Improving Health Outcomes

Back pain in North Cumbria

Geographical Area covered: North Cumbria
Focus: Case studies focusing on effectiveness

Contributors:
Authors: Peter Tiplady, Director of Public Health
Address for correspondence: North Cumbria Health Authority, Wavell Drive, Rosehill, Carlisle, CA1 2SE

Editorial comments on how case study is linked to improving health outcomes: (also published in Volume 1)

The health authority set up a clinical group to produce and implement evidence based guidelines. They chose back pain as their first topic because the use of such guidelines would lead to a cost effective improvement in processes and outcomes in this common condition. The use of the guidelines highlighted major service deficiencies, revealed considerable unmet need and led to an increase in the funding of physiotherapy services.

Abstract (also published in Volume 1)

In 1994, North Cumbria Health Authority set up a clinical group to improve the efficiency of treatments requiring referral between primary and secondary care. General practitioners, who act as efficient gatekeepers to the secondary care system could benefit from improved guidance. The collaborative group was set up with a specific objective of improving the efficiency referrals and to contain costs.

After considering criteria for guideline production, the group chose back pain for its first guideline. A literature review at that stage did not produce much helpful material, but this was supplemented later by the Clinical Standards Advisory Group report on back pain. There was little information about the local epidemiology and this was estimated by extrapolating National Morbidity Study Data.

The group adapted and developed the information available to it and produced a final guideline which was distributed to all general practitioners in the district in 1995. The guideline highlighted the importance of access to primary care, especially physiotherapy.

A comparison of the guideline targets with the current service showed that these standards could not be met, and in particular, that substantial additional physiotherapy time would be required. A study of general practice based physiotherapy had shown that this could improve access times considerably, but referral rates were not apparently reduced. Outcomes however, as assessed by the general practitioners were good.

Four additional full-time equivalent physiotherapists were appointed, who arranged personal training in the operation of the guidelines for general practitioners. Audit has shown considerable benefit. Virtually all patients are seen within two weeks, and communications between general practitioner and physiotherapist are improved. Poorer outcomes are reported with delay in the original referral. A proportion of patients are already showing signs of improvement by the time they are seen by the physiotherapist, but further educational approaches are still worthwhile. New referral to the hospital physiotherapy department have increased noticeably.

The development of this guideline did not result in any reduction in the direct costs of treating back pain, and needed substantial increases in resources.

Introduction:

Why this clinical area was chosen:

In 1994, North Cumbria Health Authority set up a collaborative group to improve the efficiency of
treatments requiring referral between primary and secondary care. The role of primary care as the gatekeeper to secondary care in the United Kingdom may account for the impressive cost effectiveness of the NHS (Starfield 1994). However, there is evidence that further improvements in health care can result from rationalisation of the referral process (Emslie et al. 1993), and that general practitioners require improved guidance (McColl et al. 1994). There is mixed evidence on whether referrals from primary to secondary care fall after the introduction of guidelines, but studies have shown that GPs already perform quite well in selecting patients for referral to colleagues in hospital (McColl et al. 1994). In North Cumbria, referral rates by general practitioners show considerable variation, but this has not been subject to any systematic local study. The collaborative group was set up with the specific remit of improving efficiency of GP referrals, in the hope that, somehow, costs could be contained.

The group was initially chaired by a local general practitioner, and had consultant and GP representatives, the Director of Public Health, the Director of Primary Care Development and the health authority researcher working on the outcomes project.

It was clear early in the group's development that its work would focus on the production and implementation of evidence-based guidelines. The group used a resource pack published by the Northern Regional Health Authority to decide in which areas it would produce guidelines. It suggested that the topics chosen should be:

- of high volume, high risk or high cost.
- significant in terms of process and outcomes of care;
- have potential for improvement;
- likely to repay the investment of time and money.

The topic chosen should be:

- interesting to the group;
- where consensus in likely;
- where change would produce benefit for patients;
- where change can be implemented.

Back pain was the first topic selected by this process.

Little helpful material was available to the group at that stage, and the decision was based on local information, and by extrapolating national data where available. In particular, there were no good data on outpatient referrals for back pain, and the impact of this problem on the health service was judged largely subjectively by the referrals group.

The OPCS National Morbidity Survey in General Practice 1991/92 identified 342 new episodes of back pain per 10,000 population per year. In North Cumbria, that implied 11,000 episodes across the district. Using the same national data, those episodes would generate 56 referrals per 10,000 population, that is to say, about 1700 per year, the majority of whom would be to orthopaedic surgeons. A large number of those not referred would require physiotherapy and other support and advice while waiting, and during those delays would run the risk of developing a chronic problem and invalidity.

The Clinical Standards Advisory Group (CSAG) on back pain reported in May 1994 (Clinical Standards Advisory Group 1994), and their conclusion was that "routine hospital specialty services and referrals patterns are largely inappropriate for patients with simple backache". They then went on to state that "management of simple backache is, and we believe that it should be, mainly in primary care". The AHCPR guidelines on acute back pain were not consulted at this time, but were later obtained via the Internet (Bigos et al. 1994).

Back pain was selected for the development of local guidelines, because it was a major local health problem; referrals to the two local orthopaedic departments were said to be high, and waiting times for consultative appointments could be six months or more for non-urgent cases. Although detailed costings were not available, the group assumed that costs were high, and that more effective referrals procedures could reduce them. There was general agreement that this was an area that would significantly repay investment, and that change was possible. The group was helped by some earlier work which had been carried out in West Cumbria, on the development of local guidelines, which further stimulated interest.
Further information that was required:

The group referred to the draft CSAG guidelines and members carried out personal reviews of the literature.

After referring to the draft CSAG guidelines and after a review of literature, the group highlighted the following areas where there was good evidence available that suggested inclusion of that area in the guidelines. This work had to be completed quickly and there was insufficient time to assess the evidence. These areas were:

- good history taking, to eliminate non-spinal pathology, and to elicit the nature of the back pain;
- physical examination to determine nerve route involvement or neurological deficit;
- effective diagnostic triage between simple back pain, nerve root problems and serious spinal pathology.
- effective treatments in simple back pain;

simple analgesia;
non-steroidal anti-inflammatory drugs;
patient education focusing on increasing activity and avoiding absence from work;
abandoning bed rest;
motion for back pain of recent onset;
limited value of orthopaedic referral at this stage.

- effective treatments in nerve route pain;

limited bed rest;
adequate analgesia;
referral to specialist when nerve route signs increase;
consideration of epidural analgesia for severe persistent pain at two weeks;
referral to specialist at six weeks if pain or neurological signs persist.

As the guideline development progressed, the group identified key features in developing the primary care management of back pain. These were the:

- importance of triage;
- access of primary care to support services, especially physiotherapy;
- need for clarifying the role of orthopaedic surgery, focusing on those patients requiring relatively urgent investigation for nerve route problems.

The final version of the protocol was circulated to general practitioners for comments, and these were incorporated into the final printed version.

The health authority had funded a pilot trial of physiotherapy in a large non-fundholding practice. This study lasted 12 months, with a mean of 18 hours physiotherapy being provided at the practice premises. The practice served a population of 12,000 patients. During the study period, 319 patients were referred for the “in house” physiotherapy service, and approximately 50% of these patients required referral to the hospital physiotherapy department. About one third of the patients seen in the practice setting had back pain and associated disorders. Overall, it was concluded that the availability of practice-based physiotherapy did not reduce demand for hospital referrals. However, patient outcomes were very satisfactory, with 4 out of 10 patients having complete resolution of symptoms, with a further one third showing initial improvement or gradual resolution of symptoms. More than 80% of the practice patients were seen by the physiotherapist in less than a week, but the average waiting time for hospital physiotherapy rose from 12 to 49 days during the study period. Numbers were too small to draw any conclusions about the effectiveness of early physiotherapy for back pain. It was noticeable that the availability of a rapid service in primary care revealed a significant amount of unmet demand.

Data validity studies:

No attempts were made to validate the data in this study.
Summary findings from initial work:

Changes which were made:

The CSAG guidelines were issued during the consultation period on the local guideline, but it was felt that there was sufficient concordance between the two to let the local guidelines stay as they were. However, the CSAG report sets out target levels for service delivery, which were used in assessing service development required to introduce the protocol. These were:

- emergency referrals for cauda equina syndrome or widespread neurological deficit should be made by telephone within 24 hours;
- urgent referrals should be seen within 2 weeks;
- nerve route problems not resolved at 6 weeks should be seen within 2 weeks of referral;
- GP access to physiotherapy. Urgent case should be seen within 48 hours, and routine case within 2 weeks of referral;
- failed primary care management. All patients with chronic backache and failed primary care management, should be referred for multi-disciplinary rehabilitation if they are still off work after 3 months, and should be seen within one month of referral.

It was clear that the current services in North Cumbria were not adequate to achieve these targets. Waiting times for physiotherapy were well in excess of two weeks, although urgent cases could always be seen within that time. The group judged that access to physiotherapy was the critical part of the guideline, and decided to concentrate on improving this.

The principal service development required by the protocol was in the area of physiotherapy, and the group recommended a total of four additional senior physiotherapy posts at an estimated cost of £87,000. In addition, it was recommend that as the contract with local providers were renewed consideration should be given to including the CSAG targets.

The benefits of introducing the guidelines and extending the physiotherapy service were identified as:

- a fast and efficient services for patients with acute backache;
- reduction in the levels of chronic back pain in the community, and reduced socio-economic stress;
- reduction in inappropriate referrals to orthopaedic services;
- reduction in the demand for extra contractual referrals for back pain;
- enhanced job satisfaction in primary care.

How changes will be monitored:

The principal tool by which this guideline is to be monitored is through clinical audit. The CSAG targets and the principle decision points in the guideline are all quantified and, therefore, can be audited. Results of clinical audit so far include:

- poorer outcomes associated with longer time delays between onset and treatment;
- virtually all patients being seen within two weeks of onset of acute back pain;
- a significant proportion of patients are already improving by the time they receive physiotherapy even with fairly rapid access, but educational programmes are still helpful;
- physiotherapy progresses well up to 6 weeks, at which point referral is made back to the general practitioner;
- communication between the physiotherapist and the GP is improved, and in particular better discharge reports are now available;
- there is an increase in new physiotherapy referrals to the acute hospitals, of the order of about 20 per month in total.

All of these measures are process based, and the inclusion of suitable outcome data could have enabled us to compare this method of treating back pain with the existing. We assumed that
outcomes would be better, and decided that measuring outcomes was not required. However, the experience gained in our separate study of outcomes suggests that it would have been a relatively straightforward matter to include a generic quality of life measure such as the EuroQol, and some specific outcomes determined by the clinicians. We are considering rectifying this in future audit.

**Resource Implication:**

The production of the guideline for acute back pain took about 6 months of work by the joint collaborative group. The process was facilitated considerably by the availability of a resource pack to assist the selection of topics for guideline development, and by early access to published guidelines. This could have been helped further if information had been available which would have allowed the effects of the local guidelines to be modelled. Estimates could have been made of numbers of referrals for physiotherapy and to other resources, if better epidemiological data had been available. In the event, the final version of the guideline had to be introduced very much “in the dark”, and the amount of additional physiotherapy required was not robustly estimated.

The development of guidelines in accordance with purchasers wishes implies a commitment to provide the necessary resources to implement them. Funding for the additional physiotherapy was made available from General Medical Services funds, and without this, the guidelines would have been impossible to implement. Health Authorities and their providers need to be aware that clinical guidelines may reveal significant unmet need.

Health authorities are increasingly looking towards guidelines as ways of reducing costs and restricting eligibility to expensive treatments. Guidelines in general will, almost certainly, not achieve this. Savings in the long term may be a possibility, but will require “priming” at an early stage. The savings that accrue may be difficult to identify and not realised in cash terms, which leads to the conundrum that investments which reduce costs in the long term cost more money in the short term and savings are never made. Perhaps one way that could break this cycle is for the health authority to lend money to the providers with a commitment to repay at a time when reduced costs are agreed to be possible. Money need not even change hands, as the payback could be in increased activity in other areas.

**Practical lessons learnt:**

This was the first guideline developed by the health authority’s collaborative group. The use of the Regional Health Authority’s structure for selecting the topic was found to be very useful, and there was much commitment from the members. The guidelines, however, highlighted major service deficiencies which would be required in order to implement them, and this caused some disappointment, not least among managers, who were looking to the development of these guidelines to reduce costs, not increase them. The view from primary care was that these guidelines would reveal considerable unmet need, as GPs would be using a structured evidence-based approach. The expected benefits in health terms, would be quite significant, but impossible for the group to cost. There were no identifiable cash savings for the health authority associated with these benefits.

The pragmatic approach of the group to adapt existing guidelines, supplemented by local experience and limited original work, cut short the development time considerably. It was not possible to “model” the effect of introducing these guidelines so that costs could not be estimated. This detracted from the process somewhat as the health authority was under pressure to put extra cash into back pain. If this had not been possible, then there was a very strong feeling in the group that the development of future guidelines would be seriously prejudiced. As it happened, funding was made available from the General Medical Services (GMS) allocation of the health authority (at that time the FHSA). This required considerable negotiation on the part of the Director of Primary Health Care, as there were competing demands on this allocation. The agreement was finally reached and the additional post were appointed in 1995. This additional funding was critical to the success of the guideline, which almost certainly would not otherwise have been implemented.

**Conclusion:**

Local guidelines can be prepared by adapting published guidelines, “fine-tuned” by local expertise and experience, and do not require original research. These guidelines have considerable clinical and management support when they are based on critically evaluated outcomes.

Local guidelines should be produced by a collaborative process involving purchasers and providers, and there needs to be an explicit methodology for selecting areas for study.
Purchasers need to be aware that guidelines are as likely as not to reveal significant areas of unmet need, and their introduction may cost money.

Guidelines can be included in contracts, which will enable delivery of services to be done on the most cost effective basis.

References:

B) Back pain


Organisational Context:

The key people in the varicose vein study were the public health department and the lead vascular surgeon in the acute hospital trust. The development of clinical outcomes as part of the Authority’s business is in its infancy, and this study could not have gone ahead without the enormous commitment of the surgeon involved. The research was led by the public health department, and the major enabling factor which got the whole study off the ground was the appointment of a full-time research worker, funded by the research and development division of the Northern Regional Health Authority. Without this support only a limited study would have been possible.

The development and use of outcome indicators in purchasing remains something of a holy grail for health authorities. North Cumbria Health Authority, in company with many others, is at an early stage in its use of outcomes to support its purchasing strategy. The health authority is now committed to an evidence-based purchasing plan, and has stated that it requires good evidence that any changes from existing patterns of service will improve outcomes. All changes in clinical services are subjected to critical appraisal and will only progress to consideration for funding if there is good evidence adduced for their benefits. This work cannot be carried out globally on all aspects of the health authorities purchasing portfolio, which would require a level of resources out of all proportion to the benefit. By concentrating on areas of change, that is to say on the margins the health care programme, it is possible to incorporate the results of detailed consideration of outcomes.

In North Cumbria this work has been largely stimulated and led through the public health department, but it relies heavily on commitment from other directorates, and most importantly, by the clinicians in the trusts. Our experience has been that a collaborative approach to outcomes affirms the clinical work in a major way. Consultants want to demonstrate that what they do improves health, and is good value for money. The common purchasing currency of service activity is viewed with disdain by clinicians, and the absence of outcome measures from the efficiency index emphasises this difficulty. What the clinicians would like to see are contracts that demonstrate that their care is effective, both in health and financial terms. We are working confidently towards contracts that specify the expected outcomes of health care, and we hope to include quantified targets to achieve this. These are sensitive areas and there needs to be extensive collaborative work between health authorities and Trusts. We believe that the liaison at a clinical level is the key feature in progress, and health authorities will need strong clinical support themselves in public health, primary care, nursing and other clinical areas. At a time when health authority management costs are continually under scrutiny, the importance of a health led strategy cannot be over-emphasised.

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