Clinical Audit, Related Cycles and Types of Health Care Quality: a Preliminary Model

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This paper is drawn from a study carried out in England, funded by the Department of Health. The aims of the study were to explore clinical audit in the four professions of clinical psychology, occupational therapy, physiotherapy, and speech and language therapy and to develop a model of clinical audit and guidelines for use by practitioners and managers. The focus in this paper is the model development. Included are examples of audits relevant to different types of health care quality that illustrate the process of clinical audit using the model.

The modelling process involved interrogating the clinical audit cycle and related cycles against the data and identifying their inter-connecting links. The model was refined and reformulated to include guidelines for the professions on what is needed to make clinical audit work. The position of the professional service manager is crucial. A mandate that includes creating machinery at provider unit level, mobilizing the principal working groups and promoting internalization of audit by practitioners, is essential for audit to be effective. Crown Copyright © 1996 Published by Elsevier Science Ltd.

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BACKGROUND

This paper concerns clinical audit activities in the health professions. We draw from a study of clinical audit in the four therapy professions of clinical psychology, occupational therapy, physiotherapy, and speech and language therapy [1,2]. The study gave us the basic empirical data with which we were able to conceptualize the content and process of clinical audit into a model and to undertake some preliminary testing of the model. This paper travels through that modelling process and tests it further, by applying examples of clinical audit from different professions to illustrate its value to practitioners and managers who are seeking guidance on how to audit their work. The examples we present are drawn from nursing as well as therapy professions. The choice of nursing illustrations reflects our own background. Also it is usually nurses who provide the generic core work of a health care team around which the specialists work.

The impetus for the clinical audit study should be set against the many policy changes occurring within the National Health Service (NHS) in the UK today. Four issues have particular relevance. First, the ethos of the internal market that followed introduction of a strong managerial power base and consequent weakening of professional, mainly medical, influence as a result of the Griffiths Inquiry into NHS management [3], and the resource management initiative in the late 1980s [4]. These developments culminated in the changes introduced by the NHS and Community Care Act of 1990 [5], which separated responsibility for purchasing health care from provider units.

Second, and related to the first, is the shift from ex post to ex ante forms of evaluation. In ex post formats, the objectives for services are defined by professionals and evaluation is retrospective. In ex ante evaluation, the objectives are pre-set by professionals or, perhaps more commonly, by external agents, and evaluation is by measurement of outcome closely related to the
predetermined objectives. Policy initiatives in the UK that have fuelled the move to ex ante evaluation are the National Audit Office, the Audit Commission, the introduction of total quality management, standards setting in nursing and the therapy professions, the proliferation of accreditation methods, such as BS5750 and the King's Fund Organizational Audit and requirements specified in purchasers' contracts and the Patient's Charter [6].

The third change is the movement of centrally allocated audit monies from separate medical and nursing/therapy purses to a single source for multi-professional clinical audit. Between 1991 and 1994 funds allocated by the Department of Health through its executive arm, the NHS Executive, to medical audit totalled £203 million compared to the £17.7 million allocated to nursing and therapy audit [7]. From April 1994 the funding sources combined so that multi-professional clinical audit could become more prominent. This makes good sense given the increasing trend to frame purchaser-provider contracts in terms of services to patients rather than those provided by individual professions, and the organisation of services around multi-professional groupings (directorates, departments, care groups).

The fourth policy change is the move to audit based contracts by purchasers. The NHS Executive now expects audit activities to be included in contracts and to reflect purchasers' and providers' priorities, so ensuring that audit will address health care needs and effectiveness and become fully integrated into the work of all providers and health purchasing authorities [8].

At the time of our research (1992-1994) far-reaching changes legislated in the NHS and Community Care Act 1990, separated responsibility for buying health services from their provision and introduced a regulated internal market into the NHS. Health concerns are now divided below regional level between purchasers (district health authority, commissioning agencies, general practitioner fund-holders) and providers (hospitals, community services, primary care services). Provider units that gained "trust" status — now the majority — relate directly to central government via its management executive division, thereby bypassing regional control. Relationships between purchasers and providers are dictated by a quasi-market culture, operationalized through contracts, rather than a managerial command structure. The purchasing authority has become the main mechanism of control in specifying the health services needed for its local population and monitoring the quality of care provision.

WHAT ARE AUDIT AND CLINICAL AUDIT?

The use of audit in health care has moved from its original meaning, the official examination of financial accounts, to describe one stage of the quality assurance cycle—the assessment or measurement of quality. The UK government White Paper, Working for Patients, describes medical audit as "a systematic, critical analysis of the quality of medical care, including the procedures used for diagnosis and treatment, the use of resources, and the resulting outcome for the patient" [9, p 39]. This we refer to as the restricted definition of audit.

Now, it has become common in the UK for audit to be defined more widely and to include changes needed to improve quality as well as its measurement: "Medical audit, like quality assurance, is a three-part cycle. The first stage is to define expectations, the second is to compare these with observed reality, and the third to bring about appropriate change in clinical practice." [10, p 11]. This we refer to as the broad definition of audit.

Clinical audit has also been defined in different ways in the UK. It was not uncommon in the past for the Department of Health to see clinical audit as any audit that was not medical [11]. Later, the Department of Health described clinical audit as multi-professional health care audit so as to underline an emphasis on integrating medical audit with the audit activities of all health care professionals [12]. More recently, the Department has retained the use of clinical audit to encompass single-professional audit undertaken by any clinician (medical, nursing or therapeutic), as well as multi-professional clinical audit [13].

Our preference accords with the Department's most recent position. That is to say, we define clinical audit as single- or multi-professional according to whether one or more professional is involved. Also, that single-professional clinical audit should run alongside multi-profes-
ional clinical audit and should not, in due course, be superseded. This dual definition was endorsed by most of the therapists we met in the clinical audit study referred to earlier.

In the second stage of this study, our aim was to move from the description and analysis of audit activity in the four health professions to a clinical audit model and guidelines that could be used and adapted in different health care settings. The modelling process began by examining the clinical audit cycle in the light of the findings and exploring its connections with other essential activities—patient care, standards setting and implementing change.

The process of testing—or, rather, interrogation—of the model consisted of internal testing by the research team against the data collected from six case study sites located in different areas of England, followed by external interrogation in three more sites. We worked with a total of 29 representatives of the four therapy professions, other professionals (e.g. doctors, nurses), managers and quality assurance advisers to determine the congruence of the model for their context. The model was refined as a result of this interrogation and reformulated to include normative modelling in which we developed guidelines for the professions. The last stage of interrogation was with members of the project’s advisory group, who were drawn from the professional and academic communities, which led to our final model framework and guidelines.

In this paper we are focusing on the modelling process i.e. the development and interrogation of the clinical audit cycle and related cycles, and guidelines on how to make audit work. Details of the methods and findings are available in the final report [1] to the Department of Health (who funded the study), and a book based on it [2].

EXPLORING AUDIT AND RELATED CYCLES

The first part of the modelling process involved a critical exploration of the clinical audit cycle. In the UK clinical audit is usually presented as a cyclical process that follows the broad definition of audit referred to earlier. Its stages include:

1. identifying the issue to be audited,
2. setting the standard,
3. measuring the quality and checking the results against the standard set,
4. identifying whether any change is needed,
5. deciding strategies for change,
6. implementing necessary changes,
7. monitoring the effect of the change against the standard.

The cycle can begin at any stage but usually stage 1, 2, 3 or 4. The process might continue round the cycle again if the standard has not been reached or if core standards are to be monitored on a continuous basis. Or, new standards might be set at a higher level when old ones have been reached and the cyclical process continued; in which case a spiral would be a more apt description, to emphasise continuous quality improvement rather than reiteration round the same cycle.

Our interrogation of the clinical audit cycle led us to a number of questions. Clinical audit defined broadly is often depicted as a cycle in the literature [10], but why should it be a cycle and does the metaphor of a cycle hold water? After all, a common criticism, supported by evidence from our study, is that the cycle is rarely completed.

Another question is, what else impinges on the clinical audit cycle? We argue that patient care, standards setting and implementing change do, all of which could be cycles too. Care of individual patients, or families or patient groups, is often depicted as following the cyclical problem solving process of assessment, care planning, implementing care and evaluation.

Stage 2 of the clinical audit cycle can be the subject of its own standards setting cycle, containing four steps:

1. professionals discuss quality-related issues,
2. draft standard,
3. discuss and test draft standard for relevance, attainability, clarity and desirability,
4. agree final standard.

This process of discussing quality issues, drafting standards, testing the draft standards for their acceptability and agreeing final stan-
standards, might have to be gone through before progress can proceed with stage three of the clinical audit cycle.

The change cycle comes into force if the professionals undertaking the clinical audit cannot implement change without their findings being endorsed and acted upon by others, such as other professionals or general managers. It consists of the following steps:

1. external actors recognise the problem presented to them as a result of stage 4 of the clinical audit cycle,
2. external actors decide, together with the professionals involved in the audit, to implement the change proposed,
3. the proposed change is implemented (i.e., stage 6 of the clinical audit cycle).

The drivers of audit work at different levels of the organisation and focus on "technical", "generic" or "systemic" quality depending on the nature and purpose of the audit (see Fig. 1). We are indebted to Joss and his team for bringing to our attention the three modes of quality — technical, generic and systemic — that they proposed for their evaluation of NHS total quality management pilot sites [14,15]. Technical quality is concerned with the quality of technical processes of care and treatment. Generic quality focuses on the way work is managed and its results as applied to whole services and management units. Systemic quality applies to the quality of a comprehensive and integrated set of services to meet the needs of a local population.

Links between the cycles

If the subject of the clinical audit is wholly technical and decisions on changes needed are entirely at the discretion of the professionals, then uninterrupted progress can occur from stage 5 to stage 6 of the clinical audit cycle. Movement into the change cycle, which occurs between stages 5 and 6 of the clinical audit cycle, is necessary when the subject of the clinical audit moves into a generic quality mode and is likely to be multi-professional or managerial in its focus. When the necessary endorsement of their decision has been achieved, the professionals can proceed with stage 6 of the clinical audit cycle.

Figure 2 shows how the patient care cycle, the standards setting cycle, the clinical audit cycle and the change cycle might connect.

The patient care cycle would connect to the standards setting cycle if clinical care standards need to be set. We have seen that standards setting can be a semi-independent cycle and, once set, standards link at stage 2 of the clinical audit cycle.

Connection between patient care and clinical audit is likely to be from stage 4 of the patient care cycle to stage 1 of the clinical audit cycle but

* practitioners
  - technical quality
  - single-professional audit
  - mainly process and outcome activities relevant to individual patient care

* professional managers
  - technical/generic quality
  - single-professional audit
  - mainly process/service organisation activities

* general managers
  - generic/systemic quality
  - multi-professional audit
  - mainly structure and process activities at an organisational level

* purchasers
  - systemic/technical/generic
  - structure, process and outcome activities relevant to the local population

FIGURE 1. Drivers of audit and their focus.
need not be. We have seen an example where the patient care cycle links successfully to the clinical audit cycle from the evaluation stage of patient care to stage 2 and stage 3 of the clinical audit cycle. This audit, known as the “individual care programme” and developed for a psychiatric rehabilitation setting, had completed one audit cycle and started another in a true spiral fashion [16]. It revealed a therapists’ spiral and a users’ spiral that progressed independently through the clinical audit cycle, in that the effects of change were monitored by each group separately (stage 7), but the two spirals interconnected at the stages of setting standards (stage 2) and measuring quality (stage 3).

We have seen how the clinical audit and change cycles connect, and our data revealed a missing stage in the clinical audit cycle which we have added as stage 5 of Figure 2. A stage for decision making on changes required is necessary before the changes can be implemented. It is at this stage that the change cycle is entered if
external decision making is needed. Changes from the clinical audit cycle should feed back to the patient care and standards setting cycles, so ensuring a continuing process of quality improvement through all the cycles, and better care for individual patients as a result.

Many clinical audit activities do not reach full maturity in that they do not complete all stages of the clinical audit cycle. Non-completion can occur for all sorts of reasons, such as insufficient resources and expertise, lack of commitment, cynicism about the value of the exercise and insufficient discretionary power invested in the person charged with managing the audit [2]. But, by way of illustration, we give three examples of audits (see Appendix).

Audit example 1 is concerned with generic quality, since it focuses on the way physiotherapy services are managed and has implications for the whole service within a health district. It comprises two cycles, the first aimed at achieving greater fairness in treatment for the total population and the second on improving the quality of service for all.

The example illustrates that in the real world all steps in the audit cycle need not always be followed. Stage 1 of the first cycle goes further than simply "identifying the issue to be audited" in that it pinpoints the problem (unacceptably large variation in waiting times for patients between referral and being seen by the physiotherapist) and in so doing sets the standard for Stage 2 (to reduce the variation). The cycle then moves to Stages 4 and 5, and then to Stage 6 with the decision to centralize the referral procedure. Stage 3 is omitted altogether, the problem having been recognised in Stage 1 but measurement of its extent not considered necessary.

Stage 3 is the starting point of the second cycle, the conclusion being that all patients were now waiting between 11 and 13 weeks between referral and treatment. This was not compared to a previous quality measure; instead the assumption was made that the new measure of variation was less than it had been before and thus represented a quality improvement. Entering a change cycle was necessary because those involved in the audit cycle did not have the authority to employ another physiotherapist.

Audit example 2 is concerned with systemic quality, that is with the quality of an integrated set of elderly care services to meet the needs of local people. It is a much more straightforward audit cycle than example 1, moving from stage 1 through to stage 7 and incorporating a change cycle. The interest here is how an effective patient care cycle can help in identifying auditable problems. In this case good evaluation (Stage 4 of the patient care cycle) of patients before discharge alerted the nurses that even patients who were fit and well were being readmitted. The example also illustrates the problem of standards (Stage 2) which are not specific enough to guide clinical practice. In this case, effective promotion of systemic quality required technical processes of care to be specified; a "comprehensive" discharge plan for patients was needed that incorporated guidance on the management of pressure sores, incontinence and confusion for unqualified care staff in the residential homes. The fact that the readmission rate was subsequently reduced (Stage 3) may have been, at least partly, the result of residential care workers following the guidance. Thus the audit cycle touches on technical quality although systemic quality remains the main focus.

Audit example 3, like example 2, is a systemic quality audit which, in this case, attempts to improve quality across social and health services for people with a learning disability. In this example the cycle moves from Stage 1 (noticing an increase in uncontrollable behaviour following return from hospital) to Stage 4, knowing "that the solution was to provide experienced nursing input". Stage 2 (specifying that all residents admitted for treatment should have access to a qualified learning disability nurse) and Stage 3 (assessing the extent and increase in disruptive behaviour) were then tackled by the house manager to justify a request for additional resources. In fact, the logic between Stages 3 and 2 and Stage 4 is weak. The house manager draws upon experience, rather than the results of stage 3, to suggest that contact with a qualified learning disability nurse would modify the negative impact of hospitalization on people with a learning disability. At Stage 7 we learn that disruptive behaviour was no more frequent following hospitalization than before. But we do not know whether this was because the residents had contact with a qualified learning disability nurse, or simply because they appreciated receiving visits from someone they knew. Or whether
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the improvement was due to something else, such as changes in hospital care procedures in the intervening year.

This example demonstrates that clinical audit is not independent of political and professional agendas; in this case it was used to justify increased resources and an increase in the nursing establishment. This example also illustrates a key difference between clinical audit and research. We do not know which aspect of the intervention produced the beneficial effect; a research study would be needed to answer this question. As an example of clinical audit though, the fact that it did have a beneficial effect is what is important.

Our presentation of the clinical audit cycle in these examples illustrates that the cycles are useful explanatory tools, but good clinical audit need not follow the content and sequences suggested. Some audits will travel consecutively around the seven stages and their final stage will be the first stage of the next sequence. Others may start at different points, may take a different route back or forth through the cycle or may emerge as complete without progressing through every stage. For example, a decision might be taken by medical staff (Stage 5b) to introduce a change to their practice that affects the work of the nurses in an acute medical unit. The effect of the change would be monitored (Stage 7) after it was introduced and, if no problems occurred, there would be no need for further action.

It is often the case, as our examples have shown, that audits cannot reach maturity and be completed successfully without recourse to external agents through the change cycle. Only audits into highly specific aspects of clinical care—the technical mode of quality—can be completed without external input unless they involve the work of completely independent practitioners who hold their own budgets. This way of working is not common for most professionals in the British National Health Service. We move on to consider how clinical audit can be made to work in large provider units, such as a district hospital or a community services conglomerate. Under the current internal market arrangements in the British NHS most of these provider units are known as hospital or community "trusts" that contract their services to purchasers (health authorities, fund-holding general practitioners or family health service authorities).

MAKING CLINICAL AUDIT WORK

The findings from our study of audit in therapy professions suggest that, for clinical audit to work, it has to be mandated by:

1 **Creating machinery at trust level.** Successful clinical audit requires that primary ownership is with the profession, or professions if multi-professional; that there is effective negotiation between professional-clinical and systems-managerial levels; and that an audit committee exists with organization-wide responsibility whose membership contains professional representatives, the chief executive, directors of services, purchasers and quality advisers. It may be appropriate to include user representatives or relevant pressure groups.

2 **Mobilizing principal working groups.** It is at the professional service level that the main expertise on clinical audit lies. Practitioners and their professional managers are best suited to carry out single-professional audit into technical and generic quality. The general manager and other professionals are involved in clinical audit into generic quality within multi-professional health care teams. Clinical audit might also occur across provider units although, with the separation of the health service into trusts and competition between them for purchasers' contracts, collaboration is increasingly unlikely. Direct collaboration between professionals and purchasers might develop, so linking the technical, generic and systemic modes of quality assurance.

The professional service manager is in the most crucial position, being at the interface between professional practitioners and general managers. This person needs stability of employment, dedicated time to initiate and maintain clinical audit, and support in the form of resources and expert advice. The professional manager will make final decisions about the content of clinical audits to be undertaken, will make judgements on which other professionals to include in multi-professional audits, will take decisions on liaising with general managers and purchasers on changes needed, will evaluate the
effects of clinical audit on patient care planning, and provision and will ensure that audit is incorporated into continuing education programmes for professionals. This is a tall order for the professional service manager.

3 Promoting internalization of audit by practitioners. Professional service managers will get nowhere in their endeavours without commitment by individual professionals to clinical audit. Compliance is not enough. Clinical audit needs to become internalized by practitioners and part of their professional practice if it is to have a positive effect on patient care. It follows that clinical audit must be mandated by the professional organizations, by the NHS Executive and by statutory educational bodies. Exposing students in all the health professions to clinical audit during training will help them internalize audit and will equip them to undertake clinical audits when in positions of responsibility. Then no longer will practitioners be expected to carry out audit with no grounding in what is required.

The essential requirements for clinical audit can therefore be summarised as:

— adequate resources, educational provision and expertise,
— commitment to audit at all levels in the organisation,
— a clear audit agenda,
— support for people in key roles in promoting clinical audit.

CONCLUSION

This exploration into audit in the health professions shows that the position of the professional service manager is often the key to successful clinical audit. The modelling process taken to develop and interrogate the clinical audit cycle and related elements — patient care, standards setting, implementing change — led to a framework for clinical audit and guidelines to help professionals and managers in their own audit endeavours. The examples of the audit process illustrate how appropriate the model is for health care professions.

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REFERENCES

APPENDIX

Audit example 1

This audit concerned the equity of access by patients to a physiotherapy service and it involved physiotherapists and general practitioners (family doctors). The problem identified (Stage 1), was that the time patients waited for physiotherapy treatment after having been referred by the general practitioner, varied widely from one service to another; for some, it was less than three months and for others, much longer. The standard set (Stage 2) was that all patients will be seen within approximately the same time period. The decision (Stages 4 and 5), was to organize all general practitioner referrals through a central clearing house. In Stage 6 physiotherapists informed the centre of their waiting lists once a week and new patients were referred to their nearest site, or to the one with the shortest waiting list.

An audit of the new referral scheme (Stage 3) revealed that all patients were now waiting between 11 and 13 weeks and so it was decided to keep the new referral system but also request another physiotherapist to reduce the waiting time further (Stage 4). These decisions were put into action (Stage 5) by moving through Stages 5a, 5b and 5c of the change cycle. The clearing house referral system continued, the general practitioners cooperated and agreed to put in a request to the unit managers to fund another physiotherapist, and the managers accepted the decision and would check their budgets. The actions agreed in Stage 5b were implemented (Stage 6) except that funds were not available for another physiotherapist. The senior physiotherapist continued to monitor waiting times across the trust and reported that variation in waiting time between patients remained low but was still about three months on average (Stage 7).

Audit example 2

This audit concerns nurses working in the care of the elderly unit in a district general hospital. Primary care nurses in an elderly care unit were struck by the rapid re-admission of a number of patients to the ward following discharge to residential homes. These patients needed continuing nursing care, but on discharge had been coping well and had been relatively fit. Within two or three weeks these fit patients were re-admitted with serious problems of skin breakdown, incontinence and confusion. The problem of rapid re-admission to hospital was identified (Stage 1).

Two standards were set (Stage 2):—
— all patients discharged to residential homes will have a comprehensive care plan that specifies how these complications can be prevented,
— all patients will have access to a skilled nurse who will assess, plan and monitor the care and its outcome and will advise care workers at the residential homes.

Assessment of the problem (Stage 3) revealed that there was a significant difference in re-admission rates. Patients needing continuing nursing care who were discharged to residential homes had a much higher rate than patients with similar nursing needs who were discharged to their own homes into the care of their relatives and the community nursing services. The re-admitted residential home patients had pressure sores, were incontinent and confused. Further examination showed that the standards set at Stage 2 had not been met. The care plans at discharge were not specific enough on how to prevent the complications and the care staff in the residential homes were providing basic care without access to skilled nursing input.

The need for a liaison nurse who would ensure that the standards were met was identified (Stage 4). This nurse would see to it that every patient discharged to a residential home had a comprehensive care plan to prevent complications. The nurse would also advise and supervise care workers in the residential homes and regularly monitor the residents' skin state, level of continence and confusion. The auditors argued that a full-time liaison nurse post was needed in the care of the elderly unit and that this nurse should be competent and experienced in care of elderly patients. This conclusion required them to consult the budget-holding manager (Stage 5) which meant entering the change cycle.

The nurses put their case for a liaison nurse to the manager (Stage 5a). They argued that the expenditure incurred would be outweighed by savings in the costs of prolonged hospital care and treatment for the re-admitted patients and by the consequent release of beds for other needy patients. Also, the costs to the patients, of pain, distress and acute illness, would be avoided. The manager was persuaded by the case and agreed to appoint a full-time liaison nurse for one year in the first instance (Stage 5b). The post would be continued after this if found to be effective. A liaison nurse, who had experience of hospital nursing in an acute elderly care unit and who had also worked in a residential home for a time, was duly appointed (Stage 5c of the change cycle/Stage 6 of the clinical audit cycle).

Six months after appointing the liaison nurse the effect of the change was monitored (Stage 7). Re-assessment of the problem showed the re-admission rate of patients discharged to residential homes to be less than before but still higher than the re-admission rate of people discharged to community nursing care. All patients who needed continuing nursing in residential homes care were discharged with comprehensive care plans as agreed at Stage 2. The residential care staff valued the advice, supervision and monitoring role of the liaison nurse and felt less isolated and out of their depth. The manager and nurses in the elderly care unit decided that this was money well spent. The liaison post was to be retained subject to the outcome of 6-monthly evaluations of re-admission rates and the standards set at Stage 2. Thus, the clinical audit cycle would continue in all its stages without the need to move into the change cycle again unless further problems occurred.
Audit example 3

This audit concerns clients with a learning disability and "challenging" (i.e. disruptive) behaviour who lived in ordinary houses where staff provided 24-hour care. The house manager of a group of houses noticed that, when residents returned home after periods of treatment in hospital as in-patients, their behaviour was uncontrollable; much worse than before (Stage 1). She suspected that there were no nurses with learning disability qualifications and experience employed at the hospital and the general nurses did not know how to manage these patients. The house manager knew that the solution was to provide experienced nursing input (Stage 4) but she also knew that evidence of the need for change was essential if she was to convince the executive manager to provide the necessary resources. This meant specifying a standard of care (Stage 2) and assessing the extent of the problem (Stage 3).

The standard set was that all residents admitted to hospital for treatment would have access to a qualified learning disability nurse. The house manager assessed the extent of the problem by looking through the case notes made during the hospital stay and also the notes kept in the houses before and after the period of hospitalization. She collected information for the previous year and found that there certainly was an increase in disruptive behaviour but only for residents admitted to hospital for surgery.

The house manager was convinced that there was, indeed, a need for skilled nursing input for these residents (Stage 4). She decided that, rather than arguing for learning disability nursing input based in the hospital, the residents would be better served if an experienced nurse whom they knew visited them regularly in hospital to assess their needs and advise the nursing staff. The house manager presented the evidence to the executive manager together with her view on the best solution (Stage 5a).

The executive manager was sympathetic. The house manager knew of an experienced learning disability nurse, currently employed as a primary nurse in one of the houses, who was eager to expand her job but not to change it totally. A solution would be for this nurse to take responsibility for monitoring the patient's needs and advising the hospital staff during any resident's admission for surgery. A temporary nurse would be appointed to take over some of the primary nurse's commitments when it was known that a resident was facing surgery. This would free the nurse to prepare the resident for what lay ahead and to follow the resident through the period of hospitalization and beyond, so ensuring continuity. The executive manager agreed to fund the replacement nurse as and when required and authorized the house manager to approach the primary nurse (Stage 5b). The response was enthusiastic and the planned change went ahead (Stage 5c of the change cycle/Stage 6 of the clinical audit cycle).

Not many residents require surgery at any one time and so it took time before there was sufficient evidence to monitor the effects of the change (Stage 7). But the primary nurse was delighted with the expansion to her job and the variability it offered. The replacement costs were incurred only when a resident required surgery which avoided wasting scarce resources. After a year had passed five residents had faced surgery, three as day cases and two as in-patients. Their disruptive behaviour was no more frequent than usual and it was clear that they valued visits from someone they knew. The staff at the hospital appreciated the advice and were most relieved that there was someone they could contact when the need arose.