

# A nurse led smoking cessation intervention increased cessation rates after hospital admission for coronary heart disease

Quist-Paulsen P, Gallefoss F. Randomised controlled trial of smoking cessation intervention after admission for coronary heart disease. *BMJ* 2003;**327**:1254-7.

**Q** Is a nurse led, smoking cessation intervention, given individually for more than 5 months, effective in patients admitted to hospital for coronary heart disease?

## METHODS

**Design:** randomised controlled trial.

**Allocation:** {concealed}\*.

**Blinding:** blinded {patients and healthcare providers}\*.

**Follow up period:** 12 months.

**Setting:** cardiac ward of a general hospital in Kristiansand, Norway.

**Patients:** 250 patients <76 years of age who were current daily smokers and had been admitted to hospital for myocardial infarction, unstable angina, or coronary bypass surgery. Exclusion criteria: serious illness associated with a short life span, serious psychiatric problems, alcoholism, or dementia. (10 patients were withdrawn after randomisation because of a refuting diagnosis; the remaining 240 patients had a mean age of 57 y, and 76% were men.)

**Intervention:** 125 patients were allocated to an intervention led by cardiac nurses without special smoking cessation training. The intervention was initiated in hospital and included individualised telephone follow up for >5 months and 1 clinic visit at 6 weeks. The intervention was based on a booklet that emphasised the health benefits of quitting smoking after a coronary event, focused on fear arousal (conveying a message about the probability of having another heart attack if smoking behaviour continued), and advised on relapse prevention methods including the use of nicotine replacement. 125 patients were allocated to usual care (a video, general information on coronary heart disease, and advice on quitting smoking).

**Outcome:** self reported smoking cessation, verified by urine test (nicotine metabolite concentration <2.0 mmol/mol creatinine in urine).

**Patient follow up:** 87%.

\*Information provided by author.

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## MAIN RESULT

Patients who received the nurse led intervention had a higher smoking cessation rate than those who received usual care (table).

## CONCLUSION

A nurse led, individually provided, smoking cessation intervention that focused on fear arousal, positive feedback, and relapse prevention and lasted  $\geq 5$  months increased smoking cessation rates 12 months after admission to hospital for coronary heart disease.

## Commentary

Findings of the study by Quist-Paulsen and Gallefoss are supported by a systematic review, which showed the efficacy of intensive behavioural interventions for smoking cessation in patients admitted to hospital.<sup>1</sup> Although it is important to highlight the valuable role of nurses in reducing coronary risk factors such as smoking, 2 concerns may reduce the usefulness of the findings in clinical practice. The first is a concern about the appropriateness of using fear tactics with cardiac patients,<sup>2</sup> especially because this type of intervention is not among the standard recommendations for effective smoking cessation.<sup>3</sup> A second challenge is that, in the face of a severe, worldwide nursing shortage<sup>4</sup> (even more critical among specialties like coronary care), it simply may not be realistic to expect that nurses' time could be spared to regularly telephone patients for up to 5 months after discharge.

Although the findings of this study show a difference between groups, 15 patients did not have their final smoking status verified. When the authors counted these as patients who smoked, the absolute risk reduction at 12 months was reduced from 20% to 13% (95% CI 0% to 26%; number needed to treat 8, CI 4 to 250). This loss to follow up must therefore reduce our confidence that the treatment effect is as large as it first appears.

It is possible that mechanisms other than "fear arousal," the central feature of the study intervention, were at play in generating these results. Perhaps the outcome is a result of attention effects, positive feedback, education, support, or a combination of these factors. Further research, including an economic evaluation, is needed before nursing resources are allocated to this intervention.

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## A nurse led smoking cessation intervention v usual care after admission to hospital for coronary heart disease\*

Outcome at 12 months	Nurse led intervention	Usual care	RBI (95% CI)	NNT (CI)
Smoking cessation	57%	37%	53% (15 to 105)	5 (3 to 16)

\*Abbreviations defined in glossary; RBI and CI calculated from data in article.