March 2001

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Moving Towards Evidence Based Practice

main report

The Foundation of Nursing Studies
Developing Practice • Improving Care

Contents

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Background

Since the early 1990's there has been increasing Government and professional concern to ensure that clinical decisions are based on sound evidence. This has been reflected in a number of Government initiatives that are aimed at both maximising the R&D capacity of Trusts, and ensuring that health care professionals use evidence effectively and appropriately. It is this latter objective which drives the activities of the Foundation of Nursing Studies (FoNS).

Since its inception in 1991 FoNS has worked to promote nurses and nursing and to help nurses disseminate and implement proven research findings and evidence to improve patient care. This aim has consolidated around the following activities:

- Project funding
- Small grants
- Conferences, workshops & seminars
- Workshops
- Professional support and consultancy for practice development

The activities listed above are not involved in producing new research knowledge about health care, but rather in ensuring that knowledge already available is put to the best use, and that practitioners are empowered in their efforts to achieve this. The Foundation has built up a considerable body of knowledge concerning different methods for promoting and using research in practice. Although the importance of this knowledge has been repeatedly stressed over the last ten years, with some notable exceptions (for example the NHS R&D programme in evaluating methods to promote the implementation of R&D) few resources have been provided to achieve this aim. Moreover, within nursing several strategic documents have focused more upon the development of research capacity, rather than on the implementation of research that is already available to us. The activities and output from FoNS act to balance this.

Overview of the Report

Over the ten years of its existence FoNS has been involved mainly with direct caregivers, promoting, encouraging and resourcing their efforts to implement research and best practice. It is able to trace the progression of evidence based practice, particularly at the level of individual practitioners/ organisations. A major element of the activities of FoNS has involved the organisation and evaluation of a number of activities based around assisting nurses to critically appraise and apply research in their everyday practice.

The purpose of this document is both to report on the evaluation of this programme and to comment on the implications which this has for the evolution of evidence based practice, in the light of the Foundation's experience in this area. Implications are drawn out not only in terms of the current R&D agenda, but also for education/professional development, Trust management, individual practitioners, and indeed FoNS itself.

The report is based on the findings of three pieces of work:

- January 1996 – June 1996 A short-term evaluation of a series of research utilisation workshops in nine NHS Trusts
  (Reflection for Action, FoNS, 1996)*
- April 1997 – March 1998 A long-term evaluation of the continuing impact of these workshops (Reported in 1999-2000)*
- May 2000 – August 2000 – A consultation exercise in the four countries of the UK to validate and update findings from the evaluations
  (Preliminary reports for Northern Ireland, Wales, England & Scotland, 2000)*

Throughout this report, these will be referred to as 'the short term evaluation', 'the long term evaluation' and 'the consultation exercise'. All activities of FoNS and participants in this work have included nurses, midwives and health visitors from clinical practice, education and research.

*Copies of all these reports are available from The Foundation of Nursing Studies

This report is divided into eight sections.

Section 1 provides a brief resume of the development of evidence based practice in the UK over the last ten years.

Section 2 outlines the development and methods for the three projects involved in the critical appraisal skills/research utilisation programme developed by FoNS.

Section 3 describes early efforts to increase the use of research through professional development in general and specifically through the FoNS CAS/research utilisation workshops. It does this by recapitulating on the results of the short-term evaluation that were reported in full in *'Reflection for Action'* (Foundation of Nursing Studies, 1996) and Mulhall et al. (2000).

Section 4 explores how the acquisition of critical appraisal skills (CAS) occurs in the context of the NHS. It is based on the results from the FoNS long term evaluation and the consultation exercise.

Section 5 asks the question what else needs to be in place, other than CAS and other training initiatives, to ensure effective implementation of research. Again it is based on the results from the long term evaluation and the consultation exercise.

Section 6 proposes how we might move forward with evidence based practice in the future. Using evidence from the consultation exercise and drawing on FoNS' experience in research implementation it considers other training needs, organisational support and the impact of clinical governance.

Section 7 provides a conclusion.

Section 8 draws out the implications of the report.

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Section 1

Evidence Based Practice: Looking Back

Although nursing has been striving to base its practice on research since the early 1970s (Briggs, 1972) the arrival of evidence based health care has brought a new impetus and considerable resources to bear on this objective. Evidence based health care crystallised in the Government's concern to identify effective, and in particular cost effective, practices and the professional concern to move away from clinical decisions based on opinion, practice and precedent to a greater use of scientific research and evidence. In *'Research for Health'* (Department of Health, 1991) the Government firmly stated its position that R&D should become an integral part of health care and that practitioners would find it necessary, and indeed natural, to base their daily decisions on research evidence.

Since 1995 there has been an even greater commitment from both the Government and the health care professions to establish an evidence based health service (Department of Health 1996b, 1997a). The flourishing evidence based movement has found a constant companion in the need to promote clinical effectiveness (Department of Health 1989, 1996a, 1997). These objectives continue to be high on the Government's agenda across the UK. For example, in England they are articulated through their commitment to the formation of evidence based National Service Frameworks; the National Institute for Clinical Excellence (NICE) which, will draw up new guidelines from the latest scientific evidence; and the Commission for Health Improvement (CHI) which will monitor standards in NHS Trusts (Department of Health 1997).

The concept of clinical governance was introduced in two Government documents for England (The New NHS Modern and Dependable, 1997 and A First Class Service, 1998) and similarly reflected in documents for Scotland (Designed to Care, 1998), Wales (Putting Patients First, 1998) and Northern Ireland (Fit for the Future, 1999). Clinical governance is defined as 'A framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish' (Department of Health, 1998). It is thus concerned with both identifying best practice, and ensuring that the conditions exist for the delivery of best practice. Two central components involve ensuring that 'evidence based practice is supported and applied routinely in everyday practice' and '...programmes aimed at meeting the needs of individual health care professionals and the service needs of the organisation are in place and supported locally' (Department of Health, 1998). Thus the introduction of clinical governance should theoretically maximise the potential for evidence based health care.

It is against this background that the CAS/research utilisation programme was developed by FoNS and the two evaluations and consultation exercise reported here were commissioned.

Section 2

The Development of a CAS/Research Utilisation Programme

In 1994 FoNS identified the need to assist nurses to critically evaluate research and make changes in their practice. A series of nine workshops focused on the utilisation of research was organised to meet this need. The workshops involved 206 participants (Registered General Nurses, Registered Mental Nurses, Health Visitors and Midwives) spanning all clinical grades from nine NHS Trusts. The objectives were to enable practitioners to:

- retrieve and select research studies appropriate to their needs
- develop criteria to evaluate quantitative and qualitative research
- practice critical appraisal
- recognise the individual and organisational barriers to change
- devise and evaluate strategies to utilise research in their own areas of practice

This report is based on the findings of two pieces of work that evaluated the impact of a series of CAS/research utilisation workshops and a consultation exercise designed to validate and update these findings. The time scales of the activities are shown in the table and a summary of each is provided.

Date	Activity
September 1994 to December 1995	Workshops run in 9 NHS Trusts
January 1996 to June 1996	Short-term evaluation
April 1997 to March 1998	Long-term evaluation
May 2000 to August 2000	Consultation exercise

The short-term evaluation

This piece of work used a written questionnaire and a qualitative study to evaluate the immediate effect of the workshops on practitioners' attitudes to research and their use of research in practice. The questionnaire was distributed to all participants immediately following the final session of the workshop. The response rate for the questionnaire was 84% and the results were analysed using simple descriptive statistics. The qualitative study aimed to explore how nurses think about research, the value they put on it, and how the workshops may have changed this. These data were collected from three sites through semi-structured telephone interviews with 13 self-selected participants before the workshops started, and through focus groups six weeks after the workshops finished. Content analysis was used to generate themes from the data.

Examples of the interview prompts
Telephone interviews
Describe your feelings, experiences and reactions to the idea of research
In what ways does research guide you when working for patients?
Focus groups
How has the workshop changed the culture of research here?
How has the workshop changed feelings about research?

The long-term evaluation

Some of the evidence from the short-term evaluation indicated that practitioners were worried that the effects of training might over time 'wear off'. Thus in 1997, recognising the possible transitory nature of professional development initiatives, FoNS decided that it was important to evaluate whether the changes reported following the workshops had been sustained, and what factors might have facilitated or constrained this. The results from the short-term evaluation indicated that the use of both quantitative and qualitative methods enhanced and added to the comprehensiveness of data obtained. This strategy was therefore repeated with the long-term evaluation which used a postal questionnaire, a qualitative study and a documentary analysis of Trust policies.

The postal questionnaire was sent to participants who still remained in the Trusts where the workshops took place. It covered a number of areas including: participants' research skills and knowledge before and after the event; whether skills had been lost/enhanced and why; whether they had used or undertaken research since the event and if the workshop had helped them in this; and factors which hindered or helped their use of research or its conduct. There were 52 respondents to the postal survey drawn from all clinical grades, although approximately half were grade G or H. The earliest year of qualification was 1960, the largest proportion (54%) qualified in the 1980s. None of the respondents had been trained through Project 2000, but 30% were graduates and 10% had done the ENB 870 Introduction to the Understanding and Application of Research Course.

The qualitative study used semi-structured telephone interviews (13 practitioners) or face to face interviews (11 managers) from three of the Trusts where workshops had been run. Tapes were transcribed verbatim to generate both an amalgamated picture of the wider culture of the Trust and a series of themes and illustrative quotes which formed the components of the amalgamated picture. Reliability was checked by making comparisons between each of three researchers' descriptions of the culture (>80% agreement)

The documentary analysis included business and/or R&D strategies/policies for 1997/8, which were received from Trusts.

The consultation exercise

By 2000 and the production of the long-term evaluation document several significant developments in research implementation, notably in England the creation of NICE and CHI and the introduction of clinical governance, had occurred. It was considered necessary to validate and update the original findings and to explore specific needs in terms of supporting and sustaining the use of research in practice. The results of the long-term evaluation

were therefore presented in a consultation paper distributed to senior nurses, practice developers and nurse educators in Trusts and academic institutions across the UK. The consultation exercise had three aims:

- to disseminate the results of the long term evaluation
- to gauge how closely these results reflect the current situation in the NHS
- to initiate a debate concerning the way forward

The first phase of the consultation invited recipients of the paper to respond to the results from the evaluations in the light of their own experiences. They were also asked to comment on the impact of clinical governance on research utilisation and the resources and support that have, or would help get evidence into practice. The same people were invited to attend one of four consultation events held in Northern Ireland, Scotland, England and Wales. At each event participants were divided into groups and asked to focus on four areas:

- developing knowledge and skills to support research utilisation
- establishing organisational structures to support and sustain research utilisation
- creating and maintaining a culture for research utilisation
- the role of the Foundation of Nursing Studies in supporting and sustaining research utilisation

Guidelines were provided and participants were asked to record their individual and group views and experiences about current practice. The individual and group notes, questionnaires and flip charts were transcribed to form the data set. Data were reviewed for consensus and commonality within each group and them between the groups. Common themes and key or important group and personal comments were drawn out into categories. The number of workshop attendees from the four countries were as follows: England 36; Scotland 46; Wales 30; Northern Ireland 31.

A preliminary report is available from the consultation events for each of the four countries.

Section 3

Making a Start: Professional Development for Evidence Based Practice

The *Culyer Report* (Department of Health, 1994), focusing on the structure and funding of research in the NHS, identified that attention must be paid to the training and human resource issues related to R&D. At the time it was not known how such training should be organised and whether it might be effective in changing clinical behaviour, or indeed clinical outcomes. However, it seemed reasonable to suggest that training in the skills of critical appraisal would be a first step towards enhancing practitioners' abilities to implement evidence based health care. This was the rationale behind the development and provision of the series of nine workshops by FoNS in 1994.

The primary evaluation of these workshops was reported in *'Reflection for Action'* (Foundation of Nursing Studies, 1996), le May, Mulhall & Alexander (1998), and Mulhall, le May & Alexander (2000). Before the workshops practitioners characterised research as:

- a valuable activity essential for practice and the profession
- high profile
- advanced/intensive/complex
- jargonistic
- linked to an academic rather than practice agenda

The workshops had the effect of:

- strengthening practitioners' skills in critical appraisal
- raising their awareness that research varied in its quality
- consolidating their prior knowledge, experience and confidence
- stimulating them to help colleagues

However, the participants' attitudes to research had not been substantially changed through attendance. They felt positive towards research before the workshop and they felt the same afterwards.

Section 4

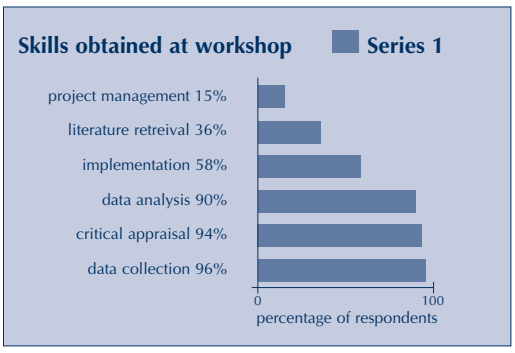
Making A Difference? Professional Development in the Context of the NHS

The provision of CAS training may in the short-term equip individual practitioners with the ability to discern good from poor research. However, *'Reflection for Action'* (1996) raised important concerns about other structural, organisational or social barriers in the work place that may dis-empower practitioners from making or implementing evidence based decisions. There was also a suggestion that over time, and faced with the realities of everyday practice, the effect of the workshop might be diminished. It became clear that the long-term effects of the workshop needed to be evaluated. The long term evaluation was carried out 15 to 30 months following the delivery of the workshops. It was guided by two questions. What effect had the workshops and the association with FoNS had in the long-term on: -

- enabling participants to critically evaluate research and apply it in practice?
- enhancing a research culture in the organisation?

Using skills in the long-term to apply research in practice

Participants in the postal survey recognised a range of skills that had been acquired through attendance at the workshops.



For the majority (85%) these skills had helped them use research to: develop guidelines, protocols and policies; review current practices; enhance educational opportunities; and underwrite clinical decisions. These new skills in using research had been achieved principally through an ability to view data more critically and through an enhanced feeling of confidence. Factors commonly cited as facilitating the use of research were:-

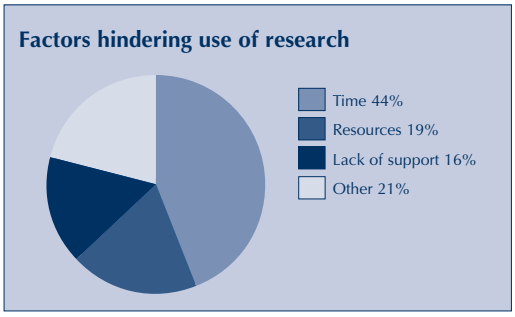
- support from colleagues, managers and the organisation
- specific structures, for example, R&D groups, university links
- the perceived importance of the topic to the practice area

In contrast, participants in the consultation exercise indicated that in their organisations, although nurses were beginning to question practice, this was often in a limited way. A questioning approach was most likely to be fostered through group activities such as journal clubs, being part of multidisciplinary teams or through reviewing policies, procedures and guidelines to make them evidence based.

Were skills lost?

The workshop enabled most practitioners to gain a range of skills, which they subsequently employed in practice. However, half the postal survey sample stated that over time they had lost some of these skills, mainly through lack of use. The proportion of participants who lost skills was approximately equivalent across all the sites and across the various clinical grades. However, the loss of skills was twice as high amongst participants who had never previously attended a research course or who were non-graduates. Paralleling this finding, the consultation exercise indicated that nurses who had undertaken degree/diploma courses were more likely to question practice.

A range of other factors hindered attempts to use research.



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The last five years have seen a proliferation of workshops, courses and books designed to assist practitioners to acquire the skills and knowledge to appraise and apply research in practice. However, the acquisition of such skills does not guarantee that they are retained, or that they are used outside the workshop environment. Use of skills occurs in a complex professional and social environment where particular constraints or opportunities operate. Whilst the extent and nature of research usage have received some attention in the literature, less is known about the clinical 'situations' which trigger practitioners to seek out evidence to support clinical decisions.

What triggers the use of research?

The most widely recognised model of evidence based practice (Sackett et al., 1998) assumes that the need for evidence arises through the identification of problems by clinicians and patients. This approach may foster a situation where evidence is not sought to uphold 'routine' decisions, but only as and when problems with care arise.

The consultation exercise identified four different triggers that may precipitate the use of research in practice – personal, organisational, external, and educational.

The individual and the organisation

At both a personal and organisational level issues of safety and accountability, and the professional environment at work may trigger research use. Individuals were concerned about gaps in their knowledge, and critical incidents they were involved in. Litigation, complaints and risk management worked as triggers within the organisation. The professional environment in which people work may stimulate individuals to read, network and pick up research ideas from colleagues and the organisation itself may stimulate research use through establishing particular professional positions or groupings such as nurse specialists and practice development teams, or structures such as journals clubs. For the individual there is also a sense of professional pressure to meet job descriptions or professional expectations for performance. More 'person-centred' factors revolve around ideas of motivation, professional maturity and the recognition of clinical opinion leaders. In this context new staff were often mentioned as triggers to research use. Trusts' policies and the way they are organised also exerted a significant effect. Both systems of quality assurance such as audit, standards, guidelines and clinical governance, and resources to support change acted to initiate research use.

External and educational factors

Government initiatives related to clinical governance and risk management are effecting a greater use of research. Comparisons between NHS Trusts and the introduction of new therapies also act as significant prompts. External bodies such as The Scottish Intercollegiate Guidelines Network (SIGN) and public pressure and preferences are also important. Educational factors which may activate research use are related to improving links with higher education, perhaps through the creation of joint appointments, developing individuals through higher education, and providing clinically focused training which prompts a questioning of current practice.

Triggers which precipitate the use of research

Individual
- Safety and accountability
- Professional work environment
- Professional and cultural pressure
- Person centred

Organisational
- Safety and accountability
- Professional work environment
- Organisational policy and structures
- Quality assurance

External
- Government initiatives
- New therapies
- The public
- External bodies
- Comparisons with other organisations

Educational
- Higher education
- Links with higher education
- Conferences
- Clinically focused training

Are CAS/research utilisation workshops effective?
The evidence for the effectiveness of workshops has been collated into a systematic review (Deeks, 2000). This indicates that CAS teaching had a positive effect on attitudes, knowledge and skills, but there is no evidence to ascertain whether this has affected patient health or satisfaction. A recent single randomised controlled trial of the effectiveness of CAS workshops on health service decision makers reported that such training improved participants' knowledge of the principles necessary for appraising evidence. However, CAS training did not lead to improvements in attitude towards the use of evidence in health care, confidence, evidence-seeking behaviour, or the ability to appraise published literature (Taylor, 2000). In contrast, non experimental studies of educational interventions have been shown to improve nurses' attitudes to research, albeit in the short term (Burls, 1997; Harrison et al., 1991, Perkins, 1992). Similarly Lacey (1996) in an evaluation of nurses following completion of ENB 870 reported that 65% of students had been able to implement research guided by a change proposal that each of them had developed. Whilst Hicks (1994) recorded that two months following a study day midwives had increased: their reading of research; their confidence in evaluating it; and the degree to which research influenced their practice.

The long term evaluation echoes some of these non experimental findings. The workshops were effective in transmitting the skills of critical appraisal and most practitioners had used these skills to enhance evidence based care. However, at least half of the sample had lost skills through a lack of opportunity to practice them. Moreover, the low response rate of the survey begs the question as to whether those who did not reply were less active in their use of research and less able to retain these skills. It seems probable that the loss of skills acquired through continuing professional development related to evidence based health care is a significant problem that may detract from the usefulness of such programmes. Deeks (2000) comments that although the development of critical appraisal skills training has been important, further expansion of the programme is not warranted.

How can the skills to use research be instigated and sustained?
The short-term and long-term evaluations showed that appropriate educational interventions could equip practitioners with the knowledge and skills to be effective users of research evidence. The consultation exercise undertaken also emphasised the importance of continuing professional development in efforts towards evidence based health care. Structures that supported professionals' skills, such as good IT facilities, journal clubs, training in evidence based health care, local access to libraries and protected time were all mentioned as important. Loss of skills could be reduced by: -

- providing individuals with sufficient time and rewards to practice skills
- promoting individual professional responsibility and monitoring/mentoring professional development (through, for example, clinical supervision or PREP)
- making appropriate appointments (for example, joint posts with universities) and identifying supportive opinion leaders
- investing wisely in professional development rather than achieving a 'thin' spread of research appreciation

Section 5

Making More of a Difference: What Else Needs to be in Place for Effective Utilisation of Research?

Three factors may affect the sustainability of strategies to enhance the use of research for evidence based health care:

- the knowledge and skills of individual practitioners and managers regarding R&D/evidence based health care
- the organisational structures which support R&D/evidence based health care
- the individual and collective attitude and ethos for R&D/evidence based health care

The acquisition and sustainability of practitioners' knowledge and skills has been discussed in Section 4. However, the use of such skills and knowledge is occurring in a complex professional and social environment that may alternately enhance, or deflect from increasing evidence based health care. Here organisational/professional structures and the overall culture of the work environment come into play. The qualitative aspects of both the short term and long term evaluations focused on capturing this complex milieu in which practitioners and managers were attempting to work towards research based practice and use the skills they had acquired at the workshops

The context of research use in the NHS: boundaries and constraints

Two 'pictures' emerged from the long-term qualitative study.

The practitioners' picture: Stepping over boundaries

Practitioners worked in an encapsulated environment in which their use of research was shaped and controlled by various boundaries. These boundaries were associated with a series of competing agendas that were compiled: by the individual; by their perception of nursing and its inter-professional relationships; by the political climate in which they practised (both local and national); and by other constraints and opportunities. For example:

'To be honest it's ingrained in me ... it's been a normal part of my nursing culture for a long time'

'There still just isn't time within the working hours to use research or to gain the evidence to change practice'

The workshops shaped the participants' world by heightening their awareness of the position of research in their practice and the opportunities and constraints to the utilisation or generation of research data. Again competing agendas were prominent.

Wanted to come
'I've always been very interested in research, it was the first opportunity I'd ever had to attend anything like that'

Sent by
'I was asked if I wanted to and obviously I said I would but initially it wasn't my doing to go onto it'

Both opportunities and boundaries were frequently constructed and/or constrained by cultural norms and expectations.

Opportunities:	Boundaries:
Support and encouragement	Access to research
Catalysts (e.g. workshops)	Prevailing culture
Organisational structures	Lack of knowledge,
Resources	skills and confidence
Knowledge, skills and confidence	Lack of morale, motivation
Morale, motivation and	and empowerment
empowerment	

The managers' picture: It won't happen by magic

The art of balancing competing agendas also dominated the interviews with managers.

Their multiple agendas demonstrated not only the diversity of work associated with managing care within non-teaching hospital Trusts, but also the emergence of a new interest in research and development – it being perceived as 'the key to our future'. These complexities were often tinged with feelings of inadequacy and uncertainty about the meaning of research and development as well as doubts about who was responsible for such initiatives and how they would be funded. For example:

'Everyone wants evidence but nobody's prepared to pay for it.'
The multiple agendas can be seen through a series of polarised themes. For example:

Research
'I feel that the main driving force for change in the strategic direction of R & D has been in response to the Culyer work. That's been significant... it's actually put R&D on a higher level.'

Practice
'We see Culyer very much as about doing research, rather than the utilisation.'

'I think a District General Hospital is going to be much more involved in the D part of R & D.'

These agendas were influenced by participants' views, the values they attributed to research and development within their 'practice' arena, and the support that was available from within or without the organisation. Participants often seemed confused and lacked clear direction, creating an image of 'haphazard dabbling' rather than strategic determination. In the main, research was seen as an endeavour in which they did not participate, finding 'development' a more appropriate concept. Research, some thought, was highly prestigious and something done by 'proper' researchers in proper research institutions. Their brand of research was not 'blue skies' but a pragmatic blend of development and research.

The context of research use in the NHS:
Trust policy development around R&D
As part of the long-term evaluation, business and/or R&D strategies for 1997/8 were received from five out of seven sites. Research was identified as a particular Trust objective in four business plans, one of which provided copious detail in reviewing clinical effectiveness and evidence based practice and explaining specific service plans for R&D. Similarly all four of these sites had an R&D strategy in place which was associated with the introduction of various structures such as academic departments, R&D forums, specific training programmes, and R&D databases. In contrast, although audit and quality were mentioned in the plan from the fifth site, research, clinical effectiveness or evidence based practice received minimal attention. Thus in general the profile of R&D in Trusts had risen. Business plans reflected this and managers spoke more comprehensively and with more authority about the NHS R&D strategy and their role in it. This organisational focus seemed to be precipitated by the Culyer report (Department of Health, 1994), the drive for clinical effectiveness (Department of Health, 1996a) and clinical governance (Department of Health, 1997a).

The qualitative data and the results of the documentary analysis captured the complex social milieu in which health care practitioners and managers work. In a period of considerable consolidation and organisational change within the NHS, the priority was in maintaining services, not developing research activity.

When asked what created a positive culture for the use of research, participants in the consultation exercise identified a number of elements. Some of these mirror the opportunities identified in the long term evaluation.

- leadership – inspirational clinical leadership which encourages and empowers others (perhaps the role of nurse consultants?)
- specific strategies – nursing needs its own research strategy with a budget within the business plan and a higher profile
- integration of quality assurance – recognising the importance and interconnections between audit, clinical effectiveness, clinical governance, and R&D
- policy and procedures – need to be research based
- multi-disciplinary working – true inter-professional respect and a move to multi-, rather than uni-disciplinary research
- education – targeted training plans, ward based research utilisation workshops, shared learning, exploring what 'evidence' means
- investment in staff – incentives and rewards for implementing evidence
- easy/equal access to research findings
- resources – there needs to be equity of distribution, easier access and a focus on implementation rather than undertaking research

To summarise, participants were describing a 'no blame', 'can do' culture in which sufficient recognition and resources were appropriately

applied within the nursing professions. Managerial and organisational commitment and mutually respectful inter-professional working underpin such cultures.

Useful strategies for underpinning evidence based health care

The participants in the consultation exercise identified a number of strategies (other than CAS skills training) that might underpin evidence based health care. Many of these echoed their thoughts concerning the creation of positive cultures (see above). However, two particular requirements stood out – good dissemination and local involvement. It appears that better dissemination of information is required, not only about research findings, but also about the ways in which evidence based health care structures and processes, both internal and external to Trusts, work. For example, local seminars covering national issues/initiatives, such as NICE, were suggested. These ideas complemented a strong theme of getting clinicians involved with local initiatives and developments. This could be achieved through, for example, R&D support for local projects that are then disseminated at an annual event, ensuring that practitioners are involved in evidence based guideline development, making them part of the R&D activities in the Trust, and celebrating local good practice.

Section 6

Moving Forward with Evidence based Practice

The proliferation of CAS training courses was a direct response to the perceived needs of clinicians who were being encouraged to use research more effectively in their practice. However, although CAS training is a significant component of furthering the evidence based health care agenda other types of training are important. Recognising this, the FoNS consultation exercise sought to determine views concerning what these other skills might be.

What other skills are needed for evidence based health care?

A number of other skills pertinent to research utilisation were recognised (see box below)

Other skills needed for evidence based health care	
People skills	**Management skills**
Leadership	Time management
Teamwork	Change management
Negotiating	Decision making
Assertiveness	
Communication	
Enthusiasm	
Evaluation skills	**Dissemination skills**
Audit	Teaching and presentation
Evaluation	Networking
Reflective practice	

Of the categories above, leadership and management of change skills were perceived as most important. Skilled leaders were recognised clinical champions with strategic vision who were knowledgeable, influential, and equipped with an awareness of both 'people' and 'political' issues. These characteristics, alongside assertiveness, and good communication/ negotiating skills enhanced their change management abilities. Once again the importance of a local knowledge of the clinical area, organisation, community and workforce was stressed. Although some CAS training may cover IT and information retrieval, respondents also specifically mentioned these skills as important.

Who needs which skills?

Currently the NHS is emphasising the importance of investing in people and such investment has been shown to be crucial to a Trust's ability to achieve organisational transformation (Adams et al., 1998). In the short term evaluation managers perceived this through their recognition of the importance of R&D in attracting and retaining high calibre staff. However, guidance and strategic planning concerning investment in staff training and development seems to be lacking. Both the long and short term evaluations emphasised the importance of Trusts having in place a defined strategy that 'situates' and gives recognition to the process and outcome of educational interventions. However, this lack of clarity concerning training needs within evidence based health care is unsurprising given the lack of national guidance on the subject.

Likewise participants in the consultation exercise struggled to identify which groups of staff needed which particular skills. There was a general consensus that all nurses need the knowledge and skills to access and critically appraise research, whilst research nurses need to undertake research, but remain in a clinical rather than academic environment. However, whilst it is clear that at least some practitioners probably need the skills to critically appraise research and apply it in practice, the question of how direct care givers will be facilitated to partake in extensive activities of this kind was not addressed by respondents. Likewise it seems unclear to what extent the model of evidence based practice as promulgated by Sackett et al (1998) either works, or could work for the nursing professions. Although certain individuals may seek out evidence in response to the clinical problems which they face, it seems more likely that evidence based practice will be more effectively increased through particular policies and structures within organisations, such as care pathways, evidence based guidelines and protocols.

Organisational structures and resources to support skill use

Many of the organisational structures to support nurses in their increased use of evidence based health care skills have been mentioned previously. Certainly the evaluations indicate that unless nurses are provided with such support they will be unlikely to maintain the skills to critically appraise research alongside their everyday work commitments. Three other particular requirements were identified in the consultation exercise: -

- protected time and equal opportunities
- the development of a nursing research infrastructure
- wider access to information technology (IT)

There were many references to the need to value (in terms of dedicated time and funding) nurses and nursing research in the same way as doctors and medical research are valued. Designated, protected time for research and education need to be part of the business plan and available for all staff. Alongside this there was a call for the development of an infrastructure of senior posts such as a Director of Nursing Research and evidence based health care facilitators/co-ordinators (perhaps as joint appointments) who would spearhead greater integration of research in practice. Many participants considered that IT facilities/training should be made more readily available, perhaps at ward level.

However, whilst these resources and structures may impact on the level of evidence based health care, consideration needs to be given to their relative effectiveness and cost effectiveness. Historically there is no doubt that nurses have been disadvantaged in their efforts at professional development in relation to research. Research has not been perceived as a given requirement to proceed within the profession (as it is in medicine). Research career pathways have also been poorly defined and funded and are usually outwith the mainstream clinical environment. Similarly, senior clinical posts have not necessarily been related to ability or activity in research.

Nevertheless, whilst a strong and well-resourced structure for undertaking nursing research within Trusts would be welcome, it is unclear how far this would impinge on the implementation of research in practice. The effectiveness of joint appointments remains unproven, and many nurses in such posts have struggled to make an impact across the competing agendas of universities and Trusts. Moreover, it is possible that the efforts of such departments and nurses will be viewed by direct caregivers in much the same way as university-based academic researchers and research. More

emphasis probably needs to be given to structures, resources and personnel who facilitate (either at the level of individual practitioners or through particular processes and structures) the use of research in clinical decision making. Furthermore, whilst acknowledging the difficulties of true collaboration in care, it remains important that efforts to use evidence important to nursing are developed within a multi-disciplinary framework.

Wider access to Internet and library facilities is a common plea within nursing circles. However, just providing access to research will not guarantee its use, even where training has been given. If it is decided that evidence based health care can best be managed at the level of the clinical encounter then particular ways of working need to be established. These need to enable, empower and give time for direct care givers to develop the sophisticated skills to: question practice; interrogate the research evidence; consider this in the light of other types of evidence; implement a research based clinical intervention and evaluate its effects.

Increasingly we have become aware that the use of research in practice is a complex and multifaceted activity. As such it requires a variety of skills and knowledge for success. Both the evaluations and the consultation exercise stressed the importance of change management as a crucial component of achieving evidence based health care. The next section details information related to this.

Developing change management for evidence based health care

The greater use of research in practice will inevitably involve individual practitioners, teams and organisations in a process of change. Although there is a wide management literature on change, to date too little attention has been paid to this in relation to the changes that accompany evidence based practice. The organisational management approach to change has been increasingly applied to health care settings (Spurgeon and Barwell, 1991). This top down approach tends to be founded on notions of rational, linear thinking. It is based on the idea of leadership and change agents – people in positions of power who drive changes through. In contrast, bottom up approaches to change are conceived as participative, a coming together through group consensus about decisions, solutions that are sought jointly and the sharing of satisfaction within the group (Plant, 1987).

The consultation exercise identified a number of strategies that enabled change in relation to evidence based health care to be managed:

- policies and procedures – the use of evidence based guidelines, protocols and care pathways
- dedicated groups and committees – these might be directorate based clinical focus groups or, higher up the organisation, R&D committees and clinical governance boards
- specific roles – either individuals, such as practice development nurses, or groups such as service advisory and implementation teams
- appropriate professional development – this related to education in both evidence based health care, for example, CAS courses, and management, for example, leadership and change management courses
- multi-disciplinary work – the need to involve practitioners across all disciplines came across strongly
- bottom up approaches – change should begin in the clinical area with appropriate support for practitioners through identified staff posts, for example, clinical networks or Trust-wide teams headed by a facilitator or consultant nurse

These suggestions encompass both top down and bottom up approaches to change and in reality there is probably a need for both (Cutliffe and Bassett, 1997). Top down initiatives such as those introduced through new Government policies are undoubtedly effective in introducing structural if not ideological changes in practice and practitioners. However, real and sustainable change needs the commitment of those who are expected to change. This commitment needs to act at two levels, with a confidence in the evidence on which practitioners are supposed to act combining with an alignment behind the ideals that are propelling the policy change. This may explain the resistance of some health care practitioners to evidence based health care as it is currently promulgated since they 'perceive the evidence as entirely based on research (their clinical/intuitive skills being largely discounted) and framed within a Government ideal which they fear will threaten patient care in the drive for cost containment in the guise of efficiency and

effectiveness' (Mulhall, 1999, p.172). Certainly when asked directly how change management teams might be established, several participants stated that such structures were inappropriate and unwelcome. On the other hand, entirely bottom up approaches tend to lack sophistication in their failure to recognise their effects within the wider context of the organisation.

Whilst the suggestions put forward through the consultation are all of merit, they need to be examined in the light of evidence for their effectiveness. However, currently there is a dearth of knowledge concerning the effectiveness of the various strategies to introducing change related to evidence based health care, especially those using a bottom up approach.

The impact of clinical governance

The introduction of clinical governance has brought a new impetus to the drive for evidence based health care. Now that the responsibility for ensuring that 'evidence based practice is supported and applied routinely in everyday practice' has been placed at board level, Trusts have been provoked into establishing structures, creating positions, appointing personnel and developing strategies to ensure that this requisite is achieved. The participants in the consultation exercise noted how clinical governance had provided a new framework for delivering evidence based health care. This has evolved through the creation of dedicated:

- working groups and committees, for example, R&D executive groups, clinical advisory groups, clinical guidelines groups which had multi-professional representation encouraging collaborative working
- posts, for example, clinical governance manager, clinical effectiveness officer, R&D facilitator
- strategies, for example, clinical effectiveness strategy to ensure key elements of clinical governance are systematically reviewed

These Trust policies had acted to:

- push forward clinically based strategies to improve evidence based health care, such as directorate action plans, implementation of national and local evidence based guidelines
- raise the profile of evidence based health care amongst practitioners and managers, and emphasise expectations concerning research implementation
- underline the importance of continuing professional development as a fundamental requisite for integrating research with practice
- foster multi-disciplinary working for evidence based health care

However, whilst some participants mentioned strategies through which information regarding clinical governance was broadcast, it is unclear how well all Trusts have disseminated such information. Certainly anecdotally, many nurses seem to be unclear as to what clinical governance is, what it implies for their practice, or who the key figures, for example, the clinical governance lead, in their own organisations are. Other concerns expressed through the consultation exercise included:

- the problem that many activities might be medically led
- the emphasis on poor performance through risk management activities
- the difficulty in accepting evidence from the centre for example, that produced by NICE
- the capacity for staff to find the time and motivation to incorporate another set of structures and changes

In this respect it was mentioned that many strategies had been implemented, but it was as yet too early to determine which had been effective.

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Section 7

Conclusions

Much emphasis has been placed on maximising the potential research function of the NHS, but looking back over the last ten years no-one could deny that measures to increase the use of sound evidence in health care practice have flourished. As theory and practice in this area have evolved it is perhaps timely to reconsider what has been learnt along the way and how this might fashion the way forward.

In the 1970s and 1980s the lack of research based practice was frequently blamed either on practitioners who were seen to have negative attitudes or insufficient skills, or on researchers who failed to disseminate their work adequately or appropriately. The advent of the evidence based medicine movement in the early 1990's catapulted the implementation agenda into the forefront of both Government and professional agendas. However, the focus remained on practitioners and in particular on their skills of critical appraisal. An evidence based cycle was proposed whereby clinicians (later in conjunction with patients) identified problems, sought out research which might answer these problems, critically appraised the studies and then applied and evaluated the effects (Sackett et al, 1998). More collective strategies were subsequently developed including the provision of systematic reviews of research and evidence based guidelines. However, the onus for applying the evidence still remained at the level of individual practitioners.

The early and continuing attempts to instil the confidence, skills and motivation to use research more effectively in practice have met with some success, as witnessed by the FoNS initiatives and those of others. However, the findings presented in this report and our experience in working closely with organisations over the years has highlighted how the use of knowledge (be it research or other types of knowledge) occurs in a complex social and organisational milieu. Individuals on their own from whatever professional group are unlikely to exert a significant effect if they remain unsupported by organisational structures and policy, or distanced from others within the multi-disciplinary team. In such an event skills and motivation may be quickly lost and the benefits of training wasted. Many factors may trigger the use of research – individual, organisational, external, and educational. The classic model of evidence based practice (Sackett et al., 1998) may thus represent just part, or perhaps the end point, of a wider picture whereby individuals react within or against organisational, professional and personal boundaries.

Furthermore, although the evidence based cycle recognises the importance of clinical experience, very little guidance has been provided to practitioners concerning what this might encompass, how it should be successfully combined with research evidence, or indeed the place of other types of evidence such as personal and tacit knowledge. The issue of how patients should be empowered to participate on an equal basis in health care decisions and how health professionals might best enable them to do this will also require much further research and development.

It is clear that skills other than those of critical appraisal are required successfully to implement research in practice. Our experience indicates that people and management skills, particularly those of change management and clinical leadership, are crucial. There is certainly an underlying thread of allegiance to local initiatives, local policies and local people. Whilst not wishing to ignore national guidance, practising clinicians are anxious to develop their own guidelines for more effective research based practice. This in its turn highlights another training need for the skills to recognise rigorous guidelines and be able to adopt them judiciously and safely for local conditions. It is far less clear who within organisations should be targeted to receive such skills training and the most effective format for that. For example, it might be more effective to train multidisciplinary teams within focused clinical areas rather than individuals in homogeneous professional groups (as is often the case with current training). This would also underpin efforts to introduce change, which rely strongly on interprofessional collaboration.

In conclusion, if the ongoing strategy to improve the effectiveness of health services is to continue to be successful, greater cognisance must be given to:

- the internal and external organisational factors that promote research use
- the content, format and judicious targeting of training
- the greater exploration of how various types of evidence may be best articulated, synthesised and implemented.

Section 8

Implications

Implications for FoNS

- Refine our strategic vision in relation to the implementation of evidence within practice
- Strengthen our communication strategy to ensure our vision is made explicit to all stakeholders
- Continue our role in supporting the sharing of evidence and enhancement of good practice by further developing dissemination strategies at organisational, team and individual practitioner levels
- Prioritise action areas for support through project funding during the next decade
- Begin to map implementation strategies currently used within Trusts, PCGs and other health care providers to form a body of evidence related to knowledge management within nursing
- Continue to consult with and lobby relevant statutory, voluntary and consumer organisations in order to pursue strategic intentions
- Expand our funding base to meet the newly identified and ongoing programme of work (for example, project funding, conferences, e-learning and network development)

Implications for the research and development agenda

- Place equal emphasis on the generation and use of research
- Enhance organisational, team and individual capability and capacity in development as well as research.
- Focus on organisational development and change management since the provision of CAS training alone may be insufficient to change practice
- Actively link with organisations which support the dissemination of research to develop a shared strategic vision
- Ensure that research priorities are tailored to meet the needs of a range of providers of health and social care, thus reflecting the realities of practice
- Fund further research into the effectiveness of strategies to increase the use of evidence

Implications for the education agenda

- Articulate the value placed on knowledge/evidence management within new curricula at pre and post qualifying levels
- Emphasise the inter-relationship between effective practice and the use of evidence/knowledge
- Ensure that curricula prepare registrants for their role in the implementation of evidence and the evaluation of its impact on practice
- Develop post-registration education which addresses the need for change management and organisational skills in evidence based health care

Implications for the organisation and management of Trusts, PCGs and voluntary health and social care providers

- Hold and articulate an organisational vision not only for research but also for practice development
- Develop clear links between the organisational vision of R&D and individual practitioner's professional development
- Make explicit the partnership between the R&D vision and mechanisms for ensuring the quality of care provided
- Ensure that structures which support R&D are clearly defined and communicated to practitioners and consumers of services
- Create a strong culture that recognises the importance of evidence based health care and celebrates effective local initiatives
- Build organisational, team and individual capability and capacity in relation to the implementation of evidence
- Develop and evaluate innovative structures to enable the implementation of evidence
- Develop strategies to evaluate the success of the organisational implementation agenda
- Support inter-professional practice which fosters evidence based health care
- Recognise and accommodate the priorities of different sectors within health care
- Provide incentives and rewards for implementing evidence based health care

Implications for individual practitioners

- Develop a personal development plan which acknowledges the place of evidence within his/her practice and any training requirements to facilitate evidence based health care
- Seek out opportunities to implement evidence in practice and evaluate its impact from a uni – and multi-disciplinary perspective
- Actively share good practices with others
- Use FoNS as a resource to enhance practice

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