The Dorset Seedcorn Project: interprofessional learning and continuous quality improvement in primary care

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SUMMARY

There is a need to develop models of practice-based learning that are effective in bringing about improvement in the quality of care that patients receive. This paper describes a facilitated practice-based project where five general practices in Dorset formed interprofessional teams that worked over a six-month period, using a continuous quality improvement (CQI) approach to make a change in areas of importance to them. All the teams completed the project and planned and implemented demonstrable changes. Qualitative enquiry showed changes in relationships and teamworking that extended beyond the specific topic of the project, with teams reporting an enhanced sense of competence and achievement. The project facilitators were able to develop a model of learning that acknowledges and utilises the depth of experience and understanding within interprofessional practice teams. Protected time and an environment and processes that encourage full participation of a wide range of team members is essential.

Keywords: *continuous quality improvement; practice-based learning; teamworking.*

Introduction

THE application of the principles and methods of continuous quality improvement (CQI) within health care is no longer new. They are being increasingly tested around the world.[1] Since Berwick's seminal paper of 1989,[2] a number of writers have reported their use in primary and secondary care.[3-6] A recent review emphasised that improvements resulting in better services to patients only come about by changes in organisations and systems of care.[7] Current approaches to continuous quality improvement emphasise the importance of learning as the bedrock for success and its methodologies are very influenced by this.[8,9]

Primary health care is increasingly being delivered by multiprofessional teams of clinicians and administrative staff. Practice-based education that focuses on interprofessional collaboration and effective teamworking has been advocated as an effective learning activity[10,11] and specific examples of this are described.[12] One challenge that has been identified is how to establish learning in practice as an ongoing process, rather than merely a tool to gain a qualification.[13] It has been pointed out that, although quality improvement systems for general practice exist, there have been few attempts to involve all primary care team members in quality improvement work.[14]

Method

Outline of the project

We wished to see if the principles and methods of CQI could be successfully used to help interprofessional primary care teams learn together in their practice settings, to improve aspects of care. We also wished to learn about the experiences of participants as they worked their way through the project and to explore its impact on members of the practice staff who were not directly involved in the improvement team.

Dorset general practices were invited to bid for funding, to plan and implement changes that they believed would result in improved quality of care. Five successful teams met three times over six months, in protected time. Payment of staff replacement and venue costs to a maximum of £200 per practice per meeting was offered.

Each practice team had to comprise at least one general practitioner (GP) principal, one nurse, and one administrator. Practices were free to invite other team members or external people as appropriate. The project leader (CC-S) had a preliminary meeting with key people in each practice, to introduce the process and explain administrative arrangements. The practices all chose topics that were causing concern and where they hoped to produce improvement for their patients and for themselves. Table 1 describes their broad aims and briefly records their results. The whole practice committed to work to implement the planned change outside the protected time and it was stressed that, to maintain the support of members not on the project team, it was essential to keep them informed.

Each practice was assigned a facilitator pair from a mix of medical, nursing, and health improvement backgrounds. All the facilitators had attended a workshop on accelerated clinical improvement, at which CQI principles and methodologies had been introduced,[15,16] using a framework that has already been tried out with some success in primary care (Figure 1).[6,17] A process to facilitate their effective use for group working was designed by the team of facilitators (Box 1). More specifically, our objectives were based on the following:

- Practices will design and implement changes in an aspect

of health care leading to improved services for their patients.
- Improvements in team working and relationships will be demonstrated.
- Development of a process of facilitated practice learning, based on a CQI model, which can serve as a guide for practice-based improvement teams.

Participants were invited to keep reflective journals and it was made explicit that, at the end of the project, team members and other members of the practice would be asked to reflect on their involvement in the learning process and to feed back their views to the university team. This was undertaken using a mix of questionnaires and staff interviews.

An example of improvement through learning

The following story describe how one practice involved tackled their particular project. Each was guided by the process described in Box 1 but their actual implementation was greatly influenced by their own uniqueness as a practice.

Improving care for frequent attenders. This is a one-and-a-half-partner practice with 2300 patients in a market town. The practice team includes a counsellor, an osteopath, a homeopath, and practice nurses.

They chose, as their high level aim, to design better ways to manage the care of patients who frequently attended for consultations and thus added to workload, even though they did not appear to have real medical needs.

The team established an interprofessional team that reflected all the different aspects of their practice and used brainstorming to share their individual experiences of coping with the patients who seemed to come into this category. They used the same CQI approach as Practice A, to turn their ideas into a focused improvement project by asking the same questions.

1. *What are we trying to accomplish?* After considering their high-level aim they focused down on to two specific objectives:

- to provide more appropriate care to patients who are frequent attenders and make better use of time; and
- to help themselves cope better and reduce stress.

Their brainstorming also demonstrated how little real information they had about what was actually happening. For example, they discovered that the same patients were making multiple appointments with different members of the team at different times. To learn more about this they agreed a practice protocol for all staff to record patient contacts on their computer appointment system.

Analysing the feedback from this exercise helped the team define a criterion for 'frequent attenders' as being those patients who had visited the practice more than six times in each of the two preceding quarters. Applying this criterion indicated that 3% of their patients used 25% of the practice's appointments. This knowledge provided evidence to support their initial feelings and assumptions. It also helped them to judge the scale of the problem and identify the actual patients who came into the category of 'frequent attender'. In this way they were able to shift their focus to real people with real needs and to consider how they might address them differently. In addition, they drew up a flowchart describing the contact of these patients with the practice and used it to explore how they might do things differently. It enabled them to clarify the processes that needed to work well and reinforced the need for everybody to establish a consistent and shared approach. They spent time discussing each individual patient's needs and designed further criteria to help them better understand the reasons for frequent attendance.

Working through these processes also identified significant teamworking and decision-making issues. Tackling

Table 1. Aims and outcomes of individual CQI projects.

Topics chosen	Change implemented	Outcome
Dealing better with incoming telephone clinical enquiries	A card-based system where details of the enquiry are recorded by the receptionist and the appropriate clinical team member returns the call with information to hand at a mutually convenient time	Fewer repeat telephone calls, receptionists are less annoyed, fewer interrupted consultations, and minimal extra cost to the practice
Improving the care of frequent attenders	Establishing regular team meetings to identify frequent attenders and agree how to manage their individual care better	Approximately 900 consultations saved per year and used to provide other services
Establishing a health visitor-run surgery session for acutely ill under-fives	Dissemination of information about the role of the clinic to health professionals throughout the practice and locality	Reduced prescribing for minor illness and high level of patient/parent satisfaction. No lowering of 'threshold for consultation', i.e. no increase in total consultations
Improving care for elderly residents of nearby Social Services residential home	New information system to obtain previous medical history of new residents soon after their arrival and to ensure that changes to the drug regime are recorded, both at the home and on the practice notes and computer	Better relationship between care home staff and practice. More accurate and up-to-date medication records
Providing a more appropriate and acceptable service for disturbed adolescents resident in a Social Services hostel	Registration of new residents with the practice on arrival, allowing access to previous health history, and proactive approach by practice. Health visitor has worked with Social Service staff and residents in determining their health needs and planning to meet these	Improved relationship between practice and hostel, fewer missed appointments, better attendance at health visitor health promotion activities, more complete medical records

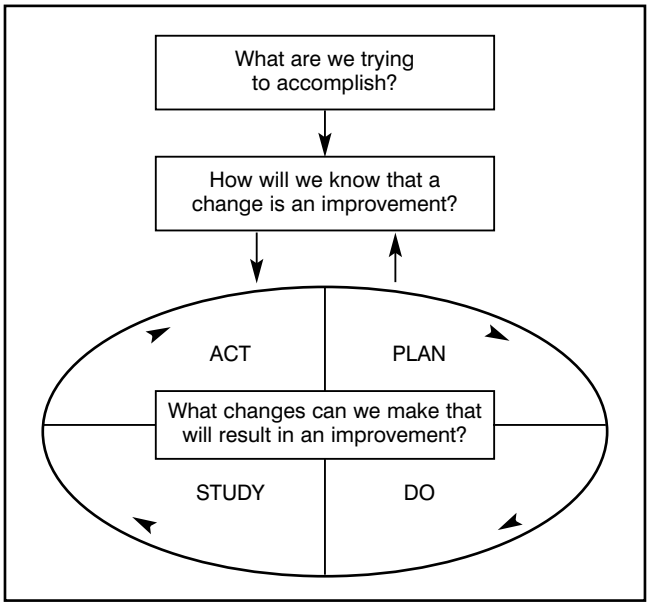

Figure 1. A model for building knowledge for improvement.

these became an important element of the project.

2. *How will we know a change is an improvement?* Before making any changes the team asked themselves how they would know that they were an improvement. They chose some simple measures relevant to both their patients and themselves so that they could learn from their experience:

   - the number of long-term frequent attenders will fall;
   - the patients who are long-term frequent attenders will change;
   - patients will report feeling better;
   - patients will report a better relationship with the practice; and
   - staff will report feeling less stressed.

3. *What changes can we make that will lead to improvement?* They agreed a small number of changes that they believed would have the greatest impact and planned their implementation. These were to:

   - design a process to identify, classify, and respond to frequent attenders;
   - design a common protocol to be used by all staff when consulting with these patients;
   - establish regular interprofessional team meetings to discuss the needs of these patients and how to manage their care better;
   - establish a system for recording patient information and intervention objectives; and
   - agree ways to monitor and review progress.

Outcomes from this project

Consultations by frequent attenders were reduced by 900 over 12 months. The time saved was redirected to provide a more effective chronic disease management programme, increased health checks for adults and teenagers, and more extended appointments for doctors. The practice team members reported feelings of greater individual confidence and improved team processes.

The team also identified other important outcomes of the project for themselves. Reducing frequent attendances created space for them to institute different and shared approaches to practice, which they believed to be as legitimate as seeing patients in their consulting rooms.

Finally, they believed that the more powerful ways of working together that they established for the project were likely to have a significant and beneficial impact on their future practice as a

Preparatory work in the practice

- A wish for improvement from within the practice.
- Choice of a topic area of real interest or importance to the practice.
- Organisation of a team including one doctor, one nurse, and one administrator, and other health or social care professionals from within and outside the practice.
- Protected time and facilitation secured. The project funding supported this.

First team meeting

- Participants expressed hopes, expectations and fears. These related to previous experience of working in groups or to preconceptions about professional roles and values. From these they agreed process ground rules to promote an effective and collaborative way of working, which values all team members' contributions.
- The project team agreed the 'high level' aims for the project ('If it goes well...').
- They described and understood the current processes and systems of care in the topic area and some created flowcharts to illustrate this.
- The team identified the 'high leverage' points where change was likely to have the greatest effect. These were often at known 'bottlenecks' in the system, where separate processes interrelated.
- They decided what measurements and data were needed to increase knowledge of the current system and planned how to gather this.
- They drafted an action plan, sharing work to be done before the next meeting and detailing how others in the practice were going to be informed about the project work.

Second team meeting

- Learning from data collected, the team revised and refined their understanding of the processes.
- Ideas for change were generated and one or two chosen.
- The team asked 'How will we know that a change is an improvement?'. They identified simple measures that would give information about this, and show if that change is moving the practice towards their stated aim.
- The team planned a test or pilot, again with clear aims of what it is hoped to achieve and the measures that would be used to check this.

Third team meeting

- The project team reviewed the pilot or test and the results achieved.
- They also considered how other members of the practice reacted to the work and the changes implemented.
- The team checked if the results achieved were consistent with the initial high level aims for the project. If this was so, then they looked to incorporate the changes into the routine of the practice, if not, then they considered why the change did not bring about the improvement planned and how it might be modified for the future.

Box 1. The process of learning for improvement.

team.

Learning from the project

At the end of the project the views of all the participants and facilitators were sought by questionnaire. Additionally, a number of face-to-face and telephone interviews were conducted with participants, facilitators, and practice staff not directly involved in the project (details on *BJGP* website).

The views of members of the participant practices who were not themselves directly involved were also sought by questionnaire (see *BJGP* website). Sixteen participants (50% of total) representing all the practices completed either interview (n = 5) or questionnaire feedback (n = 11). The views of all six facilitators were also obtained. Nineteen practice awareness questionnaires were returned from staff in four practices

The data collected were primarily qualitative and were subjected to a content analysis for major themes.[18] The broad themes that emerged were: changes in practice, team development, leadership, changing feelings, time constraints, and impact on others in the practice. Feedback about the 'changes in practice' theme is included under the discussion related to Objective A below, while the other themes are discussed under Objective B. No clear themes emerged relating to Objective C.

Objective A: Practices will design and implement changes in an aspect of health care leading to improved services for their patients

Each practice successfully designed and implemented changes and by measurement was able to show improvement in care and effectiveness (Table 1) When they were contacted 18 months after the end of the project, the changes remained in place and had become integrated into the everyday working of the practices.

The practices were able to identify clear outcomes arising from the project, whether in terms of service development (for example, establishing a health visitor's surgery), a clinical management strategy (for example, improved communications) or a willingness to change current working practices.

> *'Yes, people are starting to experiment with doing things differently though it will take time to get people working in a different way.'*

In addition to recognition of the benefits of such outcomes to patients, it was acknowledged that practices had benefited in terms of collaborative working relationships and staff satisfaction. Practices were positive about using a similar process for planning change and improvement in the future and some have already done so.

> *'There has been an impact on the children involved. They now get a better service, staff have more confidence, the health visitor is now more involved in the children's home'*.

> *'Patients at M. House are clinically better looked after as a result of improved communications. There has also been a slight reduction in the number of times doctors are called over to M. House, i.e. fewer unnecessary call-outs*'.

> *'A recent patient satisfaction survey demonstrated that patients were very pleased with the service'*.

Objective B: Improvement in teamworking and relationships will be demonstrated

Questionnaires and informal interviews were used to identify the impact of the project on each practice in a more general sense. The results give an interesting insight to aspects other than the improvement projects themselves. Participants at the end of the project were surprised and delighted by how much they had been able to achieve and noted changes in relationships and ways of working within the practices. As mentioned above, the following themes relating both to the process and the effect on the practice as a whole emerged from analysis of feedback.

Team development. Responders made many references to the improved communication and co-operation between team members, which had developed as a direct consequence of the project.

> *'Team working has been enhanced and, I believe, a greatly strengthened sense of unity has been achieved'.*

> *'It is now safer to express vulnerability with regard to professional practice'.*

Leadership. Most teams acknowledged that the GP either had exerted, or had been expected to exert, leadership of the team's activities during the project, while the extent to which the leadership 'baton' was handed on varied from one team to another.

> *'Initially the leadership role was taken by the doctor. As the project evolved it was shared more by other team members'*.

> *'No-one really took over the project* [the doctor had to resist the invitation of others to take it over]. *Several members of the team kept it going'*.

> *'X and Y occupied strong leadership positions. They recognised their failure to give up leadership'*.

This clearly raises issues about professional relationships and the parameters for democratic and role-specific decision-making processes within the practice setting. A greater degree of mutual trust and understanding engendered by the experience of this project was noted repeatedly.

Changing feelings. Participants were asked to describe their feelings as the project progressed. Comments revealed variations on a negative/positive theme, with the most common reaction being a transition from initial anxiety about the project to a feeling of satisfaction with progress made. One responder had commenced with 'excitement' before going into 'disillusionment' and then moving on to a 'feeling of pride in what has been achieved'. Another responder noted that positive feelings tended to give rise to more negative ones between meetings, before becoming positive again at the next meeting.

'An increasing sense of ownership/achievement with initial anxieties and fear of the unknown changing to enjoyment/fun'.

'*Frustration and feeling of vulnerability initially. Uncomfortable to be confronted with one's own ineffectiveness and the difficulty of changing'*.

Time constraints. Time was a difficulty in relation to the project itself and with regard to the additional workload created for colleagues as a result of attendance on this project by participants. Team development and resolution of issues could not always be addressed fully owing to other professional commitments, but comments acknowledged the value of the 'time out' afforded by the project in enabling these matters to be addressed.

'Protected time away from the Practice was vital.'

'The project revealed the need to structure reflective time in the Practice more coherently.'

Impact of the project on others in the practice. Our measure of the impact of the project on the colleagues ('project awareness questionnaire') showed that the participant practices had been successful in avoiding alienation of those members of the practice not directly involved and that the teams had kept their colleagues informed as to the purpose of the work.

Objective C: To develop a process of facilitated practice learning based on a continuous quality improvement model, which can serve as a guide for practice-based improvement teams.

While there were no clear themes identified for this objective, several responders identified the positive contribution made by their team's facilitator to the performance and outcome of the group. Comments relate to both tasks and the processes involved in the teams' activities.

'I appreciated the gentle guidance and fresh tools.'

'I started out fairly negatively and anticipated abandoning the project. The facilitators made the difference.'

'As the doctor I usually have to manage the process; it was good to be able to hand this to the facilitator, it allowed me to participate more fully.'

Conclusions and implications

Improvement-focused learning, which acknowledges and utilises the depth of understanding and tacit knowledge of those who deliver care, is relevant and appropriate for interprofessional team learning in primary care. This is consistent with work about adult learners described by earlier writers.[19,20]

Participants in this project found it a powerful way to learn together and to plan change and improvement. The process has stimulated interprofessional working and learning as well as bringing about real improvement in the practices. Changes in ways of working have generated excitement and a commitment to continue, with recognition of the value of the investment of time and enthusiasm. The project groups showed many of the characteristics described as features of successful teams.[21]

Those facilitating the learning found the principles and methods of continuous quality improvement to be appropriate and practical.

Protected time for the learning and an environment and process that encourages full participation of all members of the team is valuable. Time spent establishing this is a worthwhile investment, as even those who work together may come with confusion and uncertainties about each other's roles and strengths, influenced by previous experience of working in hierarchical organisations.

Interprofessional practice-based learning about topics of real concern to the participants could make a significant contribution to the clinical governance and health improvement agenda in the future. Protected time and facilitation may be required for this to flourish and deliver its full potential.

Future work

Our underlying purpose is to improve the health of the communities and individuals that practices serve. This will require an understanding of local community needs and knowledge of how well things are working within a practice to ensure that relevant improvement priorities are identified. With this in mind we are currently exploring how practice teams can combine the emerging concept of practice professional development plans, personal learning plans, and practice improvement priorities, to produce real benefits for patients and staff alike. The experience we have gained from this project, and our earlier work,[6] has convinced us of the value of integrating the principles and methods of continuous quality improvement and practice-based team learning to tackle such priorities. The next challenge is to enshrine this within everyday work.

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