# Implementation of secondary prevention of coronary heart disease in primary care

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## Introduction

The primary care setting has been identified as best placed to deliver secondary prevention in relation to coronary heart disease and the practice nurse is a key figure in delivering that care. Cardiovascular disease (CVD) is the largest single cause of death in Ireland. In 1997, it accounted for 43% of deaths worldwide (WHO, 1997) and more recently in Ireland, in 2001, CVD accounted for 41% of deaths (Central Statistics Office, 2002). In response to these figures, a need for preventive intervention was recognised. In order to develop a programme of secondary prevention of CVD, the role of the practice nurse is central to the successful planning, organisation and control of a secondary prevention programme in primary care.

The National Health Strategy document, 'Shaping a Healthier Future' (1994), set out the principles that were to guide and develop a cardiovascular healthcare strategy in Ireland. These principles were to form the foundation of the Health Care Strategy (2002).

## Health and social gain

According to the Health Care Strategy, treatments and prevention should result in health improvements and social gain. It is recognised that some of these improvements will be immediate and others will be more long term:

- **Equity of access —** patients' access to services should not be restricted by their income, gender, age or residence. In the case of primary care programmes for people with CVD, offering the programme locally means that patients do not have to travel long distances for treatment. This is especially relevant in rural areas.
- **Quality —** the care offered should be of the best standard achievable. Efforts should be made to actively encourage and improve standards of care.
- **Effectiveness and efficiency —** the care should result in a benefit or benefits. It should be provided by those best able to offer the service and there should be a recognised standard of practice, so patient and provider are assured of best practice.
- **Audit and accountability —** it must be clear where the responsibility for service provision lies. A review process must be established to measure health gain and to identify areas of weakness in the provision of preventive care.

In the case of CVD, health and social gain are obviously served by treating the patient to prevent another CVD event, so that they can hopefully resume their normal life as soon as possible, e.g. return to work. It also aims to extend the patient's life expectancy and improve their quality of life with their family.

As a result of 'Shaping a Healthier Future', the Cardiovascular Health Strategy Group launched 'Building Healthier Hearts' in July 1999. Its aims were to reduce the risk factor profile within the general population, identify those at risk, deal effectively with those who have established disease and ensure best survival and quality of life.

This resulted in 211 recommendations, 55 of these in the area of primary care. Central to these recommendations is the recognition of the practice nurse as a key player.

## Implementing the recommendations

The Cardiovascular Strategy provided funding for my further education and that of other nurses to obtain a Diploma in the Prevention of Cardiovascular Disease in Primary Care, in anticipation of the proposed changes and to ensure that quality of care was attained. This course was to form a basis for my learning and help me to improve the care provided to patients in our practice.

The course involved a six-month distance learning

programme with submitted course work and a two-hour written exam. It provided education on the normal and abnormal physiology of the cardiovascular system, recognition of modifiable and non-modifiable risk factors and appropriate interventions and prevention.

## Heartwatch

To ensure an equitable service, the Cardiovascular Strategy also recommended that secondary prevention should be provided in primary care and that a pilot programme should be established. In October 2002, the initial implementation of the National Programme in General Practice for Secondary Prevention in Cardiovascular Disease (Heartwatch) was launched.

At this point, general practices were asked to apply to participate in the pilot programme. Practices would be paid for providing this prevention service. meaning that patient access to the service would not be dependent on income. This marks a change in health policy, as GPs had previously been funded to provide treatment for disease as opposed to disease prevention. With the exception of immunisations and pregnancy, GPs had not previously been paid for preventive care.

The overall aim of the Heartwatch programme is to reduce mortality and morbidity due to CVD. The Department of Health and Children, health boards and the Irish College of General Practitioners, in collaboration with the Irish Heart Foundation, have developed the Heartwatch programme. In order to participate in the programme, patients must meet one or more of the following qualifying criteria.

They must have had:

- A myocardial infarction (MI);
- Coronary artery bypass graft (CABG); or
- Percutaneous transluminal coronary angioplasty (PTCA).

In order to identify qualifying patients in our practice, a register had to be created. Initially, this was done by computer audit using reports software for medical diagnosis. Then all of our primary care team, from receptionists to doctors, were asked to identify those attending for repeat prescriptions for certain combination drugs (aspirin, beta-blockers, ACE inhibitors and statins) and to scroll through their computer history, checking if any of the qualifying criteria applied. This involved much time and enthusiasm by all the team.

Patients who were identified were contacted and invited to participate in the programme. This resulted in a well-established database to which we continually add, and which is updated on a monthly basis. Currently, patients are seen four times a year, their risk factors are assessed, appropriate interventions implemented and aims achieved according to policy.

To ensure that the programme is effective and efficient, standard protocols had to be established at a local and a national level. The Heartwatch programme uses international guidelines (Prevention of Coronary Disease in Clinical Practice [Second Joint Task Force of European and other Societies on Coronary Prevention, 1998]) and any practice participating in the programme must adhere to these guidelines. As a result of our participation in the programme, we established our practice policy having regard to the European guidelines.

In compliance with these guidelines, Heartwatch is mainly a nurse-led clinic. If a patient's goals are met, then they should not need to see the GP. However, if the practice nurse has concerns she must feel able to consult the GP about them. For a programme such as Heartwatch to work, it is essential to have a practice policy in place, and perhaps a local drug directory.

## Comprehensive database

In order to identify target patients who met the entry criteria, it was agreed that all staff would use repeat prescriptions as an opportunity to update and ensure that patient medical history was entered into the computer system. Continually updating records ensures a more reliable and accurate audit system.

## Aspirin therapy

All patients who have experienced a CVD event (MI, CABG or PTCA) will receive a maintenance dose of aspirin 75mg od. It must be explained to the patient that this medication is life-long and must not be discontinued unless advised by their doctor. They are advised on possible side effects (including gastrointestinal disturbances and wheezing) and told to report these to the GP.

Clopidogrel (Plavix) must be prescribed for those patients in whom aspirin therapy is contraindicated.

## Lipid therapy

All patients who have a cholesterol level of >5mmol will receive a statin therapy. The drug of choice is atorvastatin 10mg nocte. Liver function tests (LFTs) are checked prior to commencing treatment and within six weeks of starting treatment; if normal, they should be repeated annually. Patients are advised to report any muscle pain or other side effects, such as gastritis.

## Blood pressure control

The programme aims for a blood pressure of 140/90mmHg in non-diabetic patients and 140/80mmHg in people with diabetes (European guidelines). All patients will receive a beta-blocker (Emcor or Atenomel) unless contraindicated. If blood pressure is not controlled, an ACE inhibitor such as Tritace 2.5mg od should be prescribed. This should be titrated to obtain optimal blood pressure readings.

If the patient continues to have resistant hypertension, referral would be considered at this stage.

## Drugs

- S  statin
- A  aspirin
- A  ACE inhibitor
- B  beta-blocker

## Biochemistry

Haematology will be performed on a 6- to 12-month basis for all CVD patients, with tests to include full blood count (FBC) to rule out anaemia, glucose testing to check for diabetes and a lipid profile (to include low density lipoprotein [LDL] and high density lipoprotein [HDL] cholesterol levels and triglycerides). Urea and electrolytes (U&E) should be carried out to monitor kidney function and LFTs to monitor liver function.

## Measurements

A baseline weight and height measurement are performed at the initial visit to calculate the patient's body mass index (aiming for <25). Urinalysis for protein and glucose is carried out at each visit. An ECG, chest X-ray and 24-hour blood pressure monitoring may be performed, depending on individual results and the needs of the patient. A waist circumference is taken, with targets of <94cm for men and <80cm for women.

## Lifestyle advice

All patients who have had a CVD event will receive advice and support regarding lifestyle. This will include smoking cessation, diet, alcohol and exercise (aiming for 210 minutes of activity per week). By utilising brief intervention skills and the 'Cycle of Change Model' (Diclemente and Prochaska, 1978), a patient's stage of change will be determined and appropriate advice given.

Patients are referred to the community dietitian, smoking cessation officer and the cardiac rehabilitation programme depending on their needs. Support and advice is given to promote, facilitate and maintain change.

## Audit

Anonymous, computer-generated results are sent monthly to the Independent National Programme Centre (INDC), where the information is compiled. As of September 2004, 865 patients were registered with the Heartwatch programme in the North-Western Health Board area, and 3,500 continuing care visits had been made.

Nationally, over 10,500 patients have registered and 37,500 continuing care visits have taken place. Locally, 26 patients have attended for visits at this practice, with two falling into the exclusion criteria and two choosing not to participate in the programme (figures for October 2003).

## Conclusion

This family practice, with myself as the practice nurse, has taken on board government initiatives, implemented a national pilot project and improved the quality of care for our patients by following national guidelines.

The future of Heartwatch continues to be uncertain. If discontinued, it will be up to individual practices to decide whether it is financially viable to continue this prevention programme. This is unlikely to be an option in a mainly GMS practice.

Perhaps this would be the time to remember the old adage – 'Prevention is better than cure'.

## Further reading


*Shaping a Healthier Future*. Department of Health, 1994.

*Building Healthier Hearts*. The Cardiovascular Strategy European Guidelines. Department of Health, 1999.

Central Statistics Office Independent National Programme Centre, Dublin.



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