Diabetes and coronary heart disease: combining the National Service Frameworks

Faced with milestones, goals and targets on all fronts, can Primary Care Trusts deliver the objectives of the different National Service Frameworks as a cohesive package rather than a series of multiple tasks, asks general practitioner Mike Mead? He has some advice on how they can do this.

Abstract

The two National Service Frameworks for coronary heart disease, and for diabetes, share some common themes. This article discusses where they overlap with each other and with national targets for stroke outlined in the National Service Framework for Older People. It then details a simple 10-point plan on how Primary Care Trusts can develop strategies to implement NSF targets so they achieve national standards.

Key words: National Service Framework, coronary heart disease, diabetes, stroke.

Br J Cardiol 2003;**10**:478–81

'Can primary care trusts deliver the objectives of the NSFs as a cohesive package?'

Mike Mead

Introduction

The three biggest clinical challenges facing Primary Care Trusts (PCTs) are coronary heart disease (CHD), diabetes and stroke, with each having a specific National Service Framework (NSF) agenda. The NSF for CHD was published in March 2000 and set PCTs a comprehensive series of challenging targets, many of which should have been completed by April 2003.

Unfortunately, resources have not been there to match the agenda. In heart failure, for example, by April 2003 every primary care team should have clinical data no more than 12 months old, including the number and percentage of the population with heart failure, the number and percentage of patients with confirmed heart failure or left ventricular dysfunction being prescribed an angiotensin-converting enzyme (ACE) inhibitor, and the number and percentage of patients with a diagnosis of heart failure who have ever undergone echocardiography. To achieve such objectives requires ready and open access to echocardiography, yet in many areas of the country there is over a six-month waiting list for this investigation.

Stroke was covered in the NSF for Older People published in March 2001 and we have only a few months left to achieve many of its key objectives by April 2004. These include a recommendation that all general hospitals should have a specialised stroke service and that general practitioners should use protocols for stroke identification and treatment with established clinical audit systems for stroke in place.

In contrast, the more recent NSF on diabetes takes a 10-year view – we have until 2013 to reach most targets, except for those requiring general practice to keep a register of diabetic patients and implement an effective retinopathy screening service, both of which need to be in place within the next three years.

The diabetes NSF and the NSF for CHD

Both the diabetes NSF and the NSF for CHD have 12 standards, which are outlined in tables 1 and 2. Although there are many specific issues, the NSFs share the common themes of patient identification, prevention of disease by risk factor detection, and management and structured care of the patient.

Combining the NSFs: targeting total cardiovascular risk

Diabetes is increasingly regarded as a cardiovascular disease, with about three quarters of deaths in diabetics being due to cardiovascular disease. Mortality rates from coronary heart disease are up to five times higher for people with diabetes, with the risk of stroke up to three times higher.[1] Up to 70% of patients with type 2 diabetes have raised blood pressure (BP) and more than 70% have raised cholesterol levels.[2] These risks are as important as

Table 1. The 12 standards of the NSF for Diabetes

1. **Prevention of type 2 diabetes**
   Developing, implementing and monitoring strategies to reduce the risk of developing type 2 diabetes
2. **Identification of people with diabetes**
   Developing, implementing and monitoring strategies to identify people who are not aware they have diabetes
3. **Empowering people with diabetes**
   Using agreed and shared care plans
4. **Clinical care of adults with diabetes**
   Ensuring high quality clinical care of adults with diabetes, including support to optimise the control of their blood glucose, blood pressure and other risk factors
5. **Clinical care of children and young people with diabetes**
6. **Enabling young people with diabetes to experience a smooth transition of care from paediatric diabetes services to adult diabetic services**
7. **Management of diabetic emergencies**
   Developing, implementing and monitoring agreed protocols for effective treatment of diabetic emergencies
8. **Effective care of people with diabetes during admission to hospital**
9. **Diabetes and pregnancy**
   Optimising outcomes during pregnancy
10. **Ensuring diabetics receive regular surveillance for the long-term complications of diabetes**
11. **Developing, implementing and monitoring protocols to effectively investigate and treat diabetics who develop long-term complications**
12. **Those diabetic patients who require multi-agency support should receive integrated health and social care**

Table 2. The 12 standards of the NSF for Coronary Heart Disease

1. **Reducing heart disease in the population**
   Developing, implementing and monitoring policies that reduce the prevalence of coronary risk factors in the population
2. **Reducing the prevalence of smoking in the local population**
3. **Identification of people with cardiovascular disease**
   Offering advice and treatment to reduce their risks
4. **Identification of people at significant risk of cardiovascular disease**
   Offering advice and treatment to reduce their risks
5. **Use of a defibrillator within 8 minutes of calling for help**
6. **People with a suspected heart attack to receive aspirin and thrombolysis within 60 minutes of calling for help**
7. **NHS trusts to put in place agreed protocols for assessing and treating patients admitted to hospital with a heart attack**
8. **Stable angina**
   Angina patients to receive appropriate investigation and treatment to relieve pain and reduce risk of coronary events
9. **Patients with angina increasing in frequency/severity to be referred urgently to a cardiologist**
10. **People with CHD to receive appropriate investigation and treatment to relieve symptoms and reduce risk of coronary events**
11. **Heart failure**
    Heart failure patients to be offered appropriate investigation (i.e. an echo) and treatment
12. **Cardiac rehabilitation**
    Cardiac rehabilitation programmes should be offered to patients admitted to hospital suffering from CHD

the risks of hyperglycaemia. Indeed, in the United Kingdom Prospective Diabetes Study, tight control of BP was a better strategy to reduce macrovascular events[3] than tight control of blood glucose[4] with sulphonylureas or insulin.

We therefore see a common set of risk factors in diabetes and in coronary heart disease – hyperglycaemia, hypertension, dyslipidaemia and smoking. This means it is as important to target cardiovascular risk as specific diseases.

10-point practical strategy to implement the NSFs based on vascular risk

To help practices and PCTs focus on particular areas to meet the NSF targets, here is a 10-point practical strategy, which is described below.

1. Prevention of CHD and diabetes

Prevention should focus on encouraging patients to lose weight, exercise, stop smoking and attend for regular BP, lipid and blood glucose checks. Promoting active good health and undertaking regular risk factor checks in patients will be a key role for primary care in the future.

2. Identifying patients with CHD and diabetes

Although there is a close correlation between these two categories of patients, all patients with CHD and hypertension should be screened for diabetes; it is amongst diabetics that CHD is often discovered. We should also be alert for diabetes in patients who are obese and in those who have a family history of the condition.

3. Use of shared care plans

Shared care plans for patients with diabetes and for patients with cardiovascular disease have common themes – again in reaching targets such as those for BP and lipids, and in being prescribed specific therapies. All shared care plans should identify the role of the nurse and doctor and encourage patient participation in their care. Personal diabetes record

cards were a key recommendation of the recent NSF for Diabetes Delivery Strategy.

4. Setting up of disease registers

Virtually all practices have registers of patients with CHD or diabetes but they should also have a register of stroke patients. To help identify people at risk of CHD and stroke, a hypertension register and even a hyperlipidaemia register could be added. Registers are also useful tools for audit and to ensure that patients are being followed up, enabling those who have not been seen within a specific time interval to be 'flagged up'.

5. Involving patients in their care

This recommendation asks practices to respond better to patients, to supply more information about diabetes, CHD and stroke, and to involve patients more in their own follow-up, perhaps supplemented by special educational events within the practice. Ideally patients should 'know their numbers' for HbA_{1C}, BP and cholesterol.

6. Staff training

It is sensible to combine this training, where possible, by joint sessions on diabetes and CHD, which could focus on the importance of good BP control and the treatment of hyperlipidaemia, as well as blood sugar control.

7. Using common formularies

Generally, the same cardiovascular drugs now appear in both the diabetes and the CHD formularies e.g. aspirin, statins, combination treatments for hypertension. Criteria should be developed for using the drugs in specific patient groups, along with dose recommendations for particular agents.

8. Targeting specific patients and therapies

Priorities need to be decided so that PCTs are clear on which areas they need to particularly concentrate their efforts. What is the best evidence for intervention, for example? Again the best targets to aim for are still the big three – smoking, high BP and hyperlipidaemia.

Smoking is an 'old chestnut' for primary care but evidence suggests that taking an interest in helping a smoker to quit and supplying nicotine replacement therapy or bupropion is effective.

Trials on treating patients with hyperlipidaemia in primary and secondary prevention of CHD (e.g. 4S, WOSCOPS, CARE) are now well established in practice. The Heart Protection Study[5] has further established that diabetics benefit from a statin (more precisely simvastatin 40 mg) irrespective of their cholesterol level (the study showed a benefit in patients at all cholesterol levels from 3.5 mmol/L upwards).

> ***'Shared care plans for patients with diabetes and patients with cardiovascular disease have common themes'***

This leaves hypertension – one of the biggest modifiable risks for ill health in the UK. We must make this a priority. Here, we need to change thoughts and practices towards treating systolic and isolated systolic hypertension, aggressively treating patients with a high cardiovascular risk (including diabetics) and to using rational combination therapy.

Stroke is the biggest single cause of disability in the UK and one of the most expensive. It consumes about 5% of a PCT's budget. The evidence of treating hypertension to prevent stroke is overwhelming. The recently reported SCOPE study[6] with candesartan, for example, demonstrated the value of treating hypertension in the elderly. Treatment resulted in a 28% reduction in risk of non-fatal stroke. The SCOPE study was not only a large one (5,000 patients) but it also looked at mild-to-moderate hypertension (BP of 160–179/90–99 mmHg) in patients aged between 70–89 years (average age 76 years) i.e. just the sort of elderly patients seen in primary care.

With a growing, active, ageing population – half of all 65-year-olds have hypertension – the prevention of stroke by treating hypertension will be a key PCT agenda.

Finally, the 'humble' aspirin can be used as secondary prevention in CHD, stroke and in diabetic patients. There will be dramatic benefits in morbidity and mortality just by general practitioners improving their prescription of aspirin across all these three groups.

9. Developing joint protocols with primary and secondary care

This is another essential. Hospital departments and primary care must work together towards a common set of goals and targets, with a common follow-up and monitoring programme, and a shared formulary. Criteria for referral to secondary care should be clearly identified for every different clinical situation (e.g. patients with angina, patients with heart failure, patients with stroke and so on).

10. Ensuring access to special tests and facilities

There are a wide range of investigations and facilities that need to be made available – from trained staff to equipment – so the NSFs can be effectively implemented.

Looking at equipment, wider access to defibrillators and easy open-access to echocardiography services are the main agendas of the CHD NSF, while wider access to scans is a key factor on the stroke agenda. Recent National Institute for Clinical Excellence (NICE) guidelines on heart failure have added B-natriuretic peptide (BNP) testing as a priority. The diabetes NSF wants an effective retinopathy screening programme implemented. Turning to staff, more cardiologists and surgeons will be needed to ensure best care for CHD patients; the establishment of spe-

Key messages

- NSF targets for coronary heart disease, stroke and diabetes share many common themes
- These common themes include patient identification, disease prevention by risk factor detection, and management and structured care of the patient
- Diabetes and coronary heart disease share common risk factors including hyperglycaemia, hypertension, dyslipidaemia and smoking
- Cardiovascular risk should be targeted as much as specific diseases

cialised stroke units and more stroke specialists will be a priority for stroke, and more diabetologists are needed to meet the rising number of diabetic patients.

In a wider context we must remember other essential services such as the cardiac rehabilitation team, specialised smoking cessation services and easy access to dietitians.

References

1. Department of Health. *National Service Framework for Diabetes*. London: Department of Health 2002.
2. Department of Health. *National Service Framework for Coronary Heart Disease*. London: Department of Health 2000.
3. UKPDS Group. Tight blood pressure control and the risk of macrovascular and microvascular complications in type 2 diabetes. (UKPDS 38). *BMJ* 1998;**317**:703-13.
4. UKPDS Group. Intensive blood glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* 1998;**352**:837-53.
5. Heart Protection Study Collaborative Group. MRC/BHF Heart Protection Study of cholesterol lowering with simvastatin in 20, 536 high-risk individuals: a randomised placebo-controlled trial. *Lancet* 2002;**360**:7-22.
6. Hansson L, Lithell H, Skoog I *et al*. Study on Cognition and Prognosis in the Elderly (SCOPE): Baseline Characteristics. *Blood Pressure* 2000;**9**:146-51.

Mike Mead
General Practitioner
Forest Hill Medical Centre, 2a Park Drive, Leicester Forest East, Leicester, LE3 3FN.