Whose evidence? Agenda setting in multi-professional research: observations from a case study

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Abstract   *This paper presents findings from a study that investigated the relationship between research and practice on a Nursing Development Unit (NDU) in a hospital in the UK. The over-arching aim of the NDU was to promote individualised patient care. This requires the experiences and life goals of the patient, including the patient's and family construction of risk, to inform the care planning process. Two projects, undertaken by nurses on the ward, one on inpatient self-medication and the other on the management of falls, are analysed as case studies in order to address the questions: (1) How do nurses develop and research patient-centred care? (2) What are the implications of their choice of methodology in relation to their stated aims of individualising care? The paper demonstrates how conventions about research methodology and outcomes dominated the nurses' interpretation of research, the hospital research agenda and the literature on the research topics. These conventions shaped the construction of risk and safety within the hospital setting compromising practice developments designed to support the implementation of individualised care processes.*

Key words: risk management, practice development, self-medication, management of falls

Introduction

The relationship between research and practice forms an important focus for study in health services research (Bereo *et al.*, 1998). Two Department of Health documents (Department of Health, 2000a, b) have recommended a framework which encourages practitioners and academics to work more closely together to develop collaborative centres of National Health Service (NHS) research and development. An earlier uni-professional example of academic and practice collaboration can be found in the Nursing Development Units (NDUs) set up by the King's Fund to develop researched-based practice in nursing. Academic collaboration was considered an essential component of the NDU support structure and was provided as part of the project management process.

The evolving academic base for nursing practice has moved the concept of nursing care

from a model based on duty and subservience to medical instructions, to a model which promotes individualised patient-centred practices based on a framework of ethical reasoning (Kitson, 1993; Benner and Wrubel, 1989). Individualised care requires the patient and nurse to work together to identify a path towards health that maintains the integrity of the patient's sense of self and is compatible with their personal circumstances (Leddy and Pepper, 1993; McMahon and Pearson, 1991). Much of this work is, however, theoretical and difficult to implement in practice. Nursing Development Units were established to explore how academic nursing concepts such as individualised, patient-centred care could be implemented in real-world situations and to evaluate the impact of implementing nursing theories and models on patient outcomes.

The study reported here used a combination of semi-participant observation and interviews to explore the development of nursing practice within a newly established NDU. It set out to address two questions:

- How do nurses develop and research patient-centred care?
- What are the implications of their choice of methodology in relation to their stated aims of individualising care?

Within the paper, two NDU research projects are presented as case studies: a patient self-medication project; and a falls risk project. These cases are used to explore the above questions.

Risk and risk perception in nursing care

There are few activities in our everyday lives that do not involve an element of risk (Hayes, 1992). Bed rest, once the bastion of nursing care and of safety, has been found to be very damaging to health, particularly for debilitated and ill people (Grundy, 1997). Helping people find ways to live with the consequences and medical interventions arising from illness for short- or long-term periods, without compromising their health, is perhaps a fundamental challenge for nursing. Such a challenge centres on the management of risk around everyday self-care activities such as dietary intake, use of drugs, mobilising, socialising, hygiene, elimination of waste products, maintaining skin integrity and sexual behaviour. Individual choices made in relation to these activities maybe classified as lifestyle risks (Lupton, 1995). Lifestyle risks are subject to moral interpretation because the consequences for health of taking risks in relation to lifestyle behaviour can be attributed to personal choice and are, therefore, potentially avoidable (Metcalfe, 1993).

Self-care activities associated with lifestyle risks may be partially or wholly facilitated by nurses for hospitalised patients or sick patients being nursed in the community. Nursing, when it substitutes for the daily activities of patients, provides a prima facie response to risks inherent in lifestyle activities. Nursing operates in environments where the consequences of medical interventions can transform a person's health for better or worse (Newson-Davis and Weatherall, 1994). Moreover, the knowledge base on which such decisions are made is highly technical, making personal preference a poor basis for decision making. This complex environment, in which personal preferences over the risks associated with the management of lifestyle activities are challenged by the evidence base underpinning medical interventions, is repeatedly rehearsed in debates about risk management, compliance, evidenced-based practice and consumer choice in health care.

The two case studies presented here are illustrative examples of this process in action. Mobility and drug taking (prescribed and non-prescribed) are both self-care activities that patients carry out unsupervised and unregulated at home but which become the focus for

considerable legal and procedural regulation once the patient is admitted to hospital. Such regulation may be justified as a consequence of medical interventions which reduce the capability of the patient temporarily and where hospital staff act vicariously in the patient's best interest. They become difficult to justify, however, in situations where the capability of the patient and the treatment remain largely unchanged from that experienced at home, and where the intervention is oriented towards rehabilitation and long-term management rather than cure.

Drug administration

Nurse administration of drugs to hospital patients rests on the assumption that this will promote safety and reduce risk for patients; however, this is not always the case. Medication errors are a major problem in hospitals (Ridge and Jenkins, 1995; Wakefield *et al.*, 1999). Neither does nurse administration of drugs necessarily promote patient education. A qualitative study of the discharge of elderly patients from medical wards found that only nine out of fifteen patients interviewed recalled having been given instructions about medication prior to discharge and some expressed considerable anxieties about how to manage the complex drug regimes on which they were discharged (Tierney *et al.*, 1993).

In situations of chronic illness, frequently found on medical wards, admission to hospital can disrupt the disease management normally undertaken by the patient, including self-care functions such as medication. Patients, however, rarely become totally passive. Knowledgeable patients frequently attempt to prevent staff members' errors, enter into the performance of technical procedures and provide some of their own continuity of care through the daily shift changes in staff (Gull, 1987; McWilliam *et al.*, 1996).

In recognition of these problems, a number of nurses have advocated the introduction of patient self-medication for hospitalised patients. Enabling hospital patients to self-medicate in an inpatient setting has been found to promote an understanding of drug regimes and, by implication, compliance with these regimes (Wade, 1986; Bird, 1989; Ryan, 1999). Outcome measures have almost always included improvement in compliance with prescribed regimes, as this is considered to be central to effective care. The empirical evidence linking self-medication to compliance, as against understanding and education, is limited (Furlong, 1996; Haynes *et al.*, 2000) and the majority of hospital drugs are still administered by health professionals.

The notion of compliance with prescribed medication is complex. There is an increasing body of literature which indicates that patients, along with the general public, use a complex variety of over-the-counter prescriptions, herbal remedies, illicit drugs and alcohol in conjunction with prescribed regimes (Lowe *et al.*, 1999; Kuschner *et al.*, 1997; Bauer, 2000). There is also evidence that patients adapt prescribed regimes to personal circumstances and sometimes feel that they can gain more sensitive control of their symptoms than that achieved through complying with the prescribed regime (Roberson, 1992).

This literature highlights the primary role of patients in the overall management of their drug administration. It indicates the need to problematise the concept of compliance by investigating patients' views, understanding and experiences in managing their own medication in the context of their everyday lifestyles, beliefs and practices. In other words, it highlights the need for an individualised approach to medication as advocated in nursing theory.

Adopting self-medication also reflects contemporary policy concerns that emphasise a partnership approach to care provision (Department of Health, 1998) in which hospital admission can be construed as a learning opportunity for staff and patient alike. Instead,

however, hospital policies seek to promote patient safety through nurse administration of drugs, thus locating professional responsibility for medication errors (Wakefield *et al.*, 1999; Schaubhut and Jones, 2000). Consequently, the professional responsibility and accountability of hospital staff for compliance with prescribed medication are limited to the duration of the hospital stay and prevented from extending beyond the discharge of the patient to the relatively isolated environment of the home where, arguably, patients are more at risk should an error occur.

The management of falls

A similar situation is found in the approach of hospitals to the management of falls. Falls are the leading cause of death by injury among people aged over 75 in the UK (Oakley *et al.*, 1996). Patient falls present a particularly difficult problem for nurses (Morse, 1993; Uden *et al.*, 1999). Nursing management of patients at risk of falling tends to be conservative and has in the past included the use of restraints which immobilise the patient and so reduce risk from falls but may increase health risks (e.g. the risk of developing deep vein thrombosis and pressure sores) associated with the consequences of immobility as well as reducing patient dignity and increasing agitation (Frank *et al.*, 1996; Sullivan-Marx, 1996).

There is an extensive literature on the management of falls (Oakley *et al.*, 1996; Mitchell and Jones, 1996; Campbell *et al.*, 1995; van Weed *et al.*, 1995; Gillespie *et al.*, 2000). This literature is concerned to identify the preventive interventions that professionals can undertake to increase patient safety and reduce risk. However, while the interventions may well be effective in some cases, the literature does not appear to address the moral, ethical and lifestyle dilemmas associated with the personal preferences and risk-taking behaviour of the patient and their family in managing this problem on a daily basis. The strategies proposed may reduce the activity of the patient to within professionally defined safe parameters, thereby protecting the organisation and well-being of the professional staff as much as the patient.

Developing an evidence base for nursing practice

The pursuit of evidence-based practice is embedded in the clinical governance agenda and reflects a concern to ensure that practice is based on the best possible evidence, thereby promoting certainty, reducing risk to the patient, the practitioner and the service organisation and creating safety for all parties involved (Department of Health, 1997). The two topics described above exemplify two distinct models for the development of practice, both of which are found in the literature and in practice, but which have very different implications for the generation of knowledge and management of risk within a health care setting. These are presented below as ideal types and are introduced as heuristic devises to explore the dynamics of developing evidence-based practice within a multi-professional context which increasingly recognises the importance of partnerships with patients and families (McWilliam *et al.*, 1996; Department of Health, 1998).

Model 1: implementing existing research findings in practice settings

This model is based on the premise that there is a need to close the gap between research findings and the implementation of findings in practice. It requires professionals to change their behaviour in order to promote evidence-based practice (Department of Health, 1995; Bereo *et al.*, 1998). Using this approach, evidence is collated around single issues, categorised

according to levels of scientific rigour and validity and increasingly disseminated in the form of clinical guidelines (Dawson, 1997; Haines and Jones, 1994; Grimshaw and Russell, 1993). Practice development in model 1 focuses on achieving and sustaining evidence-based technical competence and on developing new competencies in the light of fresh evidence. This is applied uniformly to a collection of patients displaying a composite set of clinical characteristics for which there is evidence that a given technical intervention will improve outcomes. Within this model researchers conduct studies which are designed to identify the causal factors which prevent or promote the introduction of evidence-based practice and which are sufficiently independent of the study setting to be generalisable to other settings.

Model 2: using action research and practitioner enquiry to redefine patient care outcomes

Model 2 arises from research that casts doubt on the transferability of knowledge produced in scientifically rigorous, experimental controlled environments to the messy, naturalistic world of everyday practice. Research within model 2 starts from a belief that knowledge about human circumstances can be generated from our commitment to practical situations and that our practical involvement can in itself create the understanding which our circumstances require (Winter and Munn-Giddings, 2001). In model 2 methodologies for exploring practitioner knowledge include action research, reflective practice, critical incident techniques, ethnography, biography, narrative and story telling. Research involves an iterative process, which alternates continually between enquiry and action, between practice and innovative thinking—a developmental spiral of practical decision making and evaluative reflection (Eraut, 1994; Carr, 1995; Ferlie *et al.*, 1999). Within this model, researchers work with practitioners to clarify, analyse and disseminate the theories, policies, competencies, resources, political perspectives and taken-for-granted assumptions implicit in their own everyday practice and the organisational and policy frameworks within which practice is delivered (Eraut, 1994; Carr, 1995).

Both models recognise professional expertise to be multi-faceted comprising technical competence, experiential and local knowledge and personal attributes which include the ability to adapt and integrate technical (i.e. evidence-based knowledge) and experiential (personal knowledge) at the point of implementation. Both models also recognise that individual differences, local expertise and the local availability of resources and skills reduce the transferability of research findings from one setting to another. Model 1 searches for ways of reducing diversity in practice in order to standardise patient outcomes. Model 2 uses local differences as an opportunity to diversify professional responses and increase the total stock of human knowledge.

The literature on patient medication and the management of falls described above illustrates the different dimensions of the two models of practice development. Studies which derive evidence for practice via the introduction of self-medication focus, almost exclusively, on compliance as an outcome indicator. Failing to demonstrate significant increases in compliance negates the case for self-medication and reinforces professional administration of drugs as the least risky model of practice.

A model 2 approach to research into patient medication problematises the concept of compliance by investigating patients' views, understanding and experiences in managing their own medication. In this way processes for including evidence from patients are incorporated into the evidence base used by professionals to provide care.

A model 1 approach to research on the management of falls can be found in the literature on risk assessment and interventions. These studies are concerned to identify transferable,

professionally initiated interventions designed to reduce the risk of falling among those patients who meet the criteria which indicate they are at risk of falling. A model 2 approach might set out to develop an understanding of the problem from the perspective of the patient and the family and to identify strategies for enabling them to negotiate the level of risk they are willing to incur. This element of negotiation is absent from most research which adopts a model 1 approach.

This paper explores the nurses' responses to dilemmas arising from the generation of evidence for nursing practice inherent in resolving differences between the forms of knowledge produced by each model.

Background to the research

The research on which this paper is based was undertaken on a Nursing Development Unit (NDU) based in a 27-bed, mixed-sex, medical ward in a modern District Hospital. The nurses on the ward had received £90,000 additional funding from the King's Fund to undertake a series of research and practice development projects over a 3 year period and hence acquired the status of an NDU. Academic support was provided at steering group meetings by the King's Fund as part of the process of project management and was available for ad hoc consultation. The research described in this paper is based on case study analysis of the impact of research on the development of practice within the NDU.

Methodology

Case study methodology has been identified as appropriate for investigating the relationship between phenomenon and context, particularly where there are a number of contextual variables (Yin, 1993). This was relevant, as it was the relationship between the phenomenon of development in relation to the context of research that was being explored. A distinctive feature of case study methodology is the multiple methods of data collection used to inform the focus of the study. In this study a combination of observation, semi-structured interviews and analysis of the formal documents was used to inform the relationship between development and research.

Data collection

At the time of the study the author was working as a senior lecturer in a local university. University funding enabled a 3 month secondment to the NDU to undertake the study. During this period semi-participant observation, including formal interviews and informal discussion with nurses of care processes on the ward, was undertaken by the author. Although the author has a nursing background she did not participate in the provision of any nursing care on the ward. Neither was she directly involved in the two studies being used as cases in this paper. She was, however, supervising the nurse in charge of the ward for his Master's research and did, on occasions, discuss the methodology of the self-medication study with him. The design was, however, his choice, and technical advice only was given in relation to his chosen method. The self-medication study did not form part of his MSc thesis. The falls risk study was being undertaken by a senior nurse on the ward who was also registered for an MSc. In this case the fall risk study was used as the basis for her thesis. Her project was supervised by a lecturer in physiotherapy at the same university. The author was not involved in any supervisory or examining arrangements.

Data collection involved daily observation of practice. Observation took place on both early and late shifts covering the 7 days of the week over the 3 month period. Observation involved shadowing each of the qualified nurses on the ward, with the permission of the patients, and discussing with the nurses the care they were giving to the patients. Observation of shift handovers was also undertaken as well as attendance at ward meetings.

Semi-structured open-ended interviews with all 15 of the qualified nurses working on the ward, the nurse manager in charge of the medical unit and the Director of Nursing, were also conducted. These interviews covered the respondents' professional biography. For ward-based nurses the interviews covered: their reasons for choosing to work on this ward; their experience of nursing on an NDU compared with other wards they had worked on; their interpretation and understanding of nursing care processes; their involvement in the NDU research projects; and their experience of the impact of the NDU projects on the care processes on the ward and on their professional development. Interviews with the remaining respondents were designed to identify the level of support for this initiative from senior nursing staff and the impact of this development on the hospital as a whole.

Apart from the 3 month secondment to the ward, contact was maintained by regular attendance by the researcher at NDU steering committee meetings and academic supervision of some of the research projects initiated on the ward. Reports of the NDU activities and steering committee minutes were also circulated to the researcher.

The role of the researcher in this setting is an important dimension of the research process. The author's background as a nurse means it was not authentic to adopt a completely outsider stance as a naïve observer. Although the author did not take part in any 'hands on' nursing care and was from this perspective a non-participant, it is not possible to rule out that the author did influence the nurses' understanding of the processes they were engaged in. The nurses valued the presence of the author as a source of information and frequently sought advice. Often this was unrelated to their everyday practice and more about how to access courses at the university and discussions about their personal career progression. Here, advice was given.

Much of the discussion with the researcher centred on the mechanics of ward organisation, shift patterns, continuity and cover, as the nurses struggled to make sense of individualised care in the context of complex organisational and personal constraints. Advice was also sought about the different projects, including the two discussed in this paper. Under these circumstances the author sought to ascertain how the nurses viewed the problem and the different solutions they could identify. Direct advice was not given.

Within any discussion of observational research there is a concern about the impact of the researcher on the environment being observed. Numerous strategies are suggested to minimise this impact. Most of the discussion centres on whether the behaviour observed has been affected by the presence of the researcher. In this research, as in other observational research conducted by the researcher, the author is fairly confident that her presence did not greatly influence the behaviour observed, which appeared very similar to nursing observed on other wards in previous projects and the author's own experience of hospital nursing. However, it is likely that the author's presence did influence the nurses' cognitive understanding about practice and the range of problem-solving approaches available to them may have increased. This served to increase awareness but did not appear to affect their approach to practice. The findings, therefore, may reflect this additional input. Such input would, however, be available from a number of academic departments should closer academic/practice links be forged. Arguably, therefore, this does not invalidate the findings but rather provides greater relevance in the context of current debates about health services research.

Data analysis

For the purposes of this paper, data from all sources (interviews, field notes, reports, steering group minutes) were extracted and collected on the self-medication study and the falls risk study being conducted by the nurses on the ward as part of their nursing development programme. Each study was analysed as a case study. Each study has its own narrative that unfolded over the life of the NDU pre-dating the author's contact with the unit and continued after the author had completed data collection. The narrative of each case is given. The interpretation of the cases is contextualised within the stated aims of the NDU and the rationale given by the nurses for choosing to develop practice via these studies and the experiences of the nurses in conducting them. The discussion returns to the literature above to provide further analysis of the rationales presented by the nurses during the course of this study.

The self-medication study—narrative

The self-medication study undertaken by the ward nurses involved a randomised controlled trial (RCT) concerned to identify the effects on patients of enabling patients to manage their own medication, or self-medicate, while on the ward. The aims of the project were:

> To examine the effect of allowing capable patients to manage their own medicines (under supervision) in hospital,
> To examine the effect of counselling from a pharmacist before going home.
> To examine the effect of these two interventions on compliance and drug knowledge. (NDU 1st Annual Report)

The introduction of self-medication had consequences for other professional staff, particularly the pharmacists. The pharmacists shared the nurses' concern to promote the principle of individualised patient-centred care and to improve compliance. But self-medication required a substantial reorganisation of pharmacy services to provide individual prescriptions for inpatients, thereby increasing costs to the pharmacy. These costs were only partially met from the NDU budget, which consequently limited the introduction of this development, on financial grounds.

To overcome the problems with pharmacy, the project used patients' own drugs as a basis for self-medication. Patients assessed as suitable for self-medication were allocated randomly to a self-medication group or a control group that received 'normal' care in which drugs were administered by nurses at prescribed times. Semi-structured post-discharge interviews were undertaken with all patients included in the study to ascertain levels of knowledge about drug regimes and stated levels of compliance with them.

As a result of the study, hospital protocols for self-medication were established. A plan was developed by the hospital to take this initiative forward; it was, however, never implemented. Nurses on the ward still continue to administer all drugs to patients.

The self-medication study—rationale and justification

For the purposes of the NDU application, the self-medication study was framed as a research study. Interview data with the nurse in charge indicated that this study was in fact viewed as an opportunity for learning and to establish innovative nursing practice. He stated that:

> one reason for doing it [the self medication study] was to just try and learn about research and how to do it. … The other side of it was to raise the profile about

self-medication as a whole and doing a study would hopefully legitimize what we we're doing. (Interview 14, Nurse in Charge)

Later in the interview when asked about his expected outcomes from the NDU programme he observed:

We saw it as a way of consolidating what we'd already done, developing nursing further and changing things for the patients to be better on the ward. … Particularly with the self-medication it was a chance to get it off the ground, get the thing established so that by the time the programme was finished it would be difficult for the organization not to carry on with it. (Interview 14, Nurse in Charge)

Here, the concern was not to produce evidence for practice but to use research as a way of promoting nursing as a therapeutic activity by introducing practices considered to be beneficial to patients. The rationale given by the nurses to justify their assumptions of the beneficial consequences of this development is located in their overriding concern to develop individualised care by moving the locus of control to the patient and promoting patient choice. A core aim and purpose of the NDU was 'To promote nursing as a distinct, therapeutic, patient-centred practice' (NDU Proposal).

The interviews with the nurses repeatedly emphasised the importance of individualised care:

I was very aware of dissatisfaction amongst patients and relatives and the fact that patients' needs weren't being met in terms of quite basic things like communication and care and we tried to move towards a more individualized system of care. (Interview 6, Senior Nurse)

They're [the NDU] well established with primary nursing [a method of organizing nursing to promote individualized care]. That's really what I came here for. (Interview 1, Newly Qualified Nurse)

Nurses were aware of the difficulties associated with introducing individualised care, one nurse describing it as 'opening a can of worms' (Interview 13, Senior Nurse). Commitment was high, however, as this nurse revealed:

I left my previous job because I became very disillusioned and also I upset a few people trying to do things associated with developing individualized care. (Interview 13, Senior Nurse)

For some of the nurses the research was a means to an end rather than a way of answering complex questions. As one nurse observed:

Well, I'm not that interested in the research for its own sake, but I think the projects such as the self-medication can only improve things for patients. (Interview 2, Experienced Nurse)

the self-medication, I mean that in itself would improve the nursing. (Interview 5, Experienced Nurse)

The research was seen as a means to an end; the research provided an opportunity to introduce practice developments that otherwise may not have been supported by the wider organisation. The overt justification was the improvement of the care given to patients, the covert justification was an increase in the profile of nursing in the hospital. This was made explicit in the 2nd Annual Report:

> the self-medication programme on the NDU will ultimately lead to an on-going self-medication programme on the ward where patients are taught how to manage and understand their medicines before going home. (NDU 2nd Annual Report)

Here, research was part of an over-arching change strategy in which the rationale for improvement came not from the findings of research but from an interpretation of nursing that linked these developments to the nurses' espoused value system.

The fall risk study—narrative

> The need to control, predict and prevent falls on the ward, grew from a realization that the incidence of falls was unacceptably high and that we were not taking any routine measures to assess the degree of risk on admission. We seemed unable to intervene to prevent falls even in obviously high risk patients who were having repeated falls. (NDU Annual Report)

The fall risk project was set up to address this problem. It required extensive data collection on the incidence and circumstances of falls, using hospital accident forms. This information was to be analysed in the context of research-based literature to identify preventive measures that were to be instigated. Then, with changed practice having been introduced in cases of high risk, the effectiveness of the changes were to be evaluated by quantification: that is to say, after 3 years of comparative data collection, the research should demonstrate a lower rate of falls.

In taking this work forward the nurses spent a considerable amount of time analysing hospital accident forms and reviewing the literature. They identified a risk indicator in the literature and applied it to their accident data, but found that the scores on the indicator did not match the content of the accident form, scoring people who had fallen as low risk. In taking this project forward the nurses experienced difficulty in identifying assessment tools and interventions from the literature that fitted their experience of this problem. Consequently, the project was only able to collate and analyse trends in the rate of falls over time and identify seasonal variations. No new interventions were introduced and nurses were unable to identify high-risk patients at the end of the project.

The fall risk study—justification and rationale

At the beginning of the project, nurses' concern about patient falls focused on patient safety and professional interventions to prevent falls:

> Discussion among the nurses about developing a check-list which could be used to assess each patients predicted risk of falling. However, it was realized that this didn't provide any help with the type of interventions they could introduce to reduce the incidence of falls on the ward. The senior nurse suggested constant observation (of those considered to be at high risk of falling) as the most effective form of intervention. This was dismissed by the nurses as unrealistic. (Field notes from a ward meeting)

During this period a critical incident occurred which caused the nurses to rethink their approach to this project:

> A patient, whose relatives were nurses, fell out of bed. The nurse on duty at the time of the incident was extremely upset as she was sure the relatives were judging her as incompetent. This was discussed at a ward meeting, at first the nurses agreed that

the patient's relatives were likely to consider the patient had been given a poor standard of care. As the case was explored however, it was recognized that, as nurses, the patient's relatives were highly likely to have been involved in very similar incidents themselves when nursing patients. Few nurses have not been. This gave rise to a discussion about sharing knowledge rather than trying to cover up problems and pretend everything is under control. The possibility of talking to the relatives about the difficulties of looking after this patient safely and eliciting their help in planning the care for this patient was identified as a more effective strategy than excluding them and their expertise from the planning process. It was felt this might lead to a less judgmental context for care. (Field notes)

As a result of this and other similar incidents the nurses began to recognise that preventing falls creates a dynamic tension between risk and safety which is alluded to in the literature (van Weed *et al.*, 1995) but is rarely explored from the perspective of practitioners or patients who are simultaneously seeking to maximise both safety and mobility:

The initial aim was to reduce fall rates, and increase staff awareness of the problem by the introduction of a reliable assessment tool and risk indicator. Recently, the focus of the project has shifted towards looking at the whole area of risk taking, and the delicate balance between promoting activity and independence, and protecting patients from harm. (NDU 1st Annual Report)

In promoting a stimulating environment and allowing patients' access to this the nurses on the NDU recognised that some patients may sustain falls. Consequently, it is also recognised that patients and their relatives/carers need to be fully engaged in the dialogue surrounding the management of falls and the risks and costs to quality of life, of over-protection as well as the risks and costs at an individual level of falling:

The balance between risk and safety [in relation to the management of patient falls] was discussed. The nurses were encouraged by ND [representative from the King's Fund] to pursue this line of inquiry rather than the approach they had originally envisaged. Nurses were apprehensive. The nurses [from both the ward and the management of the hospital attending the steering group] were unsure how well this approach would be understood by other professional staff and by hospital management and were worried about the consequences for themselves as employees if this approach was misunderstood. (Field notes from a steering group meeting)

Here, the research initially conformed to a model 1 design, which aimed to evaluate the implementation of evidenced-based strategies in the context of the ward environment and in the process to introduce a more systematic and individualised approach to the assessment of patients and to planned interventions. The nurses struggled with this model and were unable to make it fit with their data or their practice experiences. As the study progressed, a model 2 approach was adopted and the findings sanctioned by the steering committee. However, despite this level of support, the nurses did not feel confident in their findings and were reluctant to implement them, even though they fitted much more closely with their espoused value system.

Discussion

In planning their projects the nurses adopted the conventions of research associated with model 1 described above. The evidence produced was either not sufficiently strong to warrant

the proposed change in practice or led to an impasse in relation to the application of existing literature to the hospital and ward situation. When a model 2 approach was adopted in the project on falls, new avenues for developing practice were identified but the perceived conventions surrounding risk and safety in the hospital prevented the nurses from pursuing these avenues. The concept of individualised care which motivated the nurses and was central to their espoused value system was not used to inform the design of the research or to make the case for change; instead, the nurses relied on empirical evidence in which compliance and safety were emphasised, seeing this as providing a more compelling case to put to the hospital executive and other professional colleagues.

In the cases presented here, the drive for evidence-based medicine—reflected in model 1—influenced the culture of research adopted in the hospital and gave rise to a narrow definition of risk based on the application of professional expertise. The model 2 approach generated knowledge that reflected the nurses' espoused value system but in this case was not robust enough to produce the desired change. In both models, however, the expertise of service users and the individual needs arising from the specific and individual circumstances of the user were filtered through professional aspirations for practice development. Techno-logical approaches to knowledge generation can privilege professional definitions of need over patient perceptions and expertise (Alaszewski, 1998; Clarke, 2000). As demonstrated here, this has the effect of reducing the health care capacity of the whole system by reducing the efficiency of professionals working within the system.

The experiences of the nurses in the NDU demonstrate the tensions that exist in trying to implement the development of research and development without exploring the theoretical basis underpinning the evidence on which recommendations for practice development are based. Interestingly, in both cases a thorough search of the mainstream literature produced a wealth of empirical evidence but little theoretical or ethical discussion. The literature on self-medication (Ryan, 1999; Furlong, 1996; Haynes et al., 2000) replicates assumptions about compliance made by the nurses in the NDU. Similarly, the literature on the manage-ment of falls (Oakley et al., 1996; Mitchell and Jones, 1996; Campbell et al., 1995; van Weed et al., 1995; Gillespie et al., 2000) focuses on preventive interventions and safety rather than the moral and ethical dilemmas associated with risk taking and the management of risk experienced by the nurses as they sought to improve practice in this area.

The experiential knowledge gained by the nurses in pursuing the development of individ-ualised care through these projects gave rise to theoretical and ethical findings, rather than empirical results. Ethics is fundamentally concerned with judgement, making morally right decisions. These decisions may be derived from abstract principles or relate to individual circumstances (Kuhse, 1997). Either way the outcome is both non-standardised and unpre-dictable. Science, on the other hand, deals with the predictable, it tries to create order by developing explanatory theories that are comprehensive, falsifiable and repeatable, thereby giving rise to generalisable and predictable outcomes. Disciplines such as law, which deal with the unpredictable and ethical, have evolved evidence based on case precedent and peer review, rather than statistical generalisation, as a basis for practice. It may be that this approach could be adapted to inform some aspects of the evidence base in health care.

Giddens (1991) has demonstrated how global social and economic processes have created increasing inter-dependency that reinforces the need for trust in expert authority at the same time that mass information systems highlight the indeterminate status of knowledge about risk and uncertainty surrounding risk management. Edwards and Prior (1997), in a dis-cussion about communicating risk to patients, have highlighted how the language used by authoritative experts such as doctors can serve to reduce the profession's own legal and emotional risks and responsibilities rather than maximise patient choice. Gabe (1995) has

suggested that greater understanding of the pluralistic processes by which risks come to be named, framed and managed is required if these contradictory tendencies are to be resolved.

In developing multi-professional collaborative NHS-based centres for research and development (Department of Health, 2000b), tensions between the multiple values that inform health care are likely to arise. The emphasis in health services research currently given to interventions based on narrowly demarcated professional definitions of outcomes such as compliance and safety are likely to influence the language of research and in so doing limit the potential of NHS research and development to address fundamental ethical issues which arise when confronting risk taking at the level of the individual. The case studies described in this paper illustrate how the current language of empirical research produces an emphasis on organisational and professional safety, rather than on the diversity in health care outcomes reflected in patient interpretations of health and illness. Interestingly, the latest Cochrane reviews on patient compliance with prescribed drug regimes (Haynes *et al.*, 2000) and interventions to prevent falls (Gillespie *et al.*, 2000) have been unable to produce conclusive evidence for professionally led interventions to promote compliance with drug regimes or prevent falls. In both areas, interventions were found to be significantly more effective when implemented alongside an understanding of the factors intrinsic to the individual, i.e. individualised care.

Conclusion

This paper presents findings from a small in-depth study of nurses' experience of implementing academic nursing concepts and evaluating the effect on patients. Academic support for the programme was available from the funders and was augmented by the supervision of individual members of staff registered at the local university for various courses. Academic and practice collaboration is increasingly being viewed as the way forward for NHS research. This paper provides evidence from an early attempt to establish this type of collaboration. It illustrates how the traditional methodologies such as ethnography are compromised if the partnership moves from observation to influence. Action research, while providing a more appropriate methodology centred on learning rather than description, does not resolve the issue of the researcher's relationship to the clinical environment. Ultimately, unlike the clinical staff, the researcher does not have to carry the burden of clinical responsibility. Researchers embarking on such collaborations, therefore, need to be mindful of limits of their role, as it is others and not themselves who must implement novel ideas arising from the action research process.

In taking practice development and health services research forward in multi-professional settings the need to develop a shared understanding of the contributions of the different research traditions contained in the two models outlined at the beginning of the paper would appear to be a necessary first step towards multi-professional research. Each model makes a distinctive contribution to health care knowledge and evidence. Model 1 stresses patient outcomes, albeit defined predominantly by professionals. Model 2 recognises the local knowledge and values of practitioners and emphasises experiential knowledge. Both models are, however, limited primarily to professionally constructed definitions of outcome and risk. The full realisation of patient-centred care can only be achieved when the emphasis on health care outcomes evident in model 1 combines with the experiential knowledge of practitioners in model 2, and extends to include patients and carers within a participatory model of research. Only then will a research framework develop in which the individual factors that influence health behaviour can be understood and incorporated into evidence for best practice.

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