

Emerging Technology for At-Risk Chronically Ill Veterans

<i>Category</i>	<i>Description</i>
Title of intervention	Emerging Technology for At-Risk Chronically Ill Veterans
Objectives	<p>Objectives IROHLA taxonomy</p> <ul style="list-style-type: none"> ✓ To inform and educate older adults and/or professionals ✓ To support behaviour change and maintenance ✓ Other: to decrease the number of hospital admissions for veterans with chronic diseases <p>Short description of the objectives of the intervention to decrease the number of hospital admissions for veterans with chronic diseases.</p>
Target groups	<ul style="list-style-type: none"> ✓ older adults (50+) ✓ veterans 65+ ✓ pensioners: 65-80 ✓ oldest group: 80+ ✓ vulnerable groups <p>Short description of the target groups Veterans 65+ with various chronic diseases (Hypertension; diabetes; congestive heart failure; chronic obstructive pulmonary disease; coronary artery disease)</p>
Problem analysis	<p>Scope of the problem To evaluate if a home technology monitoring device can decrease the hospital admissions of older veteran (65+) with various chronic diseases.</p> <p>Consequences for individual and/or society Patients frequently are seen by numerous subspecialists who focus on the particular system in which they specialise, and this increases the possibility for gaps in communication and coordination of care. It is no wonder healthcare organisations are searching for innovative methods to improve communication between patient and provider to enhance care coordination.</p>
<i>Short description of the modifiable determinants of</i>	<p>Modifiable determinants of older adults Hospital - nursing home admissions for patients with chronic diseases ,emergency room visits, pharmacy prescriptions</p>

Category	Description
<i>older adults.</i>	
<i>Please give a short description of the modifiable determinants of professionals.</i>	Modifiable determinants of professionals -
Components of the intervention	<p>Components ✓ E-health technology</p> <p>Description of components</p> <p><i>Disease Management Tool (device used by the intervention group)</i> Health Buddy™ is an in-home messaging dialogue box with a series of daily, pre-programmed questions and answers for patients. The program staff collaborated with the Health Hero clinical team to revise and develop single-, dual-, and tri-morbid disease dialogues to meet the needs of the frail older population. The Health Buddy connects daily to the Internet from the patient's home via a toll-free telephone number and is an easy-to-use device requiring the veteran or caregiver to press one button to answer each question.</p> <p><i>Risk Management Software (device used by the physicians)</i> The iCare Desktop™ is a Web-based software application that tracks patients' responses to daily questions, assigns color-coded risk assessment to the answer, and compiles specific data for staff review. The software is easy to navigate and may be accessed with a password from a computer with an Internet connection via a password-protected Website. Program staff were able to quickly identify at-risk patients because of answers provided in four categories: symptoms, behaviour, knowledge, and general topics red- flagged to indicate any deviation from normal clinical parameters.</p> <p><i>Trend Reports(device used by the physicians)</i> In addition to the color-coded risk management system, the technology software also provides trend data. Trend data refer to vital signs such as weight, blood pressure, pulse, or blood sugar values, as well as symptoms such as oedema, chest pain, fatigue, or shortness of breath. These data points are individualised to each dialogue or combination of dialogues based on the patients' needs. Trended data are available for up to 180 days. This option allows coordinators to effectively and efficiently detect subtle changes that may signal an impending healthcare crisis. These data are shared with patients and providers to maximise management, improve communication, and encourage the patient to become an active member of the healthcare team.</p>

Category	Description
Approach	<p>Techniques used E-health monitoring device</p> <p>Stakeholders involved Veteran Health Administration, Physicians</p> <p>Type of professionals involved Physicians</p>
Resources and qualifications	<p>Duration of the intervention At least six months</p> <p>Required competencies of professionals Physicians who are trained to use the application.</p>
Implementation	<p>Implementation strategy Patients with various chronic disease are using the Health Buddy which send and receive data to the monitoring software (see components of the Intervention). These patients are the intervention group. The control group consists of patients with similar characteristic which are randomly picked by an electronic database. The e-health device monitors the participant's health and sends reminders (e.g. For medication adherence). If the participant's health indicators show that he faces a health threatening condition an effort is made to contact him via phone. If the participant doesn't respond the phone call, the emergency health care services are notified to provide onsite help.</p> <p>Conditions for effective implementation The existence of a coordination center to monitor the incoming data.</p> <p>Stakeholders involved Veteran Health Administration</p>
Transferability	The users of the software need to receive training on the use of the software.



Category	Description
Evaluation	Methods used <ul style="list-style-type: none"> • The evaluation methodology was a prospective, quasi-experimental design. • Quarterly data collection.
Effectiveness	Main results Patients followed in the program for at least 6 months experienced a 45% decrease in hospital admissions, 67% decrease in nursing home admissions, 54% decrease in emergency room visits, and 38% decrease in pharmacy prescriptions. The patients also demonstrated improved compliance with treatment regimens and both patients and providers reported high levels of program satisfaction.
<i>The key elements/components of the intervention that must stay intact in order to have an effective intervention</i>	Key elements <ul style="list-style-type: none"> • The hardware (Health Buddy) and the software iCare Desktop™ and trend reports (see components of the intervention). • The existence of a coordination center to monitor and screen the incoming data.
Level of evidence	✓ Quasi-experimental or cohort studies
Sector	Private sector
Country of development	USA
Provider	<i>Name:</i> Mary Huddleston, MHSE RN CPHQ; Rita Kobb, MS MN ARNP BC <i>Organisation:</i> Veterans Health Administration <i>E-mail:</i> mary.huddleston@med.va.gov
Relevant documents/links	<ul style="list-style-type: none"> • http://www.bosch-press.com/tbwebdb/bosch-usa/en-US/PressText.cfm?CFID=707&CFTOKEN=714c9f97d9380b9-9964A3F4-B5A3-413F-9367DE1036D275FA&nh=00&Search=0&id=412 • http://www.houston.va.gov/pressreleases/News_20090223f.asp