

KTI 10. ONLINE HEALTH INFORMATION TOOLS

WHAT ARE ONLINE HEALTH INFORMATION TOOLS?

ONLINE HEALTH INFORMATION TOOLS DESCRIPTION

- An Internet based platform that delivers information designed to educate the patient about the disease and provides information on treatment and self-management.
 - Examples: website, web portal, or web program
- Three functions of online health information tools:
 1. Providing information
 2. Enhancing information exchange
 3. Promoting self-management.

ONLINE HEALTH INFORMATION TOOLS GOAL(S)

- Increase patient's knowledge of their disease and if applicable, their self-management skills.

CURRENT FINDINGS FROM THE EVIDENCE

- Improvements in self-efficacy, blood pressure, hemoglobin levels, and cholesterol levels were seen.
- Overall the tools seem to facilitate immediate, intermediate, and long-term outcomes in older patients by providing information, enhancing information exchange, and promoting self-management.

POINTS TO KEEP IN MIND

- There is limited evidence to support online health tools effectiveness on knowledge, perceived social support, health service utilization, glycemic control, self-care adherence, exercise performance, endurance, and quality of life.

SYSTEMATIC REVIEW OF THE EVIDENCE FOR ONLINE HEALTH INFORMATION TOOLS

Source: Bolle S, van Weert JC, Daams JG, Loos EF, De Haes HC, Smets EM. Online health information tool effectiveness for older patients: a systematic review of the literature. Journal of health communication. 2015 Sep 2;20(9):1067-83.

EVIDENCE FROM THE SYSTEMATIC REVIEW

Description of Online Health Information Tools

This review included online health information tools that were:

- Websites
- Computer-based decision support tools
- Web portals
- Web-based tools
- E-health program
- Personal education programs

The information provided may have been personalized to the

	<p>patient</p> <p>A number of studies offered a nurse case manager as a means of information and support.</p>
Setting	<p><u>Healthcare settings:</u> Home-based</p> <p><u>Healthcare topic:</u> General, most often long term illnesses, diabetes=9, heart disease/failure=5</p> <p><u>Study location:</u> Not specified</p>
Intervention Deliverer	Nurses, physicians, case managers
Intervention Recipient	Patients seeking information about their disease. Older patients were a specific population that was assessed.
Quality of the systematic review	AMSTAR 6/10 by McMaster Health Forum
Quality of studies included in systematic review	<p>12 High quality</p> <p>1 Low quality</p>
OUTCOMES FROM SYSTEMATIC REVIEW	
Comparisons:	Not specified
Patient process outcomes:	Significant improvements in patient self-efficacy were found in studies that reported on online health information tools with multiple functions
Patient clinical outcomes:	<p>Improvement seen in studies using online health information tools:</p> <ul style="list-style-type: none"> • 1 study saw a significantly lower level of depression • 1 study had significantly higher improvements in blood pressure after 6 months compared with the usual care group. • A significant improvement in glycemic control was found after 2years, and this effect was mediated by self-efficacy and after 5 years, a significant effect on glycemic control was found again, and this effect was mediated by adherence to self care. • 1 study had significant improvements in hemoglobin levels, cholesterol levels, and blood pressure were found after one year and after 5 years • 1 study had significant improvements in psychological distress and quality of life levels were reported from the baseline to the post intervention condition. • 1 study had significant quality-of-life improvements and reductions in depression, blood pressure, hemoglobin, and cholesterol levels were found in the intervention group that received an OHIT in addition to usual care.

OPERATIONALIZATION OF HOSPITAL DISCHARGE PLANNING

No information was provided in the review.

STUDY EXAMPLE OF HOSPITAL DISCHARGE PLANNING FROM THE SYSTEMATIC REVIEW

Source: McKinstry B, Hanley J, Wild S, Pagliari C, Paterson M, Lewis S, Sheikh A, Krishan A, Stoddart A, Padfield P. Telemonitoring based service redesign for the management of uncontrolled hypertension: multicentre randomised controlled trial. *BMj*. 2013 May 24;346:f3030.

STUDY INFORMATION	
Goals of Intervention	To determine if telemonitoring and supervision by primary care clinicians of home self-measured blood pressure and optional patient decision support leads to clinically important reductions in daytime systolic and diastolic ambulatory blood pressure in patients with uncontrolled blood pressure. Also determined the impact of such telemonitored support on use of health service resources.
Description of Intervention	<p>The use of telemonitoring included 20 minutes of training about how to use the telemonitoring equipment done by a research nurse.</p> <p>Telemonitoring included the following health components for patients:</p> <ul style="list-style-type: none">• <i>Home blood pressure monitoring</i>— Participants were asked to monitor their blood twice each morning and each evening for first week and then at least weekly thereafter. However, if changes to lifestyle or drugs impacting blood pressure took place, blood pressure was monitored for a more intensive period.• <i>Transmission of data</i>— Readings taken by the patient are transmitted automatically, usually by mobile phone, to a website, enabling patients to share their readings with healthcare professionals in real time. Mobile phone problems did not lead to loss of data because all readings were stored in the monitor and any readings that did not get transmitted were sent when the next reading was taken.• <i>Feedback to patient participants (closed loop feedback)</i>— Blood pressure information could be accessed online and through text messages or email, which gave advice about the readings and when to contact a health professional. In cases of high blood pressure (>220/120mm), an alert to re-measure and contact health care team was sent out.• <i>Sharing readings with healthcare team</i>— The healthcare team had access to records of patients online via a secure

	<p>login to a summary screen -average blood pressure from past 10 readings, blood pressure outside recommended limits (135/85mm Hg) were highlighted. Expanding into a patient name provided lists or graphs of all their readings along with previous lifestyle and drug change recommendations. Clinicians were recommended to check the website weekly, but they could choose the frequency of log on.</p> <p>Telemonitoring of self-measurement:</p> <ul style="list-style-type: none"> • Conducted over 6month period • Participants could contact their clinicians if they were concerned about their blood pressure control and clinicians could contact the participants if needed to arrange modification of therapy. <p>Control</p> <p>Patients would continue to attend their physician practice for blood pressure monitoring.</p>
Setting	Community (primary care practice) with home-based patient monitoring
Intervention Deliverer	Research nurses
Intervention Recipient	Patients, physicians and nurses at the selected primary care practices
Quality of the Study	High quality
STUDY OUTCOME	
Comparison	1. Telemonitoring vs usual care
Patient Clinical Outcomes	<p>Supported self-monitoring by telemonitoring is an effective method for achieving clinically important reductions in blood pressure in patients with uncontrolled hypertension in primary care settings.</p> <ul style="list-style-type: none"> • The mean difference in daytime systolic ambulatory blood pressure adjusted for baseline and minimization factors between intervention and usual care was 4.3 mm Hg (95% CI (2.0 -6.5); P=0.0002) and for daytime diastolic ambulatory blood pressure was 2.3 mm Hg (0.9 -3.6; P=0.001), with higher values in the usual care group. • Self -reported adherence to drugs, potential indicators of lifestyle adjustment (weight, spot sodium:creatinine ratio, cholesterol level, HbA1c level), self- assessed therapy adherence, anxiety, health related quality of life, or exercise tolerance saw no difference between groups.
System/Organization Outcomes	<p>Supported self-monitoring by telemonitoring is associated with and increase in use of National Health Service resources.</p> <ul style="list-style-type: none"> • Mean increase of resources was 1 general practitioner (95% CI (0.5- 1.6); P=0.0002) and 0.6 (0.1 -1.0; P=0.01) practice nurse consultations.