Multi-User Health Kiosk

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Monitor physical, physiological, cognitive and behavioral status using an integrated, multi-sensor system

The Health Kiosk is designed to monitor a patient's total well-being, including blood pressure, blood oxygen levels, handgrip, weight, hearing, visual acuity and stress levels. Tests are scheduled by and results reported to a clinician without a traditional office visit. As a communal tool, the kiosk gives senior citizens access to easy, convenient and affordable evaluations of their health on a regular or recurring basis.

TARGET POPULATIONS:

- Low income senior citizens who live alone
- Ambulatory and wheelchair patients

BENEFITS:

- Tracks/reports trends daily, weekly, monthly
- Provides quick, easy-to-read results
- Increases communication, sends data remotely
- Saves time, lowers health visit costs
- Available for multiple users/clinician sharing
- Supports early detection of health concerns
- Can integrate with electronic health records

“The Health Kiosk enables senior citizens to track their health and wellness through the monitoring of vital functions or in carrying out prescriptive practices and sending the results of compliance electronically to clinicians. Individuals are provided with more immediate feedback regarding their current state of health and are able to save on the costs and inconvenience associated with frequent visits to a doctor, lab, physical therapist, or hospital.”

--Daniel P. Siewiorek, Carnegie Mellon University

ABOUT THE RESEARCH

Three user classes (resident, clinician and administrator) allow access to overlapping functions for regular, remote health evaluations and communication of important health data. The resident’s touch screen interface is generated from the clinician’s selection and scheduling of tests. The Health Kiosk is designed to be self operated and features a user interface that is both intuitive and customizable.

Industrial design students reconfigured the design model based on concerns raised by administrators and clinicians, including: how to make the interface more user-friendly for older adults; how patients can use the Wii board for testing balance; and, how the kiosk can accommodate patients in a wheelchair. This fall, a mobile health care unit will be installed in a senior high rise facility for a trial run and further system refinements.

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