

American Samoa Assessment for 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 American Samoa assessment. Meant to establish a baseline for future reference, all data is that collected in 2004/2005 and has not been updated.

Key words: American Samoa; 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 a site visit conducted by Dr. Buenconsejo-Lum in August 2004.

Additional telecommunications infrastructure needs assessment data was gathered by University of Hawai'i (UH) Telecommunications and Information Policy Group (TIPG) / Pan-Pacific Education and Communication Experiments by Satellite (PEACESAT) staff as noted in the assessment in this issue Pacific Association for Clinical Training (PACT) *Technology and Telecommunications Infrastructure Assessment*. A preliminary written needs assessment survey was distributed and completed by Dr. Oo, Ms. Wright, Ms. Misi and Mr. Lafitaga in November 2003. Dr.

Buenconsejo-Lum of the UH, John A. Burns School of Medicine (JABSOM), Department of Family Medicine and Community Health, completed a site visit in August 2004, interviewing the remaining key informants.^a

Description of American Samoa

American Samoa is an unincorporated territory of the U.S. The territory consists of a group of seven islands divided into 3 administrative districts; Tutuila (the Manu'a group: Ofu, Olosega, Ta'u), Aunu'u (Rose Atoll), and Swains Island (privately owned). The total land area of the territory is 199 sq. km, with 116 sq. km of coastline. Travel between the main island of Tutuila and the Manu'a group is by local airline, with flights offered several times a day. Passenger and cargo boat services are offered once per week and take approximately 9 hours between Tutuila and the Manu'a group. Public schools on each island are linked by satellite telecommunication (offering video-teleconferencing [VTC] capabilities), phone and fax. The territory's only hospital, the Lyndon B. Johnson (LBJ) Tropical Medical Center, and the main Department of Health in Pago Pago also have VTC capabilities.^b

The estimated 2004 total population was 57,902. The annual growth rate is 0.04%, the birth rate is 24.46 per 1,000 and death rate is 3.39. The net migration rate is 20.71 per 1,000. Infant mortality is 9.48 per 1,000 live

births, in comparison to the U.S. infant mortality rate of 6.63 deaths per 1,000 live births. Total life expectancy is 75.6 years, compared to 77.4 years in the U.S. Of the total population, over 62% are 15 years of age or older. Eighty-nine percent of the population is ethnic Samoan or part-Samoan and Tongans comprise approximately 4% of the population. The remaining ethnic groups include Filipino, Caucasian, Korean and others. Major languages spoken in American Samoa include Samoan and English. The literacy rate (defined as the percent of the population over age 14 who can read) was estimated at 97% in 1980.^c Most of the population lives on Tutuila Island; approximately 1,700 people live in the Manu'a Island Group. Manu'a remains largely undisturbed and is strongly culture-oriented. There are some homes and rural villages on each of the inhabited islands that lack electricity or running water.

The per capita income is \$4,295,^{d4} in comparison to \$37,986 in Hawaii. The majority of the territory's revenues (63%) are derived from U.S. grants; the remaining 37% are from local sources including tuna canning, agriculture and handicrafts. It is estimated that 58% of families fall below the U.S. federal poverty level.

Health Workforce Demographics

The LBJ Tropical Medical Center is the main provider of outpatient care and the only provider of inpatient care in the entire territory. LBJ receives U.S. Medicare payments and is currently in the process of restructuring their policies, procedures and training to attain accreditation by the U.S.-based Joint Commission on Accreditation of Healthcare Organizations (JCAHO). There is one community health center and six public health clinics, six dispensaries and four dental clinics throughout the islands. Most of the healthcare is provided either by LBJ staff or public health staff, primarily comprised of licensed practical nurses (LPNs) and certified health assistants. Four physicians work in the public health clinics. There are three physicians in private practice and two private offices on the main island. LBJ also houses the main dental clinic and provides most of the public health dental needs. LBJ dentists do have some portable equipment that they use for public health outreach programs to rural Tutuila and the islands in the Manu'a group.

Health workforce data for 2004 was compiled from Human Resource/Personnel Departments reports

supplemented by information from key informants and PACT Advisory Board members.

Combined public health and hospital staff: 47 physicians, 175 nurses, 0 midwives, 15 dentists, 22 dental assistants, 28 laboratory staff, 12 pharmacists or pharmacy technicians, 13 radiology techs, 30 extenders (health assistants, medex, and community health workers) and 32 other (dietitians, health inspectors, rehab or mental health) healthcare professionals. The nurse category in the survey includes staff licensed as registered nurses (RNs), LPNs or certified nursing assistants (CNAs).

Health Workforce Training

Of the 47 physicians, 5 received their training at allopathic medical schools in the U.S. and are U.S. licensed. Most physicians are graduates of the now defunct Pacific Basin Medical Officer Training Program. Many of these medical officers went on to receive further training at the Fiji School of Medicine or in New Zealand, some with financial assistance from the American Samoa government. The remaining physicians are expatriate physicians from the Philippines, Burma, Egypt and elsewhere.

Many of the RN nursing staff received their education at the University of Guam or at nursing schools in Hawaii or the U.S. mainland; some received scholarships from the American Samoa government. Those who trained in the U.S. tend to maintain their U.S. licenses. Other RNs or LPNs trained at the local nursing program at the American Samoa Community College (ASCC) or at one of the regional nursing programs in Saipan or the Republic of the Marshall Islands (RMI). In American Samoa, RNs have 3 years of training and at least an associate degree. LPNs have 12 months of training. Nursing aides or assistants receive on-the-job training.

The Accrediting Commission of Community and Junior Colleges and the Western Association of Schools and Colleges accredited the ASCC. A Land Grant institution, ASCC offers an associate degree and certificate program in practical nursing and also provides coursework for other allied health fields. ASCC also offers associate degrees in health science, human services, public service and forensic technologies. All of the degrees can serve as a career ladder for Bachelor degree programs outside of American Samoa. Graduates of the nursing program are potential candidates for the National

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Council Licensure Examinations for either practical or RNs. ASCC is exploring the possibility of developing a Bachelor of Science in Nursing Program.

Dentists, dental hygienists and assistants receive their training outside of American Samoa, typically at the Fiji School of Dentistry. Of the 15 dental assistants, 4 are certified and the remainder trained locally.

Certified health assistants receive basic training in health sciences, followed by a six-month intensive training curriculum developed by the University of Michigan.

Few of the radiology technicians are certified. Two have been at LBJ for over 20 years and function at the same level as certified technicians in the U.S. The chief technician was credentialed by the U.S. military and is working to establish credentialing policies, procedures and criteria. Most of the training is on-the-job and it is up to the two senior technicians and the radiologist to supervise the others and determine if the technician can receive a professional license from the Health Regulations Board. The ASCC allied health program provides basic training, but most technicians would need additional training off-island (for example at the UH, Kapiolani Community College program or at other programs in the U.S. mainland) in order to receive U.S. certification. LBJ has 2 certified mammography technicians and has contracted with a radiologist in Nevada to dramatically improve the screening and early detection of breast cancer. For ongoing education, the radiologist pays for his own online continuing medical education (CME) credits through a commercial source (AuntMinnie.com) and then trains the rest of his staff. He has looked into various online CME opportunities, but costs are prohibitive. Continuing education (CE) credits for Aunt Minnie/University of California, San Diego are available for physicians, technologists, ultrasonographers, and nurses.

Laboratory technicians are also trained primarily on-the-job. Six out of 16 are certified. There are no medical technologists. Some of the younger technicians participate in distance education courses on their own. The College of American Pathology Proficiency Testing kit is used for instructional purposes and for evaluation of Clinical Laboratory Improvement Amendments compliance.

Pharmacy technicians are also trained primarily on-the-job. Beginning in Fall 2004, American Samoa and Palau

will participate in a distance education pilot program for pharmacy technicians, administered by the UH in Hilo, in conjunction with the University of Alaska.

Continuing Professional Development Programs Continuing Professional Development as a Health Priority

Most of the healthcare workforce and supervisors are eager for CE opportunities, especially for those trained primarily on-the-job. Because LBJ is moving toward attaining JCAHO certification, the Board of the American Samoa Medical Authority has prioritized CE for all of their health personnel. There are currently no incentives for continuing professional development (CPD), but the Board and Hospital Administration, as well as the head of the Human Resources Department,

would like to develop revised job descriptions and eventually link salaries and promotions to both job performance and participation in CPD activities. Other ideas that have been considered included mandating CPD activities in Medical Staff Bylaws or other rules and regulations. At the time of the site visit, little had been done toward achieving this goal. Ongoing efforts over several years have been directed at urging

legislation to require a certain amount of CPD activities for re-licensure of physicians, nurses, dentists and other allied health providers.

The public health sector physicians are moving toward incentives by linking CME attendance to annual evaluation and pay.

CPD Infrastructure

LBJ supports for the CME program by providing a designated CME coordinator (the current medical staff secretary), space for CME programs, a dedicated weekly time (early Wednesday morning) without clinical duties so that physicians and nurses can attend. The hospital also provides financial support for a visiting team from Hawaii to give annual CME updates and has been promised \$500,000 by the government to sponsor staff for off-island CE programs. The CME program recently obtained provisional Accreditation Council of Continuing Medical Education (ACCME) accreditation through the Hawaii Medical Association Facilities Accreditation Committee. There remain significant administrative and organizational challenges in order to maintain accreditation.

The CME program does not have its own laptop or projector and must borrow these from nursing education

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or other departments in the hospital. A new library, with electronic resources and workstations is under construction. Assistance is being sought to purchase a laptop, projector, two computers for the library and to provide or subsidize online subscriptions for access to full-text journal articles. Despite installation of computer terminals in almost all offices or patient care areas, internet access remains very slow during regular work hours. After working hours, internet and e-mail are quicker, but health staff does not have ready access to computers after this time. The hospital IT department plans to make a 4-computer lab (currently reserved for group training) available for after-hours use by health staff. There are two internet service providers in American Samoa and dial-up rates are reasonable compared to those in the Freely Associated States (Federated States of Micronesia and RMI) but access is limited by modem speed and bandwidth issues. Broadband and wireless networking was introduced in the country in August 2004, but the costs are very high and not affordable for most individuals. The hospital IT department is looking into options to increase bandwidth for internet and email access at LBJ. At the time of the visit, no computer in the network had PowerPoint or similar presentation software. Presentation files needed to be converted to .pps files in order to be viewed on the network.

American Samoa, like all other jurisdictions, received reference books and other materials from the University of Washington, Pacific Island Continuing Clinical Education Program in 2001, based on a priority list made by physicians, nurses and allied health staff at each hospital. The CME chair and other physicians at LBJ are aware of these materials and able to access them; they generally feel that the materials were useful, pertinent and have improved the quality and usefulness of their medical library. Public health staff, on the other hand, were not aware of these text resources.

The CME coordinator posts flyers 1–7 days prior to the CME event and also calls the different clinical departments and supervisors if a special topic or a guest speaker is presenting outside of the usual Wednesday morning conference. Nursing and other hospital staff are sometimes aware of the CME opportunities and a handful attend on a regular basis, but other allied health professionals and public health staff would benefit from improved communication. At present, public health staff are not routinely notified of hospital CME opportunities, although the public health physicians do occasionally attend. The public health physicians have started their

own CME activities, where the 4 physicians rotate providing presentations for the group. Topics generally focus on non-communicable/chronic diseases because of their high prevalence.

No formal nursing CE activities are provided for the hospital nurses. Once a month, the nurses meet to receive updates from supervisors or staff who have traveled off-island for training. VTC opportunities are available for both nurses and physicians with VTC units at LBJ, Public Health, ASCC, and some of the outlying public schools; however these are rarely used. In the public health department, there are no computers for the health providers to access online resources or view slideshow presentations. Most of the computers are used for administration purposes and the internet is functional 60–90% of the time. There are a few conference rooms where public health staff conduct training, but there are no computers, internet access or projectors available for CE purposes. There is one main training coordinator for the public health nurses and the different program managers are also expected to provide continuing training for their staff.

There are no existing CPD opportunities for dental health professionals, radiology staff, laboratory or pharmacy staff, rehabilitation services staff, social work or mental health professionals.

Current Continuing Professional Development Program

The weekly Wednesday CME programs are well attended by between 25–35 physicians and a small number of hospital nurses. Some of the public health physicians do attend the CME programs if they are not scheduled to work in the outlying or Manu'a clinics. As mentioned previously, this is the only structured CE program for the territory. Hospital nurses meet monthly for update sessions and public health nurses conduct their own separate in-service sessions approximately once per month with occasional special sessions. Only recently has cross-communication of CPD activities happened between LBJ and Public Health. CPD courses are not targeted toward allied health. On occasion there will be an oral health-related topic.

The hospital CME committee, led by an enthusiastic chair, meets regularly. Most of the presenters are local physicians; about 4 programs per year are conducted by visiting physicians. Audio-teleconference programs occur approximately 6 times per year; previously emailed

The CME chair acknowledges that the quality of the local CME presentations should be improved and more evidence-based

slideshow presentations are sometimes discussed via phone with the presenter. LBJ has a direct, consistent link with the PEACESAT system and is able to participate in VTC in Hawaii with some regularity (approximately once per month). Since the time difference is only one hour behind Hawaii there is the potential to access CME conferences from some Hawaii hospitals and residency programs. Visiting clinical (e.g., Benevolent Mission Program ophthalmologists) or public health specialists provide additional opportunities for CE of staff. Many of these visits are not coordinated and do not necessarily coincide with the regularly scheduled Wednesday CME conference. Although the CME coordinator and the Public Health in-service coordinator attempt to notify relevant personnel about additional presentations, clinical staff are often not able to attend activities outside of the Wednesday morning sessions due to their workload.

The CME chair acknowledges that the quality of the local CME presentations should be improved and more evidence-based. The CME committee conducts an annual survey of physicians regarding desired topics and the evaluation form asks for suggested topics. There are plans to establish a CME schedule with topics and objectives for each month. All speakers are required to submit learning objectives and five questions that are used for a post-test. Participants must score at least 60% to receive credit for the CME session. Results are recorded by the CME coordinator.

The American Samoa Government has promised \$500,000 to support off-island CE opportunities for health staff of LBJ, but the money is forthcoming. Some physicians and nurses are not aware of the process of applying for this support. The dental staff says that approximately 90% of their requests get funded, whereas radiology and laboratory requests are hardly funded. Some physicians desire actual training and certification (e.g., U.S. residency training programs) and are not sure how to go about applying for such programs or governmental subsidy. Personnel who attend off-island training are expected to give a presentation to their colleagues upon their return.

Barriers to Accessing Currently Available Continuing Professional Development Opportunities

Several barriers were identified. The promotion and pay structures do not include incentives for CPD activities. Staff felt that insufficient notice is given when visiting

specialists give presentations. They feel that health workers are not familiar with and have limited access to online CPD resources. Internet speed and access are limited. In general, available CE content was felt to be relevant, but often the method of presentation was not effective for learning or not culturally appropriate. Distance to off-island CPD opportunities was felt to be prohibitive. It was felt that too little CE resources were available for nurses and other allied health professionals. Public health staff believe there is no central coordination and that their providers are not aware of online CPD resources.

Priority Continuing Professional Development Needs

Key informant and medical records data suggest that non-communicable diseases especially diabetes and associated conditions such as: coronary artery disease, heart failure, hypertension, chronic renal failure and obesity, are the most common disease conditions in American Samoa. In 2001, heart disease was the leading cause of death, followed by cancer, diabetes, stroke and accidents. Almost 80% of the hospital budget is spent on these chronic illnesses and both LBJ and Public Health feel strongly that education for healthcare providers and the public must be directed toward primary and secondary prevention of these "lifestyle" diseases. Rheumatic fever and childhood caries were also noted to be highly prevalent. Based on December 2003 requests, physicians also requested training on: basic pharmacology of anesthesia (especially regarding intubation and sedation), otitis media, appropriate antibiotic usage, seizure treatment, diabetes topics, including management of diabetic ketoacidosis and hyperosmolar state, pulmonary embolism, basic radiology and computed tomography training.

Nursing at LBJ, Public Health and the ASCC also identified a large need for preparatory materials so that more of their nurses can pass the national licensing exams. This includes materials for board preparation, access to computers, updated CD-ROMs as well as protected and mentored time to take practice exams. They also identified a large need for managerial and supervisory skills for all of the nurse supervisors and program managers.

Public health also identified a strong need for CE for their health educators. Currently, their health educators are

In general, there is a large CPD and basic training need for the technicians in laboratory, pharmacy and radiology. As mentioned earlier, many of the technicians are trained on-the-job with little previous formal training

not necessarily nurses and may have only an interest in the field without any formal training. Training is needed to update knowledge and skills in health education. The health educators not only educate the public, but are also looked upon as resource staff by other health professionals in the Department of Public Health. Public health would also like examples of "Best Practices" so that they might adapt some specifically for the needs of American Samoa.

In general, there is a large CPD and basic training need for the technicians in laboratory, pharmacy and radiology. As mentioned earlier, many of the technicians are trained on-the-job with little previous formal training. The hospital administration is very excited to have the opportunity to pilot the distance education program for their pharmacy technicians. Laboratory has an acute need for training in general microbiology and parasitology due to upcoming staff retirement. Radiology department priorities include: formal CE training (especially for computed tomography), access to online resources or funding for off-island conferences, developing a credentialing process for the technicians and ultrasonographers, and instituting quality assurance assessments. The ability to participate in CE is limited by the staffing shortage.

For dental providers (dentists, hygienists and technicians), there is a need for standardized policies and procedures, and to establish standards of care. They also would like the physicians and nurses in the pediatrics clinic and the emergency department to receive training in applying fluoride varnishes to the children. Because dental caries, gum disease and nutrition-related diseases are so common, nutrition and dental health education is also a high priority area for all who perform direct patient care.

Potential Collaboration

ASCC is willing to discuss with LBJ and Public Health arranging a special course for existing health providers on basic computer skills (word processing, presentation software, spreadsheet software, and internet use), since they already offer such courses. Similarly, ASCC provides training in human resources, management and administration, which were identified as high priority areas for Public Health and for some departments at LBJ. The main operations of the VTC equipment connecting eight rural schools (including in the Manu'a group) are located on the main ASCC campus. ASCC has just become part of an important collaborative project regarding cancer control and is willing to assist

health providers in CE activities. Conceivably, a well-coordinated VTC session broadcast from LBJ, Hawaii or elsewhere, could be simultaneously broadcast to: the main Public Health conference room, ASCC main campus and the 8 outlying schools (to which the health providers in the rural areas could easily drive or walk).

Because there are VTC systems in both public health and LBJ, it would appear possible for nursing to do joint training (public health and LBJ) for topics that are relevant to all nurses. Additionally, the main public health clinic is directly across the street from LBJ, so many of the nurses could attend in person.

Distance Education Technologies

Existing Technology

American Samoa has one of the most complete and modern telecommunication systems in the U.S. Affiliated Pacific Islands (USAPI) jurisdictions. All inhabited islands have telephone connectivity. High quality voice and data service Integrated Services Digital Networking (ISDN, T1) is available as well as telex, telegraph and facsimile services. The use of PEACESAT for VTC was discussed above. The launch of a commercial satellite-based communications system in 2001 has resulted in increased telemedicine and VTC capabilities being available to the hospital, the Department of Education and other agencies. The territory received GSM-1900 mobile service in July 1999.

Despite the recent implementation of an electronic health record (EHR) system (an open source version of the U.S. Veterans Affairs VistA program) at the LBJ Tropical Medical Center with the potential for internet access on each networked workstation and the installation of a 4-computer lab, barriers still exist in making these resources more available to hospital and public health staff. The Management Information Systems (MIS) department at the hospital is faced with the priority of training all hospital staff to use the EHR system correctly. Currently, the MIS personnel are available for individual training on basic medical informatics and web-based searches, but they report only a handful of physicians asking for such individual training. Once the hospital staff is online and trained with the EHR system, then the MIS department hopes to open up the computer lab for access during working hours and potentially during non-working hours. Internet security issues and limited bandwidth remain challenges. There are plans to hold regular classes to train health providers to use

The Management Information Systems (MIS) department at the hospital is faced with the priority of training all hospital staff to use the EHR system correctly

web-based resources. In general, staff have expressed strong interest in medical informatics.

In May 2004, several CME sessions (attended by 10-15 providers, mostly physicians) provided hands-on training on accessing online medical information resources. In August 2004, several live CME presentations were provided and a CD-ROM of the presentations was given to the MIS Department to install on the local network. A new hospital library is being built and funds are being sought for 2 desktop computers. The intent is for the library resources, including a variety of electronic resources and a total of 3-4 workstations, to be accessible 24 hours per day to health providers. It is not clear if public health staff will also be able to utilize the resources at LBJ when the library is fully operational.

For the public health staff, basic telecommunications (phone, long-distance and fax) are usually reliable, but computer, email and internet are accessible to administration only. The outlying clinics are even more resource-limited and are afflicted by occasional power outages.

Nursing access to the internet is limited. According to the nurse trainers and supervisors, there currently is little opportunity or incentive for nursing CE and hence many of the nursing workforce do not appear to be pursuing distance education opportunities for CE credit.

Distance Education Resources Currently In Use

Some physicians, nurses, dentists and dental assistants use their own computers to access online CME or web-based literature searches. At the time of the needs assessment, there was no formal/group access to online full-text databases. Audio-teleconferences, either with or without accompanying PowerPoint presentations are used approximately 6 times per year. VTC opportunities are more numerous, but attendance is variable if the conferences are anytime but the standing Wednesday morning CME conference. Tripler Army Medical Center's store-and-forward program is no longer being utilized (for consultation regarding potential off-island referrals to Tripler), in part because of decreased capacity to accept referrals from the USAPI (due to deployment of many of the staff).

Barriers to Accessing Available Technologies

LBJ has great potential for overcoming most of their barriers (internet speed), as most of them are

administrative issues (policies, more security and training). Public health does have at least one computer in each clinic, but they are not networked, nor do they have internet access. VTC is widely available, including in the rural areas (through the Department of Education network), but under-utilized. In general, all health providers require more training using distance education modalities. Importantly, there needs to be incentive for healthcare providers to utilize the many resources available to them.

Summary

There are no incentives for CPD for any health personnel, but efforts are being made to push legislation, as well as to change job descriptions and other Human Resource issues at the hospital and for the public health physicians. The current CME program at LBJ hospital is U.S. accredited but still faces significant administrative challenges to maintain full accreditation. The current program does not target allied health, nursing or dental personnel, but some nurses and dentists do attend relevant sessions. CE programs for LBJ and public health nursing are currently completely separate, although fledgling efforts are being made to communicate better between the two entities for all training activities.

American Samoa is fortunate to have an integrated EHR system in the hospital and reliable video-teleconferencing capabilities for the hospital, public health and department of education (including rural schools). The computer supply at LBJ is adequate although there are still issues with accessibility and training. Internet access is still slow at the hospital and throughout the country. Public health is challenged with little or no computers for training, no internet access and no formal program. The CME committee at the hospital and all key informants who participated in the assessment are enthusiastic and hopeful that PACT will be able to meet some of their needs for CPD.

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