Quality in Health Care: Traditions, Influences and Future Directions

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In tracing developments in health care quality, a number of different approaches to quality evaluation can be identified, differing in terms of the specific focus and means of achieving quality. This paper attempts to classify the development of quality in health care, drawing on experiences within the industrial quality movement.

Three distinct models of quality evaluation are described, according to whether they define quality at an individual level, as an exercise in inspection, or as a method for continuous improvement. Developments in quality and audit in health care are explored in relation to the models and specific experiences within nursing and medicine are compared. The need to be aware of the history of quality within specific professional groups is highlighted, particularly within the context of future developments in health care quality and the growing focus on multi-professional collaboration. Copyright © 1996 Elsevier Science Ltd.

Key words: Approaches to quality, multi-professional audit.

INTRODUCTION

Underpinning the many changes in the health service in the United Kingdom in recent years, a fundamental concern with the quality of service provision can be identified, resulting in an increased pressure to demonstrate and improve quality at all levels of the service. Influenced by changes in health care at a local, national and international level, a wide range of quality and audit initiatives has emerged purporting to define, measure, improve or guarantee standards of patient care in all aspects of the health service.

Within clinical care, many of these developments have focused on the development and implementation of audit, initially within single disciplines (for example, the medical, nursing and therapy professions), and increasingly moving towards multiprofessional clinical audit. However, within specific disciplines, most notably the nursing profession, the language of audit has perhaps been less familiar than concepts such as standard setting [1-3], quality assurance [4,5] and quality improvement [6,7]. At a managerial and organizational level, efforts have been directed more towards total quality concepts, for example, through total quality management [8-10] and continuous quality improvement [11,12]. Many of these quality concepts themselves are continually developing and evolving, as witnessed by the developments in clinical audit [13,14], clinical guidelines [15-17], health outcomes assessment [18], and the introduction of organizational initiatives such as hospital process re-engineering [19], benchmarking [20,21] and accreditation [22]. These developments themselves are taking place within an increasingly consumer-focused health service, as evidenced by initiatives such as the Patient's Charter [23] and the growing use of consumer-based measures of quality, such as patient satisfaction and health assessment scales [24].
The changes and developments in health care quality evaluation are not happening in isolation. An interest and concern for quality are clearly evident throughout society in general, within both the public and private sectors, where issues relating to efficiency, effectiveness and meeting customer needs are a shared and pressing concern. Indeed, developments in health care often seem to be influenced by, or at least mirror, experiences of quality in industry, an issue that will be explored in more detail throughout this paper.

As the amount of quality and audit activity in the health service has increased, so too there has been an increasing focus on the impact and effectiveness of quality and audit programmes themselves, in terms of their ability to change practice and improve patient care [25,26]. This, in turn, has highlighted issues relating to the complex processes of implementation and the underlying values of the different approaches and systems that are being adopted and applied in practice [26-29]. Before we can begin to unravel and understand the effectiveness and relative merits of different methods, we first need to appreciate the underlying principles of specific approaches and how these might influence the development of quality and audit programmes at an organizational and clinical level.

In this paper, experiences of quality in health care are classified, drawing on experiences with the industrial quality movement. Three distinct models of quality evaluation are outlined, differing in terms of the specific focus and means of achieving quality. Developments in quality and audit in health care are explored in relation to these three models, and specific experiences within medicine and nursing are compared. The paper concludes by considering the more general implications for the future direction of quality in health care.

**EXPERIENCES OF QUALITY IN INDUSTRY**

There is a relatively long history of quality evaluation in industry, particularly within the manufacturing sector. Distinct approaches to quality can be identified which are inextricably linked to underlying methods of managing organizations, work and people. Three different models of quality evaluation are apparent, differing in a number of key dimensions, including: the level of scope and concern for quality; the definition of quality adopted; the amount of employee control over work processes; views of individual employees within the system; and the focus and means of achieving quality. For the purposes of the discussion, these models are defined as follows: quality as the responsibility of individuals; quality as an exercise in inspection; quality as a means of continuous improvement (see Fig. 1).

**Quality as the responsibility of individuals**

This represents the most traditional approach to quality evaluation. Typically, it reflects a craft-based approach to work, where individuals are responsible for all stages of the work process—planning, implementing, evaluating and taking action to correct any problems where necessary.

This approach to quality evaluation dates back to the time when work was organized around specialized crafts, undertaken by highly skilled workers in a direct relationship with their customers. Quality was seen to be the implicit responsibility of the individual, who by virtue of a specialized craft-based training, was seen to possess all the necessary skills to control the complete production process. Apprentice-based training was the usual method of preparation for the role, instilling both the skills required to perform the craft and a high level of commitment and dedication to the craft itself. This combination of skills and commitment was viewed as a guarantee of a high quality output.

Within this model of quality, therefore, quality can be defined as the product of highly skilled craft-work and is achieved primarily through investing in the selection and training of workers, who are highly respected for their particular craft. Traditionally, this approach involves undertaking work on a relatively small-scale. As such, it allows for both a strong customer focus and input and close supervision and attention to detail throughout the production process. Because of the focus on developing an individual's skills, this approach is generally successful in promoting excellence in practice. However, the process of developing individual excellence and professional self-regulation tends to be quite labour-intensive and because
Quality evaluation remains mostly at an individual, implicit level, there is only limited sharing of knowledge and experience amongst practitioners.

**Quality as an exercise in inspection**

The craft-based model of quality evaluation gave way to what can be described as an inspection-based approach with the onset of the industrial revolution and its subsequent impact on methods of organizing work and deploying labour. As work processes became more large-scale, technical and complex, so too they became fragmented and less skilled, leading to division of labour and more task-based methods of working. Consequently, there were no longer individual workers responsible for overseeing the entire cycle of work, but rather less skilled employees undertaking just one or two discrete steps within the overall production process. This method of working was typified by Taylor's model of Scientific Management [30] and often encompassed payment of workers according to their performance.

The increasingly multi-staged and disparate production process and an accompanying de-skilling of workers prompted the development of more formal and more explicit methods of quality evaluation. These were introduced in the form of external inspection techniques and were seen to be based on a number of assumptions [31], namely: that there is always one right way to perform a task; specialists are required to define that best way; and work is undertaken and performed primarily for economic reward.

Generally, therefore, inspection-based approaches can be characterized by a more task-based organization of work, where practitioners are primarily responsible for “doing”, whilst

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<thead>
<tr>
<th>Level and scope of concern</th>
<th>Quality as the responsibility of individuals</th>
<th>Quality as an exercise in inspection</th>
<th>Quality as a means of continuous improvement</th>
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<tr>
<td>Implicit concern for quality, vested in individuals.</td>
<td>Explicit concern for quality, vested in specialists and experts.</td>
<td>Explicit concern for quality, vested in teams of employees.</td>
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<tr>
<th>Definition of quality</th>
<th>Quality as the integral part and product of highly skilled craft-work.</th>
<th>Quality as the absence of mistakes or defects.</th>
<th>Quality as the search for continuous improvement, towards a goal of excellence.</th>
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<tr>
<th>Amount of employee control</th>
<th>Employee control over all stages of the work process.</th>
<th>Employees responsible for discrete tasks within the work process.</th>
<th>Teams of employees responsible for controlling the work process.</th>
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<th>Views of employees</th>
<th>Highly trained and highly respected for their skills and commitment to the craft.</th>
<th>Low level of respect and trust; motivated primarily by financial reward.</th>
<th>High level of respect and trust; self-motivated and seeking to fulfil higher level needs at work.</th>
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<tr>
<th>Focus and means of achieving quality</th>
<th>Individuals responsible for their own quality. Quality achieved through investing in the selection and training of individuals who enter the profession.</th>
<th>Emphasis on inspection of employees to identify errors. Focus on introducing systems and techniques of inspection.</th>
<th>Emphasis on improving work processes. Focus on both developing systems and investing in people to achieve quality.</th>
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**FIGURE 1.** Models of Quality Evaluation.
other specialist roles take on the responsibility for planning and checking the quality of work and suggesting appropriate courses of action. Quality is typically defined as the absence of defects and external assessors or inspectors are appointed to check and remove any defects or problems that might be occurring. Whilst this approach can reduce some of the problems associated with individual approaches to quality, in particular, the lack of explicitness, it can also have serious implications for the morale and motivation of workers or practitioners. Inspection for defects or mistakes usually involves questioning the performance and productivity of practitioners, often accompanied by reward and punishment schemes which may, in the long run, result in lower performance and demoralization at work.

**Quality as a means of continuous improvement**

As task-based working and accompanying methods of inspection became the predominant method of working, so too the costs of inspection began to rise. Rather than seeing improved quality and a reduction in the numbers of errors or mistakes at work, as the capacity for inspection increased, the number of errors identified also appeared to increase [32]. Initially, this was addressed by introducing methods of statistical sampling, however, more fundamentally, the concepts of the inspection/rejection approach began to be challenged.

The challenge to the inspection-based methods of quality came through the work of theorists such as Shewart [33], Deming [34] and Juran [35], who proposed shifting the focus of quality evaluation towards prevention, as opposed to identifying defects. This involved building quality into the processes of production, rather than inspecting for quality after the event. It was in Japan that this new message of quality made its initial and perhaps most significant impact, promoting a transformation in industry and leading the development of the concept of “kaizen” [36], namely the continuous search for opportunities for all processes to get better.

Challenging the focus of quality evaluation in this way involved a fundamental shift in underlying methods of organizing and managing work. This included rejecting Taylor’s Scientific Management approach. Instead, influenced by the work of the Human Relations Movement [37–40] and new theories of motivation at work, a modified craft-based approach to work was adopted. This involved focusing on teams, as opposed to individual workers, and devolving the responsibility for problem-solving, decision-making and control to the level of the work teams. Consequently, there was a re-orientation towards a synthesis of the plan, do, check and action phases in the cycle of work tasks. However, unlike the original craft-based approaches, quality evaluation was an explicit concern, supported by the use of structured problem-solving techniques such as quality circles [31,41,42]. Employees were trained to use a range of methods, such as cause and effect diagrams, flow charts and statistical process control charts to systematically analyse and improve their work processes [43].

In order to support a locally-based approach to quality which utilizes systematic tools for process improvement, the improvement-based methods are characterized by decentralized work structures and strong leadership and commitment to quality within a customer- and people-focused organization. Quality is defined as the continuing search for opportunities to improve processes, an activity which is achieved through investing responsibility in teams of workers, whilst managers take on a leading and enabling (as opposed to controlling) role.

**EXPERIENCES OF QUALITY IN HEALTH CARE**

In tracing the developments in health care quality evaluation, Ellis and Whittington (1993) [44] identify a number of key stages, which they refer to as the embryonic, emergent and mandatory phases. In relation to the framework proposed in this paper, the embryonic stage can be seen to relate to quality at an individual level, whilst the emergent and mandatory phases reflect a move to quality evaluation at a more explicit, and perhaps compulsory level. Thus the general move towards a more explicit concern for quality in health care reflects similar experiences in industry.

However, what is perhaps less clear in relation to health care quality is whether different professional groups have followed the same
route and have reached the same point; and whether clinical quality developments are in congruence with organizational and managerial developments relating to quality. Both of these points have important implications, in terms of the increasing move to multi-professional clinical audit and the need to maximize the effectiveness of quality and audit programmes within health care organizations as a whole.

In considering these questions, this paper focuses specifically on developments in medicine and nursing, in the context of the three models described. Such developments are then discussed in relation to the wider organizational changes in health care.

DEVELOPMENTS IN MEDICINE

Of all the professional groups involved in health care, medicine can be seen to have followed the most traditional craft-based approach to organizing and managing work, with quality vested at the individual practitioner level, within the overall scope of professional practice. The competence of individual practitioners is perceived as a major factor in achieving high quality, and professional regulation, for example, through the role of the medical royal colleges in upholding standards of medical education, has played a central role in maintaining a high level of practitioner competence.

This individually-based approach reflects quality evaluation at the embryonic stage, according to Ellis and Whittington's [44] distinction, and appears to have been the predominant model in medical care up until the middle of this century. From this time onwards, there is increasing evidence of the medical profession moving into the emergent and mandatory phases of evaluation. This is apparent in developments such as outcome-related morbidity and mortality studies, clinical case conferences, peer review and the early introduction of medical audit. Although such activity reflects a general move towards more explicit quality evaluation, there has been only limited information sharing and explicit criteria formulation.

It is the reforms in health care in the United Kingdom over the last few years that have firmly moved medicine into explicit quality evaluation, mostly within the so-called mandatory approach. This is apparent through the widespread implementation of medical audit, a development prompted by the 1989 government White Paper "Working for Patients" [45], which proposed that all doctors should participate in medical audit, and provision of subsequent guidance on how the process of medical audit should be conducted [46].

Prior to these changes, confusion was reported regarding medical audit, particularly in relation to the definitions adopted and whose responsibility it was perceived to be [47]. This had prompted some resistance to audit, with the consequence that only enthusiasts tended to get involved [48]. Thus, when medical audit was introduced in a more mandatory way, it was frequently interpreted as an inspection-based approach that was being imposed by central government. Within the field of medical audit, therefore, clear distinctions have been drawn between audit as an internal, peer review activity and audit as an external, regulatory mechanism [47]. These two perspectives can be seen to reflect features of the individual and inspection-based approaches to quality evaluation, respectively.

However, more recently, there have been increasing calls for medicine to move beyond the individual and inspection-based approaches, towards the improvement-based model of quality, influenced by a perceived failure to complete the audit cycle [48–50]. In re-focusing its efforts towards the action phase of the cycle, it has been proposed that medical audit needs to look beyond its immediate sphere of knowledge and experience and begin drawing on general theories of organizational change [51,52] and specific models of quality improvement that have proved their worth in industry [53–55]. This involves developing overall systems for quality improvement where the emphasis is on continuous learning and involvement [53], and there is a central focus on patients, clients and analysing work processes as the key to quality improvement, as opposed to a narrow evaluation of practitioner performance [54]. In order to promote such improvement-based approaches, Berwick and colleagues identify the need for practitioners to take on a set of "new clinical skills", including skills in team-working, process analysis, guideline development and collaborative working...
with patients, managers and other professional colleagues [55].

DEVELOPMENTS IN NURSING

Within the nursing profession, there is less of a tradition of a craft-based approach to organizing work and, compared to medicine, considerable shifts in the underlying methods of organizing work are apparent. What is of particular interest is whether these changes have been accompanied by corresponding changes in methods of quality evaluation, as, for example, was observed within the industrial quality movement.

The traditional organization of nursing care tended to be along the lines of task allocation, with individual nurses being responsible for specific tasks within the care process. Perhaps not surprisingly, therefore, when explicit quality evaluation began to emerge as a concern, particularly from the 1970s onwards, the predominant model adopted was one of inspection. This is reflected in the early developments in national nursing standards (for example, the American Nurses’ Association [56,57]) and global quality monitoring instruments, such as the Phaneuf Nursing Audit [58], the Slater Nursing Competency Rating Scale [59], the Quality Patient Care Scale [a], the Rush-Medicus Index [61] and its Anglicized version, Monitor [62].

Within the pre-formulated quality instruments, although a clear shift in focus can be observed from monitoring individual practitioner competence to evaluating the process of care and later towards patient outcomes [63,64], they all share common characteristics of defining and monitoring quality externally to practice. By 1987, over 60% of health authorities in England were reportedly using one or more of these established instruments to evaluate the quality of nursing and patient care [65].

With increasing use of external quality assessment techniques, both in this country and overseas, a number of concerns began to be raised, both in relation to the validity and reliability of the instruments themselves [66–73], and also their ability to change practice and improve patient care. This latter concern was related to a perceived failure to address important implementation factors, particularly in terms of practitioner involvement and ownership for quality [27,74,75].

Prompted by the limitation of the inspection-based approaches, new methods of quality evaluation began to emerge, clearly reflecting a move towards a philosophy of quality as improvement and opportunity [6]. This shift in philosophy and approach was characterized by the development of the so-called practitioner-based methods, notably the unit-based approach developed in the United States of America [5] and later adopted in countries such as the Netherlands [76,77], and the model of dynamic quality improvement developed by the Royal College of Nursing in the United Kingdom [3,6,78]. Such practitioner-based methods are based on concepts of decentralization and local ownership of quality, through devolving responsibility and accountability to the level of practice. This typically involves local teams of practitioners working together to identify topics for improvement and defining, measuring and evaluating criteria relevant to the topic under study.

To date, only limited evaluation of the impact and effectiveness of quality assessment approaches in health care has been undertaken. However, a number of evaluation studies within nursing do indicate that improvement-based methods promote greater staff involvement and acceptance, subsequently reducing the negative feelings associated with quality assessment and enabling staff to implement changes and action for improvement [26–28]. However, in order to achieve these results, careful attention to the process of implementing quality improvement is required to ensure that the underlying principles of the improvement-based approach are upheld [28].

The observed shift in approaches to nursing quality evaluation is closely mirrored by a move towards more patient-focused methods of organizing nursing care, away from task allocation towards team and primary nursing structures [79,80]. These new work structures are also underpinned by principles of decentralization and devolved control, important factors supporting the implementation of practitioner-based methods of quality evaluation.

Most of the developments described in nursing can be located within the emergent phase of quality evaluation. Compared to the effects it
Quality in health care

achieved in medicine, mandatory evaluation has been less influential here although central guidance and funding have been forthcoming from the early 1990s onwards [81,82]. Overall, nursing can be seen to have followed a more classical development through the models of quality proposed in industry. However, this movement has been neither straightforward nor uniform, and there is evidence of a proliferation of approaches currently in use, reflecting features of both inspection- and improvement-based approaches to quality [28]. Questions can also be raised as to the extent to which practitioner-based methods have been clearly integrated within overall organizational systems for improvement [26,83].

FUTURE DIRECTIONS FOR QUALITY IN HEALTH CARE

From this overview of quality developments in nursing and medicine, it is apparent that the two professions have adopted different approaches to quality evaluation, both in terms of the philosophy and in terms of the methods that have been applied to implement audit. Nursing has been more familiar with inspection-based approaches, although latterly, the focus has been moving towards improvement. Medicine, on the other hand, has a long tradition of individual-based methods of evaluation, although with the greater influence of mandatory audit, the profession has perceived the introduction of inspection-based approaches to quality.

From these different starting points, we are increasingly recognizing the need for more collaborative, multi-professional approaches to quality and audit. With the increased complexity of care and a growing awareness that many quality problems arise, not within a single discipline, but at the interface of care between professions [55], particularly in relation to communication [84], there has been a recent emphasis on developing multi-professional clinical audit [13,14], within an overall framework of patient-centred care, clinical effectiveness [85] and organizational quality improvement.

However, this transition to clinical audit, effectiveness and continuous improvement is not one that will happen automatically or quickly. As well as the history of audit in medicine and nursing, we also have to take into account experiences in the range of other therapy professions involved in delivering health care. Add to that an awareness of the different traditions, relationships and power structures within and between professional groups, and

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<th>Level and scope of concern for quality</th>
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<td>Quality is made explicit in the form of agreed statements of best practice, for example, standards and guidelines.</td>
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<td>Responsibility for quality is vested in clinical teams involved in the care delivery process (including patients, carers and managers).</td>
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<tr>
<th>Definition of quality</th>
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<td>Quality is defined as the search for ways to continuously improve patient care and clinical audit is a mechanism by which this can be achieved.</td>
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<td>In seeking improvement, there is a clear commitment to action, through closing the audit cycle and implementing changes in practice.</td>
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<th>Control over the process of care delivery</th>
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<td>Clinical teams involved in care delivery are able to assume responsibility for planning, implementing, evaluating and taking action on care.</td>
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<td>This is reflected in decentralized work structures, with devolved decision making and control.</td>
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<td>The manager plays a key role as a leader, in an enabling and supporting role.</td>
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<th>Views of team members</th>
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<td>All team members are equally valued and respected, both from within the team and from outside.</td>
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<td>Methods of team working clearly encompass mutual trust and recognition.</td>
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<th>Focus and means of achieving quality</th>
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<td>There is a central focus on improving the processes of care.</td>
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<td>Quality and audit form an integral part of everyday practice.</td>
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FIGURE 2. Characteristics of clinical audit within an improvement-based model of quality.
also a consideration of the need for closer working relationships with patients and managers to ensure that clinical audit becomes an integral part of an overall system for improvement. As already indicated, this involves all of us acquiring new skills, particularly in team-working, process analysis and collaboration [55].

If implemented effectively, clinical audit would clearly reflect an improvement-based model of quality and be incorporated within the overall organizational strategy for quality improvement, encompassing collaboration between patients, carers, professionals and managers. Figure 2 illustrates the key characteristics of clinical audit within the context of the improvement-based model previously outlined. Continued barriers, whether they exist between professional groups, professionals and patients, patients and managers, or managers and professionals, could prevent any real movement away from both the individual- and inspection-based methods of quality.

However, as previously indicated, clinical audit forms only part of an overall system for improvement [53]. A clear understanding is needed of how clinical audit fits into the overall organizational strategy for effective health care delivery and service improvement, meeting the needs of patients, providers and purchasers alike. This involves taking into consideration a range of patient, professional and organizationally-focused initiatives.

Within the complexity of present day health care, it is likely that we will see aspects of all three models of quality in operation, each fulfilling different roles within the overall function and purpose of the organization (see Fig. 3). Again, the key point is to be clear as to how these models fit together and what they can realistically contribute to the organization in terms of audit, clinical effectiveness, outcomes assessment, quality assurance and quality improvement. It is also important to undertake further evaluation research, focusing on the effectiveness and relative merits of different methods and approaches to quality in health care.

**SUMMARY**

Within health care, we have come from different starting points and travelled along many different paths in the pursuit of quality. With a clearer understanding of where we have come from, we can also begin to develop a clearer vision of where we now want to go, and most importantly how we are going to get there as effectively and efficiently as possible.

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