A nurse-led intervention for patients on CABG waiting lists

tal themselves, usually to enquire about waiting times.

To address this problem a cardiac specialist nurse was seconded to the post of cardiac outreach sister. Her role was to design, administer and evaluate a presurgical intervention to improve the overall experience for patients on the CABG waiting list. In view of the limited objective evidence on the effects of presurgical interventions currently available a controlled trial approach was agreed upon.

Controlled trial

Half the local population on the CABG waiting list were to receive the presurgical intervention and half were to receive standard care. Those receiving standard care would not be contacted by the hospital, once on the CABG waiting list, other than for them to attend the preassessment clinic or be given a date for their surgery.

Unfortunately the controlled trial was terminated early, with only 13 being patients recruited into the study. This was because needs were identified among patients in the control group that could not be ignored.

Both groups had been sent prospective questionnaires at intervals to monitor their progress while on the waiting list. Of the six recruited into the control group, two were still smoking but reported they had not been offered support to help stop. One patient had high levels of anxiety and one reported deteriorating health. It was considered unethical not to act upon such problems once they had been identified so these patients were removed from the study and offered the intervention.

In addition removing such patients from the control group would have affected the study results, so the project was instead continued as a pilot study with all local patients being offered the intervention.

Presurgical intervention

The intervention has developed since it was first set up. Patients are now sent a letter within two weeks of being placed on the CABG waiting list.

They are advised about the role of the cardiac outreach sister and that she will be contacting them over the next few days to offer them a home visit and will maintain contact while they are on the waiting list. If they prefer to be seen in clinic this can also be arranged for them.

The home visit by the cardiac outreach sister comprises a detailed assessment of:

- Symptom control;
- CHD risk factors;
- Anxiety and depression – measured using the Hospital Anxiety and Depression scale (Zigmond and Snaith, 1983);
- Social circumstances.

A strong emphasis is placed on using the waiting time positively to improve health status and hence postoperative recovery. Patients tend to feel they have little control over the timing of their surgery, so they are encouraged to focus on areas they do have some control over, such as reducing risk factors.

Following the assessment an action plan, which patients feel is realistic and meets their specific needs, is agreed with the patients. A copy of the assessment and action plan is sent to the medical team caring for the patients in hospital and to each patient’s GP and practice nurse, so that the practice CHD register can be updated. If there are any immediate concerns these are discussed with the most appropriate member of the primary care or hospital team.

For patients who have no identifiable problems or modifiable CHD risk factors, no action plans are developed. Only telephone contact is maintained with this group of patients. Action plans are agreed for the remaining patients.

The action plan

The action plan shown (Box 1) was developed for Jane Smith (name has been changed), a 64-year-old woman awaiting CABG surgery. She had not previously experienced an MI or interventional treatment for CHD so she had not received any form of cardiac rehabilitation. Ms Smith experienced frequent episodes of angina on exertion, but continued to attempt all housework. She had:

- Blood pressure of 214/92mmHg on assessment by the cardiac outreach sister;
- A body mass index of 43kg/m²;
- Experienced frequent episodes of angina;
- Diabetes, but with good glycaemic control.

Ms Smith was well aware that she was overweight and had tried on previous occasions to lose weight, but reported that she had experienced hypoglycaemic episodes whenever she had tried. Ms Smith had seen dietitians before but had become disillusioned with trying to lose weight. She was unwilling to see another dietitian at this time.

When the action plan was reviewed after three months, Ms Smith had lost 2kg and her blood sugar levels remained stable. Ms Smith’s blood pressure was 150/80mmHg and she reported some improvement in symptom control.

Additional health promotion

In addition to being given individual action plans where appropriate, patients are encouraged to attend the following healthy living services:
Coronary heart disease (CHD) is one of the leading causes of morbidity and mortality in the UK, accounting for three per cent of all hospital admissions (Department of Health, 2000). The National Service Framework for Coronary Heart Disease (DoH, 2000) was introduced to reduce the incidence of CHD and improve the quality of care provided for these patients.

Cardiac rehabilitation

Patients who have received interventional treatment for CHD or who have had a myocardial infarction (MI) are usually offered cardiac rehabilitation after their cardiac event. Those waiting for CABG surgery have established and sometimes only recently diagnosed CHD, yet many receive no structured care while waiting for their operation. Some will not have had access to cardiac rehabilitation and so may not be aware of what they can do to improve their cardiac health while awaiting surgery, which can often take up to six months.

The impact on patients of waiting

A number of studies have examined what happens to patients while on the waiting list. Most report that they have a reduced quality of life (Fitzsimons et al, 2000a; Tço et al, 1998). This group of patients also have high levels of morbidity and mortality (Morgan et al, 1998; Jackson et al, 1999; Doogue et al, 1997).

People waiting for CABG also experience numerous emotional disturbances (Fitzsimons et al, 2000b; Jonsdottir and Baldursdottir, 1998; Bengtsson et al, 1994; Underwood et al, 1993).

Half of those studied by Bengtsson et al (1996) reported their uncertainty and fear as being more disturbing than the chest pain itself. Many patients also continue to have potentially modifiable CHD risk factors (McHugh et al, 2001).

Improving care

The NSF for CHD (DoH, 2000) set specific targets to reduce CABG waiting-list times. This is likely to have a positive effect on the above factors and on patients’ overall experience of being on the waiting list but will take some time to achieve. In addition, many of the above problems will still exist, even when the waiting list is reduced to three months. If the quality of care is truly to be improved for patients with CHD then consideration needs to be given to providing structured care for all those awaiting CABG surgery.

Two randomised controlled trials were identified that evaluated the effects of such pre-CABG interventions (McHugh et al, 2001, Arthur et al, 2000). The interventions differed, as did the outcomes measured, but both studies demonstrated that a presurgical intervention can result in positive outcomes.

A Canadian study (Arthur et al, 2000) observed a reduced length of hospital stay postoperatively following an eight-week programme of exercise, training and education. McHugh et al (2001) reported an improvement in CHD risk factors and reduced anxiety among patients on the waiting list who participated in a shared care programme. This programme comprised education, support and risk-factor management.

Current local practice

In April 2002 there was no structured care offered to patients on the CABG waiting list at Guy’s and St Thomas’ NHS Hospital Trust and the waiting list at the time was up to nine months. Patients had little contact with the hospital while on the list, until they were invited to attend the preassessment clinic several weeks preoperatively. Questionnaires revealed that their only other contact with the hospital before they attended the preassessment clinic was administrative in nature. This was often dependent on patients telephoning the hospital.

REFERENCES


This article has been double-blind peer-reviewed.

For related articles on this subject and links to relevant websites see www.nursingtimes.net
Providing this support as soon as patients are on the waiting list means their anxieties can be addressed before they build up to a less manageable level. Once they had made a decision on whether or not to proceed with surgery their anxiety levels improved.

It is hoped that the government initiatives to reduce waiting times and provide patients with an admission date when they are first added to the waiting list will also have a positive effect on anxiety levels.

**CHD risk factors**

Some improvements in CHD risk factors were observed in patients who were seen by the outreach sister but it should be noted that several assessments relied upon self-reporting. It is possible that self-reported improvements may not be an accurate reflection of what is actually happening. Nonetheless it does at least demonstrate an awareness of CHD risk factors among the patients seen.

Without a control group for comparison it is difficult to ascertain whether all the improvements in risk factors and levels of anxiety and/or depression observed occurred as a direct result of the intervention.

Improvements in blood pressure are likely to have occurred as a direct result of the intervention as this would have gone unchecked otherwise, while the reported increase in physical activity undertaken is also likely to be a direct result of the intervention as many of the patients who had been achieving below the recommended level of physical activity were under the impression they should not be exercising. Where it was considered appropriate for them to do so these patients were advised to build up their levels of physical activity very gradually.

**Home visits**

It was disappointing that approximately 40 per cent of patients offered a home visit declined it. Some of those who refused did so because they felt well enough to consider a visit unnecessary; some even continued to work full time, making it difficult to organise a visit even if one was required. It is good that patients felt well enough to continue work while on the waiting list.

It is also worth noting that those patients who agreed to the visit but were initially sceptical about its helpfulness reported afterwards that their scepticism was unfounded – they found it beneficial and did have concerns to discuss.

In view of this latter point, ways of increasing uptake of the service are now being considered – it has increased slightly since the cardiac outreach sister has started to write to patients before telephoning them but increasing flexibility on our part regarding the timing of the visits is also being discussed.

**Alternative coping mechanisms**

It should be recognised that not all patients will respond positively to hospital contact while on the waiting list. A number coped with being on the waiting list by avoiding thinking about the surgery and the wishes of these patients must be taken into consideration.

**Conclusion**

A controlled trial would have provided more objective evidence on the effects of the presurgical intervention. But the reason that the controlled trial was not continued – ethical reasons – further reinforces the assertion that there is a need for some type of presurgical intervention for patients awaiting CABG. Comments made by patients support this view.

The service has now been running for 18 months and the cardiac outreach sister has seen a total of 45 patients on the waiting list.

Since the service was first set up the cardiac outreach role has been merged with the cardiac liaison nurse role. There are now two cardiac liaison nurses in post (one post is 50 per cent funded by the British Heart Foundation) who see patients pre and postoperatively and post-MI.

Consideration is being given to expanding the service to include patients who are awaiting percutaneous coronary intervention and also those who have been referred but not yet accepted for cardiac surgery.

This will ensure that a complete pathway of care can be offered to all patients awaiting revascularisation procedures and would enable the hospital to provide risk factor management and support to patients from the time of diagnosis through to early hospital discharge and completion of a cardiac rehabilitation course.

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**REFERENCES**


Healthy walking schemes – 30-minute group walks led by a volunteer; Smoking cessation clinics; Shopping for Health scheme – a dietitian takes a group from the local community around a local supermarket to discuss issues relating to their diet such as food labelling and healthy eating.

Unfortunately, only one patient signed up for the Shopping for Health scheme and although several patients expressed an interest in the other schemes, the overall uptake of these schemes has been poor.

**Results**

**Uptake of the scheme**

Patient responses during the 15-month pilot included:
- 65 patients were offered a home or clinic visit;
- 38 patients were seen;
- 14 patients declined a visit as they felt they did not need it, or they worked full-time and found the visit too difficult to organise.

Telephone contact was maintained with this group of patients, with the following outcomes:
- Three patients subsequently decided to take up the offer of a home or clinic visit;
- One patient declined any contact as he wanted to ‘put the surgery to the back of my mind’ while he waited;
- 13 patients could not be contacted – several of these had gone abroad to take their minds off their surgery.

Verbal or written action plans were agreed to address symptom control, modifiable CHD risk factors and anxiety or depression levels for 47 of the 52 patients who were in regular contact with the cardiac outreach sister. These action plans were followed up during the waiting period.

The remaining five patients had no identifiable problems that they were either willing or able to address, so no action plans were agreed for them.

**Targets of presurgical intervention**

The NSF for CHD (DoH, 2000) sets targets for improving the management of CHD in primary care, reducing the number of people who smoke and improving diet and nutrition. Many of the action plans that were agreed as part of the presurgical intervention involved addressing such risk factors.

**Altering modifiable risk factors for CHD**

Some improvements in modifiable CHD risk factors were observed among patients followed up by the cardiac outreach sister. Fig 1 shows modifiable risk factors among all patients receiving the intervention at baseline and then again at the final preoperative assessment.

Patients who were not seen in person were questioned about their smoking habit and exercise levels. Their body mass index was recorded from their medical notes. It should be noted that there was insufficient time to repeat a cholesterol check during the waiting period for most patients, so no post-intervention cholesterol levels were recorded.

Although only three out of the 10 patients who smoked gave up completely, a further six were at various stages of attempting to stop at their final assessment. All 11 with elevated blood pressure on initial assessment showed some improvement, even if their target blood pressure was not achieved.

**Increasing activity levels**

Of the 14 patients who were not achieving 30 minutes of physical activity at least five times a week; three had comorbidities that prevented them from exercising and five remained too symptomatic to achieve this level of physical activity.

Unfortunately there was no appreciable weight loss among the five overweight patients but many did report making dietary changes to try to lose weight.

**Addressing levels of anxiety/depression**

Of the 38 patients, 13 who were visited at home had elevated levels of anxiety or depression, or both, on initial assessment. The question asked constantly by patients on the waiting list was when would they be having their operation, which was a source of considerable anxiety.

Some expressed concerns that they would have a heart attack before their operation; others simply wanted to know a date so that they could make plans for holidays and other occasions. The cardiac outreach nurse was able to give patients up-to-date estimations of approximate waiting times but these sometimes changed so patients had to be advised of this.

Of the 10 patients who were reassessed, all showed an improvement in levels of anxiety and/or depression. Several reported that the telephone calls from the cardiac outreach sister made them feel they were not forgotten and they appreciated the interest taken in them.

Typical comments included:
- ‘I was most impressed with the level of interest taken in me, it made me feel that someone cared,’;
- ‘Thank you for phoning… you imagine all sorts.’

**Supporting patients’ needs**

The cardiac outreach sister organised earlier surgery for two patients who had deteriorating symptoms and supported three patients who were undecided about whether to proceed with surgery. Two of these patients decided against having surgery.

The outreach sister has also visited some patients at home postoperatively to continue risk factor management and also to provide support in the early postoperative stage.

**Discussion**

**Anxiety levels**

The patients who were undecided about whether to proceed with surgery had the highest levels of both anxiety and depression and appeared to gain most benefit from the presurgical intervention. They were given the opportunity to talk at length about the risks and benefits of undergoing surgery.

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**References**

