Pressure damage prevention: basing practice on evidence

As part of an initiative to develop evidence-based practice at the Northern General Hospital, Sheffield, a three-part project was undertaken. The aims were to identify barriers to using research in nursing, establish a baseline of nurses’ knowledge and its influence on their practice in one essential area of nursing care – pressure damage prevention – and develop a strategy for change which took account of the findings from the first two parts of the project. In this article, the authors describe the second part of the project which examined nursing knowledge and practice with reference to the management of pressure damage prevention. The findings are discussed and the authors recommend that nurses integrate into their practice evidence from sources such as systematic reviews.

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In response to the Culyer initiative (NHSE 1997) to bring research and practice closer together and develop a culture of ‘evidence-based practice’ for nursing, researchers in Sheffield designed a study to identify the barriers to research utilisation and develop a strategy for change using pressure damage prevention. This formed the clinical topic in a trust-wide project at the Northern General Hospital Trust, Sheffield. This article describes the part of the project referring to the issues of pressure damage prevention.

LITERATURE REVIEW
Considerable attention has been given recently to methods to promote the development of evidence-based practice within the NHS (DoH 1995). This is in response to the situation in which, despite an increasing volume of research evidence, professional practice is only rarely informed by the best available evidence. However, the publication of systematic literature reviews, such as those provided by the NHS Centre for Reviews and Dissemination at the University of York, offers a valuable resource which, if acted upon, has considerable potential to improve practice in key areas. One example of these reviews considers the prevention and treatment of pressure sores (NHS CRD 1995).

Pressure sores are relatively common in the hospital setting and cause considerable distress to patients. Furthermore, the treatment of pressure sores represents a significant cost to the health service. The need to reduce the incidence and prevalence of pressure sores has been highlighted in recent government policy through the production of guidelines for purchasers and providers regarding quality issues in pressure area care (DoH 1993).

Similarly, the collation and interpretation of data on pressure damage (NHSE 1995) has been used to inform such guidelines. The Health of the Nation strategy (DoH 1992) proposed a reduction in the prevalence of pressure sores of 5 per cent by the year 2000. In considering how this might be achieved, nursing care must be regarded as a major influence on the outcomes related to pressure area care. Good prevention practices need to include an effective system for detecting people vulnerable to pressure damage. It should also incorporate an assessment of those factors which predispose towards tissue breakdown (Land 1995).

A number of risk assessment scales have been developed to assist in this process, for example, Norton et al (1962) and Waterlow (1985). However, there is a danger that assessment tools may be used simply to identify risk; they do not necessarily result in nurses administering the tool and subsequently planning interventions which will promote pressure relief.

Despite a wealth of literature on the prevention of pressure damage there is little evidence to suggest an overall improvement (Alcock et al 1994). The latest audit of the incidence and prevalence of pressure sores within the Northern General Hospital NHS Trust indicated, for stage 2 sores and above, an incidence of 1.07 per cent and a prevalence of 3.27 per cent in March 1997.

However, in seeking to develop evidence-based practice in skin care, there is a need to monitor not only the incidence and prevalence of pressure sores, but also the preventive measures taken by nurses and the degree of risk for individual patients or...
specific patient groups, for example, older people, diabetic patients and malnourished patients. To this end, it is important to audit current practices in order to highlight strengths and weaknesses. This should include audit of the use of risk assessment tools, assessment of nurses' knowledge of risk assessment and the prevention of pressure damage used to plan preventive interventions.

AIMS OF THE PROJECT
The aims of this part of the overall project were:
- To identify the level of trained nurses' knowledge in relation to risk assessment for pressure area damage
- To assess practice as reported by trained nurses around risk assessment and prevention of pressure damage.

These aims were to be achieved with reference to existing guidelines, care planning protocols and in-house training programmes in conjunction with the research evidence that was available.

Site and sample
The site chosen for the study was a large acute NHS hospital trust in Sheffield which hosts regional specialties. The hospital has ten primary clinical management teams or directorates and had an estimated nursing workforce of 1,500 when the study was carried out. A purposive sample of qualified nurses (n=275) was selected to:
- Represent every clinical specialty
- Represent various grades, levels of experience and expertise
- Reflect the relative size of each directorate.

Methods
Three methods were identified to examine key aspects of the prevention of pressure damage.

A self-completion questionnaire was designed which asked qualified nurses about risk assessment and the prevention of pressure damage. It comprised 25 questions which were based on the trust's Guidelines for the Management of Pressure Sores (NGH 1993) along with issues covered by in-service training provided by the skin care specialist nurse. Six questions explored areas of practice concerning risk assessment and 19 assessed nurses' knowledge of pressure damage prevention.

A nominee was identified from each clinical management team or directorate to arrange the distribution and return of the questionnaires. The number of questionnaires distributed reflected the number of qualified nurses working in each clinical management team. The majority of clinical management teams distributed 20 questionnaires, however, the smaller ones distributed fewer and the largest, which was medicine and elderly care, distributed considerably more. In addition, 19 qualified nurses who had been identified as 'the nominees' also completed the questionnaire.

A total of 275 questionnaires were distributed, with 255 returned – a response rate of 87 per cent (6 per cent were inaccurately completed by non-nursing staff or student nurses and had to be rejected) with a range from 60-100 per cent across the clinical management teams.

Members of the research team undertook a spot check audit of nursing records of a proportional sample of patients in each of the clinical management teams. A total of 100 spot checks were undertaken. The number undertaken in each clinical management team reflected its size with no more than three sets of patients' records being examined in any one ward/unit.

The spot check audit involved examining all the nursing records for each patient to identify:
- Whether a risk assessment score had been recorded, which tool had been used to calculate the score – Andersen et al (1982) and Waterlow (1985) were being routinely used within the trust, and if the patient's body mass index had been recorded
- Where in the documentation risk of pressure damage was referred to and recorded
- How often risk assessment and pressure damage was evaluated and recorded.

Finally, a documentary review of the trust's guidelines was begun both to examine the evidence base and update the contents.

FINDINGS
The nurse's role in preventive care
Both the survey of nurses' knowledge and of their record keeping suggest significant deficits in preventive care. There seemed to be some confusion between what constitutes the extrinsic and intrinsic factors predisposing patients to pressure damage. Also, technical questions relating to interface pressure and skin loading were poorly answered. These results suggest a lack of knowledge. However, questions about skin redness, repositioning of patients and the potential sites of damage were answered accurately.

Although the researchers were not looking at wound care issues when collecting data for the audit, they found that record-keeping and associated care planning appeared to improve considerably when patients did in fact develop a sore.

Routinised versus individualised care
Both the questionnaire and the audit results suggest that patient assessment of risk for pressure damage tended to be carried out weekly or daily rather than in response to changes in the patient's condition. In many ward areas this was seen as an organisational requirement. However, because nursing activity was not observed directly, it is not possible to state definitively whether this reflected an accurate picture of what was actually being done.
DISCUSSION
The status of the ‘evidence’ The NHS Centre for Reviews and Dissemination in York has produced a systematic review of the literature on the prevention and treatment of pressure sores (NHS CRD 1995) and other sources of information have reviewed pressure damage prevention strategies (Land 1995). However, on close scrutiny, little actual evidence on which to base practice is available and there is a need to combine clinical judgement with what evidence is available if changes to practice are to be made.

It is clear that if incidence and prevalence are to continue to be important criteria for monitoring patient care with reference to pressure sores, risk status with regard to pressure damage must also be taken into account (NHS CRD 1995). Consequently, this information is to be collected by the skin care specialist at the trust for all in-patients on admission and at discharge and presented to the purchasers as part of contract monitoring.

The nature of practice The questionnaires focused on the assessment of nurses’ knowledge in a written format and the audit involved a review of documentation, but the researchers did not observe actual practice. This poses the question whether the responses and records reflect what nurses know and report rather than representing what they actually do?

If nursing as a profession is serious in striving for evidence-based practice, nurses may need to observe practice and examine more closely the processes of care.

Another question the study raised was how does the redefinition of ‘roles’ affect the management of pressure area care? Perhaps healthcare assistants have greater responsibility than in the past, but the survey reported here only involved qualified nurses.

CONCLUSION
Further investigation is needed into the nature of practice before any firm conclusions can be drawn from the information collected from the questionnaire and spot check audit. However, some of the data are being used together with the available research evidence to revise the trust’s clinical guidelines on the prevention and management of pressure damage.

The in-service programme is being refocused in the light of the findings and the care planning protocol for the assessment of risk of pressure damage is being streamlined.

Individual clinical management teams are developing plans to change practice and detailed local studies are planned as a result of these findings (Scott 1997).

Implications for practice
- Nurses need to possess the skills to assess the status of research evidence
- Nurses should have ready access to systematic reviews to inform changes in practice
- Prevention of pressure damage remains a research priority in nursing care
- Nurses’ knowledge and recordkeeping should be compatible with their practice