

Wireless Kiosks: Improving Health and Reducing Costs

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Brief Description:

The Gary and Mary West Senior Wellness Center, operated by Senior Community Centers in San Diego, is a unique programming hub that supports low income seniors with nutrition, health and wellness programs, housing, lifelong learning and civic engagement. As part of this effort, we are testing emerging technologies that can expand the reach of our Center's staff to assist clients in maintaining optimum wellness.

We are implementing a wireless, free-standing health kiosk capable of obtaining and transmitting client biomarkers (such as blood pressure and weight) to databases accessible to both client and center staff. The kiosk contains an early warning system alerting Center staff to biomarker trends that pose a health risk to the client. Earlier intervention by Center staff may reduce the severity of ailments or disease progression, thus improving the outcomes of care to at risk senior populations. The wireless health kiosk is located at the Wellness Center and available to all clients seven days a week.

This submission was selected as part of a national challenge issued to leaders in all communities seeking new "best practices" and "best possibilities" for the future of nutrition and aging.

In the Fall of 2011, a team from the West Wireless Health Institute, a non-profit research organization located in La Jolla, began working with us to define the structure and operations of the proposed project. The team identified that the Wellness Center occupies an important and unique niche in the "health care ecosystem," and through its infrastructure, is providing a compendium of services that assist clients in maintaining wellness – at a lower cost of care to clients who access the Center's services.

The project can be summarized as follows:

- Senior Community Centers collaborates with the West Wireless Health Institute on a ground-breaking endeavor that aims to enhance the Center's services with the next wave of medical technology.
- The Center installs a state of the art wireless health kiosk station provided by the West Wireless Health Institute.
- The health kiosk station uses a simple touch LCD screen method, with helpful interactive video, to guide a client through simple tests. The interactive screen provides additional information relative to self-care and referrals to center staff.

- Client biomarker tests available through the kiosk include:
 - Blood pressure
 - Pulse
 - Weight
 - Body Mass Index (BMI)
 - Visual acuity
 - Depression assessment
 - Additional biomarkers will be added in the coming months that include:
 - Oxygen saturation
 - Skin impedance to determine fluid accumulation in congestive heart failure patients
- Clients receive a customized report that shows an assessment of their biomarkers with recommendations should the biomarkers fall into a range that is deemed concerning (such as an elevated blood pressure).
- Data from the kiosk is collected and reported to the Center's data base and based upon preset ranges, the system will alert the Centers staff via text or email if a client's biomarkers are out of range.
- The kiosk has the ability to configure messages for clients that include general health advice and recommendations. It can also produce messages for specific clients such as reminders to follow up with their doctor or remember to see the center's staff.
- Clients with a chronic health condition are referred to a physician doing her residency in chronic disease management from the UC, San Diego Medical School, who is out-stationed at the Wellness Center three days per week.

This project is being implemented to provide an initial screening and encourage clients to visit a healthcare provider for a follow-up exam when needed.

In their roles for this project:

- West Wireless Health Institute measures the impact of the technology on the health of individuals and the ultimate cost savings that it will afford our national health care system.
- Senior Community Centers will be able to better serve vulnerable and deserving population by more precisely and frequently gathering vital medical information on clients. This will lead to more timely and effective preventive care and interventions and allow each client to gain a great sense of ownership of their healthcare and sense of independence.

The ultimate goal of the project is to build a care coordination program that ultimately reduces ER visits, hospital days and delays and/or prevents the need for higher level of long-term care.

For this new technology to have the desired effect, we have added a Care Coordinator to our team. She is an advanced practice nurse. The Care Coordinator examines all the incoming data that this kiosk transmits every time a senior uses the device to determine

what, if any, follow up care is needed, make referrals to our healthcare education and nutritional workshops and even to recommend more urgent care should the situation merit immediate intervention.

The kiosk will assign a unique health identifier (UHI) to each client and will maintain a health maintenance report for every client. UHI will help track every client. All of this information will be integrated into the larger profile on the client and will be available for our on-site healthcare professionals during their clinical visits with the clients.

The West Wireless Institute intends to extend the reach of this innovation from the seniors that can come into the Wellness Center to those homebound seniors we serve daily. Currently we deliver meals and some wrap around services to 500 homebound seniors. With the expansion of the West Wireless Institute's investment into this very needy population, Senior Community Centers will be able to have more regular access to their health through the wireless transmission of their biomarkers to our health care professionals who will then be able to make recommendations, send healthcare professionals to make house calls therefore creating a concierge model of care that is personalized and augmented with technology.

The integration of this new technology and system will also open the Senior Community Centers up to new collaborations with San Diego hospitals, health agencies, and public health organizations. There is a potential to attract MediCal Managed care providers to refer their seniors to the center so they can be more closely monitored and prevent ER visits. The health kiosk and its data management system have the ability to share data across any organization and this provides a model for data sharing that currently does not exist.

SCC already provides a comprehensive, integrated network of vital services for independent aging that focus on preventions, intervention, and education. With the integration of the Care Coordinator and Wellness Profile Manager we will be increasing the effectiveness of our existing programs. The following are programs offered at our Gary and Mary West Senior Wellness Center that constitute our current healthcare ecosystem.

- Nurse Case Management
- Information and Referral Services
- Mental Health Services
- Healthier Living Program (Stanford University Model of Chronic Disease Self-Management)
- Transitional Housing/Homeless Prevention
- Supportive Housing
- Nutrition – breakfast and lunch 365 days per year

Senior Community Centers has also developed an extensive network of providers and collaborative partners that provide services to enhance, expand, and sustain our in-house programs.

- We over-built the Wellness Center to provide space for collaborative partners.
- Collaborative partners range from university, non-profits, social service agencies, medical practitioners, attorneys and others.
- Collaborative partners must provide services free of charge and must share results and data with us to show future impact.
- Collaborative partners yielded a savings of about \$944,049 for Senior Community Centers in 2011.

Our ultimate goal with this kiosk project is to provide better health care that keeps our clients healthy. Healthy seniors remain independent. Independent seniors, in addition to being happier, use healthcare resources much less frequently thereby reducing costs. We hope to have a replicable model, backed by data, in the next 12-18 months.