

Commonwealth of the Northern Marianas Assessment for a Continuing Health Care Professional Development Program

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Abstract

In 2003, the University of Hawai'i Department of Family Medicine and Community Health entered a four-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 Assessment of the Commonwealth of the Northern Mariana Islands (CNMI). Meant to establish a baseline for future reference, all data were that collected in 2004/2005 and have not been updated.

Key words: Commonwealth of the Northern Mariana Islands; Clinical Training; Workforce Development; Distance Education. (PHD 2007 Vol 14 No 1 pp 39-45)

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. Additional information was obtained through ongoing communications with "Pacific Association for Clinical Training" (PACT) partners on the Commonwealth of the Northern Mariana Islands (CNMI). Discussion at the November 2004 PACT Advisory Meeting provided additional information on recent activities. The report has been reviewed and revised by the Advisory Board members from CNMI.

The CNMI is comprised of 14 islands with an estimated (in 2004) population of 78,252. Most residents live on the island of Saipan, which is about 12.5 miles long and 5.5 miles wide and has a total land area of 46.5 square miles. The population is served by the Commonwealth

Health Center and private medical and dental clinics, with most care provided through the government. There are health centers on both Tinian and Rota.¹⁻³

Health Workforce Demographics

The CNMI has 30 physicians, 226 nurses, 10 midwives, eight dentists, nine dental assistants, seven laboratory staff, eight pharmacists or pharmacy technicians, two radiology technicians, and 14 other (dietitians, health inspectors, rehab or mental health) healthcare professionals.

Health Workforce Training

The issue of primary training has been an area of recent focus in CNMI. As part of an overall workforce development plan under the newly developed Area Health Education Center (AHEC) program, school programs have been developed to draw students to health careers. Healthcare staff have been providing instruction at Northern Marianas College (NMC), logging their hours in an in-kind "trust-fund" that will enable health staff to take NMC courses without charge. The apprenticeship model of training is being more fully explored to draw more new workers into the field.

Physicians are trained in the U.S. or Canada, and except for two doctors from Saipan who returned after U.S. training, are expatriates.

NMC has a 2-year associate degree program for nurses. There are presently five U.S. trained faculty and 27 students in the program. There are 23 graduates of whom 12 have taken the National Council Licensure Examination (NCLEX); nine passed and three failed. Nursing students come from throughout the world and only one local nursing student has passed the NCLEX in the past 3 years. Thirty-two potential students are in the application process to enter the program. The hospital nursing managers feel that local graduates would benefit from assistance in passing the NCLEX certification. Without this certification they cannot work at the hospital.

The Community Health Center (CHC) has nurses who are NMC graduates and also a significant number of expatriate nurses from the Philippines and some from Canada, Australia and New Zealand. Nurses from the Philippines have been noted to have widely varying skill and experience levels. CHC will not hire expatriate nurses unless they have 2 years of experience. Local nurses are exempt from this requirement.

Based on the 2004 Pacific Basin Dental Association Oral Health Needs Assessment, there are four dentists and nine dental assistants, two lab technicians and one dental hygienist who work in the government dental clinic. There are an additional four dentists in the private sector in Saipan. Only U.S.-licensed dentists can practice in CNMI. The position of Chief of Dental Health has been vacant.

Pharmacy staff in CNMI are comprised of nine U.S. and Canadian-licensed pharmacists and 26 pharmacy technicians, of whom two each are on Tinian and Rota. Most of these technicians were trained in the Philippines as "pharmacy specialists" with more training than U.S. pharmacy technicians.

There are six licensed medical technologists in the laboratory who are required to have U.S. licensure and American Society for Clinical Pathology (ASCP) or American Medical Technologist (AMT) certification and 2 years of work experience. There are also two technicians who have 2-year degrees, plus six locally trained phlebotomists. Two of the phlebotomists were successfully trained and recruited through the Government's Workforce Development Agency.

The Community Guidance Center has two Bachelor-level and five Master-level clinicians. There are three substance abuse professionals; two Clinical

Psychologists (PhD); two Psychiatrists (MD); and four mental health social workers.

The Director of Radiology notes that it has been challenging recruiting radiology techs from the U.S. owing to the high demand for these services, particularly in fields such as echocardiography. As a result, many technicians are multi-specialty staff, hired from other countries, who are not U.S. certified. There is a plan to train local ultrasound technicians on Tinian and Rota through periodic on-site training visits.

Current Continuing Professional Development Programs

Recently, there have been significant discussions of healthcare priorities in CNMI with a clear focus on human resource development. The need for primary and continuing training has been highlighted and addressed. Strong partnerships have been established between Public Health, the Governor's Office, public schools, NMC, the Nursing board, business community, as well as with the general public. A newly created AHEC program has been tasked with health workforce training and development. CNMI has made a firm commitment to use government funds to support the core training mission rather than relying exclusively on external grant funding. Externally-funded continuing professional development (CPD) programs, such as PACT and Bioterrorism Programs, will function under the direction of the AHEC program in order to provide services that are part of a cohesive overall workforce development plan.

Physicians

There is a regular weekly continuing medical education (CME) program taught by the medical staff. In addition, visiting specialists provide continuing education (CE) programs while they are on-island. CHC staff expressed interest in obtaining Accreditation Council for Continuing Medical Education (ACCME) certification for the CME program.

The hospital has occasionally participated in video teleconference training sessions, but this has not been used regularly due to the expense of the connection and challenges in coordinating the feed to the hospital through the Department of Education.

Although there is no hospital librarian, there is a collection of selected journals available to staff.

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Nursing

Nurses are required by the CNMI Board of Nursing to maintain 30 credit hours of CE every 2 years for relicensure. A CE program is taught every Wednesday by one of the nursing supervisors who is also Chair of the CNMI Board of Nursing. Attendance tends to be poor as few nurses are consistent in maintaining ongoing CE hours.

Nursing faculty at the college use free online resources to maintain their CE requirements. Two years ago a visiting team from the University of Pittsburgh gave an endoscopy workshop that provided 16 hours of CE credit.

CHC has recently instituted a hemodialysis training program to meet their needs for nurses in this field.

Oral Health

Based on the 2004 Pacific Basin Dental Association Oral Health Needs Assessment, there are four dentists and nine dental assistants, two lab techs and one hygienist who work in the government dental clinic. There are an additional four dentists in the private sector in Saipan. Only U.S. licensed dentists can practice in CNMI. There are adequate textbook resources, but inadequate journal resources available to the staff. Journals and texts are the preferred mode of receiving oral health CE in CNMI. There are no CE requirements and no regular CE programs for oral health staff. Recognizing that dental assistants should be a target group for receiving training, CNMI is about to initiate a training program using the Republic of the Marshall Islands model with assistance from the World Health Organization.

Allied Health

CE for radiology staff is a challenge since many staff have experienced visa difficulties when traveling to the U.S. to attend conferences. The Unit Director sees significant potential for online CE. Most of their staff are not U.S.-trained or certified; many have trained in the Philippines and Fiji and do not require U.S. accredited CE. The Director believes staff would benefit just from having the educational materials without actual CE credits. The Radiology Director is a U.S.-trained and certified ultrasonographer and is planning to provide training for ultrasound technicians on Tinian and Rota in the coming year.

Government employed pharmacists do not receive any

CE benefits, but the privately employed pharmacists usually receive travel and CE stipends. Most pharmacy staff have access to free internet-based CE programs through work or home computers. Pharmacists believe they would benefit from full-text journal access.

For laboratory staff, Diagnostic Lab Services (DLS) Hawai'i serves as their reference lab and occasionally sends a staff person to provide some training.

Environmental health issues were discussed with the Director of Environmental Health and his Deputy. The staff of four supervisors and 23 inspectors receive formal training from the U.S. Food and Drug Administration (FDA) through online and on-site training. They feel that their staff would benefit from basic computer skills training such as that offered through the local college.

Mental Health

Treatment team meetings are held twice a week for all clinicians to attend. During these meetings, cases are presented and a case analysis is done with input from all clinicians. New treatment modalities are discussed during these treatment team meetings. In addition, there is a monthly 2-hour clinical in-service program where all the clinicians from the Community Guidance Center, Tinian Health Center and those in private practice get together for clinical in-service. A clinician is assigned in advance to present during these in-service trainings as part of the peer education program. Plans are in the works to have these in-services sanctioned by the Office of Personnel Management. The Community Guidance Center is also looking into having these meetings count towards CE credits.

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Priority Continuing Professional Development Needs

The staff at CHC presented the following overall priorities to our on-site assessment team:

- 1) Access to continuously available health training and information sources, including internet resources;
- 2) Advanced Cardiac Life Support (ACLS) training;
- 3) Applying for American Medical Association Category 1 CME Certification for local CE programs.

With regard to ACLS training, equipment has been budgeted from the PACT Year-1 budget and a recent U.S. Centers for Disease Control and Prevention (CDC) Training Program certified a small number of ACLS providers in CNMI. More information is required on the

availability of ACLS instructor training, either through the Guam Memorial Hospital Authority or elsewhere.

In support of the overall human resource development plan under the new AHEC program, grant-writing skills, program management and data collection/review were noted as important needs.

In addition to these priority areas, other needs were elicited in interviews with the unit directors.

Specialty nursing certification exams are not held in the region, requiring travel to Hawai'i or the U.S. mainland. The college nursing faculty noted two key areas of training to be nurse leadership/administrative skills and diabetes care. The specific needs for nurses in both the hospital and Public Health areas include the following:

1. Refresher Course on RN Assessment Skills – the basic head-to-toe assessment, recognizing normal and abnormal heart and lung sounds, active bowel sounds, and neurological exam, etc. Nurses need to know how to do these assessments properly because they are part of day-to-day patient care.
2. Pharmacology Review – drug interactions, dosage calculations, familiarization of drug formulary for medications use at CHC and/or public health clinics.
3. Basic EEG – basic physiology and interpretations, and common interventions.
4. Basic Life Support (BLS) & ACLS – train the trainer. Staff are needed who can teach BLS & ACLS to all the nursing/medical staff, several times in the year.
5. Chemotherapy Training – for initial training/certification and recertification. Only two nurses (RNs) on staff have received chemotherapy training in Hawai'i in the mid-90s. Neither went back for recertification. Other RNs need to be trained, with the hope that all RNs can be certified to properly administer chemotherapy. Back-up staff are also needed for continuity of services, in case the two certified RNs should be unavailable.
6. EEG Technician Training – for initial training/certification and recertification. There is only one EEG technician on staff who received EEG training in Hawai'i in the mid-90s; she never went back for an update. Other staff need to be trained for back-up and continuity of services.
7. Fetal Monitoring Skills are especially important for nurses who work in Labor & Delivery, the Obstetrics

Unit, and possibly for nurses in Outpatient Clinics who conduct prenatal care visits.

8. Assertiveness and Communication Skills
9. Critical Thinking Skills
10. CHC needs someone with experience in CE for nurses, and to assist in revitalizing the CE program for the Nurses Department. There is a desire to set up a program where nurses can be required to take CE classes annually that are specific to their area of work or specialty. For example, nurses in Labor and Delivery must take classes related to high-risk pregnancies, and contraceptives, etc. Also, it would be useful to have a program where a CE Needs Assessment can be conducted with the nurses (use questionnaires that will be given to nurses and then sent out for analysis) so that the CE programs can be updated based on the nurses, stated needs.
11. A new computer system should be assigned for CE, including software for CE programs that nurses can use for independent studies. The goal is to have all nurses on board be NCLEX-RN-licensed; therefore NCLEX-RN review programs would be a start.

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The Lab Director thinks his staff would benefit from phlebotomy training models, materials and supplies as well as online and CD-ROM resources that could be shared throughout the region. According to the Director, the Department is short-staffed and would ideally have an additional four licensed

technologists and another technician.

The Radiology Director believes his staff would benefit from online CE programs that are available. A regional library of CD-ROM CE materials would also be beneficial. Since most staff are not U.S.-licensed, the formal certification from completing training is not so important at CHC. Laptop computers and travel funds would be helpful for the planned training of technicians in ultrasonography on Tinian and Rota. The Radiology Director thinks that there is a definitive need for CE for technologists in Radiology (x-ray, computed tomography and mammography) and Ultrasound (general, vascular and echocardiography) at CHC that would cover specific material for the specialties at this institution. There is a need to use CE to expose the current staff to new and developing technologies that are "radiology"-related but not yet offered at their institution such as, digital radiology, computed radiography (CR), tele-radiology and radiology information systems.

It is well known that CE is a basic component of staff development and building job interest and proficiency. There are numerous sources available to U.S.-trained technologists through U.S. registering bodies and associations (i.e., American Registry of Radiologic Technologists [ARRT], American Society of Radiologic Technologists [ASRT], American Registry For Diagnostic Medical Sonography [ARDMS], Society of Diagnostic Medical Sonography [SDMS]), however, these groups have minimum training/registry requirements for membership that most of the non-U.S. trained technicians do not possess. Although these are good sources for CE for the U.S.-trained staff in the Radiology Department, there is little opportunity for the remainder of the staff to acquire this educational source.

Online access to job-specific CE should be available that would not require membership by the individual, or could be supplemented by the provider to include the "unregistered" staff as a part of the targeted group.

Access to online journals could be an option since the publications tend to focus on everyday clinical encounters as well as new technologies. Many home study courses are good sources of CE and, as in the case of the specialty field of mammography, proof of at least 24 hours of CE is required for all personnel performing mammograms (whether they are U.S. trained or not) due to the FDA's, Mammography Quality Standards Act (MQSA) regulations. These courses generally require a fee, but are easily acquired through the home study process.

Potential Collaboration

The new AHEC program will serve as a focus for health worker training and development. PACT activities will be coordinated to help meet priorities within the scope of an integrated development plan. This model may have great potential to be applied in other jurisdictions but will require significant legislative and community support to establish the broad coalitions and priorities that have driven the process in CNMI.

The Laboratory Director, Albert Gurasamy, is very interested in working with regional training initiatives and feels that CHC has the resources to host some local training through programs like the Palau AHEC.

The CHC lab is also participating with a Pacific Island Health Officers Association (PIHOA)/CDC sponsored initiative to evaluate the centralization of certain

esoteric infectious disease testing at a central facility in Guam. As part of this program, the lab is also being challenged to be active in testing for common diseases in the community and the region. The lab is trying to obtain some personnel training resources and is also willing to provide some training resources to other labs in the region and is currently waiting for direction and coordination from the PIHOA group.

Lois Gage, Director of Nursing at NMC, notes that there are significant needs faced by her faculty in maintaining specialty certifications. Their students may benefit from additional review courses directed at passing the NCLEX certification exam. Improving computer and software resources might supplement and strengthen their existing NCLEX review courses.

Distance Education Technologies

Presently, there is limited video teleconferencing capability for the hospital using a video feed through the Public School System. The Pan-Pacific Education and Communication Experiments by Satellite (PEACESAT) station has not been functional for several years.

Internet access is available to doctors as well as pharmacy and radiology staff. Physicians only have access to one computer in the hospital with an internet-connection. Other groups have limited computer and internet resources. Nurses do not have the use of an internet connected computer at CHC. There are

no repair contracts for existing equipment. One hospital staff member is responsible for all IT support and development.⁴

Limitations

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 varied job duties; however, all uniformly agreed that additional training was essential for better healthcare.

No attempt was made to include health personnel on Tinian and Rota in the survey; hence their needs may not be addressed. 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 the CNMI.

Finally, the situation is a dynamic one; consequently,

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this report was outdated upon completion; however, it does establish a baseline for future comparison.

Summary

CNMI has taken significant steps to meet their short-and long-term human resource needs through developing a cohesive plan to be implemented under a new AHEC program. There are primary and continuing training components of this plan. Local CPD coordinators will work under the AHEC program which will coordinate the activities of PACT and other externally funded educational programs to meet specific needs within the overall health workforce development plan.

The CHC lab has also successfully recruited and hired four additional technologists to complement existing staff. The staffing in the lab currently is adequate for hospital needs and consists of 12 lab technologists, five phlebotomists and clerical/support staff.

CNMI has physicians who are licensed in the U.S. and Canada and require regular certification to maintain their licenses. Nurses are also required to have passed the NCLEX certification exam and to maintain CE credits for licensure.

There are regular CE programs taught locally for both physicians and nurses. Nursing staff note that attendance has been inconsistent. There has been occasional use of video teleconferencing, but this has not received heavy use recently.

In general, doctors have access to internet resources, although there is only one general use terminal in the hospital. Nurses presently do not have any internet-enabled terminals available for general use. Other allied health staff do have access to computers and the internet and feel that they could benefit significantly from computer-based training.

In the short term, PACT should focus first on addressing the very practical requests made by the CHC staff regarding their priority needs; increased access to on-line information resources, developing capacity for local ACLS training and attaining ACCME accreditation for local CME programs. The CPD Coordinator has shown the ability to facilitate previous educational programs and would likely benefit from training to use the electronic course management system to track participation and to assist local staff in accessing this resource.

Specialized online and CD-ROM training resources could benefit laboratory and radiology staff. These resources should be added to the PACT curricular library for the region. Developing improved access to computer resources, with a small number of general use computer terminals available to all health staff including nurses would increase access to continuing training opportunities through PACT and other online and computer-based resources.

Beyond these short-term objectives, PACT should remain responsive to the requests of the CNMI AHEC program to assist with workforce development as part of an overall human resource development plan that has been driven by a broad partnership of community groups, health services, government, and educators. The model of this program may be applicable to other jurisdictions within the region.

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