

Chuuk Assessment for Continuing Health Care Professional Development Program

Gregory G. Maskarinec, PhD*

Tai-Ho Chen, MD*

Julio Marar**

Romino Saimon***

Don Bosco Buliche, MO****

* Department of Family Medicine and Community Health, John A. Burns School of Medicine, University of Hawai'i at Manoa;
 ** Director of Health Services, Chuuk State Hospital, PACT Advisory Board Member; *** Former Director of Health Services, Chuuk State Hospital, former PACT Advisory Board Member; ****CME coordinator, Chuuk State Hospital, PACT Advisory Board Member.
 Corresponding Author Address Correspondence and Reprint Requests to: Gregory G. Maskarinec, Ph.D., Department of Family Medicine and Community Health, University of Hawai'i at Manoa, John A. Burns School of Medicine, 95-390 Kuaehelani Avenue, Mililani, Hawai'i 96789-1192. Email: gregorym@hawaii.edu

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 health care 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 health care professionals, hospital administrators, and government officials. This article highlights findings of PACT's Assessment of Chuuk State, Federated States of Micronesia. Meant to establish a baseline for future reference, all data is that collected in 2004/2005 and has not been updated.

Key words:

Chuuk; Clinical Training; Workforce Development; Distance Education. (PHD 2007 Vol 14 No 1 Pages 57 - 65)

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 August 2004. Discussion at the November 2004 Advisory Meeting provided additional information, and was further supplemented during three subsequent visits to Chuuk by Dr. Maskarinec during 2005. The report has been reviewed by the Advisory Board members for Chuuk who as co-authors of this report have provided additional revisions.

Located in the middle of the Caroline Islands, Chuuk (formerly Truk) is one of the four states of the Federated States of Micronesia (FSM). Chuuk is composed of six inhabited islands forming a main lagoon and over 15 outer island atoll groups spread over 100,000 square

miles of the Western Pacific. The islands of Chuuk Lagoon have a total land area of 39 square miles, while the lagoon itself has a total surface area of 822 square miles surrounded by 140 miles of coral reef. More than half of the entire population of the FSM, approximately 54,000 residents live in Chuuk; 30% of Chuuk's population live on the island of Weno (Chuuk's capital), another 48% live elsewhere in Chuuk Lagoon, 12% on the Mortlock Islands and the remaining 10% on the Western and Hall Islands. The median age of the population in Chuuk is 18.5 years, making it the youngest population of the FSM. Chuuk is the poorest state of the FSM, with an annual per capita income of about \$1,400. Chuuk has the highest fertility rate (6.0%) of the four states. Life expectancy at birth is about 65 years. The literacy rate is 91%.^{a, b}

Chuuk State Hospital is the only inpatient facility. The hospital has 120 beds staffed by 20 doctors and 80 clinical nurses, and has over 4,000 admissions a year. There are also three private clinics in Weno, two staffed by Filipino doctors. Elsewhere throughout Chuuk, medical care is provided at 80 dispensaries, staffed by 97 locally-trained health assistants. Complex cases are referred to the hospital in Weno. The anticipated arrival of a new government ship in October 2004 to support transportation between the outer island atolls

and the main lagoon will improve the capacity for medical transfers. At the time of the site visit, there were no government vessels, nor funding in the budget for medical staff to fly out to the dispensaries.

The state of the outer island dispensaries and the availability of services is reported to be catastrophic;^c many of the dispensary buildings are empty shells. Radiology services are limited to x-rays and EKGs. There is no mammography unit in Chuuk, and no computed tomography scanner. An ultrasound machine was donated two years ago but has not been used so far. The hospital lacks a working fax machine and the most basic supplies, such as paper, are in short supply. An additional critical barrier is the lack of consistent electricity in Chuuk. During the November 2004 PACT Advisory Meeting it was noted that there are approximately 4 hours of power daily.

Health Workforce Demographics and Training

As of August 2004, there are reported to be 20 physicians at the Chuuk State Hospital; 175 nurses; 4 midwives; 5 dentists; 97 external health workers in the community; 10 laboratory workers; 5 pharmacy workers; 6 radiology techs; and 7 other health professionals (rehabilitation, mental health, and health inspectors).

17 of the 20 doctors are Chuukese graduates of the now defunct Pacific Basin Medical Officer Training Program. Some, including the surgeon, the obstetrician, and the pediatrician, have received additional training at the Fiji School of Medicine. There are three expatriate doctors who were trained in the Philippines. Salaries in the hospital have been frozen for 10 years. The base salary for the local doctors is about U.S. \$18,000 annually, while nurses salary is around \$3,000 annually.

There are a total of 80 clinical nurses in Chuuk State Hospital who work in pediatrics, labor and delivery, surgical ward, medical ward, operating room, emergency room, outpatient department, and physiotherapy. Of the 80 nurses, 40 are registered nurses, of whom four are certified nurse midwives, three are nurse anesthesiologists. The other 40 nurses are practical nurses. Most nurses were trained at the College of the Marshall Islands (CMI). Besides the 80 clinical nurses, there are an additional 55 public health nurses. Recently there have been challenges with nurses who graduate from CMI not returning to Chuuk instead choosing to remain in the Republic of the Marshall Islands (RMI) to work.

The majority of the allied health staff received on-the-job training supplemented with occasional short workshops off-island. There have been limited opportunities for continuing training of health staff due to the lack of local programs. Off-island training is expensive and puts strains on an already short-staffed workforce.

The laboratory has a total of 12 personnel, of whom 10 are assigned to the Chuuk State Hospital, and two are assigned to the Public Health Department. Mioki Stanley, head of laboratory, studied psychology in the U.S. The lab is able to provide the following tests: manual complete blood counts (no differential white cell count), urinalysis, Hepatitis B screening, and HIV screening. There is no screening for PSA or stool occult blood. Pap smears and cervical biopsies are sent directly to a regional laboratory in Hawaii. They are to be paid through a contract with the FSM national government's

Maternal and Child Health and the Family Planning programs. All other biopsies samples are sent to Queen's Medical Center or Tripler Army Medical Center in Hawaii; according to the physicians the results sometimes take up to three months to be returned. At present, there is no computer in the lab, but one is expected through the FSM Bioterrorism Grant, as is a chemistry analyzer that will be connected to it. The laboratory sends people for 6-9 month training courses in

Fiji, to specialize in certain areas, such as hematology and chemistry. The U.S. Centers for Disease Control and Prevention (CDC) has sponsored on-site training for cholera. The World Health Organization has sponsored a laboratory blood safety training and an HIV course.

Debbie Stae, the chief of radiology was off island during this assessment. She and Korio Neveh have had some formal radiology technician training. The other four radiology staff have had practical training only. There is no computer in the department.

Of the five dentists, 3 are from Burma, 1 from the Philippines, and 1 from Chuuk, Yalberg Enlet, who is the supervisor; he uses a personal account for internet access, as the dental office has no connectivity. He observed that for the past ten years, the dentists have had to use their own vehicle to do school sealant programs. Lack of official transportation is not a serious problem within the lagoon, but it does adversely affect visits to the outer islands.

There are no certified pharmacists in the hospital. Pharmacy has 5 staff total, including one enrolled in

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a year-long training program in Fiji at the time of the assessment. Frankie Stanley, head of pharmacy has also completed short term training in Fiji but none of the other pharmacy staff have been off-island for training.

There is no tracking of possible drug interactions.

The distant and off-island dispensaries are staffed primarily by health assistants. There have been recent successes with a Health Assistant Training Program at the state hospital that was scheduled to graduate 28 new health assistants in 2004.

The Office of Health Statistics has a staff of 11 personnel which is headed by the health statistician that includes 3 data technicians and 7 data clerks.

The Division of Public Health has a total of 40 employees, of whom 9 are in Administration, 12 in the Maternal and Child Health Program, 9 in the Immunization Program, 4 in the Family Planning Program, 3 in the Tuberculosis and Leprosy Program, 2 in the HIV/AIDS Program, and 1 with Non-Communicable Diseases Program. William Sanphay, MPH is chief of public health in Chuuk. Continuing training opportunities for public health staff are limited. Two employees are nurse practitioners trained on the U.S. mainland.

Current Continuing Professional Development Activities

Nurses require 40 hours general continuing education (CE), and 45 hours of specialty CE for those in specialized fields. Completing adequate hours of specialty CE for specialty nurses, such as the 3 nurse anesthetists, is a recurrent problem. There is insufficient funding to send them for regular off-island training. There is currently no physician CE requirement in FSM.

Formerly there was a regular series of case presentations by the medical staff of the hospital, but no CE credits were given for attendance. These presentations have been discontinued. Lectures are now limited to those given by occasional visitors. Since 1990's physicians had benefited from internet-based case consultations through the Tripler Army Medical Center's Pacific Island Health Care Project. The physicians view these case consultations as an opportunity for distance learning as well.

Periodic workshops for health workers and community are also conducted by several U.S. funded programs on topics such as, HIV and maternal and child health.

The CE nurse coordinator, Irene Nero, is the only PSN in the hospital, but is now assigned to administration. Nurses are encouraged to study for the National Council Licensure Examination (NCLEX) exam. There are state scholarships and federal grant funds available. One nurse recently graduated from the Fiji School of Medicine with an Australian scholarship, her contract specifies that she must work in Chuuk for 3 years. Others attend the RMI and Saipan programs. Five nurses graduated last May from the nursing program in the RMI, but three remain there, as they can't afford airfare to come home.

Wages for nurses are higher everywhere else in the Pacific: in Pohnpei they earn \$275 a week (even more in the RMI and Palau) but in Chuuk the salary is \$190 a week. The hospital has a shortage of over 20 nurses. However it was noted that there are Chuukese medical staff working in Hawaii and the U.S. mainland as registered nurses, laboratory specialists, pharmacists, and radiology techs.

Targeting education based on leading causes of mortality is one approach to developing a relevant CE curriculum

Priority Continuing Professional Development Needs

With no current efforts at continuing medical education reported in Chuuk, the continuing professional development needs are very basic and initiating programs is likely to be challenging. The top 5 barriers to providing a sustainable continuing professional development program were identified as:

- 1) lack of materials/supplies (paper, projector, and computers, etc.)
- 2) geographical challenges
- 3) poor communication between departments
- 4) no incentive structure for continuing professional development
- 5) lack of funding for human resource development and internet access

Targeting education based on leading causes of mortality is one approach to developing a relevant CE curriculum. According to the Office of Health Statistics, for the period 1995-2001 these were coded as: heart disease, diabetes mellitus, cancer (all types), hypertension, influenza/pneumonia, asthma/COPD, prematurity and perinatal, accidents, CVA, malnutrition and CNS/meningitis.

Other topics that might be of high relevance based on the available literature, include teenage suicide^{d,e} domestic violence,^f and problems associated with alcohol consumption and drug abuse.^{g,h}

More than specific medical topics, however, basic training for allied health is clearly a pressing need, as

few of the workforce has little more than on-the-job training. Medical staff are uncertain how these needs can be addressed through distance education. Although the doctors and nurses have some form of CE activities, other health fields have lacked continuing training.

Potential Collaboration

The success of the Health Assistant Training Program based at Chuuk State Hospital to develop new primary care providers for the numerous distant outer island dispensaries is an encouraging development. PACT partnerships with this program may have the potential for translating successful elements to other parts of the region.

Several of the physicians expressed interest in developing their research skills and experience using the well-maintained health databases at Chuuk State Hospital. Some of these individuals may have the potential to not only develop their research skills, but also start an effective evidence-based local CE program.

Distance Education Technologies

A Pan-Pacific Education and Communication Experiments by Satellite (PEACESAT) earth station is located in the Department of Education, about 300 meters away from the hospital on a deeply rutted road. It would be possible to establish a line of sight link from the hospital to a different satellite communication dish just down the hill, but frequent power outages throughout Chuuk make all forms of distance education problematic.

Health information resources are limited in Chuuk. There is a small collection of old textbooks donated by various agencies in the past. The nursing division has only one computer. Recently, the FSM National Bioterrorism Program has started a program to place several networked computers for epidemiological tracking in the medical statistics office and laboratory. Six computers in the hospital have internet access, but only two of these are in a common area, one of which is accessible only to doctors.

Internet access is through dial-up accounts at speeds usually significantly slower than 56 kbps (actual bandwidth rates are as low as 8 kbps). FSM Telecom serves as the local internet service provider and charges a monthly rate of \$19.95 for 10 hours and then \$1.95 per hour thereafter. The absence of computers in common

areas and the connection costs limits staff access to internet health information resources.¹

Tripler Army Medical Center distance consultations are reported to have worked well in the past, but the scanner that was previously used is currently not functioning. The equipment did not appear to have been used recently.

The Shriners Hospital in Honolulu, has set up a regular teleconference for pediatric referrals. The intent is for physicians and patients to use the Department of Education PEACESAT video conferencing link for case-interviews with Shriners staff for assessing potential referrals.

Limitations

Data is based on official records as well as first-hand reports in some cases there were discrepancies between these sources, resolved in favor of information provided by the Director of Health.

As was noted in the 1998 Institute of Medicine¹ report, "Pacific Partnerships for Health," Chuuk suffers from a poorly developed infrastructure, crowded conditions, and inadequate hospital services. Chuuk has faced financial crises in the past ten years

The most serious limitation of this study was its failure to include the outer island dispensaries of Chuuk during the site visit despite their importance to the health of Chuuk's people and the urgent needs of their staff for additional health education. Chuuk's Department of Public Health was also not fully assessed. Additionally, with our focus on CE needs, 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 Chuuk, although this will be important in

developing CE recommendations that are appropriately integrated into a Chuuk and FSM health human resource development plan.

Summary

As was noted in the 1998 Institute of Medicine¹ report, "Pacific Partnerships for Health," Chuuk suffers from a poorly developed infrastructure, crowded conditions, and inadequate hospital services. Chuuk has faced financial crises in the past ten years. Education and healthcare are poorly funded. However, staff in the hospital continue to show interest in CE and would appear to welcome any efforts and additional resources. With frequent power outages and limited computer connectivity, it is likely that stored (e.g. CD-ROM-based) training modules may be more appropriate than other distance education modalities that require live distance connections. However the issue of incentives also

needs to be addressed, in the face of frozen salaries and limited opportunities for promotion.

The success of the Health Assistant Training Program has been encouraging. PACT should look to provide support for this as well as to expand training opportunities for allied health workers in particular.

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