
How Hawaii/Pacific Basin Area Health Education Center (AHEC) is Using Technology to Make the Pacific Smaller

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Abstract

Introduction: In order to improve health literacy in rural areas, the Hawaii/Pacific Basin AHEC and Ke 'Anuenue AHEC are working to connect rural communities via video teleconferencing. Methods: Video teleconferencing connectivity has been established to 15 rural and underserved locations across Hawaii and to the Republic of the Marshall Islands. Results: An average of 15 individuals participate in weekly facilitated health education sessions. Discussion: Participants have reported lifestyle change as a result of sessions and attendance is significantly increasing. In some areas, mid level health care professionals attend in order to obtain information for their patients.

Introduction

Rural areas of the US have increased infant mortality rates, decreased life expectancy, and increased mortality from chronic disease¹. Part of the cause for this is lack of adequate healthcare resources, such as hospitals, physicians and specialists. A secondary cause, however, may be lack of access to health information and educational resources. The Institute of Medicine recently studied health literacy in the US and found that half of all Americans had sub-optimal health literacy.² Therefore, the Hawaii/Pacific Basin Area Health Education Center (AHEC) and Ke 'Anuenue Area Health Education Center (AHEC), Inc. have established a regular health education seminar series for rural community members to provide information requested by the participants in a real-time discussion group format using video teleconferencing.

The Hawaii/Pacific Basin Area Health Education Center is a federally funded program within the UH John A. Burns School of Medicine with the goal of "improving health for the underserved through education". Ke 'Anuenue AHEC, Inc. was created in 1995 to help meet the health education and health professions training needs of Hawaii and Maui Counties. Activities conducted by both offices include recruitment to health careers for students of all ages, training of health professional students in rural areas and interdisciplinary teams, health workforce assessment and recruitment, continuing education and community health education. Because of the nature of the

educational activities, distance learning capabilities have long been an interest of both AHECs.

Prior to 2000, there were few functioning VTC units in rural areas available for public use, and many of the VTC units provided to rural clinics and hospitals were left unutilized due to lack of training and discomfort with the technology. Additionally, the digital networks that provide connectivity to rural areas utilize different VTC protocols making connectivity between units impossible. Three years ago, the Hawaii/Pacific Basin Area Health Education Center (AHEC) was awarded a grant by the U.S. Department of Commerce's National Telecommunications and Information Administration's Technology Opportunities Program to establish video teleconferencing for health information acquisition in rural areas. Funding was received for the AHEC Hawaii Unified Telehealth (HUT) project that aims to improve the health of underserved populations in Hawaii by facilitating health education through distance learning and intergenerational peer education. With distance learning technologies and rural/minority health disparities being foci of the Hawaii/Pacific Basin AHEC mission, the AHEC HUT project is a perfect fit to attempt to bridge the wide channels, which can limit the exchange of ideas and information across the Hawaiian Islands and the Pacific Rim to expand health literacy and knowledge in some of the most remote areas of the world.

Methods

The AHEC HUT project is different from many more traditional uses of video teleconferencing (VTC) within health care. While AHEC supports remote consultation, and store and forward technology, the AHEC HUT project is designed to provide peer health education in a community based location, often not associated with a healthcare facility. This is to provide easy access, and not risk any potential reluctance to participate on the part of community members.

In order to develop community based sites, partnerships were formed with various community organizations that have established local community run meeting facilities and with community health centers,

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education centers and Native Hawaiian Health System sites where access to public for VTC connectivity was available. Interested communities identified where they would like units placed, and in some cases, in partnership with Ke 'Anuenue AHEC, even developed learning centers to allow for public access. Each of the 15 partner locations received installation of a Polycom video conferencing machine and connectivity as needed. AHEC personnel worked closely with the communities to train at least two individuals at each site to facilitate the sessions, and provided telephone or in-person technical support when necessary. Different methods of connectivity had to be utilized to connect the different centers, principally ISDN in rural areas and T1 in areas where University of Hawaii Information Technology System provided connectivity. In order to connect the different locations, the State of Hawaii Telehealth Access Network was contracted to bridge the different digital networks.

After the VTC system was established, it was anticipated that community members would request topics that would then drive the schedule of sessions. However, initially there seemed to be a lack of interest in utilizing the equipment and little to no requests for talks from communities. Ke 'Anuenue Area Health Education Center conducted an informal survey to determine the cause of this reluctance. Quite simply, community members had no clear idea of how the technology could be used to their benefit. An initial plan to hold one session per month on chronic disease management (diabetes, heart disease, etc.) starting in October 2003 changed to twice monthly sessions by January 2004. By April 2004, with additional funding obtained by Ke 'Anuenue from Young Brother's Tug and Barge, Aloha Care, HMSA, and The Ouida and Doc Hill Foundations the series became a weekly program. Topics that originally were developed based on the CDC list of health topics are now community driven. Participants attending sessions were asked to request topics for future sessions keeping in mind that two sessions per month would focus on Diabetes. Speakers are recruited from health care professionals in the communities served, or at the academic institutions in Hawaii and include specialists such as pharmacists and nutritionists, as well as physicians and nurse practitioners.

The weekly real-time series of health education sessions were initially called "Ask-A-Doc", but has been renamed by the participants to a more culturally sensitive name: the E Ninau Aku I Ke Kauka (Ask-A-Healer) series. Speakers and participants attend from any site with VTC accessibility and up to 10 sites can participate at once due to the contracted use of the State of Hawaii Telehealth Access Network (STAN) bridge. Health topics covered have included: teen pregnancy; cervical cancer; diabetic foot care; nutrition – how to read and understand food labels, food demos of healthy meals for people on the go; organ donation; injury prevention – drinking and driving under the influence; the "Social Host Liability Law – Underage Drinking"; and, the Modernization of the Medicare Drug Bill.

Human subjects exemption was received from the University of Hawaii Committee on Human Subjects to collect feedback information from participants. The format included feedback of the sessions and a request for additional topics. However, only 1 of the 15 sites regularly submits the feedback forms, therefore, at the end of each session questions are asked verbally evaluating the quality of the connection, the benefit of the program to health, if the participants would use the information at work or at home, if they would be back the next week, and what other topics should be covered.

Results

Since April 2004, when the E Ninau Aku I Ke Kauka program was fully established, there has been increasing participation. Although completion of the evaluation forms has been spotty, one site has submitted their evaluations consistently. At this site, all 8 regular participants reported taking home valuable information and 5 of the 8 reported making lifestyle changes as a result of the sessions. At a separate site, 3 of the 11 participants committed to make lifestyle changes after the topic of renal failure was covered.

Verbal feedback from participants indicates that they find this method of information delivery to be safe, non-threatening, and unique--reasons they have been so active in this program. A majority of participants report utilizing the information at home, but note that family members are not as likely to be interested in the information when they tell them about it. A high percentage of the participants are repeat participants. Diabetes education has been the number one requested subject, however in recent months the focus has begun to shift to prevention (better nutrition, adoption of a regular exercise program). Topics such as vitamin therapy, food exchange, how native foods fit into the food pyramid, native healing methods, drug prevention (specifically ice/crystal methamphetamine) and medication interactions have been requested. Interestingly, in the Republic of the Marshall Islands, the most committed participants are the nursing staff of Majuro Hospital, who are seeking to learn from other rural island communities how to improve the health of the native population who sometimes are reluctant to seek professional help, but might be open to an informal educational activity.

Discussion

While not the traditional version of telemedicine, the AHEC HUT project is working to increase health literacy and health education in the rural areas of the Pacific. The direct beneficiaries of this program are the rural community members who obtain current health information from health care professionals not normally accessible to them. Initially, interest was limited in utilizing the technology offered. However, the technology is now a reason that some of the participants enjoy taking part in the sessions. The key to this program is the willingness of rural communities to learn and utilize the new technology and the successful collaborations and partnerships including community, academic, nonprofit and healthcare organizations. An unanticipated but welcome outcome of the project is that public service agencies such as the Alzheimer's Association and the Hawaii Department of Health have learned of the ongoing program and have offered speakers and additional needs assessment information regarding health education requests by communities.

Future directions for the program include expanding farther into the Pacific, working with other agencies to provide training for Community Health Workers to obtain their certification, and also to develop a cross-cultural health education program that will focus on native healing practices. In the near future, incentives, such as t-shirts, will be offered for completing and submitting the evaluation forms. The authors hope that the video conferencing medium for health information exchange will facilitate improved health literacy across the Pacific.

References

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