The prevention and management of pressure sores within Health Districts

A document produced by
the Working Party of
the Pressure Sore Study Group
at The King's Fund Centre
for Health Services Development

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This document is the result of discussions by the Working Party of the King's Fund Pressure Sore Study Group held at St. George's House, Windsor Castle, on 31st March-2nd April 1989.

The Working Party was convened and led by Professor Brian Livesley who was joined by: Mrs Christine Beasley, Mrs Susan Ely, Miss Pamela Hibbs OBE, Mr Ronald Jackson, Mrs Marie Parkinson, and Miss Grace Simpson.

Thanks are due to the Dean and Canons of Windsor and the Council of St. George's House, Windsor Castle, and to Dr Michael Brock, the Warden, for so kindly enabling us to make the most of the excellent facilities and surrounds in which our discussions took place. Thanks are also due to ConvaTec Limited for their assistance with this meeting and for providing the on-site typing of the reports produced by the discussion groups.

Miss Grace Simpson subsequently collated the reports and the further comments of participants (including those of Professor A N Exton-Smith CBE, who at the last minute had been unable to attend the working party). The draft document was then edited by Professor Brian Livesley.

October 1989

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INTRODUCTION

Pressure sores affect almost one in every ten patients[1] and have been estimated to cost the Health Service £150m annually.[2] They are now a recognised problem in hospitals throughout the developed world and, in addition to the human suffering they cause, they have become an expensive epidemic.[3] In the United Kingdom their cost is equivalent to taking £750,000 out of the annual budget of each Health District (at 1982 prices).[3] The total cost of hospital care for *one* patient with a severe pressure sore in 1988 has been calculated to be £25,905.[4]

Patients who develop pressure sores may sue health authorities and damages of £100,000 have recently been awarded to a successful claimant.[5]

Pressure sores have remained a hidden epidemic because of the failure to recognise and deal with the problems involved. Their prevention and treatment are given low priority and this is reflected in the lack of provision of appropriate resources. Pressure sores are mistakenly seen as a nursing problem. This results in a lack of team work and accountability for prevention and management. Although the factors producing pressure sores have been described,[6] knowledge about pressure sores is under-utilized and some research has been inadequate. "Sores are not simply a ward or nursing problem, but an unintended consequence of hospital

treatment."[7] The proposed changes in the structure of the Health Service, the fall in the young labour market,[8] and the rising numbers of elderly patients at risk—all mean that a new approach to the prevention and management of pressure sores is now essential.

The King's Fund Pressure Sore Project Group was formed in 1987 of health care professionals who have shared concerns about the problems associated with pressure sores; particularly, avoidable human suffering and financial waste. An exploratory King's Fund workshop and two national symposia (one in the north of England and one in the south) highlighted these problems and underlined the need for every District to develop its own strategy. Representatives attending the symposia agreed to do this for their own District and were given support by a King's Fund Pressure Sore Adviser. Subsequently, many other Districts have sought advice from the King's Fund Pressure Sore Study Group. This is now presented in this document as a strategic framework and may be used by those who have recognised the need to introduce "a properly organised and audited pressure sore prevention and treatment service."[9]

To be effective this strategy must be initiated at District level, with managerial endorsement, adequate funding, and the commitment of all health care professionals.

This document may be adapted for use in any setting, whether hospital, primary care, local authority, or the private sector. It is intended for multidisciplinary use with special emphasis on managerial involvement. It can be used by beginners or experts since it provides the framework for either a broad-brush approach or a detailed prevention and management programme. By outlining ideas in principle, it allows users the flexibility to implement the strategy in their own way.

Developing a strategy in five steps

The prevention and management of pressure sores is dependent upon three main factors: the patients, the resources, and the knowledge required to improve standards.

The development of an effective strategy requires the following steps:

1) forming a District Pressure Sore Group;
2) collecting baseline information about each of the three factors mentioned above;
3) interpreting the data;
4) developing and implementing a plan: and,
5) evaluating the whole programme.

For this strategy to be successful each of the three main factors (patients, resources, and education) need to be considered while completing the five steps outlined above. This document describes how this may be done.

THE DISTRICT PRESSURE SORE GROUP

The first step in the strategy is the formation of a District Pressure Sore Group, which should be endorsed at Regional level if it is to be effective.

The group should be small (no more than 10 members) with the potential to co-opt extra members if necessary. A Regional Steering Committee may stimulate the formation of District Pressure Sore Groups which may in turn form unit based working parties.

These should be multidisciplinary with representation from departments of medicine/surgery, nursing, administration, education, physiotherapy, occupational therapy, pharmacy, dietetics, and other support services. The composition of each group will depend on local conditions and group members should have mutual respect.

The chairman need not be the most senior member of the group but should have the necessary attributes of leadership. Group members should be knowledgeable, motivated, and committed. They should have professional credibility, be capable of directing thought, and influencing others. By pooling their resources the effects of the group will be greater than the actions that can be taken by individuals. If this is not the case reorganisation may be required.

Having agreed that the strategy must involve the patients, the resources, and education; the District's Pressure Sore Study Group should develop a philosophy, terms of reference, and aims. The aims should be ordered on a priority basis and short, medium, and long-term goals set within an agreed timescale. The group may choose to work together on one issue at a time or form subgroups working on all three topics simultaneously. Monthly meetings may ensure that realistic work objectives are met.

A clinical nurse specialist in pressure sores may coordinate the agreed strategy and may be involved not only in its formation, implementation, and evaluation[10] but also act as a resource for the District Health Authority.

THE PATIENTS

i) Baseline information required

The number of patients with pressure sores or at risk of developing them must be determined.

Classification of pressure sores

There should be agreement across the District on the system which will be used to classify pressure sores. A standardised system provides more accurate information on the different grades of sores (which may range from erythema to necrotic cavities). Several classification systems have been devised using different criteria.[11, 12] The system selected should be simple, reliable, and appropriate for local conditions.

Rulers, tracings, or photographic techniques may be used for the accurate measurement of changes in individual pressure sores.[13]

Point prevalence studies

A point prevalence study will determine the number of pressure sores present on a given date.[14] This may be used to assess the extent of the problem; support the need for a strategy; and, if repeated at regular intervals, monitor changes in prevalence. These studies may be conducted in the hospital as well as in the community. The subsequent effectiveness of the whole project depends upon the accuracy of the information collected.

An incidence review

An incidence review measures the number of new sores developing over a period of time.

While this information is being gathered it may be convenient to obtain additional information about the range of beds, chairs, and support surfaces available for affected patients and those at risk; the styles of clinical management being developed; and the different wound dressings being used. This information will show how patients are being treated and allow standards of care to be monitored. This investigation may take the form of a research exercise spanning several months or weekly reviews over a longer period.

Assessment of patients at risk

An appropriate risk rating scale[15] should be used to identify how many patients are at risk. This will allow appropriate preventive strategies to be introduced and resources provided where they are needed. Few risk rating scales have been subject to careful evaluation, all are prone to misuse, and some have different concepts of the degree of risk to which the patient is exposed.

ii) Interpretation of data

The number of patients at risk and the number with pressure sores will now be known and this information may be used to justify the funding and development of prevention and treatment programmes.

It is important that the size of the problem is continuously monitored (by repeat incidence studies or periodic point prevalence reviews) to detect changing

trends such as a reduction in incidence or a swing from severe to superficial sores. This information can be used to redirect resources.

iii) Developing a District policy

Every District should have a written policy about the prevention and management of pressure sores.[4] There should also be a commitment to improving existing standards of care by providing the resources and education input that will make it possible to implement the District's policy. This policy must be endorsed at Regional level and may be written as a standards statement reflecting the philosophy and aims of each District Health Authority.

A working document should be produced to provide guidelines for use at ward level; to facilitate skilled nursing assessment; and to encourage the planning of preventive clinical care. The document should provide advice on the holistic approach to the prevention and management of pressure sores. It should stress not only the importance of risk assessment in the prevention of sores but also the importance of optimal physiological and nutritional status in the management of existing sores. It should describe:

1) how to select the most appropriate support surfaces required for patients in all areas (including the trolleys and other patient-rest surfaces to be used in the accident and emergency department, the X-ray department, the operating theatre, and also the beds in wards[16]);
2) the procedures to be followed for the turning and lifing of patients (including the correct use of mechanical aids); and,
3) the importance in the relief of pressure of the earliest, appropriate mobilisation of patients.

Any policy for the local treatment of pressure sores should stress the need to provide the optimum environment for tissue regeneration by removing all obstacles to healing.

iv) Implementation

The effective implementation of the District policy will change outdated clinical practice and raise standards of patient care throughout the District. The Pressure Sore Group should produce, distribute and evaluate their own written guidelines. A clinical nurse specialist may be required to coordinate and monitor the District's policy.[10] Key personnel in every area can ensure that clinical advice, resources, and education are continuously available. Each area should identify clinically competent, credible representatives, who will then form a network for information, education, and the exchange of ideas. This network is essential for effective communication and maintaining accurate records about the standards of clinical care.

v) Evaluation

Information gained from risk rating scales and repeated prevalence and incidence reviews may be performed on a regular basis. Evaluative reports should be presented at recurring intervals at both district and ward levels. This will provide the information from which the effectiveness of the strategy can be measured and appropriate changes introduced to further improve standards and the quality of patient care.

RESOURCES

The resources relevant to the prevention and treatment of pressure sores include beds, specialised mattresses, chairs, cushions, and wound dressings.

i) Baseline information required

Baseline information is required on the quantity, range, and suitability of equipment currently available and the treatments that are being used.

Equipment and treatment review

An *inventory* should be made of the full range of equipment and treatments in use and should be completed in every area on a given day.

A *questionnaire* may be used if additional information is required about the equipment and treatments available. This should include questions about the adequacy and range of the equipment and how it is selected and distributed.

All commercially available equipment and wound treatments should also be reviewed at this stage. Consideration should be paid to their cost, proven value, mode of action, reasons for use, and safety.

Mattress review

Standard hospital mattresses are subject to an enormous amount of wear and tear and this is often overlooked. They should be regularly tested to check that they are still fit for use. A simple test involves sitting on the mattress to see whether it 'bottoms out' (that is, sitting on the mattress enables the bed base to be felt). Covers should also be examined for splits and thinning. The inner foam should be assessed to determine if it is wet, soiled, and contaminated with bacteria. New mattresses should be stamped with the date of purchase and a replacement policy planned.

ii) Interpretation of data

Once the quantity of equipment available and the treatments in current use are known, they can be related to the number of patients with established sores and at risk of developing them. In this way, shortfalls in resources can be clearly identified and remedied.

The existing range of equipment and treatments should also be compared with what is available commercially and decisions made about what to discard or purchase. This may highlight gaps in the market and identify the need for improved design technology.

iii) Planning the effective use of equipment and wound dressings

The District Pressure Sore Group should compile rationalised shortlists containing a recommended range of equipment and treatments. These must be accompanied by guidelines stating the circumstances

in which each should be used. The Health Authority must agree to provide the chosen range in the quantity required and as part of a planned programme of purchase, repair if appropriate, and replacement.

This process has been found to encourage a cost-effective and evaluative approach to the whole problem.

iv) Implementation

A person must be identified who will coordinate the appropriate use of the new range of products.

This will involve the allocation of budgetary responsibility for ordering, hiring, and purchasing. A centralised system of control can help ensure that resources are used appropriately. For example, reasons for selection and choice could be monitored and the provision of equipment determined by agreed priorities. A central store can ensure that the full equipment range is always in stock and available 24 hours a day. A properly organised system for equipment maintenance, repair, and replacement must be introduced.

v) Evaluation

The local evaluation of products used in the prevention and treatment of pressure sores is important because of the multiplicity of products available and the dearth of valid research. Evidence to support the selection of a rationalised list of products must be obtained from carefully considered, comparative trials, (which may be local or national), published research, or through relevant societies, organisations, and the District's own Pressure Sore Group.

KNOWLEDGE

i) Baseline knowledge required

The knowledge base of all involved in the prevention and management of active pressure sores should be determined.

Initially, this could be limited to include the District's own Pressure Sore Group, the multidisciplinary teams managing affected patients, and the patients and their carers at home. This is necessary because a lack of knowledge (especially if this linked with poor standards of prevention and the absence or inappropriate use of resources) may explain an unacceptable high incidence of pressure sores. Increased knowledge will enable all aspects of the District's strategy to be clearly understood and routinely implemented.

An assessment of the knowledge base expected may also be made by reviewing the local education being provided for all disciplines. Educational programmes should be assessed in terms of their content, format, and adequacy. Alternatively, structured interviews could be arranged to include questions relating to the total management of patients with pressure sores. This may be used to establish the knowledge base of individuals and be conducted before and after a teaching programme to monitor its effectiveness.

Once the level of current knowledge about pressure sores has been determined, the content of the in-house and external educational courses required to raise standards of patient care will be known. The adequacy of these courses should also be reviewed and considered under the headings of the target audience, the course content, the modes of delivery, and the course frequency.

ii) Planning to meet educational needs

The core knowledge presented by the normal teaching systems for all grades of staff within each District should be updated and expanded if necessary.

The members of the District Pressure Sore Group should increase their own knowledge by preparing and studying a comprehensive literature review.

All staff (including consultants) should be encouraged to attend study days arranged by the District; while key personnel should be encouraged to attend conferences and exhibitions, join relevant societies, and keep abreast of published research.

Other educational opportunities should be created to enable key staff to acquire particular expertise by attending relevant, external peer-group reviewed courses leading to additional qualifications (eg. Diplomas, MSc's, etc.).

A district-wide, multidisciplinary teaching package should be available and in frequent use.

This teaching programme should include updated information about the aetiology, prevention, assessment, and treatment of pressure sores. It should reinforce the District's own policy document and, in doing so, ensure its successful implementation.

iii) Implementation of the educational programme

The effective implementation of the teaching programme depends upon what it contains, and when, where, why, and how it is done.

The teaching programme may be produced as a resource pack, possibly in booklet form with accompanying handouts and pocket guides. All recipients should

be taught the same principles of care to enable everyone to support the District's agreed policy and standards.

The programme should be adapted to provide lectures, seminars, slide presentations, videos (one entitled 'Pressure sores: the hidden epidemic' can be obtained from the Graves Medical Audio-Visual Library), or permanent displays. These should be available on a continuous basis to meet changing staff needs, but the frequency and timing of teaching and discussion will depend on local conditions. For example, it may be useful to have informal, short weekly sessions, or formalised study days.

Local conditions and expertise will also determine who can best present the educational programme. It may be the responsibility of the District's Pressure Sore Group, the clinical nurse specialist, other key workers, or be presented through the District's traditional education system. It is important, however, that education about pressure sores is easily available to all concerned with their prevention and management.

iv) Evaluation

The educational programme should be evaluated in terms of its content (which should be updated regularly to include new research) and the impact it is making on knowledge levels. A lack of knowledge throughout the wards and departments in the District may be reflected in poor standards of care and a rise in the prevalence of pressure sores; whereas, increased knowledge may be shown in improved quality of care and a reduced incidence of pressure sores.

CONCLUSION

The effective prevention and management of pressure sores requires a coordinated District policy which must be placed within a strategic framework and can be best developed by a District Pressure Sore Group as described above.

Three main factors should be considered, namely: the patients; the resources available and required; and the improvements in knowledge necessary across all disciplines.

The development of an effective strategy requires the following steps:

1) forming a District Pressure Sore Group;
2) collecting baseline information;
3) interpreting the data;
4) developing and implementing a plan; and,
5) evaluating the whole programme.

Health Authorities seeking further advice, on how to reduce avoidable human suffering and financial waste by improving the prevention and management of pressure sores in their District, should contact:

The King's Fund Centre
for Health Services Development,
126 Albert Street London NW1.

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THE KING'S FUND PRESSURE SORE STUDY GROUP

This Group was first convened by Professor Livesley on 27th April 1987 under the auspices of the King's Fund Centre for Health Services Development; Director, Mrs Barbara Stocking.

The work of the Study group has been supported by four national symposia (in London and Bath) covering topics involving the prevention and management of pressure sores for all grades of hospital and community staff. In addition, there have been four workshops (in Harrogate, Darlington, Bournemouth, and London) for managers at District and Unit levels. As a result, many of the Health Districts in England and Wales are developing their own policies for pressure sore prevention and management.

The Group has consisted of:

Chairman

Professor Brian Livesley MD FRCP
The University of London's Professor in The Care of the Elderly.

Members

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