

A series of evidence-based drug therapy letters improved prescribing behaviour

Dormuth CR, Maclure M, Bassett K, *et al.* Effect of periodic letters on evidence-based drug therapy on prescribing behaviour: a randomized trial. *CMAJ* 2004;**171**:1057–61.

Clinical impact ratings GP/FP/Primary care ★★★★★☆

Q Do evidence-based drug therapy letters affect the prescribing behaviour of physicians to newly treated patients?

METHODS

-  **Design:** cluster randomised controlled trial.
-  **Allocation:** concealed.*
-  **Blinding:** blinded (clinicians, patients, and outcome assessors)†.*
-  **Follow up period:** 3 months (8 wks for letters #7 and #8).
-  **Setting:** 24 local health areas (LHAs) in British Columbia, Canada.
-  **Participants:** a 10% sample of prescribing physicians from the 24 LHAs: 499 physicians (mean age 46 y, 86% men, 90% general practitioners). The patient populations were (i) residents of British Columbia who were ≥66 years of age between 1993 and 1998, lived at home or in a continuing care institution, and had been eligible for Pharmacare coverage for ≥1 year (people who had made no claim in the preceding year for any drug among the drug classes included in the letters were “at risk” of a first prescription); and (ii) a younger patient population, which was used to measure the effect of a letter on the management of asthma.
-  **Intervention:** 24 LHAs were paired by the number of physicians in each area and 1 of each pair was allocated to an intervention (258 physicians) or control (241 physicians) group. Physicians in the intervention group received 12 issues of *Therapeutics Letter*, a concise and colourful 2–4 page bulletin with an easy to read question and answer format. The 12 letters selected had a clear message that could potentially change prescribing behaviour. 6 letters were expected to increase prescribing and 6 to decrease prescribing of new medications. The key drug for which prescription rate was most likely to change was identified in each letter as the analysis drug. Physicians in the control group received the letters 3–8 months later. The exceptions were letters #7 and #8 on antihypertensive therapy, which were mailed 10 weeks apart and the control group received letter #7 eight weeks after the intervention group received letter #8.
-  **Outcomes:** change in physician prescribing measured as incidence of patients newly treated with analysis drugs.
-  **Patient follow up:** {>95% for physicians and patients}† (intention to treat analysis).

*See glossary
†Information provided by author

MAIN RESULTS

The change in new prescriptions of the analysis drug was 1.3 times more likely in the predicted direction in the intervention group than in the control group for the 12 letters combined (weighted relative risk 1.3, 95% CI 1.13 to 1.52). No letter had a statistically significant effect on its own.

CONCLUSION

A series of 12 evidence-based drug therapy letters changed the prescribing behaviour of physicians for newly treated patients in the desired direction of increasing or decreasing prescriptions.

Commentary

Only pharmaceutical companies seem to be able to consistently change the prescribing practices of physicians. The literature on academic or delivery system based interventions to improve prescribing has shown modest and unsustainable effects, at best.¹ Printed educational materials alone have generally not been effective in changing prescribing behaviour. The study by Dormuth *et al* challenges the prevailing nihilism about such educational mailings. The authors report that a series of 12 evidence-based drug therapy letters to general practitioners in British Columbia improved evidence-based prescribing. The intervention seemed to be more successful in promoting new prescription of favoured drugs, such as thiazide diuretics for hypertension, than in reducing new prescription undesirable of drugs, such as long acting benzodiazepines, although the statistical significance of the observation was not assessed.

A few cautions are in order. The overall effect was modest, and was only observed with pooled data from all 12 mailings. The sampling strategy used to select participating physicians was not stated, raising concerns that participants may not have been representative of all general practitioners in the province. The incidence of new prescriptions for each targeted drug seemed to be low, suggesting that the number of patients affected by the intervention was small. The focus on modifying new prescriptions rather than changing existing treatment regimens limited the effect of the intervention. Finally, the evaluation ended 3 months after the letters were sent, precluding assessment of the sustainability of the intervention over time. From a population perspective, such an intervention is appealing because its costs are minimal and it has the potential to reach a large number of physicians despite its relatively modest effect.

Before payers or delivery systems commit to the production of such brochures, further research is necessary to confirm these findings, and particularly to show that physicians can maintain changes in prescribing over time in the face of their many competing demands and the contradictory messages provided by drug manufacturers.

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1 Tu K, Davis D. Can we alter physician behavior by educational methods? Lessons learned from studies of the management and follow-up of hypertension. *J Contin Educ Health Prof* 2002;**22**:11–22.

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