

# Pacific Association for Clinical Training (PACT): Lessons Learned and Next Steps in Developing a Sustainable Continuing Health Professionals Education System in the United States-Affiliated Pacific Island (USAPI) Jurisdictions

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## Abstract

*In response to the 1998 Institute of Medicine report, "Pacific Partnerships for Health", acknowledging the need for the continuing education of health workers in the United States-Affiliated Pacific Island (USAPI) jurisdictions, the U.S. Health Resources and Services Administration (HRSA) awarded a grant (1999-2003) to the University of Washington for a continuing education project in the Pacific. When shortfalls in HRSA funding threatened continuation of the program, Pacific advocates aggressively made a case for refunding of this important project. In 2003, HRSA announced competitive funding for a new program for continuing education. The Department of Family Medicine and Community Health (DFMCH) at the University of Hawai'i (UH), John A. Burns School of Medicine (JABSOM) was awarded the HRSA Cooperative Agreement to run from September 2003 through August 2007, creating PACT, the Pacific Association for Clinical Training.*

*PACT assembled a professional, community-based advisory board, most of whom were indigenous Pacific Islanders, and conducted a continuing clinical education needs assessment in every jurisdiction, subsequently developing and delivering programs utilizing distance education relevant to the needs of each USAPI jurisdiction. Priority health areas included diabetes, oral health and geriatrics, as mandated by HRSA. This report describes the processes, accomplishments, challenges and lessons learned from the project. PACT needs assessment reports for each jurisdiction and an executive summary are published as Original Articles in this issue of Pacific Health Dialog.*

*As funding for PACT comes to an end, it is clear that much work remains to be done in the region. "Continuing clinical education" is only one part of a continuum of human resources for health (HRH) workforce development. Continued USAPI regional, U.S. national and international collaboration and resources are needed to achieve the ultimate goal of improved health and health care delivery in the USAPI. (PHD 2007 Vol 14 No 1 pp 224-233)*

## Introduction

The U.S.-Affiliated Pacific Islands (USAPI) consists of three Flag Territories and three Freely Associated States (FAS). The Flag Territories are American Samoa, Guam and the Commonwealth of the Northern Mariana Islands (CNMI); the Freely Associated States are the Federated States of Micronesia (FSM; comprised of the states of Yap, Pohnpei, Kosrae and Chuuk), the Republic of the Marshall Islands (RMI), and the Republic of Belau (ROB known as Palau;). The total population of the USAPI is approximately 460,000 people, with 182,000 of the inhabitants living in the FAS. The expanse of the USAPI

is twice the size of the continental United States (U.S.) and crosses four time zones and the International Date Line.

American Samoa has been a territory of the United States (U.S.) since 1900, and Guam was annexed as possession of the U.S. in 1898. In 1947, under a United Nations Mandate, the U.S. took responsibility for the "health, education and welfare" of the U.S. Trust Territories of the Pacific Islands (TTPI), which included what is now the RMI, ROB, and the FSM.<sup>1</sup> The FAS countries are voting members of the United Nations and are sovereign, except for military matters. Each FAS is governed by a Compact of Free Association with the U.S., allowing the FAS to participate in specified federal programs, including programs funded by the U.S. Department of Health and Human Services (DHHS) and the U.S. Department of Education (DOE).

FAS are represented as independent countries with embassies in Washington, although, as former U.S. colonies, the USAPI have become heavily dependent on U.S. assistance. Citizens of the Flag Territories, while classified as U.S. citizens, are not allowed to vote in U.S. Presidential elections. FAS citizens, classified as non-immigrants, are also not allowed to vote in U.S. elections, but can freely immigrate to the U.S. to work without a visa. Guam and American Samoa have non-voting representatives in the U.S. Congress. The CNMI has a representative in Washington, D.C. who is not a member of Congress. Citizens of the Flag Territories qualify for Medicare, Medicaid benefits, and all U.S. Federal Grants. Because of the hospitals' Medicare certification requirements, many of the physicians in the Flag territories must be licensed to practice in the U.S. or Canada. FAS citizens do not qualify for Medicare or Medicaid.

The ability of each jurisdiction to respond to the health needs of the region is dependent upon the health infrastructure, financial resources, and the size and level of training of the health workforce. The health care budget expressed as a per capita expenditure of each jurisdiction in 2001 (the most recent year for which data is available for all sites) ranged from \$87 (FSM) to \$1,032 (Guam),<sup>2</sup> far below that of the U.S. at \$4,929.<sup>3</sup> Expensive tertiary care is obtained from Hawai'i (HI) or the Philippines for advanced cases of cancer, heart or kidney disease, and purchased via medical referrals. Nearly one-fourth of the already inadequate USAPI health budgets are expended on tertiary care abroad. The 1998 Institute of Medicine (IOM) report, entitled, "Pacific Partnerships for Health: Charting A New Course",<sup>4</sup> describes the glossy inadequate health facilities and infrastructure in most of the USAPI. Funding provided by the amended U.S. Compact of Free Association fails to provide for significant improvements in health care financing for the FSM and RMI, and in some health areas, funding is reduced.<sup>5</sup> Health services patients, providers and administrators in the FSM and RMI are already feeling the adverse impact of the diminishing Compact payments.<sup>6</sup> The varied and complex factors influencing policy issues, political relationships, economics, the environment, culture, health systems, education and human resource development all play significant roles in the present state of health and the health infrastructure in the USAPI.

### Health Workforce Training Issues

There are limited qualification criteria for the local health care workforce in the respective USAPI jurisdictions. Formal education, training and continuing education opportunities for health care workers in the USAPI

are variable. Rapid westernization of the USAPI has accelerated the epidemiologic transition in the region, and the existing workforce was not prepared in training or numbers for the double burden of communicable and noncommunicable illnesses.

Developing a sustainable indigenous workforce to address growing USAPI health needs will be challenging. The colonizing governments of Spain, Germany, Japan and the U.S. gave (what is now) the USAPI secondary and tertiary health care systems without providing the tools and resources needed to sustain these systems. USAPI public school systems continue to face significant challenges in preparing students for successful entry into health careers, and scholarship programs are insufficient to make up for inadequately trained students.

There was a medical officer training program in Hilo, HI during the late 1960s and 1970s. The Pacific Basin Medical Officers Training Program (PBMOTP) in Pohnpei, FSM, was a satellite program of UH JABSOM from 1986-1997, committed to developing an indigenous physician workforce to serve the USAPI. PBMOTP intensified the curriculum of the original Physician's Assistants Program, known as MEDEX. One-hundred seventy students entered the program, but only 70 graduated. Some students were able to complete enough training to serve as health assistants or MEDEXes. All 70 graduates earned a Medical Officer (MO) degree and are licensed physicians able to practice in the participating jurisdictions.<sup>7</sup> Prior to 1995, physicians graduating from PBMOTP returned to their home islands for a year-long, loosely structured apprentice-style internship. The 70 Micronesian and American Samoan PBMOTP physician graduates entered the health workforce with little opportunity to keep their knowledge current through continuing education. In 1995, a model for distance learning was adopted by the Fiji School of Medicine (FSMed) under the auspices of the World Health Organization (WHO) for dissemination in much of the western tropical Pacific basin.<sup>[a]</sup> U.S. funding sources, awarded to UH JABSOM and PBMOTP, supported initiation of clinical post-graduate training courses, which commenced at FSMed in 1997.

The 1998 IOM Report<sup>4</sup> included four recommendations to improve health in the USAPI:

1. Adopt and support a viable system of community-based primary care and preventive services.
2. Improve coordination within and between the jurisdictions and the United States.

3. Increase community involvement and investment in health care.
4. Promote the education and training of the health care workforce.

Local governments, the Pacific Island Health Officers Association (PIHOA) and other U.S. national and international partners have addressed the IOM's first two recommendations over the past 10 years, and community involvement has been increasing to varying degrees. The fourth recommendation, promoting education and training of the health workforce based on a workforce development and training plan established by each jurisdiction, called for several strategies:

- Improving and supporting basic education (primary and secondary schools);
- Utilizing distance-based learning, telemedicine and electronic data libraries;
- Provide postgraduate and continuing medical education (CME) programs for all levels of practitioners and incorporated into each jurisdiction's health care workforce training plan;
- Sponsoring training for dentists;
- Sponsoring training for nurses; and
- Providing health administration and systems management training to the Chief Health Administrator through a certificate or degree program.

The Pacific Islands Continuing Clinical Education Program (PICCEP), through the University of Washington, developed as a result of recommendations in the 1998 IOM report. PICCEP was created to provide continuing clinical education with an emphasis on primary care, for practicing health providers in the USAPI. PICCEP was aimed largely at physicians and provided text books and other learning materials to the "libraries" in each of the jurisdictions. These libraries provided educational resources, however an infrastructure to support and encourage a culture of learning was absent. Thus, USAPI health providers and policy-makers involved in health workforce planning advocated to HRSA to continue funding to develop a sustainable system for continued learning.

#### Development of the University of Hawai'i Pacific Association for Clinical Training Program

In 2003, HRSA entered into a 4-year Cooperative Agreement with the UH JABSOM DFMCH to develop and coordinate a comprehensive continuing education (CE) program for health care workers in the USAPI, to include nurses, physicians, oral health and other allied health providers. Activities were to be directed by a multidisciplinary advisory board representing each jurisdiction and the major regional nursing, medical and dental professional associations. Program goals included developing capacity for and implementing distance education in the region.

The UH PACT team approached this issue of CE through an indigenous, people-focused, participatory model of health education and training development. The ultimate goal of PACT is to improve the quality of health care and health outcomes in the USAPI through ensuring a sustainable CE program. An additional requirement of the HRSA Cooperative Agreement was to have an independent evaluator; Dr. Kathryn Braun, Research Director of 'Imi Hale—Native Hawaiian Cancer Network, worked with PACT staff and board members to design and conduct the evaluation.

#### UH PACT Advisory Board

The Ministers, Secretaries and Directors of Health from each USAPI jurisdiction appointed two persons to form PACT's community-based Advisory Board, which also included one representative from each of the regional health professions associations for nurses, dentists and physicians (please refer to the Acknowledgements at the end of this article). Given the distribution of the USAPI health workforce (refer to the Needs Assessments section, below) and health leadership in the region, the initial PACT Board of 23 members consisted of four nurses, two dentists, four non-physician health administrators, and four physician health administrators. The relative distribution has remained stable over the 4 years of the project. The Board first met in Honolulu in February 2004, where they crafted the strategic plan, set priorities for PACT activities and contributed to the design and implementation of the needs assessments. At subsequent annual meetings, progress and challenges in implementing the various portions of the strategic plan were discussed. Additionally, the Advisory Board and PACT partners discussed resources, training opportunities, reviewed the independent evaluator reports from the preceding Program year, and agreed on the objectives and evaluation measures for each subsequent year.

### Needs Assessments

Unlike traditional CE needs assessments that usually focus on content areas, these assessments also examined existing laws, policies, support and infrastructure required to support a continuing professional development program in each jurisdiction. The assessments attempted to include each item or factor noted in the 1998 IOM report.<sup>4</sup> A combination of written surveys, key respondent interviews, and reviews of existing data and reports were used to assist the Advisory Board in developing and refining the Regional Strategic Plan. As stated earlier, an Executive Summary of the needs assessment and priorities for a continuing professional development program, along with individual jurisdiction needs assessments are published as Original Articles in this issue of Pacific Health Dialog.

### Regional Strategic Plan

The PACT Strategic Plan was developed by the Advisory Board at their February 18-19, 2004 inaugural meeting in Honolulu, HI. Despite the tremendous diversity and disparity in infrastructure and human resources available throughout the region, economic and political challenges, and frustration at the generally slow progress made since the IOM report was published, this group, assembled for the first time ever, was able to develop seven strategic priorities, discussed in subsequent sections. One of the key first steps in defining the strategic priorities was to broaden the definition of "continuing clinical education" used in the HRSA Cooperative Agreement. The Board strongly felt that the term "clinical" put less emphasis on public health and primary health care and also would not include the managerial and administrative educational priorities that were so badly needed. Accordingly, the Board chose to use "continuing professional development" (CPD) to more accurately capture the type of educational priorities and activities needed under the PACT program. The term "professional" implies prior attainment of a degree or other professional certification specific only to physicians, dentists and some nurses. At the heart of their discussion was the strong need for better foundational training for the existing and future health workforce via certificate or degree-granting programs, because many of their health workers, including practical nurses, had received only on-the-job training from others who were also trained on-the-job. The Board acknowledged, however, that the much larger issue of health workforce development or human resources for health development was beyond the scope and budget of the HRSA Cooperative Agreement. Some of the priority areas in the plan were developed to help focus their health administrations' advocacy efforts in health workforce development. The Board

also stressed the need for flexibility for jurisdictions to determine, request, and receive financial assistance with their respective priority needs, as well as to develop their health infrastructures. Individual jurisdiction and regional progress in each priority area were discussed at the annual board meetings.

### Distance Education

Another focus of the HRSA Cooperative Agreement was to deliver the community-driven educational content via distance education. Distance Education in the U.S. and other developed countries is now commonly conducted using a combination of synchronous or asynchronous teaching via web-based interfaces, webcams, chat rooms, electronic study halls, online discussion groups, message boards, e-learning systems, or interactive videoconferencing programs. However, the experience in the USAPI has been very different. Video teleconferencing (VTC) via satellite is not reliable at all locations. Each of the countries, with the exception of Guam and CNMI, utilize dial-up connections at expensive per kilobyte or monthly rates. Lack of bandwidth<sup>[b]</sup> and insufficient numbers of adequately trained Information Technology (IT) staff to support distance learning are pervasive problems.

The UH Telecommunications and Information Policy Group (TIPG) conducted an in-depth assessment of existing and needed resources to conduct distance education in the USAPI. Additionally, a pilot project was conducted in Pohnpei in June 2004 testing various modalities of distance education. Original Articles by Chen et al. and Higa reporting on these two projects, respectively, are also published in this issue of Pacific Health Dialog. As a result of the pilot project, much of the "content" has been captured and delivered using Tegrity,<sup>[c]</sup> videotapes or distributed via CD-ROM or DVD, allowing for flexibility in scheduling for group meetings, as well as individual learning styles, and use of the existing technological infrastructure in the respective jurisdictions.

### Accomplishments and Challenges with the Strategic Priorities

The UH PACT Advisory Board identified seven strategic priority areas:

- 1) Prioritize Continuing Professional Development at the Governmental Level;
- 2) State-Level Coordination;
- 3) Incentive Structure;
- 4) Collaboration and Partnerships;
- 5) Curriculum Modules and Library;
- 6) Computer Skills and Telecommunications Access;
- 7) Educational Priorities;

discussed below. The priority areas encompass health care policies and systems, health workforce, telecommunications infrastructure, and technology literacy. Each jurisdiction was to develop a continuing professional development plan for all their health workers; from there, content areas were further prioritized.

### **Prioritize Continuing Professional Development at the Governmental Level**

Despite the 1998 IOM report and country-specific Strategic Health Plans or Strategic Development Plans (if such existed in 2004), PACT Advisory Board members strongly felt that *“each individual government must make CPD a priority and work on improving current systems to enable health providers to apply the knowledge and skills learned in CPD programs.”* As of early 2007, each government has made CPD a priority in at least one of several ways: formal language regarding CPD in existing legislation; plans emphasizing the importance of CPD; incorporating expectations of CPD into policies relating to hiring, retention or licensure of health workers. However, as described below, economic and political challenges continue to hamper effective implementation of these policies.

### **State-Level Coordination**

Despite the economic constraints faced by the countries, in February 2004 the Advisory Board concluded that governments should support a dedicated CPD coordinator to demonstrate their commitment to improving health workforce training. Such individuals would also work to improve coordination between hospital and public health staff. Prior to establishment of the CPD coordinator positions, relevant health workers were often unaware of visiting medical teams or consultants who traveled to the jurisdictions, resulting in overlapping scheduling, poor attendance, and wasting of valuable resources. Recognizing that special skills were needed to facilitate distance learning, the Board also felt it was important to either require CPD coordinators have adequate computer skills, or to hire a local technology facilitator. Thus, the priority area for State-level coordination was established, with Advisory Board members helping to identify and recruit at least one CPD coordinator in each state who could facilitate and manage the local technology (logistics, computer training), as well as content (supporting CPD programs conducted via distance education) activities. *“Where necessary, equipment and infrastructure support should be provided to enable the CPD coordinators access to the internet for communication,”* was the second strategic priority identified by the Advisory Board.

In response to this priority area, established in February 2004, each jurisdiction designated a CPD Coordinator, although no new positions were funded. Coordination functions were assumed by the HRSA-funded Area Health Education Centers (AHEC) in Palau and Yap, by existing Education or Quality Assurance (QA) Coordinators in American Samoa, Guam Hospital, Guam Public Health, and Kosrae, and by physician or nurse leadership in RMI, Pohnpei and Chuuk. HRSA granted permission to transfer some of the budgets for infrastructure development (i.e., supplies, equipment, specific on-site or off-site training), which were requested via a mini-grant mechanism.

At the second PACT Advisory Board meeting in November 2004, a push was made for each jurisdiction to develop a coordinated CPD plan for all health workers with input from all disciplines. In March 2005, training for CPD Coordinators was held in conjunction with a Comprehensive Cancer Control Leadership Institute (CCCLI) in Honolulu, HI, specifically designed for the USAPI and largely sponsored by the major National Partners for CCC.<sup>[9]</sup> This approach was chosen because many of the techniques and strategies used in developing a community-based action plan for cancer could be utilized in developing a multidisciplinary plan for USAPI health workforce training. CPD Coordinators also received training via Moodle,<sup>[e]</sup> an e-learning system, and received a Coordinator handbook, which included sample policies, procedures, forms and tools for creating a basic CPD program organized and based on systematically identified needs in the region. Despite the training and resources, jurisdictions were in different stages of readiness to embark upon or complete such a CPD plan. Thus, at the third Advisory Board meeting, held in January 2006, Board members agreed to assemble a multidisciplinary teams to guide CPD development based on each jurisdiction's systematically identified needs and priorities. At the final PACT Board meeting in December 2006, it was clear that challenges remained in this area. With the exception of the Palau and Yap AHECs, interdisciplinary by their nature, the other CPD teams lacked the necessary interdisciplinary make-up, and those coordinators were overwhelmed with other clinical and managerial duties. Many of these challenges stemmed from the lack of funded, dedicated CPD coordinators. Since CPD is but a part of the spectrum of human resources for health (HRH) development and also due to resource limitations, the Advisory Board feels that funded coordinators with appropriate administrative and communication skills are needed to keep moving forward with CPD and HRH planning. Some of the USAPI jurisdictions face incredible economic challenges just to maintain basic

infrastructure (electricity, clean water supply), and to pay for fuel costs to provide basic health care and immunizations to the outer islands. Therefore, external funding sources remain a critical need for the next few years, at minimum, in order to fund dedicated CPD coordinators, with requisite computer skills, in those jurisdictions where they presently do not exist.

### **Incentive Structure**

Lack of incentives to participate in continuing education was cited as one of the many barriers to establishing a CPD program in those countries without licensure requirements that include attaining a minimum number of CPD credits. Therefore, the Advisory Board identified the third priority: *“as a minimum incentive, all jurisdictions should move towards mandating a minimum number of CPD credits for continuing licensure of health workers. Professional organizations such as the American Pacific Nurses Leader Council, Pacific Basin Dental Association and the Pacific Basin Medical Association should take an active role in determining region-wide professional CPD requirements.”* Other incentives discussed included incorporating some CPD activities into existing certificate and degree programs, and developing links between CPD and career advancement. Much progress has been made in these areas, to the credit of health leaders faced with multiple competing priorities. Each jurisdiction now has in place policies that include continuing education for re-licensure of health professionals. The regional health professions organizations continue to work on organization-based incentives, and several jurisdictions have partnered with institutions of higher learning to offer relevant coursework to current health workers. In this issue of Pacific Health Dialog, Durand AM et al. describe training efforts in Yap being used as the model in other FSM States, in two articles: *““DC-OS”: Decentralized, On-Site Training”* (Viewpoints and Perspectives section) and *“The Yap AHEC Update”* (Pacific Health Institutions section). Though some of partnerships with educational institutions commenced prior to or simultaneously with the PACT project, PACT has been instrumental in advocating for these issues, has sought closer collaboration between Health and Education sectors, and has provided funding for teachers or materials for some of these courses.

### **Collaboration and Partnerships**

Given the many challenges described above, coupled with small populations in the jurisdictions, the Advisory Board acknowledged collaboration and partnering to be critical to the success of the project in establishing the fourth priority area: *“The program has explored and will continue to develop active collaboration with existing*

*health training programs provided by community colleges, regional institutions (such as Fiji School of Medicine and Public Health and the University of Guam), Federal and international agencies (including CDC, WHO, SPC) and other grant supported activities (such as regional AHEC programs and Maternal/Child Health programs). CPD training should also support existing health worker training programs where possible to address the health provider shortages in the region.”*

The FSMed and Massey University offer some formal academic credit programs in the FAS, and WHO Pacific Open Health Learning Network programs are being used in some areas as part of their academic credit programs. PACT has partnered with the Centers for Disease Control and Prevention (CDC) Division of Tuberculosis Elimination (DTBE) to help design, record, and distribute the clinician and nurse training components of various regional TB meetings. Comprehensive Cancer Control (CCC) resources, through CDC's Division of Cancer Prevention and Control (DCPC) and National Partners for CCC have provided cancer-specific training modules and other administrative and management training activities related to community capacity building. The University of Washington School of Dentistry, Preventive Dentistry Division, has been a strong partner. Largely supported by PACT, WHO and additional HRSA funding, Dr. Peter Milgrom and Dr. Ohnmar Tut (President of the Pacific Basin Dental Association [PBDA]; Preventive Services Dentist in the RMI) have worked with dental chiefs in Yap, CNMI, Kosrae, and, soon, Chuuk and Pohnpei, to develop comprehensive programs and provide training in preventive oral health techniques. PACT and PIHOA (both supported by HRSA), along with other HRSA and WHO funds, have been used to support PBDA conferences, and provide learning materials to upgrade the knowledge and skills of dentists in the region. As PIHOA embarks on their strategic plan for HRH, strengthening existing and establishing new collaborations and partnerships will be developed with the Pacific Post-Secondary Education Council, FSMed, Massey University, and many others.

### **Curriculum Modules and Library**

Given the diversity of learning needs in the region, flexibility in requesting and using the curriculum modules is imperative. Thus, the Advisory Board identified its fifth priority as, *“PACT CPD activities should augment locally and regionally available training programs. Pre-existing content modules will be identified and modified as needed to utilize various distance education modalities. New modules will be developed using local, regional and international expertise to complement existing training materials. A “smorgasbord” of training modules*

*will be made available so that workers within each jurisdiction can select the most appropriate content and delivery method for their training needs and available resources. An open source library will be maintained of all clinical education materials.*" Specific modules developed by either UH, physicians and nurses from RMI, FSM, Palau, American Samoa, and Guam, CDC or others have been distributed on CD-ROM or DVD to all jurisdictions. Some of these modules are also available through Moodle on the PACT website, but because of bandwidth limitations and/or lack of supplies, individuals in most of the jurisdictions do not download the materials or utilize Moodle. PACT also partnered with NetCE,<sup>[9]</sup> another well-established, web-based continuing education program specifically designed for medical, nursing, social work and dental health professionals, to make their content available to USAPI health providers at no-cost to individual participants. NetCE is able to track passing and completion rates, generate certificates of completion, and provides reports of such information with PACT staff.

Some of the lectures and trainings for physicians are eligible for U.S. American Medical Association (AMA) Category 1 CME credit, while others are eligible for Category 2 credit. While the great majority of health professionals in the FAS do not need U.S.-accredited CME credits, those health professionals in Guam, CNMI and American Samoa who need such credit obtain them through U.S.-accredited education programs for physicians and nurses delivered on-site (Guam and American Samoa) or via distance or off-island conferences (CNMI). However, even in the Flag Territories, limited local CME opportunities exist.

One contact-hour is defined as one person participating in 1 hour of a continuing education activity designed or facilitated by PACT, regardless of format (i.e., individual or group setting, live lecture, CD-ROM/DVD, web-based, VTC, audio conference or problem-based learning session). Delivery of the educational modules started in grant year 02 of the program, during which over 2,500 contact-hours were accrued. In year 03, more than 1,900 contact-hours were accrued, excluding NetCE participant data. NetCE converted their database in 2006 and was unable to provide the needed information for reporting in that year. The great majority of contact hours were obtained in group settings by viewing and discussing content captured via Tegrity and distributed on CD-ROM. Problem-based learning (PBL) has been introduced in each of the jurisdictions and is still being utilized in Yap and Chuuk States in the FSM, and in Ebeye, in the RMI. In December 2006, TB clinicians participated in a workshop that focused on converting

a traditional case history into an interdisciplinary PBL case. Periodic reinforcement to utilize PBL continues to be needed, but this holds promise as a learning modality that is both sustainable and builds capacity. An Original Article by Yamada et al., highlighting the use of PBL, is published in this Pacific Health Dialog issue (pp 98-102).

### **Computer Skills and Telecommunications Access**

The Advisory Board identified its sixth priority as, "*Basic computer and internet skills training must be provided to increase the capacity of local health providers to access web-based resources including the PACT curricular library. PIHOA will assist in negotiating fair internet and telecommunications access rates for health providers in states where current pricing is prohibitive. UH faculty will explore opportunities for access to clinical support information, such as full text articles, for providers in the region.*" PACT staff and partners have been able to conduct basic health informatics training in some of the jurisdictions. FSM health professionals who participated in trainings at the College of Micronesia FSM received basic computer skills training with financial assistance from PACT and PIHOA. Recent emphasis has been placed on better utilization of available resources at community colleges in each jurisdiction. The UH TIPG, a major PACT partner, has helped to improve telecommunications infrastructure in several jurisdictions. PACT provided a laptop and computer projector for continuing education program use in each jurisdiction, and helped support access to full-text articles through online medical literature databases. The mini-grant mechanism also helped fund other electronic equipment and supplies to build the infrastructure for CPD programs in each locale or with respective regional professional organizations. Primarily because of bandwidth limitations and time differences, web-based meetings or seminars have not been widely utilized in any of the USAPI jurisdictions. However, nurses and allied health staff in the RMI have successfully utilized VTC, because it works well, and because the timing of meetings in Hawai'i more closely matches trainings to be held pre- or post-work shift.

### **Educational Priorities**

At UH PACT's first Advisory Board meeting, significant discussions took place regarding our target audience, content and what made sense for the region and the individual jurisdictions. The HRSA Cooperative Agreement mandated diabetes, geriatrics and oral health as priority health concerns. Geriatrics was redefined by the Advisory Board as the upper age-range of persons who typically utilize most of the health resources. Given the wide disparity in educational needs between the jurisdictions, only regional educational priorities were

identified. The jurisdictions would be free to prioritize and request specific content according to their own local needs. The Board decided that priority educational needs should be based on the most prevalent health indicators and diseases. Thus, the seventh and final strategic priority area was established as, *“Region-wide priorities were identified (in descending order) as: diabetes, oral health, cancer, environmental health, administration and leadership, injury and mental health/suicide. Geriatrics will be incorporated into each content area as applicable.”* Advisory Board members further emphasized the importance of nursing and preventative care/public health training, and the need for public health management training, including inventory management. “The number one killer in Micronesia is disorganization,” declared one PACT Board member. The Board acknowledged that only focusing on content without improving the processes and context in which health professionals practice would result in well-trained but frustrated individuals, unable to apply their new knowledge and skills.

A partial listing of distributed content (more than 80 separate training modules) includes: “Diabetes and Oral Health”, “Approaches to Preventing Metabolic Syndrome,” “Diabetic Foot Exam,” “Wound Care,” “Delirium and Dementia,” “Home Care,” “Update in Geriatrics,” “Palliative Care,” as well as a variety of cancer-related topics (e.g., cancer screening, cancers of the breast, cervix and colon, U.S. Preventive Services Task Force [USPSTF] guidelines, human papillomavirus [HPV] vaccine, liver cancer, Hepatitis B & C, cirrhosis), greater than 20 topics related to tuberculosis, a variety of nursing education and nursing quality improvement initiatives, various presentations by physicians on public health, case series, and other topics. Oral health training has been largely delivered in face-to-face capacity-building sessions. A PACT mini-grant supported a Palauan physician to deliver a 20-hour curriculum on mental health to public safety and health officials in Yap. To date, more than 20 PBL cases have been distributed to the jurisdictions, and some have begun to develop their own problem-based learning cases.

## Evaluation

Kathryn L. Braun, DrPH, Director of Research for ‘Imi Hale, conducts PACT’s annual evaluations. Using the original Cooperative Agreement application as a framework, the PACT Advisory Board refined and approved annual objectives and indicators. Because of the complexities throughout the region, the PACT Board determined at their first meeting that it would take many years to measure “meaningful” outcomes in terms of patient care or visible systems changes. Therefore,

most evaluation indicators are process-oriented. Data to measure progress consists of meeting reports, attendance and evaluation sheets from the PACT-facilitated modules, as well as direct feedback from PACT Advisory Board members. Overall, program evaluation has been positive in each year, with PACT reaching or exceeding most of the indicators. Nearly all responding Advisory Board members provided positive feedback about PACT and its achievements in funding years 01, 02 and 03. For example, overall consensus was received for the following indicators:

- 1) PACT staff members are interested in Pacific issues and are well-intentioned, respectful, and responsive.
- 2) Good relationships have been established.
- 3) Health professionals across the region want CPD.
- 4) CPD opportunities are being provided through multiple mechanisms and venues, increasing options for individuals and jurisdictions.
- 5) Goods and services related to CPD have been realized by all jurisdictions.
- 6) The project is supporting infrastructure development.
- 7) Expectations of PACT are being met.

To date, PACT has been successful in building the infrastructure for CPD in the Pacific. Its major impact has been through (a) developing and distributing Tegrity training CDs; (b) supporting local/regional trainers and meetings (although post tests and CPD tracking mechanisms still need to be added); (c) awarding mini-grants in support of local infrastructure and associations; and (d) securing additional grants (e.g., in the area of cancer) to support training and capacity building in the region.

Despite these limited successes, many challenges remain. Capacity for CPD still varies by jurisdiction and is significantly influenced by budget and health workforce shortages. While Pacific health providers are willing to utilize new technologies, their ability to receive non-face-to-face CPD programs remains constrained by lack of equipment, staff trained to operate the equipment, and a consistent supply of electricity. A proposed website planned as a central information clearinghouse has not been fully developed due to staffing issues and also because many of the jurisdictions are unable to utilize web-based curriculum and tracking. Few of the jurisdictions have developed plans, targets, and internal tracking mechanisms for CPD.

The 1998 Institute of Medicine report identified the need for continuing education for physicians of the USAPI<sup>4</sup> and was the initial step that allowed PACT to evolve. HRSA then funded two consecutive 4-year projects. The initial one helped define the magnitude of the problem, documenting that all health professionals in the USAPI had been neglected for decades. The second 4 years of HRSA funding utilized a participatory model of development, identified and addressed infrastructure, human resource and policy issues that could promote a sustainable continuing education system. However, despite the IOM report and 8 years of HRSA funding, local sustainability of the PACT program is questionable. The professional health education efforts cannot be continued in a robust manner without continued funding and support. The health care resources that presently exist in the USAPI remain insufficient, requiring external assistance similar to the HRSA grants for at least another 15-20 years to enable sustainability and to produce significant positive outcomes.

### Next Steps

Developing local capacity and identifying a dedicated CPD coordinator for each jurisdiction is vital to ensure sustainable workforce development through CPD. Additionally, coordinators are needed to implement policies and procedures related to CPD planning and implementation in the RMI, Pohnpei and Chuuk States in the FSM, American Samoa, and the CNMI.

Local and distance-based courses for academic credit need to be expanded for adequate training and certification of each jurisdiction's health care workforce. CPD priority areas, to be wed to larger HRH planning under the auspices of PIHOA, should be developed in concert with health workforce planning. Multi-level and multi-sector collaboration and coordination is also needed to develop and implement relevant HRH plans for long-term improvements in the provision of health care.

The UH JABSOM DFMCH, in collaboration with the Pacific Cancer Coalition and PIHOA, will continue to seek U.S. federal and international resources to provide training and capacity building as it relates to cancer control. Ongoing advocacy efforts highlighting the unique strengths and challenges of the USAPI is needed at all levels.

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### **Footnotes**

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[b] Bandwidth: the transmission capacity of electronic communication system; the speed of data transfer. ([www.tegrity.com](http://www.tegrity.com)).

[c] *Tegrity*: a proprietary e-learning technology system.

[d] Comprehensive Cancer Control Leadership Institute (CCCLI): a public/private/govt collaborative designed to help states, territories and tribal nations implement and improve their comprehensive cancer control plans.

[e] Moodle (Modular Object-Oriented Dynamic Learning Environment): a free, open-source electronic course management system, downloadable in 75 languages. ([Moodle.org](http://Moodle.org)).

[f] NetCE Continuing Education Online ([www.netce.com](http://www.netce.com))