

The Yap AHEC: An Update 2004-2006

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Abstract:

The Yap Area Health Education Center (AHEC) is one of three U.S. Health Resources and Services Administration-funded AHEC programs in the U.S. Affiliated Pacific Island jurisdictions (together with those in Palau and the Commonwealth of the Northern Mariana Islands). The Pacific Island AHECs are administered through the University of Hawai'i, John A. Burns School of Medicine and were founded in response to recommendations for development of the local health workforce by the U.S. Institute of Medicine in its 1998 report, *Pacific Partnerships for Health*. The goal of the Yap AHEC is to build human capacity in the health workforce, and thereby to strengthen the health service and improve health status for the people of Yap State. An ancillary goal is to pilot test new approaches to health workforce development which might be shared with others in the region. These goals have been pursued by building partnerships with colleges in the region, with the new Wa'ab Community Health Center project in Yap and the Yap State Department of Health Services to bring formal college programs for students and health service staff to Yap State. To date, formal relationships have been established with 5 colleges; Palau Community College (PCC), the College of Micronesia Federated States of Micronesia (FSM), Fiji School of Medicine (Dept of Public Health & Primary Care), University of Hawai'i, Hilo and the University of Alaska, Anchorage. A total of 143 students have been enrolled in 48 courses in several health worker disciplines, including clinical nurses, health assistant/dispensary managers, community health outreach workers, public health program staff, pharmacy technicians and x-ray technicians. In addition to facilitating the delivery of courses in Yap, a new 6-course certificate program has been developed for community outreach workers in collaboration with the College of Micronesia, FSM and the Wa'ab Community Health Center (Wa'ab CHC) in order to support the CHC's innovative health service delivery model. The Yap AHEC has also assisted the College of Micronesia, FSM in the World Health Organization sponsored development of a proposal for the establishment of a nursing program which is based on the decentralized, on-site (DC-OS) nursing training model that has been pilot tested in partnership with PCC at Yap State Hospital. (PHD 2007 Vol 14 No 1 Pages 57 - 65)

Background

The Yap AHEC was founded in 2004 as an offshoot of the Palau AHEC. The Palau AHEC was founded in 2001 when the Palau Ministry of Health approached the John A. Burns School of Medicine (JABSOM) at the University of Hawai'i and petitioned to be included in JABSOM's Hawai'i AHEC funding reapplication to the U.S. Health

Resources and Services Administration of the U.S. Department of Health and Human Services to support the provision of post-graduate training in primary care for medical officers in the region. The AHEC program has been in existence in the U.S. since 1973. AHECs mission is to improve the supply, distribution, diversity and quality of the health workforce in medically underserved areas. AHEC has funded 120 centers in 46 U.S. states.^a This mission is fully congruent with the recommendations of the 1998 U.S. Institute of Medicine in its report, *Pacific Partnerships for Health: Charting a New Course in*

the 21st Century,^b to promote the development of the health workforce in the U.S. Affiliated Pacific Island (USAPI) jurisdictions. Within 3 years, the Palau AHEC had delivered both academic and clinical post-graduate training to 11 physicians in Palau, Yap and the Marshall Islands. The Palau AHEC also expanded its programs to include undergraduate and post-graduate training for public health, environmental health, nutrition, and health administration (see *The Palau AHEC - An Update 2001-2006*, in this issue). In 2004, building on the success of the Palau AHEC an application was submitted through the JABSOM Hawaii AHEC for funding to establish new AHEC centers in Yap and the Commonwealth of the Northern Mariana Islands (CNMI). In late 2004, A. Mark Durand, supported by the Palau AHEC, moved to Yap to expand training programs there.

Like most of the health services in the region, Yap State has been largely staffed by health workers who lack formal academic training for their jobs. The goal of the Yap AHEC is to build human capacity in the health workforce, and thereby strengthen health service and improve the health status for the people of Yap State. An ancillary goal is to pilot test new approaches to health workforce development which might be shared with others in the region. These goals are being accomplished by bringing formal college programs to train health workers in Yap State. We do this by building partnerships with regional colleges, decentralizing their programs to the state, and delivering them on-site in the workplaces of the Yap State Department of Health Services (see *DC-OS: Decentralized, On-Site Training; a Sadly Neglected Opportunity for Building the Pacific Islands Health Workforce*, in this issue). Our experience with each of these programs is summarized below.

Palau Community College, Clinical Nurse Training

The Palau Community College (PCC) Nursing Program is a 3 year, Associate of Science degree, career ladder program, with exit points at 1 year for "practical nurses" and at 3 years for "graduate nurses." The following courses have been delivered at the Yap State Hospital (in a room on the hospital ward that has been converted to a classroom):

ESL 088	<i>English Reading IV</i>
ESL 098	<i>Writing IV</i>
MA 90	<i>Pre-Algebra</i>
NU 102	<i>Basic Nursing Concepts (twice)</i>
NU 103	<i>Child Health Nursing I</i>
NU 104	<i>Health Assessment</i>
NU 105	<i>Patient Education</i>

NU 106a	<i>Nursing Trends I</i>
NU 106	<i>Nursing Trends II</i>
NU 108	<i>Child Health Nursing II</i>

The first 2 of these courses are foundation English courses, which are required in the PCC curriculum, but have been offered through the local branch of College of Micronesia-Federated States of Micronesia (COM-FSM), but delivered at Yap State Hospital. A total of 25 students have been enrolled in any of the courses to date. This includes 20 who were already members of the nursing unit staff and 5 who were recruited into the program from outside. 21 of these students are currently enrolled.

Many of our nursing students have had trouble with the English and math courses in the curriculum. To address this, we have repeated one of the courses and hired an English tutor. When most of our students were failing a 3-credit pre-algebra math course, we requested the instructor to continue classes for as long as necessary until the students met the learning objectives of the course. After 11 credit hours of contact, 15 of 17 of the students had met the learning objectives and passed the course. Of the nursing courses, two have been taught by visiting PCC faculty while the rest have been taught by Anna Boliy, a BSN at Yap State Hospital who has taken on teaching in addition to her former duties as Chief of Clinical Care for the hospital. These multiple duties have caused some gaps of time when no nursing instruction was taking place. A full-time nursing instructor from abroad has recently been recruited to increase the pace of the program.

Ms Boliy has also been contracted by the COM-FSM to develop a nursing program plan for the college, based on the decentralized, on-site, career ladder program we have been delivering at Yap State Hospital. As of this writing, the proposal has been endorsed by the four FSM State Health Directors, the FSM Secretary of Health, Education and Social Affairs, the American Pacific Nurse Leadership Council and the Board of Regents of COM-FSM. Final endorsement by the FSM Board of Nursing and the accrediting agency of COM-FSM (the Western Association of Schools and Colleges) is pending.

College of Micronesia, FSM, Dispensary Manager/Health Assistant Certificate Program

This is a 12 course, 47 credit hour certificate program that teaches both public health and clinical skills to health workers in outer island dispensaries. Most courses have

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been delivered by two senior physicians, Drs. Arthur Yolwa and Vincent Tafleimal, who are also stationed and supervise medical services in the outer islands. Courses are delivered by a combination of distance learning over a network of high frequency radios (using materials that are pre-delivered by monthly field ship) in addition to twice yearly 4-6 week-long face-to-face sessions. For the face-to-face sessions, half of the health assistants are brought in to a central site (usually, one of the larger outer islands) and the rest are redistributed to provide service coverage to all of the islands. When the first session is complete, those who attended are sent back out to cover services, and the second group is brought in to take the courses. The following courses have been delivered to date:

CHS 220	<i>Review of Health Sciences</i>
CHS 231	<i>Maternal and Child Health I</i>
CHS 233a	<i>Behavioral Health</i>
CHS 242a	<i>Environmental Health</i>
CHS 235a	<i>Dental Health</i>
CHS 241	<i>First Aid Care</i>
CHS 240	<i>Maternal and Child Health II</i>
CHS 224a	<i>Health Problems in Adults</i>
CHS 251a	<i>Health Problems in Children</i>

A total of 29 students have been enrolled in the courses to date. This includes 21 who were already working as outer island health assistants and 8 women who were recruited to train to be birth attendants on outer islands which had no female health workers. The initial plan was for the birth attendants to take just the Maternal and Child Health Courses. However, five of them became interested in taking the full curriculum and have continued through the entire series to date. A total of 27 students are currently enrolled in this program.

College of Micronesia, FSM, Community Health Worker Certificate Program

This is a 6 course certificate program which was developed in collaboration with the new Wa'ab Community Health Center (CHC) project in Yap, to supply a new category of health worker, equipped specifically to deliver preventive services to people in their homes, schools and villages. The Wa'ab project features 4 new health center sites in the main island cluster of Yap, each of which is responsible for delivery of primary care and all preventive services to the populations within their respective catchment areas. Registries of clients in target populations for the various public health

programs are used to identify lists of patients needing preventive services, which are relayed to the CHC sites and then delegated to the community health workers in order to deliver healthcare to the community. The curriculum is competency based on the development of specific skills, such as preventive dental care for young children (application of fluoride varnish and counseling parents for children's dental care), directly observed therapy for tuberculosis, use of a flipchart to counsel diabetics who are delinquent for clinic visits, monthly assessment for stability of chronically mentally ill clients and household sanitation inspections. The curriculum also includes detailed training in survey techniques, as the health workers are being used to conduct a health survey of all households, for case finding and baseline health status determination, as has been done in Palau. The curriculum was adapted from the COM-FSM Health Assistant Certificate Program. Most of the preventive and community health teaching was moved to the first 6 courses, which are designed to be appropriate for both outreach workers in the district centers as well as health assistants in isolated areas, while the second set of 6 courses is designed for health assistants only, who must have skills to diagnose and treat ill patients. The revised curriculum for both certificates was formally approved by the COM-FSM Board of Regents in early 2006.

The curriculum consists of the following courses:

CHS 220a	<i>Review of Health Services</i>
CHS 231a	<i>Maternal and Child Health I</i>
CHS 234a	<i>Nutrition</i>
CHS 233a	<i>Behavioral Health</i>
CHS 242a	<i>Environmental Health</i>
CHS 235a	<i>Dental Health</i>

The community health worker certificate program in Yap was delivered full-time by Dr. Victor Ngaden, a senior physician with the Yap Department of Health Services over a 7 month period in a classroom at Yap State Hospital. This program started with 16 students, ten of which have completed the full curriculum and gone to work for the CHC.

Fiji School of Public Health & Primary Care, Undergraduate and Post-Grad Public Health Training

As has been done in Palau, courses from the Fiji School of Medicine, Department of Public Health and Primary Care have been delivered in Yap by faculty visiting for 2-3 weeks at a time from Fiji. At first, each visiting faculty member delivered 2 undergraduate courses to the same enrolled students during each stay. However, it became clear that, though it was possible to deliver sufficient

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classroom contact hours, the pace was too fast for many of the students. Recently, faculty members who visit teach an undergraduate course each morning to one group, and a post-graduate course each afternoon to staff members who already have an undergraduate degree.

The following courses have been delivered at the Yap State Hospital to date:

Undergraduate:

PH 143 *Information Systems for Health Managers* (offered twice)

PH 133 *Community Development and Health*

PH 121 *Community Health Practicum*

PH 142 *Introduction to Health Services Management*

PH 242 *Health Care Management in the Pacific*

PH 243 *Project and Participatory Management*

PH 151 *Introduction to Human Nutrition* (twice)

PH 122 *Introduction to Environmental Health*

PH 241 *Communications in Health*

PH 346 *Practical Health Services Management*

PH 322 *Environmental Health Project Management*

PH 332 *Settings Approach to Health Promotion*

Post-Graduate:

PH 731 *Health Promotion*

PH 748 *Principles of International Public Health*

PH 752 *Nutritional Problems of Public Health Significance*

PH 721 *Introduction to Ecology and Health*

PH 722 *Environmental Assessment*

PH 751 *Food, Nutrition, Health and Development*

A total of 37 undergraduate students and 12 post-graduate students have taken courses to date. Seventeen undergraduates and 10 post-graduate students are currently active in the program.

In May 2006, the Dean of the Fiji School of Medicine, Dr. David Brewster, came to Yap to preside over the first ever graduation ceremony of the Fiji School of Medicine in the FSM. Seventeen undergraduate and graduate certificates and diplomas were awarded.

University of Hawai'i, Hilo/University of Alaska, Anchorage, Pharmacy and X-Ray Tech Web-based Training

The University of Hawai'i in Hilo is in the process of creating a school of pharmacy which will serve students from the state of Hawaii and Pacific Island jurisdictions. They have received some startup funding from the U.S. Health Resources and Services Administration, including funds for developing distance learning models

for pharmacy training. In order to meet the expressed need in Palau for basic pharmacy technician training, they identified a web-based program from the University of Alaska in Anchorage that had been developed for training of health staff in isolated communities. This is a year-long, 4 course curriculum wherein CD-ROM and printed materials are forwarded to students first, with weekly assignments, discussion sessions, and readings conducted with faculty at the University of Alaska for each course. In early 2005, the program was launched in Palau and in late 2005, in Yap. Courses delivered to Yap so far include:

Phar A101 *Introduction to Pharmacy*

Phar A105 *Pharmacology for Technicians I*

Phar A107 *Pharmacy Dosing Formulae & Concentrations*

While 6 of ten students in Palau successfully completed the program, only one of 10 students in Yap has successfully completed all of the 3 courses that have been offered to date. The difference appears to be in the

degree of on-site student support. In Palau, a very enthusiastic pharmacy supervisor met with students weekly throughout the courses and addressed problems as they arose, in Yap students were given materials, computer lab passwords, initial instructions regarding how to sign into the website, and simply offered help if they felt they needed it. We are repeating the program starting in August, 2006 in Yap

with 11 students, this time with more intensive on-site support including a lead-in period of weekly face-to-face orientation sessions with the Chief Pharmacist at Yap State Hospital, and weekly, proctored, half-day sessions in the computer lab to assure that web connections are successful and to address difficulties promptly as they arise.

We have also begun preparing students for the University of Alaska Limited Radiography Program, a 3 course program which is also a web-based and designed for isolated communities. We have recruited a radiology technician to teach the courses face-to-face (unofficially) and to supervise hands-on procedures. We plan to register those students who are successful in this portion to take the courses for official credit on-line. We are doing these courses in two stages as an experiment to determine whether this strategy will allow a higher percentage of students to succeed in the program. We also hope to identify students who are sufficiently motivated to stick with the entire on-line program and save the cost of tuition for those students who are prone

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to drop out. To date we have delivered the following courses:

RADT 194k *Radiation Protection and Biology for Non-Imaging Professionals*

RADT 194L *Chest, Upper Extremity and Lower Extremity Examinations*

Ten of the 14 originally enrolled students are still active in the program.

Discussion

Healthcare is delivered by people. Its quality can only be as good as the skills of those who deliver it. Many Pacific Island health services are fatally handicapped by the lack of formal preparation of a large portion of their health workforce. Health administrators who wish to improve services in small island states must consider the development of the health workforce as a priority of the highest order. While healthcare organizations in developed countries must make some effort to recruit a sufficient workforce, those in developing countries are saddled with the extra burden of organizing basic training for available staff. For this reason, multinational donors and aid organizations who wish to improve health in the Pacific should be particularly concerned with assisting district health services with the development of their workforce. In partnership with regional college programs and donor organizations it is possible for district health services

to professionalize multiple components of their health workforce within a few years by becoming virtual health science academies, even while continuing to provide day-to-day healthcare.

Acknowledgements

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References:

- a Withy K, Dever G. Building Partnerships to Meet Public Health Needs in the Pacific. The National AHEC Bulletin, 2002; XIX(1): 44-46.
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13 years ago in Pacific Health Dialog, D. Sibua stated, "...sustainable economic growth is unlikely without adequate investment in human capital, and without economic growth the resources will not be available to cope with a rising population and increased educational aspiration." PHD, 1995; 2 (1): 77.