

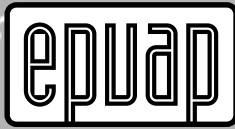


Mission Statement The European Pressure Ulcer Advisory Panel's objective is to provide the relief of persons suffering from, or at risk of pressure ulcers, in particular through research and the education of the public.

Executive Committee Members: Denis Colin: *President* (France)
Tom Defloor: *President Elect* (Belgium)
Michael Clark: *Recorder* (UK)
Jacqui Fletcher: *Deputy Recorder* (UK)
Marco Romanelli: *Past President* (Italy)
George Cherry: *Secretary/Treasurer* (UK)
Carol Dealey (UK)
Christina Lindholm (Sweden)

Trustees: Sue Bale (UK)
Andrea Bellingeri (Italy)
Theo Dassen (Germany)
Katia Furtado (Portugal)
Laszlo Gulacsi (Hungary)
Jeen Haalboom (Netherlands)
Ruud Halfens (Netherlands)
Hilde Heyman (Belgium)
Helvi Hietanen (Finland)
Maarten Lubbers (Netherlands)
Zena Moore (Eire)
Lisette Schoonhoven (Netherlands)
José Verdu Soriano (Spain)
Anne Witherow (Northern Ireland)

EPUAP Business Office: *Administrator:* Christine Cherry (England)
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Letter from the President

DEAR FRIENDS



Denis Colin

AS 2004 comes to an end, there is still so much to say. This is yet another testimony to the energy and dedication of the EPUAP. In 2004 we had the opportunity to explore and confirm exciting paths in our work during the following two occasions:

- A first meeting in Paris in April at which time the French association PERSE hosted several members of the executive committee and trustees of the EPUAP such as Tom Defloor, Christina Lindholm, Mike Clark, Carol Dealey and Jeen Haalboom. This meeting was a wonderful opportunity to present the progress and the projects of the EPUAP. The quality of the presentations (and the presenters!) greatly impressed the members of PERSE and allowed us to share our experiences and to enlarge our horizons. The decision was taken that evening to exchange the experiences of the French and European group on a more frequent basis. I was able once again to realize my good fortune to belong to both of these groups and to be able to take advantage of the cross sectional richness of information as well as to contribute and participate in the sharing of this information.
- A second much larger meeting took place in Paris in July during the WUWHS with a strong participation of the EPUAP in numerous sessions. All the dynamic forces of the EPUAP were able to present their research and demonstrate their capacity to teach and share information. It was also a wonderful opportunity to spend six days side by side with the world's most motivated experts in the area of prevention and treatment of pressure ulcers.

These two meetings, each different in size and media attention, are nevertheless both proof of a common philosophy. The EPUAP comprises of individuals each with a strong dedication to continuing education and research in the field of Pressure Ulcer Management in order to improve the quality of life of our patients. Our goal is not only to be better informed but also most importantly to better treat and heal.

Despite our efforts, we still have much work to do. The next event has already been identified as our 8th meeting, which will be held in Aberdeen, next May. Once again it will be the opportunity to debate not only that which we already know, but most importantly that which we still do not know, which is not necessarily limited to the realm of knowledge. We still have much work to do in the understanding of our respective health systems, the diffusion of good working practices, and in the capacity of self-evaluation of our methods in order to promote continuous improvement.

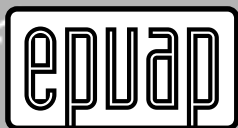
The EPUAP's ultimate goal is still far from being reached. Many patients still suffer from pressure ulcers and numerous medical teams are lacking motivation and tools. The public powers, or more generally speaking the decision makers in health matters, continue to discount the importance of pressure ulcer management in public health care.

I sincerely hope that our engagements on both a national and European level will allow us to reach the next step. I truly believe that it is through our convergence of individual energy and dedication that we will pave the way for the future and win the battle against pressure ulcers.

One final word, I would like to emphasize the great confidence that I have in all of you in completing our mission and reaching our goal, and I would like to stress how important my involvement in the EPUAP is to both my personal and professional life.

Happy New Year and I look forward to seeing you very soon!

Denis Colin
President



EDITORIAL



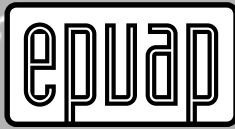
Dr Michael Clark

AS we move towards the close of another year it is time to reflect upon 2004 and look forward to 2005. Undoubtedly the main story of 2004 was the success of the 2nd World Union of Wound Healing Societies meeting held in July. With over 5000 delegates and a large commercial exhibition this six day conference exceeded all expectations and congratulations are due to Luc Téot and the entire organizing team. A selection of pressure ulcer related abstracts from the Paris conference are reproduced in this issue of the EPUAP Review. There are now four years to go until the Third Meeting of the World Union to be held in Toronto in 2008. It is probably unlikely that EPUAP will be a co-host of this event however we will be working to help make Toronto a success and anticipate considerable activity in the next year as the initial plans for the meeting develop.

For EPUAP in 2005 the main event will be our Open Meeting – the 8th held by the organization. It seems like only yesterday when the first Open Meeting was held in Oxford – how time flies as the new organization grew rapidly. That EPUAP is now a mature society will be recorded early in 2005 by the publication of a new book dedicated to pressure ulcers written by EPUAP Trustees and colleagues. Keep looking at the web-site and reading this publication for further details of this new title for 2005.

Back to the Open Meeting for 2005; this will be held in Aberdeen on the east coast of Scotland. Further details of this event (May 5–7) are included in this issue of the Review and we hope that this meeting will be as successful as our most recent previous gatherings in Tampere and Budapest. As a native of Aberdeen I am particularly happy to see our meeting visit my home city and know that you will receive a warm welcome from the city and its people. You may want to think about arriving in Aberdeen a day earlier than the start of the EPUAP conference – the UK Tissue Viability Society have agreed to hold their annual conference the day before the opening of the EPUAP Open Meeting in the same venue. So join with our colleagues in the UK on 4th May 2005 to mark this collaboration between EPUAP and a strong national organization. See you in the Granite City in early Spring!

Michael Clark
Editor



Dr George Cherry

THE Business Office has been extremely active in 2004 as one of the four co-hosting societies of the World Union of Wound Healing Societies' meeting in Paris in July where more than 6000 participants from throughout the world attended. The EPUAP had a booth which was well visited as well as having a representative from the Aberdeen Convention Centre in Scotland who was promoting our 8th meeting, 5–7 May 2005. In addition, booths were manned at major wound healing meetings in UK including the Wounds UK 2004 in November at Harrogate where more than one thousand delegates from throughout Europe attended. At all of these meetings EPUAP trustees have spoken, and at the World Union meeting we were actively involved in developing the scientific programme in which pressure ulcers played a prominent role. We also had a booth at the NICE Meeting in Birmingham, in December.

One of the popular features of the EPUAP Booth's exhibits has been that of the interactive pressure ulcer classification system (PUCLAS) which Tom Defloor and his colleagues developed.

Also the new Nutritional Guidelines in the prevention and treatment of pressure ulcers started by Gerry Bennett and since directed by Michael Clark have proved extremely popular throughout Europe being available in a number of different languages. The EPUAP is grateful for the educational grant which was given from Nutricia.

The EPUAP sponsored book *Science and Practice of Pressure Ulcer Management* is planned for publication by the end of this year. There will be a discount in price for EPUAP members, and an announcement brochure is included in this issue of the *EPUAP Review*.

Figure 1 (below).
EPUAP Booth, 'Wounds UK 2004',
Harrogate. Chris Cherry, EPUAP Business
Office (centre) with Jackie Muir, Aberdeen
Convention Centre (right), and Tissue
Viability Nurses (left) learning PUCLAS.



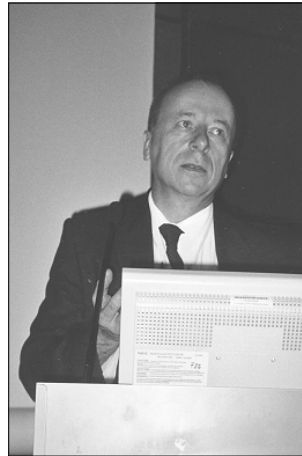


Figure 2.
Speakers at the Second World Union of Wound Healing Societies Meeting in Paris, 2004. (From left to right): Prof. T. Ohura, President of the Japanese Pressure Ulcer Society. Dan Berlowith, President of the NPUAP. Denis Colin MD, President of the European Pressure Ulcer Society.

Figure 3. From left to right: Geoff Sussman and Mike Stacey, organizers at the 1st WUWHS Meeting, Melbourne, 2000, and Luc T  ot, President of the 2nd WUWHS Meeting, Paris, 2004.



The Business Office has moved from the Department of Dermatology at the Churchill Hospital, Oxford to 68 Church Way, Iffley, Oxford, OX4 4EF. This has given us more space and Christine Cherry, who has retired from the National Health Service, is now the administrator of the office continuing the active r  le that she has had since the EPUAP was founded.

The audited financial accounts provided to the Charity commission are included in this issue of the *EPUAP Review*.

Interest for our eighth annual meeting in Aberdeen, Scotland (5–7 May 2005) is extremely robust and, judging by the number of commercial exhibitors that have signed up as well as the scientific and social programme which is planned, it will be one of the best meetings since we began. The meeting is preceded by a one-day Tissue Viability Society meeting whose theme is ‘Fundamental principles and good practice in tissue viability.’ Individuals who attend this meeting will be given a discount on the registration fee for the EPUAP meeting to encourage their attendance for both meetings.

Professor Terence Ryan, one of our founding trustees, has received a grant for wound care and pressure ulcers in developing countries to be administered through the EPUAP. If you are involved in pressure ulcer education or treatment in developing countries please write him directly at the Business Office.

The Business Office would like to wish all of our members and corporate sponsors a joyous holiday season and a prosperous and peaceful 2005!

Dr George W. Cherry
Secretary/Treasurer



CHRISTOPHER REEVE

A spokesman for publicising the experience of preventing and living with pressure ulcers as well as a proponent of advanced research into tissue repair for neuro-injury

THE untimely death of the actor Christopher Reeve ('Superman') at the age of 52 years due to cardiac complications associated with an infected pressure ulcer highlights the serious health problems that pressure ulcers can cause. Pressure ulcers are not only a complication of spinal cord injury, as in Christopher Reeve's case, but also affect others that are restricted in their movements and confined to beds and wheel chairs due to a number of chronic illnesses particularly in the elderly population.

In the UK it has been stated that 60,000 people per year suffer from pressure ulcers. Similar figures have been reported for other European countries. The New England Journal of Medicine reported in-patient mortality from 22-33% associated with pressure ulcers.¹ Christopher Reeve became a major proponent for medical research into tissue repair, particularly stem cell therapy for the repair of nerve injury, but also in television interviews stressed the struggle that he had with the prevention and treatment of pressure ulcers. His response to his unfortunate injury like other celebrities such as Michael Fox has made the public as well as governments aware of many of the aspects of tissue repair which our Panel and other similar organisations have as their research objectives. We should be grateful for the publicity that these individuals have given to the European Pressure Ulcer Panel's objectives.

Dr George Cherry

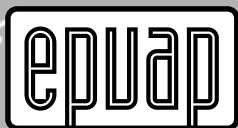
Reference

1. Davies K *et al.* The hidden mortality from pressure ulcers. *Journal of Tissue Viability* 1991, Vol. 1, No. 1, 18.

Website: <http://www.christopherreeve.org>



Christopher Reeve and his wife Dana at a Christopher Reeve Paralysis Foundation gala on Nov 24, 2003. This foundation is committed to funding research that develops treatments and cures for paralysis caused by spinal cord injury and other nervous system disorder

**EUROPEAN PRESSURE ULCER ADVISORY PANEL CHARITY
DIRECTORS' REPORT AND STATEMENT OF FINANCIAL ACTIVITIES**

The directors, who are also trustees, present their report together with the accounts for the period ended 31 March 2004

Review of the Business and Future Developments

The company is limited by guarantee and is a registered charity (registration number 1066856).

The charity reported net incoming resources of £12,107 for the period. Subscriptions received in advance during the period amounting to £23,575 have been carried forward.

Mission Statement

The European Pressure Ulcer Advisory Panel's objective is to provide for the relief of persons suffering from, or at risk of pressure ulcers, in particular through research and education of the public.

Risk Management

The trustees have identified the major risks which the charity faces and are taking steps to mitigate those risks.

Reserves Policy

It is the policy of the charity to maintain unrestricted funds, which are the free reserves of the charity, at a level which equates to approximately six months unrestricted expenditure. This would provide sufficient funds to cover management and administration and support costs and cover publication expenses. The trustees are researching ways to meet this objective.

Directors

The directors in office at 31 March 2004, all of whom served during the period unless otherwise stated, were:

Executive Committee:

- Marco Romanelli, President (Italy)
- Denis Cohn, Vice President (France)
- Michael Clark, Recorder (England)
- George Cherry, Secretary/Treasurer (England)
- Christine Cherry, Business Administrator (England) [resigned 05.09.03]
- Christina Lindholm (Sweden)
- Joan-Enric Torra I Bou (Spain) [resigned 05.09.03]

Report of the Charity

The charity's objective 'to provide the relief of persons suffering from, or at risk of pressure ulcers in particular through research and education of the public' continues to be achieved.

The *Review*, the Charity's journal continues to provide a wealth of knowledge both for members and the general public who visit the EPUAP website (www.epuap.org) The Business Office continues to receive requests for information regarding pressure ulcers throughout Europe and the rest of the world. These requests are passed on by the members of the Business Office to those who have the most expertise in the particular fields. The EPUAP Guidelines on prevention and treatment are much sought after and a working group was formed in Paris in January to update these – first published in 1998.

The annual meeting was held in Tampere, Finland and built on the success of previous meetings. Reports from the working groups were given at the meeting including updates on the Pan European Pressure Ulcer Study (PEPUS), Nutritional guidelines group and the setting up of a phenomenology study group. A working party looking at the election of trustees and generally clarifying the constitution and terms of reference was set up.

A working party on Nutrition has produced guidelines for those at risk or suffering from pressure ulcers as well as in healing. These have been translated into French, German, Finnish, Flemish and Portuguese and plans are for further translations into Italian and Spanish. This work was sponsored by an educational grant from Nutricia.

The EPUAP reference book *Science and Practice of Pressure Ulcer Management* written by trustees and members is now in the hands of the publishers (Springer-Verlag) and will be launched at the World Union of Wound Healing Societies' meeting in Paris in July. Sponsorship from Industry has helped to make the publication possible.

The annual meeting of the EPUAP this year will take place within the Second World Union of Wound Healing Societies meeting in Paris in July where the EPUAP is a co-host. Many of the trustees are invited speakers, organising work shops and symposia for this great meeting.

Trustees spent a working weekend in January meeting

in Paris to discuss major issues affecting the panel and its members. A pressure ulcer classification project was discussed in depth following on from the CDs produced by Tom Defloor and his Group in the University of Gent for teaching purposes. These educational CDs have been distributed and well accepted throughout Europe. They are now in the process of being updated and expanded. The pressure ulcer prevalence study carried out by the EPUAP has been published as well as receiving numerous publicity through journals involved in health care. The aim of educating the public in our mission statement has been acted upon through our publicity committees as well as the Business Office circulating literature to members of the British Parliament. The awareness of pressure ulcers in general by the public has been helped by popular television programmes such as 'Casualty' on the BBC where in one episode the need for prevention was part of the story line. It also emphasised the need for the awareness of prevention by basic care such as providing pressure relief mattresses on trolleys.

Pressure ulcer incidence and prevalence were again discussed and a working group set up to do a pilot study on incidence for one year only.

Discussion led by Carol Dealey dealt with criteria for nominations of candidates to stand as trustees, length of tenure and the inclusion into the executive of chairs of working parties. All EPUAP members were circulated following this meeting with forms to suggest candidates. Five candidates were put forward and three (two from the Netherlands and one from Spain) met the criteria. Their election will be ratified at the annual general meeting in July at

the World Union of Wound Healing Societies' meeting in Paris. Tom Defloor was successfully elected as future president.

Throughout the year there have been general discussions on 'definitions' within the world on pressure ulcers and it was suggested that the NPUAP (National Pressure Ulcer Panel, USA), EPUAP and the Japanese Society should get together.

Site visits for the 2005 annual meeting were made by members of the EPUAP Business Office, the Recorder and Secretary /Treasurer to Aberdeen, Glasgow and Belfast. All sites were deemed acceptable but after much deliberation it was decided the meeting would be held in Aberdeen, on 5-7 May 2005.

The Business Office, administered by Christine Cherry, continues to work as a busy hub for the organisation of meetings, publication of the *EPUAP Review*, co-ordinator of working groups, dissemination of reports and a liaison with Industry for fund raising and sponsorship. It is also organising the annual meeting in Aberdeen for 2005 in which the programme and registration forms have been published as well as being available on our website.

The EPUAP has made great progress into achieving its mission, but with publicity and more public awareness the problem of pressure ulcers remains a major economic and health problem and is a long way from being solved.

This report has been prepared in accordance with special provisions of Part VII of the Companies Act 1985 relating to small companies.

28 June 2004

BY ORDER OF THE BOARD

Statement of Financial Activities for the period ended 31 March 2004

	Note	Nutricia Guidelines Restricted Fund 2004	Un- restricted Funds	Total	Funds 2003
		£	£	£	£
INCOME AND EXPENDITURE					
Incoming Resources					
Subscriptions - Individual		-	12758	12758	15260
Corporate		-	44434	44434	58468
Conference income	2.	-	128329	128329	106121
Interest receivable		-	525	525	697
Research and grants		7000	-	7000	13992
Total Incoming Resources		7000	186046	193046	194538
Resources Expended					
Charitable Expenditure					
Nutricia guidelines		1379	-	1379	3496
Committee meetings		-	4705	4705	6319
Awards made		-	225	225	28
Prevalence study meetings		-	-	-	520
Secretarial and office expenses		-	26160	26160	39342
Publication expenses		-	12470	12470	12130
Conferences and meetings expenses	2.	-	125352	125352	103379
Computer support		-	1520	1520	3405
Advertising		-	-	-	516
NPUAP conference		-	-	-	1313
Project work		-	1347	1347	534

	Note	Nutricia Guidelines Restricted Fund 2004 £	Un- restricted Funds £	Total £	Funds 2003 £
INCOME AND EXPENDITURE					
Charitable Expenditure (continued)					
Attendance by overseas delegates		-	2739	2739	1710
Accountancy		-	1579	1579	1366
Bank charges		-	1335	1335	1570
Depreciation		-	373	373	679
Management & administration of the charity		-	1755	1755	1928
Total Resources Expended		1379	179560	180939	178235
Net Incoming/(Outgoing) Resources		5621	6486	12107	16303
Fund Balances brought forward		10496	22390	32886	16583
Fund Balances carried forward		16117	28876	44993	32886

The above represents the recognised gains of the charity.

Balance Sheet at 31 March 2004

	Note	£	2004 £	2003 £	£
Fixed Assets	3.		1852		2225
Current Assets					
Cash at bank		58722		68552	
Prepayments	4.	9463		24237	
			68185	92789	
Current Liabilities					
Accruals and deferred income	5.	(25044)		(62128)	
Net Current Assets			43141		30661
Net Assets			44993		32886
Represented by:					
Restricted fund	6.		16117		10496
Unrestricted funds	7.		28876		22390
			44993		32886

These financial statements have been prepared in accordance with the special provisions of Part VII of the Companies Act 1985 relating to small companies and the Financial Reporting Standard for Smaller Entities (effective June 2002).

The directors are satisfied that the company was entitled to exemption under subsection (1) of section 249A of the Companies Act 1985 and that members have not required an audit in accordance with subsection (2) of section 249B.

The directors acknowledge their responsibilities for:

- a) ensuring that the company keeps accounting records which comply with section 221; and

- b) preparing accounts which give a true and fair view of the state of affairs of the company as at the end of the financial period and of its profit or loss for the financial period in accordance with the requirements of section 226, and which otherwise comply with the requirements of this Act relating to accounts, so far as applicable to the company.

These financial statements were approved on behalf of the charity on 28 June 2004.

Signed on its behalf by
George Cherry
Secretary/Treasurer

Notes to the Accounts for the period ended 31 March 2004

I. Accounting Policies

The following accounting policies have been applied consistently in dealing with items which are considered material in relation to the charity's financial statements.

- (a) **Company Status** The charity is a company limited by guarantee. The members of the company are the trustees.
- (b) **Basis of Preparation** The financial statements have been prepared under the historical cost accounting rules, and in accordance with the Charities SORP and the Financial Reporting Standard for Smaller Entities (effective June 2002).
- (c) **Income and Expenditure** Income and Expenditure is accounted for on an accruals basis. Subscription income is apportioned over the period to which it relates.
- (d) **Tangible Fixed Assets** Tangible fixed assets are stated at historical cost less depreciation. Depreciation is provided using the reducing balance basis at rates which reflect the anticipated useful lives of the assets and their estimated residual values:
- | | |
|--------------------|---------------------|
| Office Equipment | 15% |
| Computer Equipment | 33 ¹ /3% |

2. Annual Conference

Income	£
From corporate sponsors including satellite meeting	70611
From individual registrations	57718
	128329
Less: expenditure	(125352)
	2977
	=====

3. Fixed Assets

	Office Equipment £	Computer Equipment £	Total £
Costs:			
Brought Forward	2457	2823	5280
Additions	-	-	-
	2457	2823	5280
	=====	=====	=====
Depreciation:			
Brought Forward	1119	1936	3055
Charge	151	222	373
	1270	2158	3428
	=====	=====	=====
Net Book Value:			
As at 31 March 2004	1187	665	1852
	=====	=====	=====
As at 30 June 2003	1338	887	2225
	=====	=====	=====

4. Prepayments

Included within prepayments is an amount of £6526 relating to expenses incurred for the Paris Meeting being held in July 2004.

5. Accruals and Deferred Income

	2004 £	2003 £
Accountancy and professional fees	1469	1300
Deferred income	23575	60828
	25044	62128
	=====	=====

During the period subscriptions were received from individual members covering the subscription year ending 30 September 2004 and corporate members covering the subscription year ending 31 December 2004. As these financial statements have been prepared to 31 March 2004 the element of subscriptions paid in advance at that date amounting to £23575 has been treated as deferred income.

6. Restricted Fund

This is a specific grant from Nutricia for the production of nutritional guidelines

7. Trustees Transactions

Fifteen Trustees were reimbursed for their expenses, amounting to £21,165 (2003 : £25,733).

During the period of this report the business office of EPUAP was reorganised and partially relocated. The business office functions of EPUAP were previously carried out by an employee of the Oxford NHS Trust; these functions are now provided by the Oxford International Wound Healing Foundation, a company of which Dr G Cherry is one of the directors. The Foundation recharges EPUAP, at no profit to itself, for the cost it incurs on behalf of EPUAP.

During the period to 31 March 2004 EPUAP was invoiced and paid to the Foundation the following amounts:

Reimbursement of salary to the Oxford Radcliffe NHS Trust for secretarial and administrative duties of C. Cherry for approximately three months	£9000
Reimbursement of travel expenses for delegates and speakers to the Annual Meeting.	£2700
Reimbursement of direct expenses incurred for the Tampere meeting	£1000
	£12700
	=====

**Accountants' Report on the Unaudited
Accounts to the Members of the European
Pressure Ulcer Advisory Panel Charity**

We report on the accounts for the period ended 31 March 2004 set out earlier in this document.

Respective Responsibilities of Directors and Reporting Accountants

As described on page six the trustees, who are also the directors of European Pressure Ulcer Advisory Panel Charity for the purposes of company law, are responsible for the preparation of the accounts, and they consider that the company is exempt from an audit. It is our responsibility to carry out procedures designed to enable us to report our opinion.

Basis of Opinion

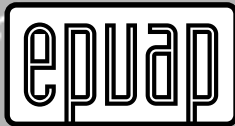
Our work was conducted in accordance with the Statement of Standards for Reporting Accountants, and so our procedures consisted of comparing the accounts with the accounting records kept by the company, and making such limited enquiries of the officers of the company as we considered necessary for the purposes of this report. These procedures provide only the assurance expressed in our opinion.

Opinion

In our opinion:

- (a) the accounts are in agreement with the accounting records kept by the company under section 221 of the Companies Act 1985;
- (b) having regard only to, and on the basis of, the information contained in those accounting records:
 - i) the accounts have been drawn up in a manner consistent with the accounting requirements specified in section 249C(6) of the Act; and
 - ii) the company satisfied the conditions for exemption from an audit of the accounts for the year specified in section 249A(4) of the Act and did not, at any time within that period, fall within any of the categories of companies not entitled to the exemption specified in section 249B(1).

Critchleys Chartered Accountants
ABINGDON
28 June 2004

**ABSTRACTS FROM THE 2ND WORLD UNION OF
WOUND HEALING SOCIETIES MEETING***Paris, 8–13 July 2004***PRESSURE ULCERS AND NUTRITION:
A NEW EUROPEAN GUIDELINE***M. Clark*

Pressure ulcers are frequently associated with malnutrition; however to what extent is this relationship valid? The European Pressure Ulcer Advisory Panel (EPUAP) has developed a new practice guideline addressing the role of nutrition in pressure ulcer prevention and treatment. This guideline highlights that currently there is no strong scientific evidence for a direct relationship between poor nutrition and the development of pressure ulcers, although it is possible that poor nutrition may influence the vulnerability of tissue to extrinsic factors such as pressure. Stronger links exist between malnutrition and the delayed healing of pressure ulcers. The new guideline was developed by a multi-disciplinary group with members drawn from five European countries. Much of the guideline was based on a new Cochrane review of the links between nutrition and pressure ulcers. The draft guideline was presented during the EPUAP Annual Conference in September 2003 and published in draft form in the EPUAP Review with the guideline revised in light of comments received. The final version of the guideline (available in eight European languages) covers the whole nutritional cycle and includes weighted recommendations with regard to nutritional screening, assessment, intervention, evaluation and follow-up. The guideline especially stresses the importance of integrating nutritional activities into daily pressure ulcer care. This presentation will discuss the development, content and implementation of the new guideline with implementation assisted through the development of a decision tree which can be used to aid the translation of the guideline into locally relevant protocols of care. The European Pressure Ulcer Advisory Panel would like to thank Nutricia for an unrestricted educational grant that made development of the guideline possible. Members of the Guideline Development Group were Benati G, Clark M, Cohn D, Jackson P, Kerry B, Langer G and Schols JMGA.

**INTERRATER AND INTRATER RELIABILITY
OF THE EPUAP PRESSURE ULCER
CLASSIFICATION SYSTEM***T. Defloor, L. Schoonhoven*

Background: Correct identification and classification of a

pressure ulcer is important for an accurate reporting of the magnitude of the problem, and for timely prevention. The reliability of classification systems has rarely been tested.

Aims: To examine the interrater and intrarater reliability of classifying pressure ulcers according to the EPUAP classification system using pressure ulcer photographs.

Design: Survey among nurses without special expertise in pressure ulcers.

Methods: 56 photographs of normal skin, blanchable erythema, pressure ulcers (PU) or incontinence lesions were correctly classified by 53 PU experts. The photographs were presented in a random order to 473 nurses. A random selection of 9 photographs were included twice. 83 nurses did the test twice within a time interval of one month.

Results: The interrater reliability ($k = 0.37$) and the intrarater reliability ($k = 0.52$) were low. Incontinence lesions were confused most frequently with superficial PU; 80.2% of the PU lesions (grade 2 and higher) were identified as such. Nurses who classified more photographs correctly, remained consistent in their judgement. Nurses with a limited number of correct answers, frequently changed from opinion in between two sessions.

Conclusions: The interrater and intrarater-reliability of the EPUAP-classification appears to be low for the assessment by nurses with no special expertise in PU. More attention should be given to training in PU classification. The description of the different PU grades should be further developed, based on their clinical presentation and not only on the anatomic limits of soft tissue damage.

**OBSERVATION OF NON-BLANCHABLE
ERYTHEMA***K. Vander Wee, B. De Neve, M. Grypdonck, T. Defloor*

Introduction: The use of risk assessment scales is recommended to identify patients at risk for pressure ulcers. For many patients however, applying these scales results in an inefficient use of preventive measures. Recent research has shown that waiting until non-blanchable erythema occurs before starting prevention is a more efficient method than using the Braden scale. It is important that non-blanchable erythema is correctly observed. The aim of this study is to examine two methods to observe non-blanchable erythema and to examine the interrater reliability of the observations.

Methods: 303 patients of an acute geriatric ward with erythema observed by the researcher participated in the study. Nurses observed heels, hips and sacrum daily. They scored

the presence of blanchable erythema or non-blanchable erythema. To distinguish between blanchable and non-blanchable erythema, both thumb and transparent disk were used. The researcher executed the same observations, independently.

Results: The interrater reliability between nurse and researcher was both for the thumb method ($k = 0.67$) and transparent disk ($k = 0.70$) substantial. The agreement was higher for the sacrum than for the heels. The agreement between the observations with thumb and transparent disk was high, both at nurses ($k = 0.88$) and researcher ($k = 0.88$), however, more non-blanchable erythema was observed with the transparent disk. The agreement was higher for the heels, than for the sacrum.

Discussion: The interrater reliability was higher for the sacrum than for the heels. When using a transparent disk more non-blanchable erythema was identified.

PRESSURE ULCER PREVALENCE: USING EUROPEAN METHODOLOGY IN THE IRISH HEALTH CARE SETTING

J. O'Brien, Z. Moore

Background: Pressure ulcers are common however, in Ireland there are no national prevalence figures available and no national guidelines exist for pressure ulcer prevention and management.

Aims: 1) To gain insight into the use of the EPUAP pressure ulcer minimum data set. 2) To establish pressure ulcer prevalence and risk status of the population in an acute hospital setting. 3) To identify the number and severity of pressure ulcers and prevention strategies in use.

Methods: A survey was conducted using the EPUAP pressure ulcer minimum data set. Permission to conduct the study was granted from the Director of Nursing Services and ethical principles were adhered to. The study site was chosen using random sampling and all patients were assessed ($n = 519$). Data analysis was carried out utilising SPSS version 11

Results: Pressure ulcer prevalence was 15%. Most patients were in the acute care/high dependency care setting (63%) and 20% were at risk of pressure ulcer development ranging from low high (Braden Scale). 78 pressure ulcers were identified and 57 (73%) were grade 1 or 2 damage (EPUAP grading). A range of prevention measures was used, the appropriateness of these varied among the risk groups.

Discussion and Conclusion: This study provides a clearer understanding of the scale, nature and severity of the problem of pressure ulceration. Based on this information plans can be drawn regarding appropriate resource allocation and future research within the Irish population.

SEVERITY, LOCATION, DURATION AND ORIGIN OF PRESSURE ULCER WOUNDS IN GERMANY

N. Lahmann, T. Dassen

Introduction: Data about the severity, location, duration and origin of pressure ulcer wounds in German Healthcare facilities are rare. Knowledge of these characteristics could be used to evaluate the preventive and therapeutic pressure ulcer management, i.e. long duration of pressure ul-

cer wounds may open the way for a discussion about the necessity of improved or new treatment procedures. In the years 2002 and 2003, the 'Department of Nursing Science' at the Humboldt-Universität zu Berlin conducted nationwide surveys on the prevalence of pressure ulcers in German hospitals and nursing homes, during which data about the severity, location, duration and origin of pressure ulcer wounds were obtained. The research question is: What are the differences of pressure ulcer wound characteristics between nursing homes and hospitals in Germany?

Method: The study design consisted of two point prevalence studies conducted in April 2002 and April 2003. Specially trained ward nurses examined all hospital patients and nursing homes residents who were able to give informed consent. Where a pressure ulcer wound was diagnosed, the severity, origin, duration and location had to be stated. Demographic data and a risk assessment according to the Braden scale were obtained. Chisquare was used to test for statistically significant differences.

Results: 2158 out of 21,574 hospital patients and nursing home residents had a total of 3,857 pressure ulcers. In hospitals 36.4% of these wounds were of severity grade 2 and higher; in nursing homes the percentage of these wounds was 46.7%. In hospitals 51.4% of all wounds were developed nosocomially compared to 60.2% in nursing homes. In hospitals 7.4% of all wounds have persisted for more than three months, 29.7% in nursing homes. In both types of institutions they were most commonly located on the lower back area and the heels.

Summary: In Germany pressure ulcer wounds in nursing homes are more severe, persist longer and more often develop nosocomially in nursing homes than in hospitals.

URBAN AND RURAL USA NURSES' KNOWLEDGE OF PRESSURE

E.A. Ayello, FAAN, K. Zulkowski, ONS, RN, CWS

Introduction: Pressure ulcers continue to be an important issue for nursing home residents in the United States. Documentations and treatment of pressure ulcers are critical components in the provision of optimal care, in this population. In long term care (LTC) facilities, it is the staff nurses that must understand how to assess risk for pressure ulcers that have developed, and implement prevention/treatment programmes. The knowledge level of nurses employed in long term care facilities has not been examined. Nurses in rural areas may have fewer opportunities for continuing education programmes than their urban counterparts. It is not known if there is a difference in pressure ulcer knowledge by geographic location.

Methods: Nurses employed in LTC both urban and rural settings have been invited to participate in the study by completing a standardized pressure ulcer knowledge tool developed by Pieper and a demographic sheet developed by the authors.

Results: Data is being analysed using SPSS 11.5 statistical software. Data collection is in progress with over 700 surveys mailed. The presentation will give the results of both urban and rural nurses knowledge of pressure ulcer identification, risk and treatment using a standardized pressure ulcer tool developed by Pieper.

Discussion: These data will help in planning future continuing education programmes for staff level nurses to enhance pressure ulcer care.

A PHENOMENOLOGICAL STUDY TO EXPLORE THE EXPERIENCE OF LIVING WITH A PRESSURE ULCER

C. Dealey, A. Hopkins, D. Colin, T. Defloor

Background: Little is known of the impact of pressure ulcers on an individual's quality of life. This phenomenological study set out to investigate the impact of pressure ulceration on a variety of people with different underlying pathologies from several countries across Europe. This paper is reporting the first stage of the study, testing the impact of having multiple data collectors and translation from one language to another for analysis as well as the findings from eight patients.

Methods: Patients over the age of 65 years, with a grade 3 or 4 pressure ulcer which had been present more than one month, were recruited to the study. Each patient was interviewed using an unstructured format. The interviews were taped and then transcribed. The transcriptions were sent to one person for analysis. Standardised training was given to all those undertaking the interviews. Following analysis the emerging themes from each interview were examined with the interviewer to ensure validity. Transcripts that were translated into English were verified by the interviewer for accuracy.

Results: A total of eight patients have been recruited from four centres, three in the UK and one in Belgium. Emerging themes from the interviews are pain, sudden loss, restriction and equipment. Discussion of the results will focus on the issues of validity that arise from a pan-European qualitative study, in particular the cultural and translation influence within interview based methodology and the reliability of the emerging themes within a population that have multiple pathologies.

THE EFFECT OF CLOTHING ON THE MEASUREMENT OF INTERFACE PRESSURE

J.M. Melhuish, M. Clark, R.J. Williams, K.G. Harding

Introduction: The measurement of interface pressure between subjects and associated support surfaces has been exhaustively researched. The effect of clothing on these measurements has been discussed but there is little work that has examined the effect on measured interface pressure. It is known and we have demonstrated that measured interface pressure is dependent on the hardness of the support surfaces for most types of sensors.

Aim: To examine the effect of clothing materials and associated clothing structures (ACS) in a controlled environment on the measured interface pressure.

Method: Synthetic mixes, Various Cotton garments and sheets were selected for testing. Small pieces of material approximately 20 x 20 cm were cut from each garment. Measurements were undertaken on the plain material, a 1.5 cm folded crease, seams, pockets and buttons. The materials were placed as a sandwiched between two layers of foam

(Shore "00" hardness 42) and two 10 x 10 cm metal plates. The plates were then loaded to apply 50 mmHg. Interface pressure was measured using a Tally Oxford pressure monitor. One piece of material and its ACS's was tested using 7 foams of increasing hardness, (shore 16–50 "000" scale), loading 25mmHg.

Results: The Median (Range) of the measured control interface pressure was 50 (50–50)mmHg. There was little effect shown on the measured interface pressures for plain materials 50 (45–54) mmHg. There were varying effects for the ACS's, not including buttons, 64.5(42–148) including buttons 68(42–310). Increasing foam hardness was associated with increasing measured interface pressure this became more pronounced for the ACS's. For plain material, structures and buttons these were for foam 1 (hardness 16 "000") 12(12–13) 13(11–16), 28(27–29)mmHg, and for foam 7 (hardness 50 "000") 23(23–24), 27.5(22–50), 113 (113–115)mmHg.

Conclusion: Clothing has a variable effect on the measured interface pressure this being very small for plain surfaces but can be greatly increased over associated material structures.

PRESSURE ULCERS 1 (QUALITY OF LIFE) THE NEXT STEP: USING LARGE DATABASES TO MEASURE QUALITY OF CARE

D. Berlowitz (US)

Information on pressure ulcer status is increasingly available from large databases and is often considered for use when assessing the quality of care. In the United States, current initiatives are using data on pressure ulcers from a variety of settings including nursing homes, home care, and acute care hospitals. A basic understanding of the strengths and weaknesses of these data are essential if one is to develop a comprehensive understanding of the quality of care. Among the issues are the reliability of the data; whether the data provides an accurate description of the quality of care; how best to inform providers and consumers on performance; and optimal means to using these data in assessing and improving care.

PRESSURE ULCERS 2 (EDUCATION AND GUIDELINES) QUALITY OF NATIONAL AND INTERNATIONAL GUIDELINES: A REVIEW

M. Clark (GB)

Many national and international guidelines have been produced that seek to assist pressure ulcer prevention and management. While there is considerable convergence between guidelines with recommendations offered primarily on the basis of expert opinion there has been no attempt to compare the quality of different guidelines. Until recently the lack of comparisons of guideline quality may have stemmed from there being no accepted audit tool with which guideline development and content could be assessed. The release of the AGREE instrument (<http://www.agreecollaboration.org>) in 2001 provides an approach allowing the quality of clinical guidelines to be assessed. This presentation will report the process and results of a comparison of three pressure ulcer guidelines (developed by

the European Pressure Ulcer Advisory Panel, the US Agency for Health Care Policy & Research and the UK National Institute for Clinical Excellence where each guideline was assessed by minimum of four reviewers.

PRESSURE ULCERS 3 (SUPPORT SURFACE EFFECTIVENESS) CLINICAL EVALUATION OF SUPPORT SURFACES: A REVIEW

N. Cullum (UK)

A systematic review has been undertaken in order to establish the relative effectiveness of different pressure-relieving support surfaces in reducing the development of new pressure ulcers. Studies in any language, published or unpublished, in which participants were randomised, and which reported the incidence of new pressure ulcers as an outcome were eligible for inclusion. After a comprehensive search for studies, study selection and data extraction were undertaken by one reviewer and checked by a second. Individual study validity was appraised by two reviewers independently. 41 eligible RCTs were identified. The validity of eligible studies was variable with only half providing sufficient information for us to judge that allocation to support surfaces was truly random. Blinded outcome assessment was used in 10 studies. Median sample size in individual studies was 80 (range 12 1166). Foam alternatives to the standard hospital foam mattress reduce the incidence of pressure ulcers in people at risk of developing pressure ulcers. The relative merits of alternating and constant low pressure devices, and of the different alternating pressure devices for pressure ulcer prevention are unclear. These and other findings will be presented alongside an overview of the validity of trials in this area, and the methodological challenges associated with the evaluation of support surfaces.

PRESSURE ULCERS 3 (SUPPORT SURFACE EFFECTIVENESS) MAINTAINING APPROPRIATE SKIN MOISTURE AND TEMPERATURE OF THE PATIENT: A BIOMEDICAL ENGINEERING OVERVIEW

E. Flam, L.I. Raab (US)

Excess moisture and over-heating weaken the skin. Excess moisture also increases friction and shear leading to greater damage from these forces. The skin of a patient can be more resistant to developing pressure ulcers if conditions that weaken it are controlled. The area of the patient's skin in contact with the support surface is most susceptible to these adverse conditions. Low Air Loss therapy (LAL) is considered as a valuable means to help control these conditions. In effective LAL therapy, air flow from the cushions of the support surface removes the excess moisture and heat. From a Biomedical Engineering perspective, the design of an LAL system must take the following factors into account: the sources of excess moisture and temperature; the quantity of excess moisture produced; the elevation of the skin temperature; the air flow available for managing these excesses; and the ability of the support surface to effectively use the air flow to remove the excess moisture and heat. In this symposium section, the determination of these factors is

detailed. An example is then provided to demonstrate how their interaction can result in an effective clinical outcome.

PRESSURE ULCERS 4 (RISK ASSESSMENT) DO RISK ASSESSMENT TOOLS WORK?

B. Barrois (FR)

Pressure ulcers occur on elderly and reduced mobility patients. Many studies choose pertinent risk factors and assess their validity. Using a validate tool is necessary. No strategy as allowed pressure ulcer abolition. Fiability No study is randomised. BRADEN scale is the most studied. It can be used for children in USI (Curley). It must be associated with understanding the clinical uses (Russel) and repeated (Pokorny) WATERLOW scale is specific for very old patients. NORTON scale is more specific than Waterlow for elderly. Limits BRADEN scale Cut-off's difficult to determine. Waters). Predictive factors are: very old woman, with cognitive and mobility reduction (Horn) WATERLOW scale Anthony showed than age is predictive but gender is not, without scientific proof for validity to each item. Four items: continence; skin aspect; mobility; and ability to transfers are valid. (Papanikolaou) NORTON scale Over evaluation appear in 64%. In palliative units, activity, mobility and age are predictive (Henoeh) Specific factors appear for children (Samaniego) and smokers. For elderly using medics and institution entry (Baumgarten) are predictive indicators. Pain reduces motility and increase the risk (Reddy). Confusion, hypo albuminemia and bowel incontinence are significant (Reed). New tools OASIS assess risk level.

Conclusion: Using an assessment tool for risk factors is useful. It is better than clinical feeling but it is improved by clinical assessment. Every scale as good sensitivity and poor specificity. The new idea from 2000 is assessment of predictive factors. No tool is actually very efficient.

PRESSURE ULCERS 4 (RISK ASSESSMENT) WHAT ARE RISK FACTORS: SENSE OR NONSENSE OF PRESSURE ULCER RISK ASSESSMENT SCALES

T. Defloor (BE)

Risk assessment scales are considered to be essential tools for providing pressure ulcer prevention care. There is a wide consensus that prevention plans should include mechanisms for predicting which patients are more likely to develop pressure ulcers and that interventions should be directed to the vulnerable. Risk assessment tools are used to help identifying those patient who are at risk. In 1962 the first pressure ulcer risk assessment scale—the Norton scale—was designed and tested. Since the 1980's several new risk assessment scales have been developed (Braden, Waterlow, Knoll, CBO, etc.). The currently available risk assessment scales are only of limited value. It may be expected that many patients are falsely identified as at risk or not at risk. Sensitivity and specificity are commonly used to evaluate the validity of risk assessment scales. The use of intermediate preventive measures decreases the risk of pressure ulcers development and means that sensitivity and specificity criteria are not the most appropriate method to validate

risk assessment scales. An analysis of published studies on risk assessment scales reveals that although some patients got preventive measures and others did not, this was not taken into account. Consequently, generalisation of those results is not possible. Rethinking risk assessment scales and research on pressure ulcer incidence using risk assessment scales in combination with a preventive protocol is needed.

PRESSURE ULCERS 6 (THERAPY DEVICES) MODE OF ACTION

D. Berlowitz (US)

The healing of a pressure ulcer is a complex process that frequently requires months of Intensive therapy. Reducing the time required to heal a pressure ulcer, and the cost of care, are important goals. A wide variety of adjunctive interventions are available that may promote the healing of pressure ulcers. These therapy devices include electrical stimulation, negative pressure wound therapy, noncontact normothermic wound therapy, ultrasound, ultraviolet radiation, and hyperbaric oxygen. Each of these therapy devices has been hypothesized to have a unique mode of action that will be reviewed. Evidence supporting the efficacy of these interventions will also be considered.

PRESSURE ULCERS 5 (SURGICAL REPAIR) SURGICAL TREATMENT OF PRESSURE SORES

C. Kauer (FR)

For the plastic surgeon, the pressure treatment needs two actions: resection and reconstruction. We exclude also all pressure sores where the medical treatment with adapted dressing and nursing allows a directed healing. The surgical treatment concerns the pressure sores with a minimal height of 5cm for the diameter, located in area with bone protrusion, essentially pressure sores of the pelvic arch. The surgical treatment requires three stages: 1) preparation stage with information of the patient for the surgical imperatives; 2) surgery stage with the choice of a secure technique which needs to preserve the maximum of skin and muscle, useful in case of recurrence; 3) post-operative stage requiring cooperation and responsibility of the patient. The techniques are multiple from the most simple such as local plasty, to the most sophisticated such as distal flaps cutaneous, muscular, or mainly musculo-cutaneous. An imperative condition: thick tissue cover, well vascularised, occasionally sensitive, overall bringing a durable mattress on the bone protrusion area. The indications are directed by two factors: the patient and the pressure sore. Four elements linked to the patient, supervise the choice of the ideal indication: cooperation; autonomy; nutritional balance; continence or controlled incontinence. Depending on the location of the pressure sore, four rules guide the choice of the technique used: one operative stage, direct closure of the donor site, respect of the cutaneous and muscular capital of each possible location of the pressure sore, most reduce delay of hospitalisation.

Conclusion: It exists an ethic of the surgery treatment of pressure sores: the surgeon has a commitment by the choice of adapted techniques and an obligation of result with the tar-

get to give function the most rapidly possible to the patient with pressure sores.

Key-words: Pelvics, Musculo-cutaneous flaps, Autonomy.

PRESSURE ULCERS 5 (SURGICAL REPAIR) PREVENTION OF RECURRENCE AFTER SURGERY

M.J. Lubbers (NL)

A patient who needs surgical repair for a pressure ulcer, is always at risk of recurrence after surgery. In general, the condition of this patient is impaired. The circulation and sensibility at the top of the surgical repair is less than normal. This patient always needs quality pressure ulcer after care. The problem is the fragmented health care system. Prevention of pressure ulcers needs a holistic approach. To improve the level of care in one place and to disregard the others is useless. Most use of high-tech devices is in specialist centres or IOU settings. In the after care after surgery, often less advanced beds, mattresses and cushions are used. Therefore, the recurrence rate is high. Only with a total holistic approach is this kind of surgery effective.

PRESSURE ULCERS 6 (THERAPY DEVICES) DEVELOPING TRIALS

J. Nixon (UK)

Clinical trials which aim to compare the effectiveness of pressure ulcer prevention and treatment therapy devices present a number of challenges relating to both trial design and trial conduct, such as the definition and measurement of endpoints and complex patient populations and care environments which impact upon trial participation, outcome assessment and compliance. Both problems and solutions will be discussed and presented including: a brief overview of: superiority, equivalence, non-inferiority and sequential trial designs; the importance of quality components such as an a priori sample size, allocation concealment, intention-to-treat analyses and interpretation of results in minimizing bias and; the use of Good Clinical Practice guidelines and the CONSORT statement as quality frameworks for the planning and conduct of clinical trials in the field.

PRESSURE ULCERS 2 (EDUCATION AND GUIDELINES) IMPROVE GUIDELINES PRESSURE ULCER CARE?

R.J.H. Halfens (NL)

Prevalence studies typically indicate that many patients have pressure ulcers while in health care institutions. Perhaps this is because pressure ulcer prevention and treatment is not optimal? For instance, in the Netherlands almost 40% of pressure ulcers were not treated according to the recommendations within the national guidelines, while only 20% of patients received appropriate preventive measures (Bours, Halfens and Wansink, 2003). So why aren't guideline recommendations implemented? There are several reasons why the production of a guideline is not always followed by changes in patient outcome. First of all, providing

new guidelines (and knowledge) doesn't automatically change our practice. Perhaps this is often due to the way in which guidelines are disseminated which typically is very passive. So to achieve the desired changes in health professionals' behaviour a pressure ulcer guideline may have to be actively implemented. In this process three elements are important: the guidelines; the target group; and the context. Starting with the guidelines: simple guidelines may be easier to implement than more complex ones. The group for whom the guideline is intended must have the knowledge required to understand its recommendations, while the political, social, organisational and financial environments must converge to make guideline acceptance and implementation possible. We know that guidelines can change the behaviour of health professionals and can exert a positive impact on patient outcomes, but for these positive results to be achieved the implementation process must be effective.

PRESSURE ULCERS 4 (RISK ASSESSMENT) A NEW (INTRINSIC) RISK FACTOR SCALE AND ITS USEFULNESS IN JAPAN

T. Ohura (JP)

Purpose: In order to identify the risk factor for pressure ulcers, a single nationwide case control study was carried out in Japan. A new (intrinsic) risk factor scale (OHURA-HOTTA) is advocated as a new assessment tool and its utility is demonstrated in detail.

Methods: New risk factors were detected from a total of 132 pressure ulcer cases that could be followed up for three months and then 528 control cases that also met the above demands were collected from 125 facilities in Japan.

Results: The OH scale considers deterioration of mobility, morbid bony prominence, edema and joint contracture as main factors with nutrition and skin moisture as additional factors. The scale is further classified into three levels according to the total score. It was confirmed that the onset probability of pressure ulcers and the healing period of pressure ulcers correlated to the levels of the scale.

Conclusion: Clinically, the OH scale was useful as a prevention and prognosis tool for pressure ulcers. Furthermore, it may work for 'Clinical Path', as it can predict the healing period and onset probability of pressure ulcers. It can help with both mattress selection and with estimates of the number of mattresses required by hospitals. The degree of nursing care in each hospital can be compared with others using this data. According to the results of a Graphical Modelling analysis, the risk factors of the OH scale are dependent on each other. The OH screening tool was proven to provide more predictive results than previous methods.

PRESSURE ULCERS I (QUALITY OF LIFE) HUMAN COSTS OF PRESSURE ULCERS: REVIEW

P. Price (UK)

The development of pressure ulceration is a problem associated with a number of concomitant conditions and a range of symptoms, and although little research has been com-

pleted on the impact on everyday life, there is an understandable assumption that it profoundly affects health-related quality of life. Qualitative work has shown that the impact of pressure ulcers is wide ranging, with physical social and financial aspects affected, whilst changes in body image and the loss of independence I control are profound (e.g., Langemo *et al* 2000). Studies that have used validated health-related quality of life tools (e.g., Clark 2002, Franks *et al* 2002) have used the Short-Form-36 in conjunction with tests of physical function (such as the Bartel). Franks *et al* (2002) have shown that whilst there is a negative impact on health-related quality of life for patients with pressure ulceration, this is similar to other patients treated within the community setting with other conditions. Clark (2002), reporting on a cohort of 2,507 patients, has highlighted the difficulties of using generic self-report tools with this patient population. There are a number of challenges that professionals in this area need to consider, for example, as a condition specific tool for pressure ulceration is not available to use alongside generic tools, then it is difficult to assess the impact of new treatments in terms of the direct impact on the patient. Many patients in this group will not be able to complete a self-report of impact on health-related quality of life, which raises the issue of the use of proxy ratings for some patients. In addition to reviewing the current literature, this presentation will raise questions of methodology and ethics that related to this important topic.

EVALUATION TOOLS DESIGN: A NEW EVALUATION METHOD FOR PRESSURE ULCERS

H. Sanada (JP)

Background: The Japanese Society of Pressure Ulcers identified the need for treatment guidelines to assess pressure ulcer severity and to monitor the healing process. The society's academic committee developed a pressure ulcer severity classification and healing progression monitoring tool to fulfil this need. DESIGN is an acronym derived from the six items used to classify and assess wound-healing progress: Depth, Exudate, Size, Infection, Granulation, Necrosis. P is added to the acronym when a pocket (undermining) is present.

Objective: This study reviews the validity and reliability of DESIGN, a tool for classifying pressure severity and monitoring progression towards healing. Only the tool's healing progression component was evaluated.

Method: Inter-rater reliability was evaluated by calculating the agreement rate of scores, based on eight photos of pressure ulcers and six actual ulcers, made by a panel of seven nurses. Validity was assessed, using the same eight photos, by comparing DESIGN scores with those made using the validated Pressure Sore Status Tool (PSST).

Results: The DESIGN inter-rater reliability results showed a high correlation of $r = 0.98$ for the photos and $r = 0.91$ for the real-life patients with pressure ulcers, respectively, for all raters based on total scores. For validity, a correlation greater than 0.91 was found between the DESIGN and PSST scores.

Conclusion: Based on our results, DESIGN was found to have both high inter-rater reliability and high validity among the seven nurses who quantitatively evaluated the wound-healing progress of the pressure ulcers in this study.

Inquiry into the Use of Anti-Pressure Ulcer Supports in a Geriatric Service

T. Jacquet, S. Haulon, V Gautler, F Bloch, G. Abitbol.

Introduction: For some years certain geriatric services profit from dynamic anti-pressure ulcer supports. Is this type of material correctly used? What type of patients benefit from such supports?

Methods: In a geriatric service in Paris the Pressure Ulcer Unit has been active for six years. The inquiry was carried out on a given day. The supports present on the beds and armchairs, the demographic characteristics of the patients, their level of dependence, their GIR score and Norton score were noted.

Results: 156 patients were present on that day, average age 88 ± 8 years. 109 (70%) of the patients had the benefit of a static-type bed support, 39 (25%) had a dynamic type support (continuous pressurised air or alternating air) and 8 (5%) were on a hotel-type mattress. 16 (10%) of patients had a pressure ulcer. 87% of all supports taken together were properly installed, 85% of the dynamic supports and 94% of the static supports. 63 (40%) of the patients were installed on comfortable armchairs or adapted chairs. The patients who had a dynamic support had a greater number of pressure ulcers (31% vs. 3.7%; $p < 0.001$), a lower GIR score (1.6 vs. 2.6; $p < 0.0001$), a lower Norton score (9.8 vs. 13.7 $p < 0.0001$) and were less continent (8% vs. 40%; $p < 0.001$). Significantly more of the patients with a dynamic support were installed in comfortable or adapted armchairs ($p < 0.05$) and were installed in rooms with rails on the ceiling ($p < 0.001$). The appraisal of the suitability of a support in relation to the patient showed there was no difference with respect to the type of support, nor was there any difference as regards age, sex or type of hospitalisation.

Discussion: More than 85% of supports were properly installed, the patients who had a dynamic type of support were more dependent and had more pressure ulcers. The selection of the Pressure Ulcer Unit to distinguish the two principal types of support, and the two target populations, those already having a pressure ulcer or at very high risk and those at risk, seemed to be effective overall, the use of the risk scale and GIR permitting to position the patients suitably on a support.

Occlusive Moist Environment for Early Stage Pressure Ulcers with Necrosis

K. Tsukaoa, K. Tokunaga, M. Nagano

Treatment of early stage pressure ulcers with necrotic tissue is controversial. This study evaluates using occlusive moist environment and retrospectively determining the safety.

Methods: 64 uninfected necrotic ulcers, not for selected surgical debridement, from 59 patients from a 3.5 year period were included. Initial assessments were Stage II or III.

Results: After an average of 15 days, the ulcers were re-assessed as 13 Stage II, 50 Stage III, and one Stage IV. Hydrocolloid dressings were used for 48 ulcers, of which 13 Stage II ulcers, 29 Stage III ulcers, and one Stage IV ulcer had begun epithelization. Necrosis of three Stage III ulcers be-

came hard eschars and two ulcers were infected. Hydrogell or lysozyme hydrochloride cream was used for seven Stage III ulcers that had started epithelization. Silver sulfadiazine cream was used for eight Stage III ulcers, of which six had started epithelization, one remained unchanged, and one necrosis became hard eschar.

Conclusions: Occlusive moist environments, especially using hydrocolloid dressings, are useful and safe for the early stage uninfected pressure ulcers with necrosis. After providing autolysis of necrosis, surgical debridement should be selected.

Paediatric Scalp Pressure Sores-Aetiology and Prevention Measures

BA De Souza, A. Ghattaura, M Shisu

Introduction: Paediatric multi-trauma patients with head injury are susceptible to occipital pressure sores. The incidence of pressure sores amongst paediatric patients is not well documented but there is evidence that children do get pressure sores. In the paediatric intensive care there is an assessment tool available and should be used to identify patients at risk. The consequence of this is scarring alopecia which requires surgery and has significant morbidity.

Patients: six patients sustained scalp pressure injury with age ranges from 2–10 years. The factors most strongly associated with pressure injury were nutritional status, mobility and conscious level. Other factors were systemic infection, coagulation disturbance, neuromuscular blockade and vasopressor treatment.

Conclusions: To prevent pressure injury occurring it is essential to identify those potentially at risk. Risk assessment scores will assist in the identification of patients likely to develop pressure sores.

Pressure Ulcer Prevalence in Nursing Homes – Comparison of the Netherlands and Germany

A. Tannen, T Dassen Gerrie Sours, R. Halfens

Introduction: The prevalence of pressure ulcers (PU) among care dependent people is still underreported in national health care statistics. That is why there is a need for epidemiological research. In addition to the prevalence of PU within health care facilities a comparison with other countries also provides sufficient information for judging the extent and severity of the subject. Since 2000, the above-mentioned departments have been conducting annual prevalence studies in the Netherlands and in Germany and have discovered repeatable differences between the two nations. The aim of this analysis is to describe and explore the differences between and similarities of the two countries regarding nursing home residents.

Method: All in-care residents of the participating nursing homes, who handed in their informed consent, were examined by trained nurses of the respective facilities. For each of the residents a standardised questionnaire was completed and details about risk of PU according to the Braden scale, nursing interventions and characteristics of available PU were recorded. The samples consisted of 77 Dutch facilities with 8250 residents and 15 German facilities with 1276 residents.

Results: With regard to the demography of those two groups the same average age (82–84 years) and share of sex (74–82% female) were established. Concerning the risk of PU the two samples showed the same average Braden score (17.39–17.88) and a similar share of risk patients (64.7–65%). Hardly any differences were discovered in individual Braden items. The prevalence (when referring to the risk patients) was 38.3% in the Netherlands and 16.8% in Germany. Considerable correlation was found between PU prevalence and the residents' age.

Summary: The residents of both samples bear resemblance concerning the individual risk factors (such as age and Braden score). Additionally, the share of risk patients is equal in both study populations. Therefore, it is worthy of note that the prevalence of PU among nursing home residents in the Netherlands is different from the one in Germany. Further comparisons of nursing prevention interventions and supply quality will have to be drawn in future.

Pressure Ulcer Prevalence: Using European Methodology in the Irish Health Care Setting

J. O'Brien, Z. Moore

Background: Pressure ulcers are common, however, in Ireland there are no national prevalence figures available and no national guidelines exist for pressure ulcer prevention and management.

Aims: 1. To gain insight into the use of the EPUAP pressure ulcer minimum data set 2. To establish pressure ulcer prevalence and risk status of the population in an acute hospital setting. 3. To identify the number and severity of pressure ulcers and prevention strategies in use.

Methods: A survey was conducted using the EPUAP pressure ulcer minimum data set. Permission to conduct the study was granted from the Director of Nursing Services and ethical principles were adhered to. The study site was chosen using random sampling and all patients were assessed (n = 519). Data analysis was carried out utilising SPSS version 11 *Results:* Pressure ulcer prevalence was 15%. Most patients were in the acute care/high dependency care setting (63%) and 20% were at risk of pressure ulcer development ranging from low-high (Braden Scale). 78 pressure ulcers were identified and 57 (73%) were grade 1 or 2 damage (EPUAP grading). A range of prevention measures was used, the appropriateness of these varied among the risk groups.

Discussion and Conclusion: This study provides a clearer understanding of the scale, nature and severity of the problem of pressure ulceration. Based on this information plans can be drawn regarding appropriate resource allocation and future research within the Irish population.

Pressure Ulcers: Recommendations Associated with Prevention

P Brocker, F Mignolet, MJ Darmon, F Berthier, G. Daideri

The objectives of this study were to carry out an audit for an inquiry into the prevalence of pressure ulcers in the whole of our University Hospital Centre and to develop the knowledge and practices of staff as well as the implementing the coordinated and appropriate use of the various ex-

isting medical devices and supports. The enquiry was carried out on a given day after the training of the investigators in the use of the Braden scale and the description of pressure ulcers according to the classification of Garches. It was completed by an audit of the resources. The results concern all the 1611 in-patients (784 men and 827 women). 268 patients (16.6%) presented one or more pressure ulcers, but only 146 (9.1%) did so if the S1 stage (simple redness) was excluded. The prevalence determined was 7.5% (n = 120) and 3.7% (n = 60) if S1 was excluded. The most significant prevalence was found among the highest age ranges (35.6% for those over 85 years), and 77.3% of the total number of pressure ulcers was found among the population over 65 years. The prevalence of pressure ulcers by activity group was highest in the follow-up care and Rehabilitation, then in the Intensive Care Unit, with Long-term care, Medicine and Surgery following. The most frequent location of ulcers was the heel (46%), followed by the sacrum (26%). The S1 stage represented 70% of the pressure ulcers, S2 17% and S3 9%. This inquiry also revealed a failure in rehabilitation methods for the prevention of pressure ulcers due to lack of appropriate use of supports and the lack of information and training of the medical and nursing staff.

Urban and Rural USA Nurses' Knowledge of Pressure Ulcers

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Introduction: Pressure ulcers continue to be an important issue for nursing home residents in the United States. Documentations and treatment of pressure ulcers are critical components in the provision of optimal care, in this population. In long term care (LTC) facilities, it is the staff nurses that must understand how to assess risk for pressure ulcers that have developed, and implement prevention/treatment programs. The knowledge level of nurses employed in long term care facilities has not been examined. Nurses in rural areas may have fewer opportunities for continuing education programmes than their urban counterparts. It is not known if there is a difference in pressure ulcer knowledge by geographic location.

Methods: Nurses employed in LTC both urban and rural settings have been invited to participate in the study by completing a standardized pressure ulcer knowledge tool developed by Pieper and a demographic sheet developed by the authors.

Results: Data is being analyzed using SPSS 11.5 statistical software. Data collection is in progress with over 700 surveys mailed. The presentation will give the results of both urban and rural nurses' knowledge of pressure ulcer identification, risk and treatment using a standardized pressure ulcer tool developed by Pieper.

Discussion: These data will help in planning future continuing education programmes for staff level nurses to enhance pressure ulcer care.



Sue Bale

**CONGRATULATIONS TO PROFESSOR SUE BALE AND
DR CAROL DEALEY ON COMPLETION OF THEIR PHDs**



Carol Dealey, who completed her PhD during 2004.

PROFESSOR Sue Bale was part of the original team that established a unique wound healing service in Cardiff that has rightly earned an international reputation. The Wound Healing Research Unit was one of the first centres in the world dedicated to the advancement of wound care. Sue's contribution to the unit helped to establish the role of wound care nurse researchers at an early stage, and has acted as an inspiration and catalyst for other nurses in the UK. More than this, she was responsible for guiding and developing a team of nurses into research, clinical and managerial roles, providing them with an excellent role model to follow.

Her colleagues believe that very few practitioners have made as significant a contribution to wound healing at such a high and sustained level as Sue. They consider that her leadership is a positive example, and inspiration to nurses in the UK and abroad.

Early in her career she rose to the challenge of improving the knowledge and practice in wound healing at a time when the field was in its infancy. She soon became a leading light in this highly specialist area of nursing, and continues to operate at the cutting edge of wound care. Specialists and nurses regard Sue's publications as vital sources of information for their practice and new treatments.

Sue's job as Director of Nursing Research at the Wound Healing Research Unit, based in the University of Wales College of Medicine in Cardiff, placed her at the forefront of wound healing practice today. Through her work with international associations she continues to push forward the boundaries of professional development, ensuring the success of wound healing and guaranteeing that her work is always relevant to health practitioners in the field.

During her twenty-year career, Sue has been instrumental in establishing several wound healing societies – the Wound Care Society, the European Wound Management Association and the European Pressure Ulcer Advisory Panel. Working closely with colleagues across health care professions, she has been able to put nursing at the top table of European organisations. It is a testament to her

pioneering spirit and professional leadership that today both European societies have an active nursing membership with nurses in leading roles.

Sue has received global recognition for her work speaking at, and organising, national and international conferences as well as writing textbooks. She has produced a large body of published work that ranges from over a dozen books, to well over 100 peer-reviewed articles, videos and CDs. She has for some years judged the *Nursing Standard* Nurse of the Year Awards as a specialist judge.

For her outstanding contribution to nursing research, development and practice of wound care in the UK and internationally, RCN Council confers Fellowship of the Royal College of Nursing on Sue Bale.