

KTI 6. COMPUTER-GENERATED REMINDERS DELIVERED ON PAPER

WHAT IS COMPUTER-GENERATED REMINDERS DELIVERED ON PAPER?

COMPUTER GENERATED REMINDER DELIVERED ON PAPER DESCRIPTION:

- Reminders automatically generated through a computerized system (computer-generated) and delivered on paper to healthcare professionals.
- Other KT interventions can be used in combination with this intervention (e.g. audit and feedback, interventions with an educational component) to achieve its outcomes.

COMPUTER GENERATED REMINDER DELIVERED ON PAPER GOAL(S):

- Facilitate a positive change in healthcare professional practice.
- Improve quality of care endpoint (i.e. test ordering).

CURRENT FINDINGS FROM THE EVIDENCE:

- There is moderate-certainty evidence to support slight improvements in quality of care in terms of compliance for:
 - Preventive guidelines
 - Disease management guidelines.
- It is uncertain whether reminders improve patient outcomes because the certainty of the evidence is very low.
- The heterogeneity of the reminder interventions suggests that reminders can probably improve quality of care in various settings under various conditions.

SYSTEMATIC REVIEW OF THE EVIDENCE FOR COMPUTER-GENERATED REMINDERS DELIVERED ON PAPER

Source: Arditi C, Rège - Walther M, Wyatt JC, Durieux P, Burnand B. Computer - generated reminders delivered on paper to healthcare professionals; effects on professional practice and health care outcomes. The Cochrane Library. 2012 Jan 1.

EVIDENCE FROM THE SYSTEMATIC REVIEW	
Description of Computer Generated reminders delivered on Paper	<p>In this study the most commonly used co-interventions were:</p> <ul style="list-style-type: none">• Patient reminders• Educational meeting for healthcare professionals• Audit and feedback <p>Design of the reminders:</p> <ul style="list-style-type: none">• Patient Specific (n=34) or Generic (n=1)• Same reminder (n=15), 2 to 10 different reminders (n=19), or over 10 different reminders (n=7).• Space for the provider to respond to the reminder (e.g. a check box to order a mammogram) (n=19).• Specific advice on patient management (i.e. recommendation for care) (n=35)

	<ul style="list-style-type: none"> • Explanation of the advice (e.g. background information, risk definition) (n=13) <ul style="list-style-type: none"> ○ Justified by an influential source (e.g. systematic review, bibliographic citation) (n=11) <p>Reminders were placed for health care professional to review at the point-of-care for the patient (i.e. during the patient's visit) and in some studies sent to physicians directly following a patients' visit.</p> <p>Reminder Topics:</p> <ul style="list-style-type: none"> • Cancer screening tests (e.g. mammography, Papanicolaou smear, rectal examination) • Vaccination • Disease management guidelines • Test ordering (e.g. mammography, glycated hemoglobin) • Prescribing • Professional-patient communication • General management
Setting	<p><u>Healthcare settings:</u> Outpatient, inpatient, mixed settings</p> <p><u>Healthcare topic:</u> Various</p> <p><u>Study location:</u> USA (n=29), Canada (n=3), France (n=1), Israel (n=1), Kenya (n=1).</p>
Intervention Deliverer	Not specified
Intervention Recipient	Physicians, nurses
Quality of the systematic review	Low risk of bias (Assessment tool: ROBIS)
Quality of studies included in systematic review	Medium quality
OUTCOMES FROM SYSTEMATIC REVIEW	
Comparisons:	<ol style="list-style-type: none"> 1. Computer Generated Reminder Delivered on Paper vs. usual care. 2. Computer Generated Reminder Delivered on Paper vs. intervention(s) without the reminder component.
Patient clinical outcomes:	<ol style="list-style-type: none"> 1. Computer Generated Reminder Delivered on Paper vs. usual care. <ul style="list-style-type: none"> • The study measured patient outcomes of care and found that reminders are not associated with significant improvements in patient outcomes.
Health care provider process outcomes:	<p>Moderate improvement in professional practices across all included comparisons was seen with a median improvement of 7%.</p> <ol style="list-style-type: none"> 1. Computer Generated Reminder Delivered on Paper vs usual care.

	<ul style="list-style-type: none"> Improved care by 11.2% and ranged from 6.5% to 19.6%. <p>2. Computer Generated Reminder Delivered on Paper vs intervention(s) without the reminder component.</p> <ul style="list-style-type: none"> Improved care by 4 % and ranged from 3.0% to 6.0%.
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OPERATIONALIZE OF COMPUTER-GENERATED REMINDERS DELIVERED ON PAPER

Two characteristics were significant predictors of improvement:

- Providing space on the reminder for a response from the clinician.
- Providing an explanation of the reminder's content or advice.

STUDY EXAMPLE OF COMPUTER-GENERATED REMINDERS DELIVERED ON PAPER FROM THE SYSTEMATIC REVIEW

Source: Le Breton J, Ferrat É, Attali C, Bercier S, Le Corvoisier P, Brixi Z, Veerabudun K, Renard V, Bastuji-Garin S. Effect of reminders mailed to general practitioners on colorectal cancer screening adherence: a cluster-randomized trial. *European Journal of Cancer Prevention*. 2016 Sep 1;25(5):380-7.

STUDY INFORMATION	
Goals of Intervention	To improve colorectal cancer screening rate among primary care physicians.
Description of Intervention	<p>3 printed colorectal cancer screening reminders were sent to primary care physicians at 4 month intervals.</p> <p>The reminders included a list of patients who had not yet received faecal occult blood test (FOBT) screening.</p> <p>Reminders were sent from the French statutory health insurance program that maintained a database for 87% of the country's population and kept track of health services they received.</p>
Setting	Community
Intervention Deliverer	French statutory health insurance program (Caisse Nationale d'assurance Maladie des Travailleurs Salariés)
Intervention Recipient	Primary care physicians
Quality of the Study	High quality
STUDY OUTCOMES	
Comparison	1. Reminder list of patients who have not received a FOBT vs. usual care.
Health Care Provider Process	A cluster analysis showed no significant difference between the two groups for screening adherence rates (RR 1.07, 95% CI 0.95– 1.20, P= 0.27).
Outcome	No other statistically significant results were reported.