Review: nursing interventions increase smoking cessation rates in adults

Rice VH, Stead LF. *Nursing interventions for smoking cessation*. (Cochrane Review, latest version 21 May 1999). In: *Cochrane Library*. Oxford: Update Software.

QUESTION: How effective are smoking cessation interventions delivered by nurses?

Data sources

Studies were identified by searching the Cochrane Tobacco Addiction Review Group specialised register (which includes studies identified from Medline, EMBASE/Excerpta Medica, and PsycLIT, and by hand searches of specialist journals, conference proceedings, and bibliographies) using the terms nurse or health visitor. CINAHL was also searched from 1983 using the terms nursing, smoking cessation, and intervention.

Study selection

Randomised trials were selected if they evaluated the effectiveness of nurse delivered smoking cessation interventions (defined as provision of advice or other information and strategies to help patients stop smoking) for adults; had ≥ 2 treatment groups; and had ≥ 6 months of follow up. Studies were excluded if the sample included pregnant women, if they compared advice alone with advice plus nicotine replacement therapy, or if no outcome data were provided on smoking cessation rates.

Data extraction

Data were extracted on study setting and design, sample size, definition of a smoker, description of the intervention and its intensity, outcomes, and biochemical validation. Main outcome was smoking cessation, defined using the strictest available criteria for abstinence (eg, sustained cessation rather than point prevalence). Studies were assessed for quality and rated for efforts to control for selection bias.

Main results

19 studies met the selection criteria; 17 involved patients from hospitals or primary care settings and 18 involved adults with diagnosed health problems. 14 studies reported smoking cessation validated by biochemical analysis of body fluids or expired carbon monoxide. Meta-analysis included 15 studies ($n=7912$) and was done on an intention to treat basis. At longest follow up, patients who received advice from a nurse were more likely to stop smoking than those who received usual care (table).

*Nursing intervention v usual care for smoking cessation at longest follow up (≥ 6 mo)**

Outcome	Nursing advice	Usual care	RBI (95% CI)	NNT (CI)
Smoking cessation	15.7%	12.5%	28% (2 to 61)	32 (17 to 250)

*Based on a random effects model. Abbreviations defined in glossary; RBI, NNT, and CI calculated from data in article.

Conclusion

Nursing interventions (primarily advice to stop smoking) increase smoking cessation rates among adults.

COMMENTARY

This meta-analysis by Rice and Stead provides a review of smoking cessation interventions delivered by nurses to patients in hospital and outpatient settings. The findings lend support for smoking cessation counselling by nurses but provide little direction for choosing the optimal set of strategies for a smoking cessation programme (eg, self help manuals, individual counselling, or telephone follow up).

The authors classified cessation strategies into low and high intensity interventions based primarily on the duration of the intervention. Surprisingly, they observed that low intensity rather than high intensity smoking cessation strategies led to successful cessation. A review of the high intensity interventions indicates that many of them required >1 visit by a patient to a healthcare setting (eg, multiple sessions over time) or involved group interventions. It is not possible to determine whether these factors produced the differential effect of high versus low intensity interventions. Furthermore, the meta-analysis did not take into account other factors known to influence the effect of cessation interventions, including patient characteristics (eg, readiness to change behaviour, perceived risk of smoking, and type of events triggering behaviour change); contextual factors (eg, partner and family support for cessation, and social norms); and features of the intervention (eg, individual versus group counselling, and the theoretical model underlying the intervention).

The focus of this meta-analysis was the nurse as a vehicle for providing the intervention. A previous review showed that smoking cessation interventions provided by several healthcare professionals have a stronger effect than interventions delivered by a single provider.¹ Nurses should therefore strive to ensure that all members of the healthcare team provide a consistent message about the importance of smoking cessation.

A central question raised by this review is whether smoking cessation counselling by nurses simply provides a means of reaching a larger number of patients, or suggests an opportunity to improve smoking cessation interventions. It is perhaps time to capitalise on the strengths nurses bring to patient care situations and use these to enhance cessation efforts. This might lead to interventions that are timed to better reflect patients' readiness to change, address contextual influences for individual lifestyle choices, and involve partners and other family members in supporting smoking cessation efforts.

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1 Fiore MC, Bailey WC, Cohen SJ, *et al*. Smoking cessation. Clinical practice guideline No 18. Rockville, MD: Agency for Health Care Policy and Research, 1996.

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