

# The nurse as expert practitioner in global cardiovascular risk management

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Randomised controlled trials have demonstrated the benefit of nurse-run clinics for secondary prevention of coronary heart disease through impacting upon health perceptions and on cardiovascular risk factors. However, to achieve positive results, intensive intervention is needed and this requires a significant time commitment. At present, nurses tend to be involved in individualised interventions directed at patients who already have coronary heart disease. There is a need now to consider a community approach to prevention of cardiovascular disease. It is also important to try to influence the structural, economic, and cultural issues that are impacting upon cardiovascular risk management.



The goals of global cardiovascular risk management are to ensure that high risk patients are aggressively treated and that advice and motivation are given for possible lifestyle changes. Issues that need to be considered with regard to risk factor management include advice on modifiable risk factors such as hypertension, cholesterol concentrations, effective medication, and glycaemic control in the diabetic population.

## BENEFITS OF NURSE-LED CLINICS

Randomised controlled trials over the past decade have demonstrated the benefit of nurse-run clinics for the secondary prevention of coronary heart disease. An outline of four of these trials is shown in table 1. Cupples and colleagues<sup>1</sup> reported a study undertaken in Northern Ireland involving patients with angina. Intervention group patients were reviewed four monthly by a health visitor and were given health education about cardiovascular risk. Control group patients received usual medical care. At two year review, there were no significant differences between the groups in objective cardiovascular risk factors such as the body mass index, cholesterol concentration, and

blood pressure. However, there was decreased mortality in the intervention group and patients reported less restriction by angina and reduced medication.<sup>2</sup> It can be assumed that the improvement in their symptoms of angina contributed towards their reported increase in quality of life. Interestingly, three years following this intensive intervention, most of these benefits had declined,<sup>3</sup> which supports the planning of programmes of secondary prevention to provide long term support.

A further study,<sup>4</sup> undertaken in Scotland, evaluated the effect of secondary prevention clinics run by nurses in general practice for patients with coronary heart disease. The intervention again primarily involved health education and patients were reviewed every two to six months, depending on their symptoms and desire for support. The control group received usual general practitioner (GP) care. As in Cupples's study, there was an improvement in functional ability between control and intervention patients, and data from the Short Form-36 health survey questionnaire showed that intervention group patients had significantly increased health perceptions. Maintaining physical functioning and positive health perceptions must be an important goal for health care. Previous studies have demonstrated how health perceptions influence the outcome from interventions such as angioplasty<sup>5</sup> and coronary artery bypass grafting,<sup>6,7</sup> and play an important part in the recovery from myocardial infarction.<sup>8</sup>

The more recent ASSIST (assessment of implementation strategies)<sup>9</sup> study was a protocol driven study. It involved assessment of elements of secondary prevention relating to medicine management and the medical aspects of care, and was carried out in Warwickshire towards the end of the 1990s using protocol driven care for blood tests and medications. The study compared three methods of promoting secondary prevention of coronary heart disease in primary care: audit, systematic recall to the GP, and systematic recall to a practice nurse-led clinic. Follow up by nurses was found to be at least as effective as follow up by a GP. Medical outcomes such as blood pressure

**Table 1** Randomised controlled trials of nurse-run secondary prevention clinics

Study	Intervention	Delivered by
Cupples <i>et al</i> <sup>1, 2, 3</sup> n=688	4 monthly review	Health visitor
Campbell <i>et al</i> <sup>4</sup> n=1173	2–6 monthly review	Practice nurse/health visitor/district nurse
ASSIST trial <sup>9</sup> n=1906	Protocol driven	Practice nurse
McHugh <i>et al</i> <sup>10</sup> n=98	Monthly	Shared care; practice nurse/cardiac liaison nurse (health visitor)

ASSIST, assessment of implementation strategies.

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and cholesterol varied little between these two groups and in both groups there was increased management of cardiovascular risk factors compared with baseline. With the more recent trends toward nurse prescribing, the benefits of a nurse-led clinic may improve still further.

The role that nurses can play in secondary prevention was clearly shown in a study carried out in the Glasgow area by McHugh and colleagues.<sup>10</sup> This study assessed the effect of intensive intervention and was again a randomised controlled trial. The study had a shared care approach, involving a practice nurse and a cardiac liaison nurse. The intervention was given monthly, either in the practice or in the patient's home, and was found to produce significant improvement in modifiable risk factors. Other important results from this study were improvements in anxiety, depression, and quality of life. This study clearly demonstrates the benefit of this intensive programme for secondary prevention.

What are the key issues that lead to success? From studies demonstrating improvement in global cardiovascular risk a variety of nursing strategies are identified:

- encouragement and support
- counselling and lifestyle advice
- information regarding treatment regimens
- family support
- measurement and monitoring of risk factors
- time to listen.<sup>10-12</sup>

It would therefore appear that a fundamental element to successful nursing interventions lies with this approach. For example, provision of information on treatment regimens alone is unlikely to confer benefit. However, information when combined with counselling, lifestyle advice, and facilitating family support may well motivate behavioural change.

### ALTERNATIVE MODELS FOR NURSE-LED CARDIOVASCULAR PREVENTION

The literature shows that where nurse-led clinics have been associated with improvement in medical data or health perception, the initial clinic visit ranged from 30–60 minutes and subsequent visits from 10–30 minutes.<sup>13</sup> Therefore, nursing interventions not only need to be frequent but also have significant time commitment. This not only drains our current scarce nursing resources but also impacts upon the patient and family. Alternative models could therefore be considered. One example would be adoption of a worksite based approach using occupational health nurses. Previously reported to show positive benefit in terms of risk factor modification,<sup>14</sup> this approach may focus more upon health over disease. In addition, in view of the current shortage of resources, an internet based support may prove useful.<sup>15</sup>

There is also a need to consider the wider community: a knowledgeable community (a “neighbourhood with know-how”), which can have an impact upon secondary prevention. The Foundation in Community Heart Health is a project underway in East Berkshire. Involving various local groups,

including social services, voluntary sector workers, housing department, library staff, local businesses, community group leaders, sports centre workers, and local government employees, the aim is to enable local personnel to gain an overview of coronary heart disease and health promotion to support healthy lifestyle advice.

### CONCLUSION

At present, nurses are largely involved in interventions that are individualised and directed at patients who already have coronary heart disease. There is a need to move away from that approach and to consider a community approach to prevention of cardiovascular disease. This can be seen as returning to the public health approach. If nurses are going to have any influence in the prevention of coronary heart disease and management of cardiovascular risks, they also need to try to influence the structural, economic, and cultural issues that are impacting upon cardiovascular risk management.

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