Achievements with quality improvement in the NHS

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This paper examines achievements in quality improvement in health care. It is not intended to be a comprehensive overview, rather to provide a brief description of how concepts of quality improvement have been used in nursing, to give examples of quality improvement in practice, and to highlight factors which need to be considered before achievements can occur.

On a bad day my definition of quality improvement reflects the sentiments of Denis Healey, who said that problems are never solved, merely altered.¹ This, somewhat cynical, view perhaps reflects the experiences of many practitioners rather than the more well known rallying calls of the quality gurus. But on reflection, quality improvement rarely guarantees end points or solutions. It, too, emphasises the importance of movement towards a desired state, something which depends on common goals, and people working together, trusting one another, valuing contributions, and having the right information to make decisions.

Achievements with quality improvements therefore will manifest themselves as much in changes in behaviour, attitudes, and communications as in actual clinical practice. However, five years' experience working with the Royal College of Nursing's Dynamic Quality Improvement Programme has taught quality improvement is fragile and often elusive. It cannot be prescribed or conscripted into an organisation; its presence is more likened to work of the spirit than the application of the law.

Why quality improvement

It is this rather ephemeral aspect of quality which may explain why in health care we keep changing the terminology. Once everyone talked about professional standards of care – those implicit value laden notions which carried with them both the moral requirements of the practitioner as well as his or her technical competence. The steady move towards focusing on technical competence is well documented, during this time the generic term standards of care gave way to more technology based terms such as accreditation,² utilisation review,³ and audit.⁴

Although these terms all purported to be evaluating the quality of patient care they differed in their underlying assumptions, methodologies, and mechanisms for implementation. The most recent set of concepts and terms have embraced total quality management⁵ and quality improvement.⁶⁻⁸ To

understand the key elements distinguishing quality improvement from other terms such as quality control, audit, or accreditation it is useful to look at developments within industry.

Conceptual models of quality in industry

Harvey described three distinct phases of development that have taken place in industry and which have direct parallels in health care (box).⁹ Quality at an individual level reflects the traditional craft based approach to work in which individuals were responsible for each step of the Deming cycle¹⁰ – namely, planning the work, doing it, checking on it, and taking action to correct any deficiencies. The model is familiar to those in professional practice and has been successful in promoting excellence. However, it is labour intensive and requires a long apprenticeship. It is also based on the notion of developing individual expertise and does not focus on teamwork.

The model of quality at an individual level gave way to the more technocratic approach – namely, quality through inspection. From its origins in the scientific management movement led by Taylor¹¹ at the beginning of the twentieth century, work began to be separated out: different external evaluators were responsible for quality and workers were responsible for one process only. Although this approach solved the problems of long apprenticeship and of meeting increasing demands for products, it soon led to reduced performance and low morale. Interestingly, while this approach was still being widely used the Horder committee in 1942 recommended its introduction to nursing practice.¹² The separation of nursing into several discrete tasks is still much debated.

The most recent development has been the growth of the collaborative model of quality. Its underpinning principles include emphasis on the effective work of teams rather than individuals and reorientation towards synthesising the planning, doing, checking, and actioning of work. This philosophy has been embraced by total quality management (TQM) and continuous quality improvement (CQI) and its derivatives. Its hallmarks are in developing humane work systems and investing in people.

Dynamic quality improvement programme

The principles of the collaborative model were the foundation stones of the Royal College of Nursing's Standards of Care Programme

Conceptual models of quality*

<i>Quality</i>	<i>Individual</i>	<i>Inspection</i>	<i>Involvement and collaboration</i>
Focus	Individual responsibility Integral part of work	Identifying defects Work separated out	Improving processes Quality seen as a search for continuous improvement towards a goal of excellence
Means of achieving quality	End product of highly skilled work Selection Training Individuals highly trained, respected for skills and commitment	Workers at fault for poor quality Systems techniques of inspection Workers viewed as lazy, responding to financial reward	Developing systems Investing in people Workers viewed as valuable assets to whole process
Key characteristics	Craft based Labour intensive Long apprenticeship Employee control over planning, doing, checking, and acting	Scientific work management Task activity analysis Poor performance, low morale Employees responsible for doing only; rest of cycle controlled by managers and specialists	Work achieved through teams Empowering workers Involving whole team Employees responsible for planning, doing, checking, and acting Key role of managers, leaders is a supporting, enabling role

Adapted from Harvey.⁹

(now the Dynamic Quality Improvement Programme). In 1987 the college stated how it was going to encourage the introduction and use of quality concepts to improve nursing practice. In setting out the conceptual framework for its quality assurance programme,^{12a} the college made a firm commitment to involve practitioners directly in setting and auditing their own standards and in encouraging local ownership and control of these activities. It also endorsed an organisational system which devolved power to local level, was driven by local standard setting or quality improvement groups, and supported by trained facilitators. In the late 1980s this was a radical departure from the more inspection based nursing quality assurance systems being used (preformulated tools such as Monitor,¹³ Qualpacs,¹⁴ and the Phaneuf audit.¹⁵ A major educational programme had to be set up to help nursing departments take on this new philosophy and methodology.⁸

By the late 1980s the college's quality improvement approach was reported to be used in over half the district health authorities in the United Kingdom.^{15a} The Audit Commission recommended its use as one method of auditing nursing standards,^{16 17} and recently a three and a half year evaluation study of the effect of local standard setting and audit on nursing actions and patient outcomes reported significant improvements.^{18 19} Despite this evidence several issues exist which if not recognised and dealt with, will undermine any potential benefits brought about by involvement in quality improvement activity.

How quality improvement systems work

Two key factors seem to be essential to success in improving quality: getting appropriate groups of clinical staff together to set, audit, and evaluate their care and having that process supported by a trained facilitator. The steps around the quality improvement/audit cycle are now well accepted (figure), but the college's programme emphasises the need for the team of practitioners to be involved in each of those steps personally and to manage the behavioural and attitudinal changes that need to occur before practice changes.

Because staff have been involved in setting and auditing their own standards the commitment to take action after data analysis tends to be greater. In fact, both experience and research indicate that improvement in practice often happens when a team begins to look more thoroughly at a particular area of care.¹⁸⁻²¹ Auditing acts as a validator of that activity and can outline other areas for further work. The closing of the audit loop²² is therefore more likely to occur when groups have been involved in each step.

The importance of successfully moving around each step of the audit cycle has been identified by several authors.²³⁻²⁵ What has not been systematically evaluated is the effect of separating out the defining, monitoring, and action stages of the cycle and the issues of ownership over the defining and auditing of standards. These aspects of quality improvement – that is, ownership of the change and personal responsibility for effecting behavioural and attitudinal change have been identified by several investigators.^{5-7 9 26 27}

Dynamic quality improvement cycle

A further issue for debate is the relation between systematically derived national guidelines and possibly less rigorous local guidelines or standards.²⁸ Again, an assumption is made that the most important factor is to have the most up to date research evidence to feed into the quality improvement cycle. However, evidence suggests that staff can develop their own guidelines locally, and despite deviation from the “ideals” of a national guideline patient outcomes and staff performances can still be seen to have improved.^{18 19} This seems to suggest that factors other than the acquisition of the most recent scientific knowledge affect staff behaviour and patient outcomes. Clearly, certain key aspects of knowledge must be identified before local groups can be effective. However, outside these core items acceptable variation must exist. Distinguishing between core elements and contextual aspects of care is another area where little guidance is currently available.

Successes with quality improvement

The apparent tension between the role of scientific knowledge in informing processes to improve performance and the dynamics of interpersonal relationships, attitudes, and teamwork has been recognised previously. Berwick identified the need to acknowledge the interdependencies that exist between health care workers before any real progress can take place in improving patient care.^{7 26} Auditing practice cannot be viewed as a policing exercise and all the players must be involved in assessing what counts as a quality service. To evaluate health care processes – as expounded within the quality of improvement

approach – means that both scientific knowledge and interpersonal, value based information must be integrated. What is interesting is that quality improvement initiatives led by nurses have tended to focus on the interpersonal, organisational aspects of care whereas those led medically tend to focus on more discrete technical interventions.

This dichotomy, although understandable in terms of the training and professionalisation processes that occur within disciplines has potentially negative effects on the philosophy and practice of attempted integrated quality improvement. Although there is evidence that several nursing led initiatives have improved practice (box), their apparent failure to produce numerical data as evidence to support the improvement means that their professional colleagues view the improvements as either insignificant or unsubstantiated, thus reinforcing the divisions between groups. This situation raises two very important issues: Why do nursing quality improvement activities tend not to focus on the collection of numerical data as a primary objective? How can interdisciplinary quality improvement initiatives be encouraged which overcome the variety of approaches to data collection.

Nurses and numbers

There are at least two possible reasons why nurses tend not to collect numerical data. Firstly, audit assistants have not supported nursing audit and therefore record review and auditing large numbers has been difficult. Secondly, nurses tend to select topics for quality improvement which are related to continuity of care or providing support or information, which are difficult to quantify

Success with quality improvement				
	<i>Case 1*</i>	<i>Case 2</i>	<i>Case 3</i>	<i>Case 4</i>
Topic for quality improvement	Improving comfort and relaxation of patients in intensive care unit	Use of local anaesthetic patches on children in day surgery	Style of information giving and its effect on patients' ability to tolerate endoscopic procedure without sedation	Pressure sore care
Reasons for variation	Lack of time to give support to patients Little expressive touch; too much technical intervention as mode of contact	Patches being applied too late to be effective	Investigate whether experiential information is more effective than procedural information	No hospital standard for pressure area care
New target	Achieve way of giving patients more time and opportunity to relax	Review procedure for applying patches	Information given is sensitive to individual needs of patients	Standard and audit tool developed for preventing pressure sores, key areas: <ul style="list-style-type: none"> ● Assessment of patients ● Quality and use of equipment ● Actual nursing care patients received
Implementation	Introduced massage relaxation therapy, uninterrupted periods of rest for these patients	Information and instructions sent to parent before date of surgery	Experiential as well as procedural information given Equipment demonstrated Information given in quiet area	
Audit	Physiological signs	Nurse checks that child has patch on admission	Same nurse stays with patient during procedure	Baseline audit and repeat audit after 12 months
	Psychological signs Patients' satisfaction	Adjustments made to operation list as necessary	Steps identified in new standard audited	
Results	Patients were more relaxed after rest periods. Massage, other interventions did not increase relaxation more than rest alone	Children showed less discomfort and distress during administration of anaesthetic agent	Improved tolerance during endoscopy Less sedation used Patients returned home more quickly Patients were free from side effects of sedation	Immediately after implementation 19% patients had pressure sores. Repeat audit showed a reduction of 7% to 12% of patients. 76% patients nursed on equipment appropriate to risk score. (Compared with the first audit score of 58%) over 80% of patients in the second audit were routinely assessed with Waterlow score assessment chart.

After Dunn.²⁹

and not usually documented precisely. The task of producing a clear audit tool with precise numerical data is possible but is often outside the skill and experience of the group unless supported by an experienced facilitator. Nurses generally do not gather routine data on their patients (except for accident rates, pressure sores). This habit needs to be developed as routine indicators such as post-operative pain, comfort levels, and satisfaction with information could be used as broad measures of quality of care. Additionally, local

support is needed to help practitioners to see "the big picture" – that is, how their particular intervention with patients belongs to a collection of similar interventions which can be evaluated.

It is important to recognise the traditional orientation of health care groups, particularly in the move towards clinical audit and more interdisciplinary work. The experience of many nurses involved in audit projects is that colleagues tend not to be interested or committed to the topics identified as areas for

investigation. This may reflect quite profound differences in methodological perspectives and ways of interpreting patient care. However, within the framework of quality improvement it is these very differences which need to be synthesised in order to achieve a complete picture of the process of care delivered to patients. Therefore the creative tension existing between members of the health care team when they come together to discuss topics for quality improvement must be harnessed. Managing the dialogue, sorting out the group dynamics, helping individuals become team players are complex tasks. In reality quality groups are usually left to muddle through as best as they can. This whole area of facilitating effective group work is an important dimension in successful quality improvement initiatives.

Evidence for quality improvement

A general rule should be that one source of evidence alone should not be seen as sufficient to indicate improvement. Thus we should be as sceptical of a set of statistics showing improvements without descriptions of actual change as we should be aware of descriptions without numerical data. The ODySSSy project illustrates this point.^{18 19} In this quasi-experimental design the nursing management of postoperative pain in five wards setting standards was compared with that in five matched control wards. Three of the experimental wards over the study period (12 months) showed an improvement in patients' pain scores whereas two experimental wards and none of the control wards showed similar improvements. These data were collected by members of the research team and were independent of the local audits undertaken by staff themselves. While the local audits showed that more patients were using pain assessment charts in the three wards in which improvements were recorded by the research data they also recorded an improvement in one of the two experimental wards not showing an improvement according to the research data. Such findings raise fundamental questions about the reliability of local audits, their timing, and the sustained effects of improvements alleged to have been achieved in practice.³⁰

More interestingly, when the process data (on group activity and dynamics) from the five experimental wards were compared with the results on patient outcomes very strong patterns of staff motivation and related patient pain scores were detected. In other words, when staff were highly motivated and keen about their task within the group more patients reported low pain ratings on graphic rating scales administered on the third post-operative day. Conversely, when staff were demotivated patients' pain scores increased.¹⁷ This would seem to indicate that certain process measures of how the group is working may be quite sensitive indicators of patient experiences. Using process data to inform outcome results is seen as important for further exploration.

Data collection and review techniques

The message of quality improvement is that it combines good teamwork and motivation with well developed skills in statistical analysis and detecting variations in practice over and above normal limits. The importance of laying down good data systems, informed by scientifically based practice guidelines or standards, is a pressing need for all groups. By involving local practitioners in this activity the conventional wisdom can be compared with the scientific evidence. Where the two are in discord then by the fact that a dialogue has been established through quality improvement, there is a greater rather than a lesser chance of practitioners taking on new ways of doing things.

Precursors to success

Quality improvement is both a philosophy and a methodology. It is important to locate oneself, one's colleagues, and one's organisation in the conceptual framework defining approaches to quality. In what way is quality improvement viewed in an organisation? Does one group resist it because it is perceived as an inspection model? How can the vision for quality as collaboration and involvement be spread? Can we cope with the consequences of this message in terms of breaking down hierarchies, encouraging greater teamwork, and of group problem solving?

The organisational structure set up to support quality improvement must be clear and not hierarchical: leaders for quality have to be identified and supported; inter-dependencies acknowledged; and common goals emphasised, reducing the areas for division and discord. The mechanics of quality improvement – selecting topics, analysing processes, and setting and auditing new standards – must be communicated to everyone within the organisation using the same terminology and the same basic techniques. All of this new activity must be supported by trained agents of change or facilitators who know how to get the best out of groups. And finally the best incentive for improvement is to ensure regular feedback of those successes – how things improve for the patient, for the staff, and for the organisation. When quality improvement is progressing well there should be no losers.

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