

Quality health care and psychologists



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Guest Editors Hilary Hearnshaw and Noelle Robertson introduce a special feature on the role of psychologists in delivering quality in health care.

THE articles in this special feature describe the opportunities for psychology created by a growing interest in the quality of health care provided in the National Health Service (NHS) in the United Kingdom. The NHS has faced many major changes over recent years and healthcare professionals are being confronted with more and more demands. There is now a requirement to provide evidence-based, high quality care. This means that health service staff need skills in evaluating and implementing research evidence and in quality management, in addition to dealing with clinical responsibilities. As these articles will demonstrate, the knowledge and skills of psychologists in practising, teaching and researching their discipline can all help health service staff to meet these demands.

There are already many roles for psychologists in the health services. For example, clinical psychologists, psychotherapists, counselling psychologists and counsellors have clearly defined roles in providing services and care. There are also occupational psychologists working in health service management. However, our contention is that, in addition to the familiar roles in the health service, many more new roles are now open for psychologists in the management and maintenance of the quality of the service that the NHS provides for its patients. Health service staff are, in many areas, turning to psychologists to help them satisfy the requirements placed upon them in the new NHS.

Models for quality

The management of quality is well-researched, well-documented and familiar to many organisational or occupational psychology practitioners amongst others. However, the introduction of quality management in health care has, in only a few instances, followed recognised models such as total

quality management or continuous quality improvement. These models use both scientific principles and the dynamics of human relations to alter the whole (total) organisation in its management of the quality of its output (Martin, 1993). The model used in most NHS settings is that of clinical audit as a tool for improvement.

Clinical audit is understood as the process by which a multidisciplinary team (most often doctors and nurses, but



sometimes other therapists or administrative staff) choose an area of their work to investigate and improve (Hearnshaw, 1993). They measure their current practice and compare it with agreed standards of care defined by the research literature. If their current practice does not meet these standards, then changes are agreed and implemented. Practice is measured again after the changes have been introduced, to check that the changes have led to improvement.

This apparently simple, systematic process has been strongly advocated in the NHS (Department of Health, 1989). Investment in clinical audit has been high (Maynard, 1991), the idea being to give necessary support and motivation by providing skills, knowledge and personnel for the process of conducting

clinical audits. As the article by Cape and Hewer reports, this has resulted in the generation of a new profession of clinical audit support staff, for which psychology graduates have many of the required skills.

Implementing change

Even with support, the process of clinical audit is not always successful in bringing about change. The article by Baker and Firth-Cozens discusses, from the clinician's point of view, how psychological theories can assist clinicians to implement change in their provision of care. The aim is to ensure that care follows what research suggests is best practice.

The authors also prioritise and detail other research needs of quality management, from the health service staff perspective. They identify where psychologists can contribute and set new research agendas to answer questions raised by health service quality managers. There is clearly room for co-operation between clinicians, health service managers and psychologists both in sharing existing expertise and in developing research programmes in these topics.

The psychologist's view of the value of psychological expertise in the many

opportunities for supporting quality improvement in the health service is discussed in the first article, by Robertson and Hearnshaw. The wide range of expertise held by psychologists has much to contribute in many specific niches in this field.

Research skills enable appraisal of evidence related to clinical practice, which is increasingly required by clinicians of all disciplines. Expertise in understanding reactions to change, as repeatedly experienced by all health service staff, can help staff in adapting to those changes. Knowledge of change management strategies and of the process of innovation can enhance the effectiveness of quality initiatives and inform effective development of the service. Data handling skills are invaluable in clinical audits. Expertise in the nature of groups and organisations is increasingly relevant to the effectiveness of multidisciplinary work in health care, especially in the management of its quality.

Openings

These opportunities for the application of many different aspects of the discipline of psychology to the quality in health care movement are real. There are jobs in clinical audit departments and in quality management units in NHS trusts, in health authorities and in some pri-

mary health care centres and general practices. Academic health services research units are running research projects which address issues of quality. The recent growth of research programmes in NHS trusts funded by the NHS Executive Research and Development Programme means posts are available for those with relevant research training in behavioural sciences. These posts are advertised in the *Appointments Memorandum of The Psychologist* and in other professional journals. We believe that psychologists are well-placed to fill these posts. These articles are intended to inform psychologists about these opportunities.

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Managing quality in health care ...

The opportunities

**Noelle Robertson
and Hilary
Hearnshaw explore
the growing need for
quality management
professionals in
effective health care.**

IN recent years, the National Health Service (NHS) in the UK has undergone many rapid and fundamental changes — partly as a result of government policies but also because of an increase in demand for health care. One of the most important of these changes has been the growing need to achieve, maintain and improve the quality of services available to patients (Donabedian, 1988; Berwick, 1992) whilst ensuring that doctors, nurses and therapists provide care that has been shown to be effective (National Health Service Executive, 1996). This emphasis has led to the development of a new focus — the management of quality in health care. Loosely defined, this is an attempt to improve patients' health outcomes by analysing and intervening in the structure and process of health care.

Attempts to manage and improve the quality of care offered to patients are by no means new. One of the earliest documented forays into quality management occurred during the Crimean War with the work of Florence Nightingale. Faced with alarmingly high mortality rates at the military hospitals in Scutari (40 per cent of casualties admitted died there), Nightingale strove both to identify likely causes (appalling sanitation, little in the way of hygiene and overworked staff) and to implement solutions (establishing a laundry and encouraging more judicious use of nurses). Her quality improvement strategies paid off: within six months of her initiatives mortality rates had plummeted to two per cent (Cohen, 1984).

Almost 150 years on, the organisation of the health service may have altered but the need for quality management is no less important. Since 1990, the NHS has operated an 'internal market' whereby health care is purchased (either by general practitioners who hold their own budgets or by health authorities for those GPs who do not) from providers (hospital or community trusts). The business ethos has not only permeated NHS organisation but is implicit in the Patients' Charter. Patients are encouraged to be consumers and to expect basic levels of care, to exercise choice about care offered to them and to complain if their expectations are not met.

What has followed from these cultural and organisational changes is a

focus on quality. To ensure that the consumer, whether patient or purchaser, receives the best care available, quality management is now paramount. Increasingly, health professionals — doctors, nurses, physiotherapists, clinical psychologists and others — are expected to demonstrate and measure the effectiveness of their activities. They are also expected to have established mechanisms to monitor and improve the care they provide. Quality issues now figure as prominently as clinical concerns.

This new emphasis on measuring and demonstrating quality poses challenges for many working in the health service whose main interests may be clinical, and who may not be well-versed in the various quality assurance activities required of them. All staff are faced with



Florence Nightingale — an early foray into quality management?

an array of additional demands that are integral to quality management. How best to assess the quality of care they provide? How to interpret research findings that might shape their practice? How to undertake effective audit and, if change in practice is warranted, how to achieve this? Many staff are searching for relevant expertise to help them with these diverse tasks and, whilst information and practical support to facilitate these various activities is slowly growing, many issues in quality management are still to be addressed.

Psychology and psychologists are already making significant contributions in this area. However, we believe that there is scope for a greater and more proactive impact. Psychology should make the most of the opportunities which the task of quality management in health care offers to those with very different interests and skills. In this article

we consider further possible roles for our profession.

Breadth of opportunity

Currently, most psychologists employed within the health service are in either clinical or counselling posts. Their roles have often been viewed in a rather narrow way as providers of psychological therapies, usually to individuals or groups. However, the changes within the NHS and the need to support quality initiatives are stimulating a re-evaluation of the role of psychology both inside and outside the profession (Firth-Cozens, 1995).

For example, occupational psychology is being drawn upon to help inform health professionals about how they can function more effectively and to help them understand the factors that enhance or impede change in their daily practice (West & Farr, 1990). Both social and organisational psychology are being harnessed to help develop the multidisciplinary teamwork that underpins the effective delivery of health care in primary care, community and hospital settings (West & Wallace, 1991; King & Anderson, 1995). Psychological theories and methodologies are being used to suggest how health professionals can change their practice to incorporate new research findings (Robertson *et al.*, 1996; Lomas, 1995).

In this article we have selected some areas of psychological expertise which we feel illustrate how our skills can be more widely and systematically applied to the growing discipline of quality management in health care. The first is expertise in research methods, which, successfully deployed, can help other health professionals decide what is and what is not effective practice. The second is expertise in the collection and analysis of data, which is an increasingly routine activity in the health service. The third is expertise in understanding and managing reaction to change — an inevitable consequence of any attempt to introduce innovative methods of quality management (Berwick, 1992).

Interpreting evidence

The current NHS is increasingly concerned about the evidence base for the care that patients receive. Decisions about what care is provided and how it is delivered are increasingly governed by research evidence for the effectiveness of interventions. For example, the recent suggestion that counselling for vulnerable groups, such as the recently bereaved, does not have significant benefits for mental health (National Health Service Centre for Research and

Dissemination, 1997) is likely to have repercussions for psychological services across the country.

In this climate, health professionals are thus encouraged to draw on research to determine how they practise. However, not all are familiar with how to judge and draw conclusions from research findings. Psychologists have knowledge and skills in appraising quality of research evidence, for example in the recent Society guidelines examining evidence for the existence of recovered memories (The British Psychological Society, 1995). They also have a role in helping other professions to develop critical appraisal skills so that their practice too can be informed by the best available evidence.

A basic undergraduate training equips psychologists with the skills to assess the merits of others' research. We can consider whether a study adequately tests a hypothesis, identify methodological weaknesses and evaluate whether the conclusions are justifiable. Our familiarity with quantitative and qualitative methods is also vital in assessing the relative strengths of different types of study. These skills are currently very much in demand as the culture of research appraisal and implementation develops in the NHS (Sackett & Haynes, 1996).

Training to develop such interpretative skills is already emerging for those involved in quality management (Robertson *et al.*, 1996) and through hospital and general practice research networks. Psychologists are in a powerful position to contribute to this training; they need to cultivate formal and informal links with the health service research community to facilitate an improved grasp of research throughout the NHS. Since clinical psychologists are trained in the dual roles of scientist and practitioner and routinely use diverse research evidence to inform practice, this may be a useful training model to encourage other health professionals to develop more reflective and research-based practice (Long & Hollin, 1997).

Data handling

Initiatives to improve quality and clinical effectiveness have undoubtedly wrought changes both in the ethos of the health service and in the daily work practices of health professionals. One of the most prominent of those changes has been the emergence of clinical audit. As a routine tool to manage quality, audit encourages health professionals to examine their own practice by choosing an aspect of care, setting standards, assessing practice against standards and, where necessary, changing their practice if the standard has not been met.

However, whether improvement in quality follows from a change in practice can only be known for certain by mea-

suring the changes to the care that is given. Here the skills of psychologists can be used to identify the best tools for measuring the structures, processes and outcomes of health care, and for effectively handling different kinds of data.

For example, having a clear understanding of the appropriate distribution measures (mean, median, mode, standard deviation) for different types of data (interval, ratio, whether normally distributed etc.) is very relevant to the interpretation of data collected for audit. An understanding of measures of differences between samples is vital to the interpretation of how sure we can be that changes have actually happened. These skills are particularly in demand as it is increasingly recognised that tools generated in broader research on health care may have limited utility for quality assessment (Grol, 1996).

Clinical audit can also involve considerable amounts of data collection and is often undertaken by those who have not yet had the opportunity to learn the necessary data handling skills. Psychologists are in a strong position to provide training and advice either through consultancy to audit groups or by involvement in multidisciplinary audit initiatives. The selection of appropriate data collection methods, measurement scales, error recognition strategies, statistical tests and levels of accuracy and the ability to assess confidence in results are a few of the more technical skills that we can contribute to this central strand of quality management.

Reactions to change

When examining professionals' participation in audit and other strategies aimed at quality management, it appears that changing practice is by no means guaranteed and is often resisted (Newton *et al.*, 1996). For example, early efforts to involve doctors in systematic medical audit were occasionally met with antipathy and hostility (Black & Thomson, 1993) and attitudes to the process are by no means universally positive (Chambers *et al.*, 1996). 'I can learn from my mistakes without audit' is a common refrain.

Even where attitudes to quality improvement have been largely positive, this has not necessarily translated into action (Baker *et al.*, 1995). A survey of hospital doctors (Mansfield, 1995) showed that while most (77 per cent) welcomed clinical guidelines (systematically developed statements to aid decision making), they did not use them as much as might have been expected — findings echoed in earlier work on general practitioners (Grol, 1992).

From a psychological perspective, such apparent unwillingness to relinquish tried and tested procedures is both

understandable and reasonable. Attempting to improve the quality of your performance can seem both threatening and de-skilling. It frequently requires that health professionals consider very different and often innovative approaches in the way they care for patients, and managing these changes can be fraught with difficulties.

However, changes in how doctors, nurses and allied professionals deliver care can be understood, and to some extent moulded, if psychological knowledge is used in designing and undertaking quality management initiatives. For example, extensive literature on innovation suggests how behaviour alters when we must adopt new and dispense with old routines (Rogers, 1983).

This theoretical work can help not just to understand how and why professionals react as they do when faced with change, but also to identify ways of making desirable changes in practice more likely to occur and remain. For instance, if quality improvement is to occur and be sustained, those involved in the process need to feel that they have been instrumental in making any changes and that their efforts are valuable (Kanter, 1983).

The benefits of this kind of consultation have been demonstrated in a study where different professions undertook clinical audit in primary care settings (Hearnshaw *et al.*, 1994). All members of a number of primary health care teams (general practitioners and ancillary staff) were actively encouraged to devise and undertake audits reflecting the way they worked. The sense of ownership that resulted was crucial to completing the audits and implementing changes to the delivery of care.

Whilst the literature on innovation has grown, and with it advice on how organisational change can be introduced effectively, little has been applied explicitly to quality improvement in health care. It is well documented that employees are more inclined to relinquish familiar routines and explore alternatives where they feel secure and not overloaded by unreasonable pressures (West & Farr, 1990). However, many quality initiatives are expected of staff with no additional time and resources — perceived as two of the main obstacles to conducting routine quality management (Eve *et al.*, 1996).

It is not too surprising that, when faced with new and demanding tasks, health professionals feel both ill-equipped and fearful of changes which are imposed upon them. Many health professionals report both struggling to complete audit or similar activities in the context of a leaner NHS and having to

handle increased caseloads and administrative responsibilities. To shape the kinds of environment where high quality care can flourish, psychologists can offer practical advice rooted in theory to both policy makers and NHS staff.

Enhancing the process

As we described at the outset of this article, quality management both has a lengthy history and requires systematic assessment of the processes involved in health care if patients are to benefit. To date, much of that assessment has examined the behaviour of health service staff as they either adopt or fail to adopt new practices and procedures (Wensing & Grol, 1995). Strategies used to encourage changes, such as guidelines or continuing education (for example, workshops or conferences) are also under scrutiny. Unsurprisingly, given the complexities of changing professional behaviour, no one strategy has been found to be uniformly effective (Oxman, 1994).

There is undoubtedly enormous scope for psychology to ensure quality care by enhancing understanding of how changes occur in clinicians' behaviour. Our discipline can help to identify more clearly professionals' attitudes and beliefs which underlie change in practice. Psychological models and techniques that derive from them can describe and explain the process of change and suggest how strategies might be used to enhance change. For example, the rapidly developing field of health psychology has generated a number of very valuable models to understand and shape patient behaviour (Conner & Norman, 1996). It may be timely to harness these models and test their relevance to professionals' behaviour to better understand what shapes their practice and to use this as a basis to help them deliver a quality service.

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Employment of psychology graduates in NHS clinical audit



John Cape



Philippa Hewer

John Cape and Philippa Hewer discuss the relevance of psychological skills.

THE clinical audit programme has been the major NHS initiative in quality improvement over recent years (Department of Health, 1996a). From 1990 to 1995, some £360 million was spent by the NHS on clinical audit (National Audit Office, 1995). An increasing proportion of this funding has been spent on dedicated staff to help health professionals carry out clinical audit. These staff, variously termed clinical audit advisers, assistants or facilitators, have in effect become a new quasi-profession in the NHS, with approximately 1500 currently employed in this role across the country (Buttery *et al.*, 1994).

The new clinical audit staff have been drawn from various different backgrounds, and there is anecdotal evidence of an increasing number of psychology graduates among them. In addition, over the past three years, there has been specific targeting of psychology graduates with advertisements for clinical audit staff posts appearing in the Society's Appointments Memorandum.

The majority of clinical audit staff are employed by NHS hospitals and trusts, with a minority being employed by health authorities. Those employed by health authorities work with GPs and primary healthcare teams; those in trusts with secondary healthcare professionals. Their functions include (see Buttery *et al.*, 1994; Firth-Cozens & Venning, 1990; Kent, 1994):

- training and educating health professionals in quality improvement methodology;
- advising health professionals on carrying out quality improvement projects, including design, data analysis and use of the results to change clinical practice; and
- designing and undertaking specific agreed clinical audit projects.

The core skills required of clinical audit staff in this role are (Robertson *et*

al., 1996):

- sound understanding of scientific methodology, especially within the social sciences;
- practical experience in project design and data analysis;
- interpersonal skills to work with staff from widely different professional cultures;
- facility with information technology;
- understanding of the influences on individual and group behaviour change;
- ability to search, appraise and summarise research literature; and
- oral and written presentation skills.

These, it will be evident, are core skills taught in the psychology graduate curriculum (Hayes, 1989; Radford, 1992). This suggests that such posts are particularly suited to psychology graduates, and potentially offer a new graduate career path for psychologists.

We decided to survey the extent of current and anticipated employment of psychology graduates as clinical audit staff in the NHS.

The survey

A questionnaire, with a covering letter on the Society's letterhead, was sent out in September 1995 to both the clinical audit committee chairperson and clinical audit co-ordinator of each of the 385 NHS hospitals and trusts in England. Clinical audit committees are the professional structures within NHS hospitals and trusts responsible for organising clinical audit; they primarily comprise doctors and other clinicians. Clinical audit co-ordinators are responsible within a trust for managing a clinical audit staff team, working to the priorities of the audit committee. Duplicate questionnaires were sent to both chairperson and co-ordinator to maximise response rate. The questionnaires asked about backgrounds of current clinical

	Health profession qualification	No health profession qualification	Total
Graduate	154 (16%)	288 (29%)	442 (45%)
Non-graduate	184 (19%)	358 (36%)	542 (55%)
Total	338 (34%)	646 (66%)	984

Table 1: Qualifications of clinical audit staff

audit staff employed, skills required of clinical audit staff and anticipated future employment requirements.

The clinical audit chairpersons and co-ordinators were also sent supplementary survey forms to pass on to any psychology graduate clinical audit staff they employed. These additional questionnaires asked about the graduates' experiences in clinical audit posts and the extent to which they had used their undergraduate psychology training.

Employers

We received 231 responses from 223 NHS hospitals and trusts, completed by 36 clinical audit chairpersons, 145 clinical audit co-ordinators/managers and the remainder by other clinical audit staff (duplicate responses from eight trusts have been excluded from the analysis). This is a response rate of 58 per cent. A range of trusts was represented in the responses: 84 acute; 22 community; 17 mental health; 66 combined trusts; with 34 unspecified.

A total of 1089 clinical audit staff was identified in the responses. The number of staff reported per trust varied from one to 24 (mean = 4.87).

The background and qualifications of staff, where known, are given in Table 1. There was considerable variation between trusts, from those employing no graduates to those employing graduates only. Of the total clinical audit staff, 72 were reported to have a psychology degree. This represents 7 per cent of the total staff employed and 25 per cent of the graduate non-health professional audit staff.

Clinical audit chairpersons and co-ordinators were asked to rate the importance in recruitment of seven core skills. The results are given in Table 2. The skills rated most frequently as 'very important' were interpersonal skills and oral and written presentation skills. Facility with information technology and practical experience of project design and data analysis, both well covered in the psychology degree, were also rated highly. The skills most specific to the psychology degree — understanding of scientific methodology, ability to appraise and summarise research literature, and understanding of influences on group and individual behaviour change

— were still considered important, but were comparatively less highly rated.

A supplementary open-ended question asked respondents to note what additional skills they looked for in recruiting clinical audit staff. Additional skills listed were those that were more knowledge-based or related to personal factors. They were:

- having an understanding of audit, the NHS and/or knowledge of medical terminology;
- being able to work with little supervision and on own initiative, adaptable, flexible, honest;
- being a team player, team worker; and
- teaching and training skills.

Three questions asked about anticipated changes to recruitment requirements over the next three to five years. Of the 172 responses to this question (75 per cent of total responses), 56 per cent antic-

ipated an increase in staff, 36 per cent thought there would be no change and 8 per cent expected a decrease in staff numbers. Various reasons were given for anticipated staff increases, including: 'audit in community services increasing' and 'involvement with Research and Development growing'. Where doubts were expressed about growth, they were primarily concerns about funding and general pressures on costs.

Numerous respondents thought a more highly qualified and skilled staff group would be needed: 31 per cent expected an increased proportion of graduates to be recruited and 27 per cent expected increased recruitment from existing health professions. Greater requirements for staff with skills in scientific methodology, data analysis, information technology and facilitation of behaviour change were commonly mentioned.

Of the clinical audit employers, 17 per cent said that they would be more likely to recruit psychology graduates in future; 36 per cent would be happy to do so if the psychology graduates fulfilled other relevant criteria; 43 per cent indicated no greater likelihood of recruiting psychology graduates.

Psychology graduates

We received 66 responses from psychology graduates. This represents 92 per cent of the 72 clinical audit staff with

Skill	Very important	Important	Of little importance
Understanding of scientific methodology	57 (26%)	139 (63%)	26 (12%)
Practical experience in project design and data analysis	126 (56%)	92 (41%)	8 (4%)
Interpersonal skills	203 (89%)	25 (11%)	0
Facility with information technology	74 (33%)	145 (64%)	7 (3%)
Understanding of the influences on group and individual behaviour change	58 (26%)	129 (57%)	38 (17%)
Ability to search, appraise and summarise research literature	59 (26%)	141 (62%)	26 (12%)
Oral and written presentation skills	158 (69%)	67 (29%)	3 (1%)

Table 2: Clinical audit employer ratings of importance of skills in recruitment to clinical audit posts

psychology degrees reported by the clinical audit employer respondents.

The majority of the psychology graduates (73 per cent) had obtained their degrees within the previous five years, and most (78 per cent) had been working in clinical audit for less than two years. The lack of staff with a longer history working in clinical audit is understandable in that the clinical audit initiative in the NHS had been established only five years before the survey.

Salaries reported by respondents varied from £9,500 to £26,000. Most new graduates reported salaries in the region of £11,000 to £17,500, with higher salaries for more experienced graduates in more senior clinical audit positions. These are better salaries than for many new graduate positions.

The skills from their psychology degrees that the graduates reported using in their current clinical audit job are given in Table 3. These were collated and categorised from responses to an open-ended questionnaire item. They are similar to the skills rated by the clinical audit employers in Table 2, with the exceptions that interpersonal skills are less frequently mentioned and searching, summarising and appraising research literature is not explicitly mentioned.

The majority of psychology graduates considered the psychology degree relevant for a post in clinical audit (22 very relevant, 39 fairly relevant, two not at all relevant). Knowledge and skills from the degree which they reported not using in clinical audit were psychological theory (30 per cent), advanced hypothesis testing and research skills (18 per cent) and advanced statistics (15 per cent).

Most of the psychology graduates rated their experience working in clinical audit as satisfying: 29 per cent as very satisfying; 58 per cent as moderately satisfying; and only 5 per cent as not at all satisfying.

The future

Employment opportunities for psychology graduates in clinical audit are likely to increase. Employers predict greater numbers and a greater proportion of graduates employed. There is also likely to be a growing requirement for skills more specific to the psychology degree. At present, employers of clinical audit staff appear to value general degree skills (e.g. oral and written presentation



Psychology graduates in clinical audit roles can be expected to acquire technical skills in service evaluation and quality improvement, and general management skills in project and people management in complex organisations.

skills) more highly than skills such as understanding of scientific methodology and of the influences on behaviour change, which are more specific to the psychology degree.

However, strategic developments in

the NHS around clinical effectiveness and evidence-based medicine are likely to demand more sophisticated skills from clinical audit staff, so they can assist doctors and other health professionals in making better use of research evidence in their routine clinical practice (Department of Health, 1996b). Psychology graduates will be well placed to do this.

At a postgraduate level, training in health psychology has a special relevance for working in clinical audit. Although the survey only asked about the undergraduate psychology degree, we are aware of a number of psychology graduates with health psychology postgraduate qualifications working in clinical audit posts. The health psychology curriculum (Rumsey *et al.*, 1994) provides both a relevant academic knowledge base and applied skills in research, teaching and intervention. These have the potential to enhance significantly the competence of clinical audit staff. Within a broad vision of applied health psychology (Marks, 1994), work in clinical audit can be viewed as a specific example of applied health psychology practice.

Clinical audit staff posts within the NHS are still both recent and evolving, so that established career pathways have yet to emerge. Within the NHS there are more senior posts available as clinical audit co-ordinators and quality man-

Skill	Number of graduates reporting
Project design and data handling	55 (83%)
Oral and written presentation skills	38 (58%)
Scientific methodology	33 (50%)
Psychological principles, social psychology, health psychology	24 (36%)
Information technology	19 (29%)
Interpersonal skills	14 (21%)
Understanding of group and individual behaviour	14 (21%)

Table 3: Degree skills reported as used in clinical audit posts by psychology graduates

agers. They have management and leadership responsibilities for quality improvement in hospital trusts and healthcare commissioning bodies.

More generally, psychology graduates in clinical audit roles can be expected to acquire both technical skills in service evaluation and quality improvement, and general management skills in project and people management in complex organisations. These would be relevant for research, evaluation or technical posts in other areas (including in other areas of applied psychology), and for general management posts within or outside the NHS.

As a direct outcome of this survey, a seminar for psychology graduates working in clinical audit identified through the survey was held at the Society's Centre for Clinical Outcomes Research and Effectiveness at University College London. This led to the establishment of a group for psychologists working in clinical audit and clinical effectiveness. This is now known as PSYQNET, having merged with a similar group initiated by psychologists at the Eli Lilly National Clinical Audit Centre at the University of Leicester.

PSYQNET meets regularly to discuss issues such as competencies for clinical audit staff, development of an information pack for undergraduate departments on clinical audit as a career,

development of promotional material on the skills and abilities of psychology graduates for clinical audit employers, and arranging specific workshops. Its work also includes advice to other healthcare quality organisations on psychology and its contribution to clinical audit and clinical effectiveness. Other sources of support for psychology graduate clinical audit staff are the National Centre for Clinical Audit (Smith, 1996), the Association for Quality in Health Care, and the Clinical Audit Association.

Expansion of psychology graduate numbers in clinical audit posts has potential benefits both to the NHS and to the science and practice of psychology. For the NHS it can give health professionals ready access to psychological expertise to improve the quality of clinical practice and service provision. For psychology it can provide a new avenue of psychological practice linked most closely with health psychology and, as with all new areas of applied psychological practice, it can be a testing ground for the theories of psychological science.

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Evidence, quality of care and the role of psychology



Richard Baker Jenny Firth-Cozens

Richard Baker and Jenny Firth-Cozens aim to enlist the help of psychologists in increasing the clinical effectiveness of the NHS.

AN increase in clinical effectiveness has been a national priority for the health service since 1994. The underlying aims are to improve patients' health and to make best use of the money spent on health care. The two principal approaches to achieving these worthy goals are to stop providing care which research has shown either has little benefit or may even be harmful, and to increase the provision of care which has been shown to have definite benefit. This inevitably entails changing the clinical practice of health professionals, and some of the ways that this might be achieved are listed in the government White Paper, *The New NHS* (Department of Health, 1997), under the heading of clinical governance. These approaches include: the use of clinical audit; an understanding of research and the use of evidence; the enhancement of team leadership; the systematic use of risk management; and continuing professional education.

As clinicians and academics who are also involved in policy advice and implementation, our aim in this article is to request help from psychologists in pursuing these tasks. Through its focus on the study of behaviour change, psychology has the potential to take on a much greater role in the development of clinical governance, and we will suggest ways that psychologists may usefully become involved.

We start by providing examples of where evidence-based health care has been slow to be implemented. For instance, the use of family intervention as a method of treatment in schizophrenia has been recommended for more than a decade, but it remains unusual in routine practice (Anderson & Adams, 1996). Growing numbers of randomised controlled trials have been undertaken but, without a formal synthesis of their findings by reviewers, practitioners have not been given an unequivocal statement about the effectiveness of this method. However, a formal systematic review has

now been undertaken which confirms that family intervention reduces relapse rates. Now the challenge is to implement this strong evidence into routine care. This is not simply a matter of increasing resources. It will also require clinical audit, education, decision making, the efficient use of individual skills within a team and a more systematic approach to risk management.

An example from acute clinical services is in the care of coronary thrombosis, clinically referred to as myocardial infarction. This is one of the most common causes of death, but an effective treatment that reduces the risk of death immediately after the infarct is to administer a thrombolytic drug which dissolves the blood clot in the coronary artery. An adequate number of trials had been conducted by 1973 to establish that thrombolytics reduce death rates. However, it was not until 13 years later that this treatment was recommended by the majority of experts writing in textbooks and reviews. This in turn contributed to the further delays that occurred before thrombolysis was implemented in routine practice (Antman *et al.*, 1992).

This example demonstrates that successful implementation relies on changes in the behaviour of professionals. However, change in behaviours will require all those strategies listed above (e.g. clinical audit) as well as a systems approach to the organisation of the care process so that thrombolysis can be given as early as possible. Auditing at various places along the route, for example, allows us to see where delays are occurring.

Mechanisms for change

Clinical audit is a way of monitoring practice, including the outcomes that result, but there is also some evidence that the feedback it involves may itself

bring about change. For instance, in one audit to increase the use of thrombolytic drugs, five hospitals in England took part (Robinson *et al.*, 1996). One hospital acted as a control, while the others collected data about the proportion of their patients who received the treatment. In these four, initial data showed that the proportion of patients receiving treatment in each hospital was 57 per cent, 58 per cent, 60 per cent and 94 per cent.

On the basis of these findings, the hospitals took different steps to improve performance, and the proportions treated changed to 73 per cent, 88 per cent, 88 per cent and 86 per cent respectively. Even though the sample sizes in this audit were small, the improvements appear encouraging. This is despite one hospital doing less well when data were collected a second time, perhaps because the initial feedback indicated that little improvement would be possible.

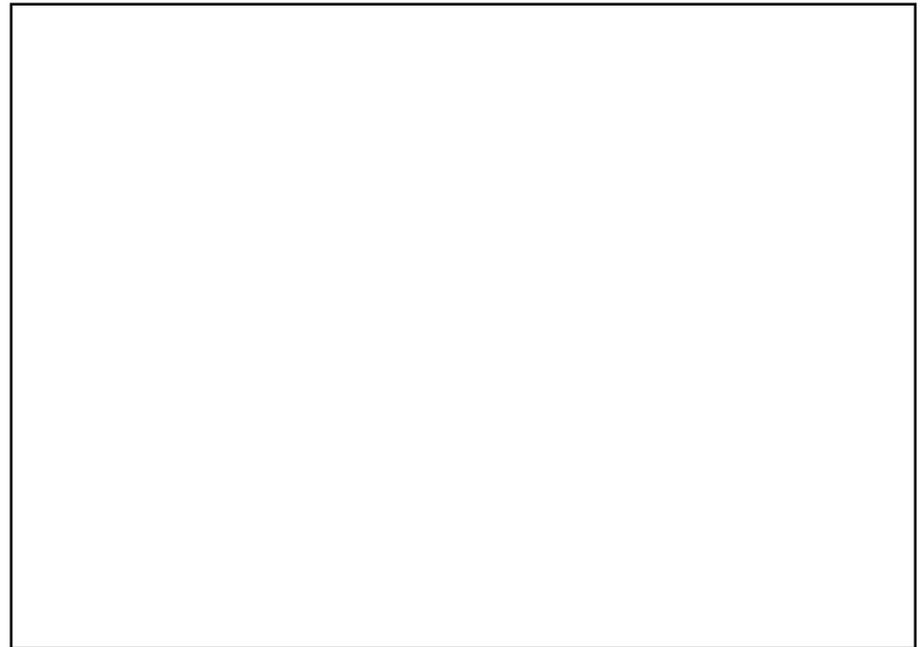
The problems in clinical practice illustrated by the example of thrombolysis in acute myocardial infarction include delay before the implementation of effective care, variations in performance between providers, and variation in the improvements that take place when change is attempted. As well as helping with the measurement issues involved, psychologists might provide practical and efficient solutions which are needed to ensure improved patient outcomes.

The types of questions that need to be addressed by psychologists will include: (1) Are the problems related to teamwork? (2) Are they related to various means of reinforcement to encourage change? (3) Which organisational changes should be introduced — for example, to lower risk? (4) Is the medical scientific method too limited to research and resolve the problem?

Teams and rewards

The recognition in the new White Paper (Department of Health, 1997) that well-led teams are a means of encouraging clinical effectiveness is welcome. Most clinicians see themselves as working in a multidisciplinary team, and teams in general have been shown to be important vehicles for innovation (West & Anderson, 1992) and for effective performance in general (Guzzo & Shea, 1992).

Psychology has already contributed towards understanding the importance of the diversity of teams in health care and clinical audit (West & Field, 1995; Firth-Cozens, 1992). Nevertheless, there is evidence that primary healthcare teams show far fewer of the elements needed for good performance — participation, support for innovation, clarity of task, and so on — than do other non-health-related teams (West & Poulton, 1997).



Psychologists could usefully continue to explore the factors specific to making healthcare teams more or less effective and to contribute to the development of team leaders. Their influence will come through studies of group dynamics and of organisational change, but input into educational practice and policy may also be needed — for example, to investigate the potential benefits of educating health workers such as nurses and doctors together at some stage so that they become accustomed to the differences in each other's values, theories and problem solving.

In investigating the reasons why some general practitioners refused to take part in a simple audit in Leicestershire, samples of participants and non-participants were interviewed (Baker *et al.*, 1995). Of the 147 practices that were invited to take part, 75 completed the audit, 49 withdrew at some point, and 23 refused from the outset. Those who refused to take part were less likely to view as useful the local agency set up to support audit and were also less likely to see it as threatening. In comparison with those who completed the audit, those who withdrew were less likely to have discussed the decision to take part with colleagues in their practices. The question that arises from these findings, which psychology may be able to answer, is: how much and what type of reinforcement — positive or negative — should be used to encourage real participation?

These issues are not confined to primary health care. In a study involving junior and senior hospital doctors various obstacles to audit were uncovered (Black & Thompson, 1993). Junior doctors perceived audit as being a method for their seniors to monitor and discipline them, and some doctors of all grades reported difficulties during audit

caused by criticism and lack of support among peer groups.

Dysfunctional teamwork may be a major obstacle to successful participation in both audit and the evidence-based approach to care. It may well contribute to the differences in hospitals' use of thrombolytic drugs described earlier (Robinson *et al.*, 1996). Indeed, the response to the initial findings in two of the four hospitals was the dissemination of a new policy about the drugs to junior doctors, while in another no action was taken by the team of staff involved.

Another role for psychology is in the area of risk management. Psychologists are particularly active here, frequently taking a systems approach to reducing error and so enhancing care (Reason, 1996; Vincent, 1996). However, it is also important to appreciate the links between stress and increased risk (Firth-Cozens, 1993) and the fact that NHS staff have much higher levels of stress than other British workers (Wall *et al.*, 1997). Psychologists could well be influential in organisational approaches to the reduction of stress in the NHS as well as working clinically within occupational health.

But what is evidence?

The randomised control trial (RCT) is the prevailing scientific method used to provide evidence for treatment efficacy, and it has become even more dominant since the emergence of evidence-based medicine (Sackett *et al.*, 1997). Health professionals want research to provide clear and reliable answers to questions about the relative benefits and risks of different treatments, and RCTs, to some extent, provide this. However, they do not lead to an understanding of why

treatments work or do not work, nor do they capture the complex decision making that occurs in a clinical setting. This method is also a particularly unsuitable way for professionals to routinely assess the effectiveness of their own therapies since it is cumbersome, costly and not always easily generalised.

Psychologists have been developing quantitative and qualitative research methods for investigating complex change for many years and this needs frequent reiteration and demonstration in the wider arena (Bradley & Brewin, 1989; Firth-Cozens, 1996).

The role of theory

Apart from the more specific ways described above, psychologists are already influential in helping health professionals address change by providing a theoretical understanding of what is happening. For example, Mittman *et al.* (1992) highlighted the importance of social influence in explaining clinician behaviour change, while Grol (1992) outlined the stages in change and the importance of investigating barriers. He suggested that different strategies would be appropriate in different circumstances and that a combination would be more likely to be effective than a single strategy.

The strategies selected should be directed at specific barriers to change; some might be facilitating, others more coercive. An elaboration of this has been the suggestion that the prevailing barriers should be identified, and appropriate strategies selected, guided by the underlying psychological theory that explains health professionals' behaviour (Robertson *et al.*, 1996). Firth-Cozens (1997) has extended this work by putting forward a co-ordinated model which includes lessons from social and health psychology, adult learning theory and marketing approaches, in addition to the

psychodynamic concept of resistance.

Although research to develop more effective methods for implementing change would undoubtedly be helpful, much could also be achieved by applying our existing knowledge to the issues outlined above. A systematic approach to choosing implementation strategies could bring real benefits. The increasing emphasis on evidence-based care is worldwide and represents a huge shift in the ways we deliver services, make decisions, involve patients and manage outcomes. Psychologists from every field can contribute enormously.

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