WCCHC

Evaluation of Culturally Proficient Community Health Education on Diabetes Outcomes

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AAPCHO

PROJECT GOAL

Examine the impact of culturally proficient health education utilization on HbA1c outcomes of underserved diabetes patients at one community health center located in Hawaii.

BACKGROUND

Preliminary evidence based on provider experiences at a number of health centers suggest that health education plays critical roles in improving health access and outcomes for underserved populations. However, there have been no definitive studies to support this claim due in part to the current lack of health education data collection and evaluation to demonstrate its broad health center impact on quality improvement. Without sufficient understanding of their impacts, health education will continue to be inadequately financed, if at all. In fact, the lack of definitive data about health education has been a crucial barrier to demonstrating its value and securing financial support for these essential services at community health centers. This study seeks to fill this information gap through an examination of the impact of health education enabling services utilization on improving HbA1c outcomes of health center patients.

As part of the Enabling Services Accountability Project, the Association of Asian Pacific Community Health Organizations (AAPCHO), in collaboration with Waianae Coast Comprehensive Health Center (WCCHC), examined the impact of health education utilization on underserved diabetes patients at WCCHC, a federally qualified health center serving predominantly Native Hawaiian patients. The study compared active and non-active health education users on diabetes HbA1c levels. It was predicted that health education enabling services are associated with improved HbA1c levels, and thus are essential to patient health care. Through this project, we seek to demonstrate the vital role of health center educational services in reducing diabetes health disparities, and the critical imperative to develop long-term federal and state initiatives and budgetary mechanisms to fully support these essential and currently poorly-reimbursed services at community health centers across our nation.

Setting:

Waianae Coast Comprehensive Health Center (WCCHC), a federally qualified health center located in Waianae, Oahu, Hawaii.

Source: BPHC, UDS 2005

# of Users	% Native Hawaiian, Other Pacific Islander, or Asian American	% at or below 100% Poverty
25,263	77%	67%

Health Education:

Diabetes health education at WCCHC is unique as it is based upon the Chronic Care Model and adopts a multidisciplinary approach that includes disease management, medication management, insulin administration & apparatus management (self-monitoring blood glucose for Diabetes Mellitus). Furthermore, WCCHC services are culturally proficient and tailored to the underserved populations it serves. For example, the health education staff are from the community and use the "talk story" approach in which they develop rapport by connecting, either by family (e.g., "who's your auntie?") or other common ground (i.e. "where did you go to high school?").

Since 2000, there has been a decreasing number of diabetes health educators at WCCHC as funding to cover the services has declined due to budget cuts and reallocations and been inadequate to serve the growing numbers of diabetes patients. This supports the need to demonstrate the vital role of health center educational services in improving diabetes and other health outcomes to adequately support these essential and currently non-reimbursed services at community health centers and to reduce health disparities across our nation.

The majority of the health education services included in this study were related to diabetes, although diabetes patients may have received them for other conditions. They were defined as: (1) Health education or provision of materials to an individual or family on disease management or (2) Education and monitoring of chronic disease through self-management plan.

METHOD

Sample:

The sampling frame included adult diabetes patients (>18 years old) at Waianae Coast Comprehensive Health Center (WCCHC) with three or more primary care visits annually between 1/1/02-12/31/05.

Groups:

1. The **Active Group** consists of diabetes patients with 2 or more health education visits annually between 2002-2005.
   195 patients: 46% Male, 54% Female
   Mean Age = 47.9 years

2. The **NonActive Comparison Group** consists of patients with less than 2 health education visits annually between 2002-2005.
   73 patients: 53% Male, 47% Female
   Mean Age = 51.9 years

Data Collection:

- Archival electronic patient records were used for analysis.
- Patients were randomly drawn from the eligible patient population into the two groups based on administrative and clinical data.

Analysis:

Analysis of Covariance

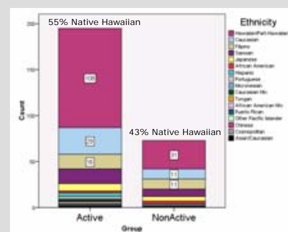
Independent Variables
- -Group: Active, NonActive
- -Gender: Male, Female

Covariates:
- -Age
- -1st HbA1c value (baseline)

Dependent Variable
- -2nd HbA1c value (average: 12 months later)

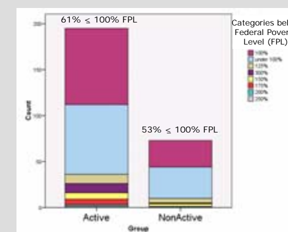
Patient Demographics

Race/Ethnicity



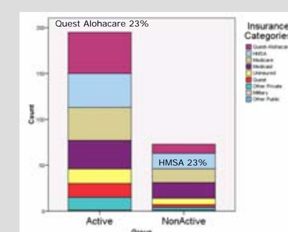
Native Hawaiian was most common ethnicity.

Poverty Level



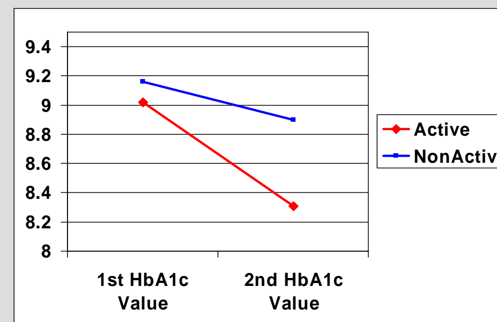
Active patients were slightly poorer than NonActive patients.

Insurance Status



Quest-Alohacare & HMSA were most common

HbA1c Value by Group



RESULTS

Results indicate that a significant difference existed between diabetes health education Active and NonActive users 12-months after baseline HbA1c value ($F=5.6$, $p< .02$). There was a main effect of HbA1c values indicating that HbA1c values improved for both groups ($F=133.5$, $p<.00$). There were no significant demographic differences between groups. These results suggest that health education improved diabetes outcomes for Native Hawaiian, Other Pacific Islander, and Asian American patients, and thus are essential to reducing diabetes health disparities in these populations.

IMPLICATIONS

- The study demonstrates the critical impact of health education on patient health and the importance of sustaining funding for critical health education services at community health centers.
- Culturally & linguistically appropriate health education services are integral components of health center care for underserved populations and reduce barriers to care and health disparities.
- More research is necessary to determine whether other related factors impact diabetes health outcomes, such as presence or attention of providers, number of providers available, and timing of health education service.