

**“This program is the best thing that has happened to me in the last year. In the year of 2005, I was in the hospital every month and twice each for two months; that’s a total of 14 times. Being able to check my pulse ox at any time has saved me from many hospital trips. I thank God every day for it [the health box].”**

**-Community resident and Project C.A.R.E. participant, 2006**

## **Project Summary:**

Project C.A.R.E. (Community Access to Riverhead E-Health) set out to determine the impact on health care access and outcomes of “telehealth” medical technology in an underserved community. The project targeted disadvantaged minorities, working poor and fragile seniors in the Riverhead, New York community. In Riverhead there are known disparities in both access to health care and health care outcomes. The devices used in the project accurately recorded vital sign information such as blood pressure, blood glucose, blood oxygen, pulse and weight. The recorded data were then transmitted via a regular telephone line to a secure and HIPPA compliant web site. A health care clinician could then access, analyze and respond to the test results in real time using a computer from a remote location.

As stated in the original proposal, the goals of the project were as follows:

- Alleviate socioeconomic, cultural and linguistic barriers to medical care
- Increase the number and improve the quality of interactions with primary care providers
- Improve opportunities for early detection of disease and improve patient quality of life
- Empower the community by providing health data to community members
- Link existing resources of community partners that are fragmented and underutilized
- Plan for project evaluation and sustainability

In order to achieve the goals stated above, the Project Care team was organized as a collaborative effort among the following groups:

- Community - The First Baptist Church of Riverhead
- Academic - Stony Brook University’s Health Sciences Center’s School of Health Technology and Management and the School of Social Welfare
- Social service - the church’s soup kitchen and food pantry as well as the Senior Companion program of the Federation of Organizations
- Clinical organizations - United Comprehensive Care clinic and the Peconic Bay Medical Center (formerly Central Suffolk Hospital).

Early in the project, a Community Advisory Board was formed which included persons from each of the participating organizations as well as other community, business and civic leaders, representation from the County Health Department and our technology partner, Viterion TeleHealthcare. Over a period of approximately four months, advisory board members met to plan the introduction of the telemedicine technology into the Riverhead community. The group decided to focus on detection and monitoring of diabetes, hypertension and problems affecting breathing such as congestive heart failure, chronic obstructive pulmonary disease [COPD], and asthma. It was also determined that our project would screen and monitor only Riverhead area residents who were at least 21 years of age. Materials and procedures for deploying the equipment and evaluating

its impact on residents' healthcare were developed. A corps of senior volunteers was recruited and trained as Senior Companions/Community Health Workers to reach community residents with any of the health problems mentioned above. A "Know your Numbers" educational handout was developed to enable participants to compare their own test results with normal test ranges and thereby understand the significance of their particular screening data. A health fair was planned as a vehicle for identifying community residents suffering from the chronic diseases of interest. It was determined during these meetings that we would place ten single user units into people's homes as well as have a group of ten persons who did not have the equipment. We planned that both groups would be assigned a Senior Companion/Community Health Worker who would make regular friendly visits to each assignee. During months 3 through 5 several key materials were developed including: an informational brochure, flyers to inform the community about the free health screenings, a questionnaire for gathering information about participants and their attitudes about using the equipment, and forms that participants would sign to indicate their authorization to have their information included in the final report and released to medical providers involved with the project. During this time, the lead partners hired a Project Director to govern the project's day to day operation. One partner, United Comprehensive Care was contracted to provide a nurse practitioner to review screening results and provide treatment as necessary to uninsured participants. Team members designed letterhead for the project and decided to call the equipment "The Health Box" so the community would not be intimidated by technical terminology (Viterion 500 kiosk or Viterion 100 telehealth monitor). The team decided to aim for screening 200 community residents and to monitor at least 50 on an ongoing basis. To increase the community's awareness of Project CARE and the free health screenings that would be offered, the advisory board distributed flyers in church bulletins, program journals and to community residents in several senior citizen complexes and trailer parks throughout Riverhead.

Actual monitoring of community participants began on January 30, 2006. Two multi user "health boxes" were set up at the church for free health screenings on three weekdays during the food pantry hours and an additional day on Sundays following church services. A health fair held in February at a local senior citizen housing development helped to identify the twenty community residents, each of whom would be assigned to a Senior Companion/Community Health Worker. Ten of those residents were provided with a single user "health box". Over the next several months, the soup kitchen was added to the free health screening schedule, a major health fair was conducted at the church in May and the Town's senior nutrition site was added to the regular free health screening schedule.

Each individual who participated in a free health screening was assigned a unique three digit "ID", asked to sign an authorization form and fill out a questionnaire about his/her health concerns. After the health screening was completed, each participant was asked to complete a short survey to determine his/her reaction to using the equipment. From this initial data collection, a file was established for each project participant and stored securely at the church. For each homebound user of the "health box" an initial interview was conducted. All of the completed questionnaires and usage surveys were de-identified and given to Stony Brook University for data entry, analysis, and final report preparation. The Stony Brook University team presented a preliminary report of the survey data to the Community Advisory Board and integrated feedback into the final report (provided in the attached evaluation report). The Senior Companions/Community Health Workers were provided with questions created by the Director and reviewed by the Community Advisory Board with which to conduct exit interviews among project participants.

A total of 178 project participants or 81.3% filled out the surveys. The majority of insured survey respondents (73.4%) had Medicare, Medicaid or some combination of Medicare and Medicaid with private insurance. Only 26.6 % of respondents had private insurance alone. Despite the fact that most of this population had insurance, 20% stated that they used the emergency room for their health care. Most (72%) of the respondents reported having visited their doctor 3 or more times in 2005 and approximately 64% indicated that their doctor was helping them manage high blood pressure alone or in combination with other conditions, including high blood sugar. Approximately 57% of respondents indicated a personal history of high blood pressure or hypertension. The health box results supported their reported history. On the other hand, while only 24% of the respondents indicated a personal history of diabetes, the monitoring data indicated 42% of them actually had high levels of blood sugar meeting the definition of “diabetic, pre-diabetic, or borderline diabetic” using the “health box” screening results compared to their self-reported personal history of diabetes. An impressive 99.3% of respondents reported that the health box was easy to use, and nearly half of them continued to use the health box after their initial screening. One individual indicated that she had been hospitalized 14 times for COPD in 2005. Since having the health box in her home, she has had no hospitalizations for COPD. In fact, the data gathered by Peconic Bay Medical Center indicates that E.R. visits and related hospital admissions were 4 this year rather than 14 in 2005 for the individuals that had the health box at home [see attachment 2].

### **Progress Toward Goals:**

#### **1. What changes occurred in connecting the underserved to a primary health care system?**

The project contracted United Comprehensive Care clinic to provide for the services of a part-time nurse practitioner who would see uninsured participants who needed medical follow-up and who could monitor screening results on a regular basis. Dr. Augustus Mantia provided basic training to the Senior Companions and other project personnel so that they could interface effectively with participants and the medical community. Dr. Augustus Mantia monitored screening results regularly as they were accessible to him via a secure computer website. He routinely sent advice messages to people whose screening results were out of normal range. In extreme cases, he followed up by telephone either with project staff or directly with the individual. All of the Senior Companions/Community Health Workers were given Dr. Mantia’s direct contact numbers in case of an emergency.

Project participants whose screening results were outside of acceptable limits established by United Comprehensive Care’s medical staff were encouraged to seek medical attention. Whenever screening results showed moderate or high risk and a participant indicated that he/she either had no primary care physician and/or no insurance, the Senior Companions/Community Health Workers referred the individual to United Comprehensive Care. Since most participants had some form of insurance, they were encouraged to follow up with their regular physicians. In the few instances where the screening results were at an extreme high risk level, the participants were referred to Peconic Bay Medical Center’s emergency department. In many instances, even among the project staff, primary physicians were provided with print-outs of screening results. Several individuals’ doctors who were given print-outs followed up in their offices and consequently made changes to participants’ prescription regimens.

## **2. Improvements in compliance with health protocols**

Many of the people who participated in the project complained that they had difficulty in paying for prescriptions and/or visits to the doctor's office. One individual who came to the church weekly for screening and who had serious problems with diabetes, hypertension and weight management, indicated that she was afraid of losing her home and therefore would not apply for Medicaid assistance, despite the fact that she had no doctor and no insurance. Recently, however, she indicated that she has made an appointment with a doctor to help her manage her health issues.

For most participants the "Know Your Numbers" campaign was a catalyst for compliance. The simple handout empowered both participants and volunteers. The printed information showed normal, borderline, and high ranges for blood glucose, blood pressure and Body Mass Index. Consequently, the Senior Companions/Community Health Workers were able to better understand individual screening results [see attachment 3]. Similarly, participants were able to know what the test results meant to their health and whether they needed to make lifestyle changes. Most people who came routinely to monitor themselves carried the handout with them and looked forward to seeing whether their numbers had improved since the last screening. Typical comments follow:

"I appreciate all the help. It keeps me on my toes...."

"...it's good for me knowing what the blood pressure, if it's normal- if not it's for me to be careful."

"I...feel that the services that Project CARE provides to the community is invaluable. Since I enrolled I have become much more aware of my health regimen. It would be an invaluable service lost if this service was discontinued."

## **3. How was access to care changed? What impact was seen in emergency room visits?**

The project team member for Peconic Bay Medical Center's Emergency Department was given the software so she could access the data. The emergency department's nurses were instructed to contact her if a patient identified themselves as a Project Care participant. There were few emergency department visits, and/or the participants did not identify themselves at the time of visit. For this reason access to data while the person was in the emergency department did not occur frequently.

The data collection dates were from 3/1/06 to 9/30/06. At the end of the data collection date the project team member with the Project Director chose 10 participants who used the health box at the church, the soup kitchen or the senior center.

These individuals:

1. Used the health box at least 5 times
2. Had a history of high blood pressure, obesity, diabetes, heart or pulmonary disease or their "numbers" were not within normal range.

The number of related hospital visits was collected. Related hospital visits meant the emergency department visit or hospital admission was related to the health box monitored numbers either, blood pressure, and blood sugar or blood oxygen.

There were no hospital related visits for this group of participants (See Attachment 1).

The second group included the 10 participants with the health box in their home. These participants had a history of high blood pressure, diabetes, obesity, heart or pulmonary disease or their “numbers” were not within normal range. These participants also expressed a desire to have the technology in their home, and had senior companion visits. Related hospital visits were collected for the data collection period 3/1/06 through 9/30/06 (the period with the health box) and for the year prior (3/1/05 through 3/1/06). The number of hospital related visits for this group decreased (See attachment 2).

**Note:** Hospital data collection was obtained from Peconic Bay Medical Center only.

The testimony of one homebound individual with COPD is included below:

“This program is the best thing that has happened to me in the last year. In the year of 2005, I was in the hospital every month and twice each for two months; that’s a total of 14 times. Being able to check my pulse ox at any time has saved me from many hospital trips. I thank God every day for it [the health box].”

#### **4. How was feedback from advisory committee and participants used?**

During the course of the project, there were numerous opportunities for the community advisory board members to make adjustments based on community feedback. For example, in the early weeks of the health screenings, the community advisory board members learned that there was some skepticism in the community regarding equipment accuracy and the capabilities of the Senior Companions. The community advisory board members’ frank discussion about the cultural roots for such skepticism allowed for the implementation of several suggestions which appeared to ameliorate the problem:

- Volunteers purchased lab coats and wore badges to increase their credibility with community participants.
- Reverend Coverdale spoke during Sunday services about using the health box himself.
- A health fair was scheduled which included presentations by medical professionals, academicians and officials from the county health department.
- A professional brochure was developed for the project.

When the Senior Companions/Community Health Workers started providing health screenings at the church’s soup kitchen in downtown Riverhead, it became apparent that our ability to reach the large Hispanic population frequenting the soup kitchen was very limited. This problem was also placed on the agenda of a community advisory board meeting. As a result the following steps were undertaken:

- The authorization form and surveys were translated into Spanish by personnel at Stony Brook University.

- When a Spanish speaking community member pointed out that the Hispanic community members spoke more idiomatically than academically, our volunteers identified and recruited a Hispanic community resident to assist in interfacing with Hispanic community members. The individual proved to be a very valuable addition to the volunteer corps as his presence greatly increased trust for the project among the Spanish speaking participants. Unfortunately, he passed away suddenly very recently.

### **5. What lessons were learned – how would the program change in the future?**

Within the first three months after having received a grant commitment from the W.K. Kellogg Foundation, the project participants realized that we had underestimated the time needed to organize ourselves as an effective group. Successful collaborative efforts take time. Partners must allow for the establishment of trust among themselves. The role of our facilitator was essential in helping us agree on ground rules for working together and in keeping our meetings on point. In our case, time was also needed to make room in the church for the set up and installation of equipment. A room was actually divided to make a dedicated and secure environment for health screenings. Time was required to train staff and volunteers on the proper installation and operation of the equipment.

We also learned early on that to insure adequate support for those operating day to day in the community and to assure for cohesive effort between the cooperating agencies, a Project Director was essential.

During the course of the project, it also became apparent that sensitive and expensive equipment being carried about frequently necessitated protective carrying cases. Other supply items were consumed within the course of the project and monies had to be allocated to re-stock them. These included diabetic testing supplies.

The initial proposal called for four part-time Community Health Workers. It did not allow for anyone to be responsible and accountable for the successful day to day operation of the project in the community. The recruitment and training of Senior Companions as Community Health Workers provided several benefits:

- The senior volunteers drawn from the community were able to relate well to their peer participants.
- The senior volunteers could spend more quality time with participants.
- The senior volunteers were able to establish meaningful rapport with participants and were therefore very effective in encouraging community members to follow up with doctors and to make necessary lifestyle changes to improve their health outcomes.

Several of the participants who have been monitored regularly have indicated that they have come to depend on the health box and would not be happy to have it taken away. Thus we have learned that to make real progress in alleviating health disparities, solutions must be sustainable and widespread.

## **6. What financial barriers were encountered? How were they addressed?**

One financial barrier encountered during the early planning stages of the project was the fact that we had not allocated funds for hiring a Project Director. This limitation was overcome by adding the Federation of Organizations to our collaboration. We were able to adapt their Senior Companion Program to meet our needs by training the Senior Companions that we recruited from the community to work with the health boxes. Thus the Senior Companions/Community Health Workers were conceived. Their stipends were funded by the Federation of Organization's Senior Companion grant monies. This funding created room in the budget for the lead partners to hire a Project Director.

The second financial barrier was really minor in nature. There had been no budget allocation for the supplies and equipment needed by the volunteers as they ventured out into the community soup kitchen and senior nutrition site. Because health screenings in those settings were provided to large groups of people, the volunteers needed to carry the participant records with them. They also needed to protect the delicate electronics of the health boxes and their peripheral equipment. Finally, as has been stated previously, they needed to replenish diabetic testing supplies. The Community Advisory Board voted to allocate monies for the supplies and equipment needed.

### **Future Plans:**

#### **1. List the project and evaluation activities you intend to pursue during the next project year for each intended outcome and note whether and how they involve modifications.**

We are planning to leave the current equipment in place and are pursuing funding locally to accomplish this. We would like to broaden the scope of the project to include health screening in the school age population of the community. Given the national health crisis with adult onset diabetes increasingly affecting our youth, we feel this would be an appropriate next step. We would attempt to determine the extent to which the younger population will be more or less receptive to using the health box. We would like to determine the impact upon youth of the "Know Your Numbers" campaign and we would like to ascertain whether the youth have any impact on getting their family members to become more pro-active in maintaining good health. Moreover, we would like to add a translator or bilingual individual to the project team to assist us in reaching more of the Hispanic population. We would especially like to explore modifying the equipment so that data regarding body mass index (BMI) can be captured. BMI is a better indicator than weight alone of whether an individual needs to make adjustments. We envision adding nutritional evaluation and counseling as a component of the expanded project.

#### **2. What will be done in this coming year to increase the likelihood that the project will be self-sustaining by the end of the grant period?**

The project team is in the process of seeking more sustainable funding. We are presently in discussion with a not for profit Medicaid certified managed healthcare provider and we have received a public verbal commitment from Peconic Bay Medical Center to underwrite the equipment now in place through 2007.

**3. What indications are there that this project can or cannot be adopted elsewhere?**

There is every indication that the successes of Project C.A.R.E. can be replicated in larger populations within this community as well as in other communities across this region as well as nationally.

**Dissemination:**

**1. What information or evaluation findings from your project have been made available to the field and how?**

Project C.A.R.E. has just held a dissemination event for the medical and business professionals in the Riverhead community. As part of the project, we have developed a film which is a very effective and informative tool.

**2. What plans do you have, if any, at this time for disseminating information about your project during the next year and at the conclusion of Foundation funding?**

Several Project C.A.R.E. team members will be making a presentation at the international Counseling and Treating People of Colour Conference in the Dominican Republic on November 30, 2006.

**Other:**

**1. Please list issues you would like to discuss with your Foundation program director.**

- The project team would like to explore the possibility of expanded funding to support the future directions noted above and to enable the successes of the pilot project to be replicated in a larger population.
- The project team would like to determine the extent to which the Foundation might match funding raised from other sources to help us move toward a more permanent presence for the health box in our community.

**2. Grantees may attach appendices which may help to clarify information contained in the body of the report. Be selective! Do not include copies of every newspaper article, brochure, or detailed statistical report having to do with the project. If possible, attach a copy of the organizational chart both for the project and for its place within the greater institutional structure.**

- Peconic Bay Medical Center attachment 1
- Peconic Bay Medical Center attachment 2
- "Know Your Numbers" handout attachment 3
- Newsday article attachment 4
- Project C.A.R.E. organizational chart attachment 5

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Project C.A.R.E.

Annual Report

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- 2. Attach evaluation reports generated during the past year as appropriate if they are not contained within your project report.**

Attached please find the evaluation report entitled "Results of the 2006 Participant Survey" prepared under contract by Stony Brook University.