Evaluation of a Remote Patient Monitoring and Home Safety System

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The VCare Residential Gateway is a remote patient monitoring and home safety device developed by Virtual Health Solutions (VHS). The Gateway is designed to be the center of an intelligent home for seniors and people with chronic illness who live unassisted in the community. It uses a tablet style computer as a hub to put health and home security monitoring technologies at the resident’s fingertips. The Gateway interfaces with a range of health monitoring technologies (eg. blood pressure, oxygen saturation, and heart rate monitors), home safety technologies (eg. security cameras, door locks, and motion detectors) and environmental control technologies (eg. controls for lights and house temperature). In addition, the Gateway has video-conferencing features that allow residents to participate in remote consultations with health professionals.

In March 2010, eight (8) seniors with chronic illnesses participated in the evaluation of the VCare Residential Gateway. The purpose of the evaluation was to gain a better understanding of the usability of the Gateway from the perspective of seniors with chronic illnesses (e.g. ease of use, applicability/usefulness, user acceptance, barriers to adoption, potential impact ).

During the evaluation, the facilitator led participants through pre-defined tasks. Upon completion of each task, participants were asked a series of questions by the facilitator to elicit feedback. A final questionnaire was administered at the end of the session to elicit more general feedback about the technology.

Overall, the response to the system was very favourable. Things participants most liked about the Gateway included the easy to use, fingertip control interface; the fact that it is an all inclusive, fairly compact system, and that they were able to socially interact with a health professional. The biggest advantages of using the Gateway that participants discussed included:

- the security it would provide knowing immediate help is available
- the ability to monitor health effectively (from home)
- the ability to get help from doctor and pharmacist / order prescriptions
- that it would result in improved quality of care
- the potential for saving time/ saving money in the medical system

Challenges brought up by participants included costs, privacy issues, and the fact that it is new, untried technology.