The Clinical Standards Board for Scotland's quality assurance system in secondary prevention following acute myocardial infarction

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Abstract

The Clinical Standards Board for Scotland (CSBS) was established in 1999 to develop a national system of quality assurance and accreditation of clinical services with the aim of promoting public confidence in the NHS in Scotland (NHSS). The coronary heart disease pathfinder project assessed services to patients following myocardial infarction. The quality assurance system involves comparison of performance against written standards developed by a multidisciplinary project group which included lay members. Six nationally applicable standards were the subject of comprehensive open consultation with both the public and the professions. All acute trusts in Scotland were issued with a self-assessment tool followed by a visit from a multidisciplinary external review team comprising of lay representatives and health service professionals who produced a verbal and written report. There was a pool of over 100 reviewers and each team numbered on average eight reviewers, two of whom were lay members. A national report of Scotland's performance was published by CSBS in October 2001.

The main areas of concern in Scotland's national performance were that few sites were able to meet the standard relating to thrombolysis times and there was an overall lack of robust audit material. It was noted, however, that the major strength of Scotland's delivery of healthcare lay with the staff providing services.

The process of accreditation in Scotland differs from that of other countries and one of its strengths lies in the involvement of the public, patients and health professionals as peers in all stages. The process itself encouraged dissemination of good practice and highlighted areas of concern.

Key words: standards of care, quality assurance, myocardial infarction, secondary prevention.

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Introduction

The Clinical Standards Board for Scotland (CSBS) was established in 1999 with the task of organising a national system of quality assurance of clinical services. The main aim of the Board is to promote public confidence in the National Health Service in Scotland (NHS Scotland) and to support continuous quality improvement.

The system of quality assurance adopted is to set written national standards for a service, to review performance against these standards via self-assessment, to conduct external peer review and to publish the results of the review.

The Board involves the public actively at all stages of the accreditation process and the system is also designed to complement clinical governance.

A coronary heart disease project group (CHD Accreditation Steering Group) was convened in autumn 1999. This 16-member group included health professionals from different disciplines, lay representatives from backgrounds including service users, health councils and voluntary organisations.

Coronary heart disease remains a major cause of death in Scotland although standardised death rates are falling in both men and women. The prevalence of heart disease, is increasing however, as patients survive myocardial infarctions and live longer. It has been suggested that 40% of this reduction in mortality is due to better initial treatment (including thrombolytic therapy) and secondary prevention.[1] Given the evidence suggesting that secondary prevention measures are not universally applied, the group felt that this was an appropriate area for its initial project.[2-4] It focused on one area of service provision: that provided in the acute hospital setting, and considered that secondary prevention starts at the time of the index event. For this reason a standard on immediate management was included. Other areas, such as primary prevention and pri-

Table 1. The template for formulating standards

- Evidence-based
- Applicable nationally
- Few in number
- Consistent with current resources
- Improve outcome
- Achievable but stretching
- Measurable

Table 2. The six standards set for NHS Scotland

- Immediate management
- Prophylactic medication
- Risk factors
- Cardiovascular status
- Cardiac rehabilitation
- Discharge

mary care, remain to be considered during the next stage of standard setting.

A template (table 1) was followed as a basis for formulating the standards. The standards were based on evidence from a literature search, and British Cardiac Society Standards and Scottish Intercollegiate Guidelines Network.[5–33] Discussions were held with professional groups, patients, carers and the general public, and areas where outcome could be improved were identified. The standards were drafted to be applicable nationally. As this was the first attempt to set and apply national standards for Scotland, it was decided to benchmark the services achievable within current resources, with the aim of making them more demanding subsequently. Draft standards were developed and, after wide professional and public consultation, pilot reviews were conducted in rural district general and tertiary hospitals to test the process of applying and measuring performance.

The final six standards (table 2) were accompanied by explanations in lay and scientific language with each standard containing a number of criteria graded essential or desirable. Essential criteria were those that the service should be meeting and the desirable criteria were those considered aspirational in that they would encourage continuous quality improvement. It was expected that all providers of CHD services should meet the essential criteria as the services knew the standards, following the wide consultation. It was also expected that a number of providers would meet the desirable criteria.

Review process

The pilot reviews were evaluated and self-assessment documents were refined and issued to all Acute NHS Trusts in Scotland. The self-assessment documents were questionnaire-based and indicated the evidence required to support measurement against the individual criteria. The self-assessments were completed by the Trust and distributed to the external review team approximately two weeks before the review visit. This was followed by external visits, which were conducted by multidisciplinary review teams to all of the Acute Trusts in Scotland. The teams had different members for each visit and each team included members of the public. More than 100 reviewers took part in the reviews and all members of the review team attended a training session before participating.

At the end of each visit, assessments were made and an informal feedback session was held with the Trust. A detailed written report was sent to all team members for comments and also to the site visited so that it could be checked for factual accuracy before publication. Presenta-tion of the final reports and overview of national performance took place at a public meeting in Edinburgh.

Results summary

Detailed results are available on the Clinical Standards Board for Scotland website (www.nhshealthquality.org). The following is a summary of Scotland's performance against the standards.

Immediate management

Between 97–100% of sites met the criterion for immediate administration of aspirin, and had protocols for the administration of thrombolysis and the management of diabetic patients. Data on thrombolysis times were collected by 91% of sites; 56% of sites performed regular audit on thrombolysis times. Only 27% of sites met the criterion demonstrating that 50% of eligible patients received thrombolysis within 30 minutes of presentation to hospital.

The strength of the service provision in Scotland measured against this standard lay in the evidence of clear protocols for aspirin therapy and diabetes management. The majority of sites, however, did not meet the essential criterion for timely thrombolysis; those sites that did meet the criterion usually administered thrombolysis at the point of entry to hospital (either in Accident and Emergency or Coronary Care Units). It was also noted that there was variable quality of audit data and a lack of audit support across Scotland.

Prophylactic medication

Clear protocols for the administration of the four types of prophylactic medication (aspirin, ACE inhibitors, beta blockers and lipid-lowering medication) were shown in 97% of sites; 75% also documented reasons for not prescribing medication.

The strengths of the service measured by this standard were that most sites had clear protocols, which had both been recently reviewed and were available to those responsible for the care of the patients. There was cross-checking of patients' medication by pharmacy staff and cardiac rehabilitation staff. Documentation of reasons why medication was contra-indicated was inadequate in places and, again, there was variability of audit data to allow quantitative assessment of prescribing.

Risk factors

National performance against this standard indicated that all basic items of risk factor information were well documented across Scotland and staff demonstrated widespread awareness of the need to record these. All sites documented risk factors, such as smoking and blood pressure, and 86% of sites documented all other risk factors including blood sugar and cholesterol.

Cardiovascular status

The strength of national performance measured by this standard indicated that basic information on cardiovascular status and co-morbidity was well documented. All sites documented basic cardiovascular status and co-morbidity. Only 51% of sites demonstrated that all patients received an exercise tolerance test (ETT) or perfusion scan or that the reasons for not assessing this were documented. Fifty-four per cent of sites demonstrated that all patients received an echocardiogram or isotope scan for the assessment of left ventricular function.

Another challenge in this area lay in the delay in access to ETTs, perfusion scans and echocardiograms. This was due to limited resources, resulting in long waiting times for these investigations.

Cardiac rehabilitation

National performance measured by this standard indicated that cardiac rehabilitation, with no exclusion of patients by age or gender, existed in most sites in Scotland. In addition, rehabilitation was an important vehicle for collecting data relevant to secondary prevention.

The essential criteria of this standard were met by 89% of sites; 95% of sites also met the desirable criterion of providing exercise training. Although 84% of sites met the desirable criterion of continuous data collection, only 45% performed regular audit.

It was noted that audit was not always conducted from routinely collected data and there was also some over reliance on 'soft' money to fund cardiac rehabilitation programs.

Discharge

The national strengths of the service measured by this standard lay in the well planned and communicated discharge of patients. The essential criteria of planned discharge with a hand held summary to allow continuity of care were met by 97% of sites, although, only 5% of sites met the desirable criterion of full discharge summary reaching the patient's GP in seven days. These sites used electronic transmission to provide rapid information.

Summary and recommendations

The recommendations[34] suggested in areas where essential criteria were not met were that:

- services should be reviewed to ensure that the criteria for timely thrombolysis is met
- IT systems and support of these systems are required to allow robust data collection to facilitate audit.

Table 3. Summary of criteria that proved a challenge to NHS Scotland in many areas

Essential criteria not met
Thrombolysis times
Regular audit of thrombolysis times

Desirable criteria not met
Echocardiogram and exercise tolerance test/perfusion scans
Time to issue of discharge summaries

Overall
Lack of robust audit material due to lack of support for data collection, data entry and, in some cases, lack of IT systems

Recommendations suggested in areas where desirable criteria were not met were that:

- all patients should have an assessment of exercise capacity and demonstration of the presence or absence of reversible ischaemia
- all patients should have an echocardiogram (regardless of whether they are prescribed an ACE inhibitor or not)
- systems should be put in place to enable the issue of full discharge summaries to the patient's GP within seven working days of discharge.

Table 3 shows a summary of the recommendations.

Discussion

The process of this quality assurance system has already caused some change in healthcare delivery. The wide consultation exercise allowed the service and public to discuss and form the standards. The service responded enthusiastically to the process, introducing a number of changes in the delivery of care, including new protocols.[35]

Change was further encouraged by the methodology of the external review process which included both many disciplines and reviewers, allowing staff to experience and note innovative practice during visits, and to disseminate this practice by taking it back to their own Trusts.

It was also encouraging that members of the public taking part in the review process commented on the dedication, hard work and often innovative practice of the staff providing the services, which allowed them to improve clinical services within allocated resources. They were impressed by the enthusiasm, openness and commitment of the health service to deliver the best possible care to all patients. The commitment and hard work of the staff was commended in each and every local report.

The CSBS will expect Trusts to inform them of their progress and will revisit areas to encourage compliance with the standards.

Note added in proof

Since writing the paper (in 2002) there have been a number of changes in the Structure of the Clinical Standards Board. On the 1st of January 2003, NHS Quality Improvement Scotland was

Key messages

- Scotland's quality assurance process for CHD was centered on a small number of nationally applicable, evidence-based written standards designed to be achievable within current resources. Members of the public were involved as peers in all stages of the process
- Performance was measured by self-assessment questionnaires, locally owned audits and external review visits which measured the process of care. Local rather than central ownership of audits encouraged rapid change without distorting local priorities
- Review visits were conducted by different teams consisting of health professionals and lay members which encouraged the dissemination of good practice and ownership of the standards
- The quality assurance process causes change in the delivery of healthcare
- Common features commended at all sites included the dedication, hard work and commitment of staff providing services for CHD

established as a new special health board incorporating the work of the Clinical Standards Board for Scotland, the Clinical Resource and Audit Group, the Health Technology Board for Scotland, the Nursing and Midwifery Practice Development Unit and the Scottish Health Advisory Service. The purpose of NHS Quality Improvement Scotland is to improve the quality of healthcare in Scotland by setting standards and monitoring performance and by providing NHS Scotland with advice, guidance and support on effective clinical practice and service improvements.

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The Clinical Standards Board for Scotland's quality assurance system: a comment from primary care

Coronary heart disease (CHD) is a major cause of death in the UK but death rates are falling and it is suggested that 40% of this reduction in mortality is due to better immediate treatment and secondary prevention.

Our national health services are accountable for their performance. This is true of individual practitioners as well as the organisations in which we work. Some benefit to patients will come from the changed behaviour of individual clinicians but most will come from organisations working in a more structured and systematic way.

Audit requires validated standards against which we can measure our performance. The English National Service Framework (NSF) for CHD has 12 main standards encompassing all aspects of the management of CHD and its consequences. It includes population-based primary prevention, the management of acute events and cardiac rehabilitation. Each standard has several associated performance markers called milestones. Organisations are being judged on their ability to reach these milestones. There is good evidence that across England there is good, albeit variable, progress in meeting the milestones with a consequent improvement in patient care and outcomes.

Mark Davis

The Scottish experience

The article by Barlow *et al*. (see pages 386–90) reviews the work done by the Clinical Standards Board for Scotland (CSBS)

in setting standards for secondary prevention in the acute setting and then measuring performance against these standards. The CSBS was given the task of organising a national system of quality assurance and accreditation of clinical services. The main aim of the Board is to promote public confidence in NHS Scotland and to support continuous quality improvement. This project was led by a 16-member steering group, which included lay members from various backgrounds.

The standards were to be evidence-based and to be shown to improve outcomes. Sensibly they were designed to be achievable within existing resources but with the aim of making them more demanding as resources allowed. Each standard contained criteria which were graded essential and some which were desirable.

Performance was reviewed using self-assessment completed by the Trust, backed up by peer review. The external review team also included lay members and all members had received training beforehand. After each review, an informal feedback session was held followed by a detailed written report. There was an opportunity for all parties to check the report for accuracy before publication.

As we might expect, Scotland performs well. The only one of the essential criteria not met was that of ensuring that the recommended 'door-to-needle time' for thrombolysis.

Shortcomings of service

The Trusts failed to meet two of the desirable criteria. The first concerned assessment of the cardiovascular status of the patients. Barely half of the patients received either an exercise tolerance test or a perfusion scan and a similar proportion echocardiography or an isotope scan for assessment of left ventricular function. England would certainly fail to meet these criteria. It was also recommended that systems should be put in place to ensure that full discharge summaries reached the patient's GP within seven working days of discharge.

The Board also notes the IT failings, evident across the UK, by drawing attention to the lack of robust audit material in some areas. Specifically, this is due to lack of support for data collection, data entry and, in some cases, a lack of IT systems.

As has happened with the English NSF, this initiative has already caused a change in healthcare delivery. When the NSF for CHD was being developed, the views of a wide spectrum of people was sought, including the public. The NSF set a very ambitious agenda and some healthcare professionals, particularly in primary care, became frustrated when resources did not follow publication. Perhaps the size and culture of Scotland allowed for greater consultation. The authors note that, as in England, the service responded enthusiastically to the process, introducing a number of changes in delivery of care including new protocols. The narrow focus of this initiative may have concentrated minds but part of the attraction of the NSF is that it allows us to develop the whole patient pathway, which will eventually provide the service user with seamless care.

The lay members of the review teams commented on the dedication, hard work and commitment of the staff providing the service. This was commended in all of the published reports which makes a pleasing comparison to much media coverage of our health services.

We need to rebuild the confidence of the public in our respective National Health Services. To do this we need a service with adequate resources which delivers high quality care. An essential part of this is to have national standards which allow the flexibility to develop different models of local delivery. Our performance must be measured. To allow this we need the type of standards set in this initiative and in the NSF. We will be audited by providing data from our IT systems and by external auditors. It is only by knowing where we are now that we can identify our strengths and weaknesses and plan for a better service in the future.

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