KTI 4. PRINTED EDUCATIONAL MATERIALS FOR CLINICAL CARE

WHAT ARE PRINTED EDUCATIONAL MATERIALS FOR CLINICAL CARE?

PRINTED EDUCATIONAL MATERIALS DESCRIPTION

- Published or printed recommendations for clinical care including clinical practice guidelines, monographs, and publications in peer-reviewed journals.
- These materials are distributed to health care professionals via mass mailing or delivered personally.

PRINTED EDUCATIONAL MATERIALS GOAL(S)

- Intended to improve healthcare professionals' awareness, knowledge, attitudes, and skills, and ultimately improve professional practice and patients' health outcomes.

CURRENT FINDINGS FROM THE EVIDENCE

- There is a small beneficial effect on professional practice outcomes when used alone.
- There is insufficient information to reliably estimate the effect of printed educational materials on patient outcomes, and clinical significance of the observed effect sizes is not known.

POINTS TO KEEP IN MIND

- For the purpose of this review, only studies that used passive dissemination of printed educational materials were included.
    - Mass mailing
    - Personal delivery
- The effectiveness of printed educational materials compared to other interventions, or of multifaceted intervention with a printed educational material component, is uncertain.

SYSTEMATIC REVIEW OF THE EVIDENCE FOR PRINTED EDUCATIONAL MATERIALS

Source: Giguère A, Légaré F, Grimshaw J, Turcotte S, Fiander M, Grudniewicz A, Makosso-Kallyth S, Wolf FM, Farmer AP, Gagnon MP. Printed educational materials: effects on professional practice and healthcare outcomes. The Cochrane Library. 2012 Jan 1.

EVIDENCE FROM THE SYSTEMATIC REVIEW	

Description of Printed Educational Materials	In this review, printed education materials were delivered in the following ways (n=# of printed educational material interventions):,
	• Journal publication (disseminated passively) (n=23)
	  ○ Frequency: indeterminate
	• Direct mailing (disseminated actively) (n=9)
	  ○ Frequency: 8 were delivered only once and one delivered 4 times during a 4-6 month period.
	• Mass emails (disseminated actively) (n=6)

	○ Frequency: 4 were delivered once, one was delivered twice, and 1 consisted in a series of evidence-based bulletins mailed out regularly over a three-year period. • No PEMs were disseminated solely by electronic means, but those that were disseminated passively probably used electronic dissemination channels, such as the journal's website in the case of the articles published in scientific journals. Most printed education materials were generic without tailoring to the intended recipient. Format of printed educational materials: • Peer reviewed journal publication (n=23). ○ 22 were longer than 2 pages ○ 16 included a practice guideline • Newsletter or bulletin (n=6) ○ 4 were published in black and white ○ 1 published in colour ○ 1 was unclear. • Brief summary of a practice guideline (n=3) • Black and white manual of peer-reviewed clinical article reprints (n=1). Clinical issues addressed in the printed educational materials (n=# of studies): • Addressed 2 or more behaviours ○ Prescribing or treatment behaviour (n=39); ○ General management of a health problem (n=8); • Procedures (n=6); • Test ordering (n=5); • Referrals (n=5); • Surgery (n=5); • Targeted patient education/advice (n=4); • Diagnoses (n=4); • Clinical prevention services (n=3); • Screening (n=2); • Discharge planning (n=2); • Reporting (n=1). 51/52 studies were intended to modify an already established management.
Setting	Healthcare settings: family practice, outpatient, mixed setting, municipal health centre, unclear Healthcare topic: Various Study location: Canada (n=12), USA (n=11), Europe (n=11); Japan (n=2), Brazil (n=1)
Intervention Deliverer	No specified

Intervention Recipient	Physicians, nurses, pharmacists, psychologists, allied health professionals
Quality of the Systematic Review	Low risk of bias (Assessment tool: ROBIS)
Quality of Studies Included in Systematic Review	14 studies were randomized control trials (8 were cluster-RCTs) and were rated as high and medium quality. 31 studies were interrupted time series and were rated as medium and low quality.
OUTCOMES FROM SYSTEMATIC REVIEW	
Comparisons	1. A printed educational material versus no intervention (n=44). 2. A printed educational material versus an electronic version of the same document (n=1). 3. Multifaceted interventions where patient educational material is included vs. multifaceted intervention without patient educational material (n=0).
Patient clinical outcomes	1. A printed educational material versus no intervention: 2 RCTs had positive patient related results: • 1 RCT showed an improvement of 13% in clinical remission. • 1 RCT reported 5 patient related outcomes, one outcome was statistically significant: ○ Statistically significant result, the proportion of patients that agreed to quit smoking, standard effect size is 74% (95% CI 0.09-1.40)
Health Care Provider Process Outcomes:	1. A printed educational material versus no intervention: • 7 RCTs that had categorical data saw a 2% absolute improvement in professional practice outcomes. • 3 RCTs that had continuous measures saw a 13% improvement in professional practice outcomes. 2. A printed educational material versus an electronic version of the same document: • One RCT measured professional practice outcomes for this comparison and their results were not statically significant.

OPERATIONALIZATION OF PRINTED EDUCATIONAL MATERIALS:

Printed education materials' characteristics that may have influenced their effectiveness were explored by the systematic review authors; however, although some characteristics seemed promising to increase impact on professional practice, the limited number of studies prevented any conclusions. Examples of characteristics investigated include source of information, tailoring to individuals or groups, clinical areas, type of targeted behaviour, purpose, level of evidence, format, mode of delivery, frequency of delivery, duration of delivery, endorsement, appearance (e.g., black and white, colour, figures or tables). More research is needed on the characteristics of printed educational materials that lead to a change in behaviour.

STUDY EXAMPLE OF PRINTED EDUCATIONAL TOOLS FROM THE SYSTEMATIC REVIEW:

Source: Dormuth CR, Maclure M, Bassett K, Jauca C, Whteside C, Wright JM. Effect of periodic letters on evidence-based drug therapy on prescribing behaviour: a randomized trial. Canadian Medical Association Journal. 2004 Oct 26;171(9):1057-61.

STUDY INFORMATION	
Goals of Intervention	To improve physician drug prescribing to newly treated patients
Description of Intervention	A Therapeutics Letter is a concise and colourful 2 to 4 page bulletin with an easy-to-read question-and-answer format. In this study, a series of 20 letters were sent to over 6000 physicians in British Columbia, however 8 letters were excluded for either lack of outcome measurability or lack of prescribing message. The Therapeutics Letters are available online and can be accessed here, http://www.ti.ubc.ca/therapeutics-letter/. Topics of the Therapeutics Letters include: • Letter 1, Treatment of Non-Ulcer Dyspepsia in Adults • Letter 2, Definitive treatment of peptic ulcer disease by eradication of helicobacter pylori • Letter 4, Should we be using NSAIDs for the treatment of osteoarthritis and "rheumatism" • Letter 6, Medical management of ischemic heart disease: optimal use of nitrates • Letter 7, Drugs of choice in the treatment of hypertension (part 1) • Letter 8, Drugs of choice in treatment of hypertension (part 2) • Letter 11: To sleep or not to sleep: here are your questions • Letter 12, Changing concepts in the management of asthma • Letter 14, Menopausal hormone therapy • Letter 16, Review and Update 1996 • Letter 18, Management of anxiety disorder in primary care • Letter 19, Medical management of benign prostatic hyperplasia Letters were mailed to physicians in intervals that varied in length by 4-10 weeks. Outcome measures were taken for 3 months before receipt of the letter as a pre-intervention observation and measured for 3 months after as a post intervention observation.
Setting	Community
Intervention Deliverer	University of British Columbia
Intervention Recipient	Primary care physicians
Quality of the Study	High quality

OUTCOMES FROM SYSTEMATIC REVIEW	
Comparison	1. Therapeutic letter vs. no intervention
Health Care Provider Process Outcomes	Results demonstrate a significant change in prescribing to newly treated patients when the impact of a series of 12 letters was subjected to a combined analysis. Each letter's impact when considered on its own did not achieve statistical significance. Note: counting only newly treated patients increased the sensitivity of demonstrating a change in prescribing.