other (dietitians, health inspectors, rehabilitation/occupational therapist or mental health) healthcare professionals.<sup>4</sup>

## Health Workforce Training

Physicians on Guam are required to have at least 1

year of U.S. Accreditation Council for Graduate Medical Education approved post-graduate training to qualify for a license.

The University of Guam (UOG) offers nursing, social work and related health science education. The nursing program provides undergraduate education in nursing. Graduates are eligible to take the registered nurse licensing examination. Students are eligible to take the nursing assistant certification examination after their sophomore nursing courses and the practical nursing licensing examination after their junior nursing courses. Training is also provided for clinical faculty and student preceptors. Faculty and students conduct research and other activities to increase their body of nursing knowledge and also provide community service in Guam and the region. The faculty provide and also collaborate with the Guam Nurses Association to offer continuing education (CE) to the nursing community. CE is provided based on identified educational needs and availability of resources. Educational and training needs surveys are conducted every 2 years and during the American Pacific Nursing Leaders Council (APNLC) conference. Several faculty have offered CE via Pan-Pacific Education and Communication Experiments by Satellite (PEACESAT) to island jurisdictions. One such experience is the modular community health course, which combined the use of the satellite PEACESAT sessions and sending documents by mail. Other CE courses include leadership, health assessment and pathophysiology classes. Currently, these services are offered as resources permit. The last PEACESAT session with nursing faculty was an update on the jurisdictions' implementation of their HIV programs.

Guam Community College (GCC) offers nursing assistant and medical assistant education courses. Graduates are eligible to take the nursing assistant certification examination after completing 11 credits in approximately 6 months. The college also offers an 18-month certificate program and a 2-year Associate's degree for the medical assistant program. Graduates are eligible to take the national certified medical assistant examination after completing one of the tracks. CE is offered to nursing assistants and medical assistants in the community on an as needed basis.

The Guam Nurses Association offers CE hours to all

nurses and nursing assistants through the Center for Nursing Education and Testing (C-NET) program on a quarterly basis.

Most GMHA specialty nurses working in the NICU (Neonatal Intensive Care Unit), PICU (Pediatric ICU) and the operating room have had little formal structured training, but have rather been trained on-the-job. The clinical training component is felt to be strong, but administrators feel that these nurses would benefit from a stronger, formal didactic program. Other fields, such as chemotherapy, were highlighted as requiring more specialty training opportunities.

Guam Naval Hospital offers opportunities for the civilian healthcare staff to participate in some training programs, but space is limited.

## **Current Continuing Professional Development Activities**

### **Nurses, Physicians and Oral Health Staff**

Guam requires 15 CE hours for nurses every 2 years. Physicians are required to complete 100 CE hours every 2 years of which half must be category 1. The Guam Medical Society incorporates a monthly continuing medical education (CME) presentation open to all physicians immediately prior to its monthly members' meeting. Dentists are required to earn 75 hours of CE every 2 years in order to renew their Guam dental licenses. Of the 75 hours, 20 hours must be earned on-island. The on-island courses must be approved by the Guam Board of Dental

Examiners. The Guam Board of Dental Examiners approves the Guam Dental Society meetings/courses. The Guam Dental Society has a strong CE component for dentists. Other dental personnel are not required to earn CE contact hours but are encouraged to be at least certified in CPR. Guam has adequate numbers of journals and provides in-services for dental assistants.

GMHA has an active CME coordinator who manages a number of ongoing activities. There is a weekly video teleconference CME session from Hawai'i that is broadcast through an Integrated Services Digital Network (ISDN) connection. The quality of the connection is good, but the cost to the hospital is \$200 per hour. Attendance is not very high and it has been an ongoing challenge for the coordinator to improve attendance. Timing of programs is likely a factor and it

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was felt that distance education programs that could be completed simultaneously might be helpful. There was some disruption to this service in the aftermath of the typhoon in August 2004. The CME coordinator is able to obtain journal articles from the UOG or U.S. Naval libraries for physicians upon request.

There is an active coordination between GMHA and Department of Public Health and Social Services-Bureau of Family Health and Nursing Services (DPHSS-BFHNS) CE coordinators. Training opportunities provided at the hospital are distributed to all regions in DPHSS-BFHNS. In addition, training opportunities provided at DPHSS-BFHNS are coordinated with GMHA for the staff to receive CE hours and to provide a speaker for the GHMA's grand rounds session.

UOG's School of Nursing, Social Work and Health Sciences continues to offer National Council Licensure Examination (NCLEX) RN review courses at the end of the spring and fall semesters when resources permit. In addition, in order to increase the capacity of the RN workforce to produce evidence to support their practice in a unique setting, a nursing research training project was implemented starting December 5, 2004, culminating in a research conference in November 2005. This is a collaborative effort between the UOG and the Guam Nursing Association's Commission on Nursing Leadership.

Commencing FY 2003, the Department of Education provides CE contact hours for the school health counselors once a year at their health education conference. This is a collaborative effort between the school health counselors and the Guam Nurses Association.

Beginning in Fall 2005, the GCC commenced a Licensed Practical Nursing (LPN) Certificate Program based on the community's needs. GCC offers an 18-month certificate program. Graduates are eligible to take the licensed practical nurse examination after successfully completing the courses.

As noted above, Guam Naval Hospital offers opportunities for the civilian health staff to participate in some training programs, but space is limited.

#### **Allied Health**

Many allied health staff do not have any structured CE opportunities in their specialty field.

Radiology technicians require 24 hours biannually, half Class A (directly related to the specialty) and half can be more general Class B credit. Some of this training is done through using enduring materials but some specialties like mammography require off-island continuing training. Pharmacy staff typically use free online journals in order to maintain their certifications. Dietetic staff must leave Guam for their CE needs to maintain certification. Laboratory staff previously had routine CE programs but these are not presently active.

Unlike most healthcare markets in the United States, private vendors do not play a significant role in providing continuing training opportunities for allied health workers in Guam.

#### **Public Health**

CE activities are offered Friday afternoons; these are usually lectures given by local staff and experts. Activities offered at other times are not well attended due to staffing shortages and the resulting heavy workload. Few sessions are given by outside consultants. There is very limited use of other continuing professional development (CPD) modalities such as audio/video-teleconferencing or computer-based training. The public health nursing outreach CE program is hindered by lack of equipment, such as a laptop and VGA projector.

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#### **Priority Continuing Professional Development Needs Nursing**

There are approximately 25 unfilled LPN positions at the hospital and four at

DPHSS causing a nursing shortage; this does not include the vacancies in other government agencies and the private sector. GCC and the GMHA have created LPN Certificate Programs to address the island-wide nursing shortage. In addition, the RN vacancy rates throughout the government agencies ranges between 25-50%. The UOG is producing nursing graduates but not enough to meet the needs of the community. Additionally, specialty nursing certification in fields such as chemotherapy is required. There are adequate clinical preceptors, but a lack of formal didactic training opportunities to complement the clinical training opportunities.

Nurses with experience teaching in Micronesia have suggested incorporating the local expertise of nurses in the region into continuing training activities. There is a need to teach skills that support the ability of

local nurses in the region to pass on their knowledge and experience. Often local CE providers are not as valued as outside consultants. It was suggested that clinical faculty appointments with outside educational institutions such as the UH would provide added prestige to local experts.

### Oral Health

Overall it was felt that there was not enough CE for oral health providers. The School Oral Health Prevention Program that applied sealants to children's teeth was discontinued due to lack of funding. The need for increased attention to early childhood oral health with a focus on prevention was noted. The DPHSS Dental Section implemented the Guam Fluoride Vanishing Program as of August 2004. The program is geared towards children under 5 years old. Fluoride varnish has been proven to be a safe and effective way of preventing tooth decay. It has been shown that by the time children attend school, they have already experienced dental decay. Fluoride varnish is recommended as soon as the teeth erupt. Children enrolled in Headstart, receiving immunizations, under the Women, Infants and Children (WIC) Program, and children seen in the Well Child Clinics are eligible for the program. There is a need to educate parents and partners regarding the program.

### Other Allied Health Professionals

It was felt that there are insufficient continuing training opportunities for medical technologists, radiology and pharmacy staff. Given the generally busy clinical schedules, being able to complete CE activities outside of patient care time was felt to be important. Videotapes or online and CD-based materials would be helpful.

Laboratory staff would benefit from having available American Society for Clinical Pathology certification packages in order to keep up their skills and knowledge. Radiology staff does have some enduring materials that they can use for continuing training but some staff still must go off-island for specialty training for fields such as mammography.<sup>5</sup>

### Public Health

Lack of time to attend CPD activities has been highlighted as the greatest barrier to continuing training. Other significant concerns included lack of funds to attend activities, excessive distance to training opportunities, lack of distance education infrastructure,

insufficient notice and coordination of activities, and lack of awareness of online resources.

Social workers noted the lack of continuing training resources directed at their specific needs. In Guam, social workers often take on patient and caregiver education responsibilities for home health patients and would benefit from training in this area. Increased coordination with physicians and increasing the use of multi-disciplinary teams was requested. Social workers would benefit from training related to general patient health issues such as use of common medications and their effects. Younger social workers are likely to be very comfortable using computers.

A need for improved communication and coordination between public health and clinical services at GMHA was identified and basic computer skills training was requested for some allied health staff. Library staff at UOG felt that obtaining broader access to electronic health information resources such as full-text journal packages was important for the entire Pacific region.

### Potential Collaborations

Given the expertise and experience of UOG faculty, developing strong partnerships with the UOG could have significant benefits to the region.

Discussions with the UOG, School of Nursing, Social Work and Health Sciences have suggested the potential for significant collaboration. The programs that might be most easily applied to the Pacific region might be the Health Leaders Achieving Today Tomorrow's Excellence (HLATTE) administration and management skills workshop, developed by Laurent Duenas, which has been successfully taught in the region through on-site training. There are also links between the UOG's School of Nursing, HLATTE and the American Pacific Nursing Leaders Council for consultation and CE.

Academic partnerships between UOG and other universities are needed to prepare more nurses seeking graduate education, at least until UOG has more nursing faculty to develop an UOG-based Master's degree in nursing program.

Potential partnerships with the School of Social Work at the UOG may help meet the diverse needs of social workers on Guam in providing outreach services. Discussion with the Dean of the UH School of Social

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Work revealed that there are plans to develop a Master's degree level partnership course with significant distance education components between the two schools. The role of social workers in the Pacific region and their specific training needs as not been well studied. There is interest among the Guam Association of Social Workers in developing a survey of social workers that can be administered on Guam and throughout the region.

Various UOG departments and faculty members are experienced at conducting educational programs in the Pacific region through live on-site workshops as well as through distance education. Bruce Best, the UOG PEACESAT Station manager, plays a valuable role in developing and coordinating communications throughout the region using a combination of satellite (both PEACESAT and commercial) and radio technologies. His experience in developing, installing and repairing communications systems in the region will be invaluable in maintaining the distance education infrastructure in Micronesia.<sup>6</sup>

Dr. Ahmed El-Ghoneimy, a U.S.-trained geriatrician at the UOG, has expressed interest in providing some clinical training programs for the region. At the request of PACT, he prepared and presented a 1-hour program on home health issues to an audience at GMHA. This presentation was videotaped for future broadcast to the region by satellite.

As noted above, the UOG School of Nursing faculty has experience in teaching a community health curriculum in the region using distance education. Modules were forwarded and paper assignments were returned to the instructors. The various time zones hindered communication. The difficulty of maintaining updated videotaped modules was also noted. The importance of having effective local coordinators and facilitators was stressed.

The UOG Agriculture School has pioneered their own electronic course management system for use with a distance education training extension program offered in the Marshall Islands, Commonwealth of the Northern Mariana Islands, Palau and the FSM. The importance of having well-trained local facilitators with clear roles and responsibilities was stressed.

The role of the Robert F. Kennedy Memorial Library in

providing health information and informatics training in the region has been important. Arlene Cohen has conducted numerous on-site workshops in the region and has received positive feedback from health workers.

#### **Distance Education Technologies**

Health workers on Guam have access to video-teleconference technologies through an ISDN connection at GMHA and through PEACESAT at the UOG. Each system provides two-way transmission capability that allows Guam to both receive and broadcast. In general, access to computers and the internet is good, especially among physicians. GMHA is in the process of expanding their medical library computer resources. Although GMHA offers regularly scheduled programs, these are often not well attended. PEACESAT has not been used for regular health education broadcasts.

**Physicians, nurses and most allied health providers on Guam are required to maintain U.S. certifications and must fulfill the corresponding CE requirements. The lack of specialty continuing training programs requires some staff to seek training off-island. Visa restrictions may make this difficult for non-U.S. health staff.**

Access to medical library resources on Guam is good and there is coordination between the GMHA CME coordinator, the UOG Robert F. Kennedy Library and the U.S. Naval Hospital Library which enables access to full-text articles for physicians at the hospital.

#### **Limitations**

Though we had a suggested a distribution list for the initial survey, it was ultimately the choice of each Director to do the preliminary distribution. Some respondents had difficulty ranking or prioritizing

the various barriers or content areas. This occurred for several reasons: varying exposure or access to the different types of information, varying educational backgrounds, and differing job duties.

There were no visits to the two Community Health Centers on Guam; hence, their needs may not be reflected accurately in this report. Overall, no assessment was attempted to determine how many or what kind of health professionals are needed in the future to maintain and improve healthcare services in Guam.

The actual numbers and type of health workforce personnel was obtained through several means (i.e., there was no uniform methodology) depending on the information available to the person who managed human resources/personnel issues in each facility. Guam provided data based on licensure board records, but that information could not be used to identify personnel

actually working and practicing in Guam. Therefore, Guam's nursing numbers are probably over estimated. The physician listing on Guam was obtained from the medical staff roster at GMHA. It is possible to have missed some physicians who only have ambulatory (outpatient) practices.

## Summary

Guam has the largest and most diverse healthcare community in the USAPI region. In addition to those health workers employed by the government there are many health workers in private practice settings and in the military.

Physicians, nurses and most allied health providers on Guam are required to maintain U.S. certifications and must fulfill the corresponding CE requirements. The lack of specialty continuing training programs requires some staff to seek training off-island. Visa restrictions may make this difficult for non-U.S. health staff.

Although physicians have relatively good access to CPD opportunities, there remains a significant need among nurses, including those in public health. Oral health staff and other allied health providers in fields such as radiology, medical technology and social work would also benefit from additional opportunities.

The use of enduring materials such as videotapes and online or CD-ROM materials might play a significant role in addressing some of the needs for healthcare providers on Guam, where access to computers and internet connections is generally good. The ability to provide CE in nursing specialties would be particularly welcomed.

Most health personnel have had experience with various distance education modalities. GMHA has used distance education in the form of live video teleconferences with Hawai'i.

The resources and expertise of health personnel on Guam make this jurisdiction a potential source of important CE initiatives for the rest of the region. Existing partnerships with the UOG should be strengthened and developed.

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