in this issue ...

Feature on Conference 2000

An ergonomics intervention in an acute hospital

Implementing safer handling in neuro-disability
AS PROMISED in the last issue we have a feature on Conference 2000 in this issue. I hope this will refresh happy memories for those delegates who made it to Durham, despite the petrol crisis, to enjoy an excellent lecture programme and lots of opportunities for the exchange of ideas and for expressing opinions in workshops, between sessions and, of course, at the annual dinner and dance. You should have seen some of the frocks! For those of you who were not able to attend we hope this brings you some flavour of the conference and the quality of the programme. We also hope it will enthuse as many of you as possible to attend Conference 2001. The dates and venue have been in ‘Diary Dates’ for the last two issues. This will be quite a departure from the traditional university-based conferences and it will be a very pleasant change being able to stay dry between lectures and not to have to walk up very steep hills with luggage! The programme is outlined at page 21 – book early and we look forward to seeing you there.

Also in this issue and following on the conference theme, John McElwaine of the Health and Safety Executive, and long time supporter of National Back Exchange, is reflecting on his lecture at Conference 1999 in his article ‘Has HSE Fulfilled its Promise’? Certainly HSE had a very busy year in 2000 in terms of occupational health and work related musculoskeletal disorders with new initiatives coming thick and fast. We look forward in the Spring to the outcomes of the ‘Back in Work’ projects which many of you may have been involved in. Maybe we can persuade John to write us one more article before his retirement later this year.

I sense that, with the implementation of the Human Rights Act, therapeutic handling will be even more of a topical issue in 2001. The CSP has published a draft ‘Position Statement’ for discussion (see News, Views and Information) and will be holding a consensus conference in March prior to publishing revised guidance ‘Manual Handling in Physiotherapy’ later in the year. On the subject of therapeutic interventions we also have in this issue an excellent article by Lynn Billin, a nurse teacher who has been involved in implementing the moving and handling initiative at The Royal Hospital for Neuro-disability in London ‘Safer Handling in Neuro-Disability’. There will be more on this subject later in the year.

Finally, a plea – this is your Column and despite the change in format and style your contributions remain as valued as ever. Do send us news, views, information, letters and group reports. Let us know about your projects and research, tell us about courses and meetings you have attended. It is this exchange of ideas that makes National Back Exchange what it is.

Jacqui Smith
Editor

National Back Exchange
A multi-disciplinary special interest group aimed at reducing work associated back pain problems.
This journal is intended to provide a vehicle for exchange of information between subscribing members and to convey notes of meetings’ proceedings. Opinions expressed by contributors are not necessarily those of National Back Exchange. Mention of any person or organisation does not imply that they have been approved, accredited or investigated by National Back Exchange.

Patron: The Baroness Cox
Trustees: David Stubbs PhD, BEd, Eur Erg, Miss Brenda Wright MA, RGN QN, RCNT.

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I KNOW THAT you will receive this copy of the Column in February, but I am writing this at the turn of the year, the snow has gone, I have cleared up the mess and finished fighting with the Christmas tree. Over the holidays I have been looking at what is the next phase for National Back Exchange. A good place to start is the Constitution and at this point I wish to thank Margaret Hollis for her part in setting this up and also to wish her the very best for the future on her retirement as a Trustee.

Under the ‘aims’ we have the following:

a) To promote the exchange and dissemination of information and ideas on back care.
b) To develop and promote common standards of training in safer handling.
c) To promote initiatives and act as a forum for providing evaluation and audit of current practice in all matters associated with back care.
d) To lobby employers to provide back care advisory services to reduce work related back problems.
e) To provide support and advice for members.

I feel that the first aim is ongoing and is undertaken on an individual, local and national level. We need to share information, pass on our skills and discuss differences. My aim this year is that we do this respecting each other’s opinion and that we set up ‘safe’ forums for doing this. Our local group has the rule that when we are comparing practice we have agreed NOT to say things such as...

‘I can’t believe you teach that, we never…’

We need to be careful that we don’t condemn each other, but open the way for members to question. We then must be able to back up what we say and, if we can’t, to say so. We also need to accept that what we are saying now, very strongly, may be laughed at by other back care advisers in 10 years time. I want our membership to always feel safe enough to ask the obvious question and either be given the concrete proven answer or to move on the process of finding out that answer.

The second aim has been developed and many thanks to Pat Alexander and all the others who worked with her on producing the trainer and training standards. I hope that this will be further developed and will include other areas.

For 2001 and I would like to see the third and fourth aims really moved on. How do you audit your practice? What can we do...
to evaluate what we do? My first step will be
to bring this to the fore at the business
planning weekend. The executive have also
discussed who we should be lobbying with
regards to providing back care advisory
services and your input is also welcomed.
The last aim is also very vital and I
realise that this is something we all want and
value. Thank you to everybody who works to
further the aims National Back Exchange,
those who produce the Column, the executive
committee, local group officers and
individuals. We couldn’t be where we are
without you.

So plenty to do and plenty of help
needed. I look forward to 2001 with great
excitement.

Carole Johnson
Chairman, National Back Exchange

Regional Groups

Yorkshire Group
7th November 2000 at Fieldhead
Hospital, Wakefield.
The Group discussed and finalised the details
and contents of meetings to be held in
2001 and it was proposed that we increase
the number of meetings per year as there
seemed to be so much to do and discuss!
(please see amended list of dates at the end
of this report). We also agreed to extend the
meetings until 3pm instead of 1pm. The
group requested that we have a problem
solving session at each meeting with the
possibility of informing the committee
beforehand so that relevant speakers/reps
might be contacted if needed.
The meeting broke up into small groups
looking at the moving and handling policies
from individual members’ hospitals. We
discussed what we felt were the important
points to include in a moving and handling
policy and its accompanying guidelines.
Jackie Warwick from Liko gave us an
interesting demonstration of hoists and a
variety of slings including their new standing
hoist, the Sabina Comfort and Liko Comfort
Vest.

6/7th December – Visit to the Arjo
Factory, Gloucestershire.
Arjo invited us to visit them and provided a
couch to take us down to Gloucester. After
our ‘long’ journey we were taken straight to
the hotel and enjoyed the facilities of pool
and steam room before being entertained for
the evening by our generous hosts, our local
area sales managers, Bob, Andy and Lee.
They had all come down specially to look
after us and did an excellent job! The
evening was a great opportunity for us all to
get to know each other better. The following
morning (after half of the group had
managed an early morning swim) we were
taken to the Arjo Factory. Bob, Andy and Lee
took us to their Centre of Excellence where
we had the chance to look at and ‘play with’
all the equipment. This ranged from baths,
showers and bath hoists, a range of hoists,
slings and standing aids. Some of us were
introduced to Arjo’s ‘Stedy’ – a useful transfer
aid for a client who needs only minimal
assistance into standing but needs support
whilst transferring. In fact we were all
fighting over it as it was so comfortable to
perch on whilst watching the demonstra-
tions!

After coffee and biscuits we went on a
tour of the factory and were shown the
processes of inspecting, painting and
assembly of products and the testing
procedure for all hoists and slings. We were
interested to see the ergonomic approach to
the Arjo workplace, with workers using an
adapted ambulift to lift equipment up to a
working height. We were also impressed to
see that every sling is individually tested to
37 stones.

We completed our visit with a useful
impromptu ‘bed’ workshop using maxislides.
We all shared ideas on various manoeuvres
and found the process so useful we are
considering incorporating a similar type of
session into one of our meetings. We were
then treated to a festive lunch with lots of
calories before winding our merry way back
North.

Future Meetings:
11 Jan 01 William Merritt Centre, Leeds.
15 Feb Airedale Hospital, Skipton
24 April Bupa Hospital, Elland.
14 June RDS, Leeds.
12 July Problem Solving Workshop/
Equipment day, Fieldhead Hosp,
Wakefield.
5 Sept AGM Fieldhead Hospital,
Wakefield.
22 Nov Huddersfield Royal Infirmary.
12 Dec (venue to be confirmed)

Ergonomics Course 28th/29th
September and 23rd/24th November
2000 at the Regional Disability
Services, Leeds
This was held by the Yorkshire group for the

group members after consultation and
discussion earlier in the year. Various
speakers and course programmes were
considered and we finally agreed that the
proposed ergonomics course (in 2 parts) was
what we were looking for!

We had an extremely enjoyable time, 14
members of the Yorkshire Group of National
Back Exchange attended and we all knew
each other, all feeling relaxed and raring to
go! The course was presented by Jacqui
Smith and Glyn Smyth and we all appreciated
their humorous and interactive teaching
styles. We were given copious handouts for
later reference and there were a number of
group exercises and opportunities for
discussion which enlightened and enhanced
the course.

Part One – An Introduction to Ergonomics
was aimed at therapists who had little or no
experience in ergonomics. The programme
was designed to give us an understanding of
ergonomic principles and theories and the
tools we would need to undertake ergonomic
assessments.

We looked at definitions of ergonomics,
the potential effects if good ergonomic
principles are not applied to a workplace and
we began to see how broad the subject really
is! We had a fascinating session on
functional anatomy which, despite our
differing backgrounds and experience, kept
us all interested. Even some of the physios
learnt something!

Anthropometrics was introduced to us
and we had some practical (and interesting!)
experience carrying out measurements on
each other to find out that none of us were
average so we were all, therefore normal! We
then looked at some ideas as to how we
might apply this knowledge.

The first day was completed by a look at
psychology and psychosocial factors and we
watched and discussed a video of some
fascinating experiments.

Day 2 included a session on task analysis
and we looked at definitions of a task and models and methodologies. We had a practical and lively session looking at tool design and its implications.

We then looked at User Centred Design and discussed the environmental factors that should be taken into consideration when assessing the workplace.

We had requested some information on the legal aspects and Jacqui shared with us some of her great knowledge and experience in a very interesting session on ergonomics in health and safety, including the English legal system and health and safety law. We all felt inspired and stimulated by the 2 days and were very much looking forward to Part 2 a month later.

**Part Two – Advanced Ergonomics**

We were treated to a 2nd part of this highly thought-provoking programme and were all keen to return and add to our knowledge. This part of the programme aimed to look at ergonomics and risk management, especially the management of musculoskeletal disorders. It also gave us the opportunity to explore the issues of job design and accident investigation.

Day 3 started us off looking at the management of musculoskeletal disorders and we discussed epidemiology, various clinical models and disability and the importance of effective rehabilitation and reintroduction back to work.

A session was included on risk assessment tools such as RULA. We were given some practical exercises to enable us to start using RULA and discussion ensued as to how useful the various tools might be in the workplace.

We then looked at the principles of the ergonomics of seating culminating in a practical session which enabled us to use the fantastic facilities of the Regional Disability Service in Leeds. We looked at various designs of workstations and chairs and discussed advantages and disadvantages of different designs on display and the type of workers (particularly those with disabilities) who might benefit. We all felt a great deal more confident in not only looking at our own workstations to make sure we had the correct posture when working at computers, but also to begin to see if there are any basic changes to improve peoples’ postures and positions in order to enable them to reduce any risk of musculoskeletal disorders.

Day 4 started with a session looking at the principles of risk management and we were given an extremely interesting and useful tool to enable us to identify and prioritise risk in the first instance.

We then looked at manual handling training and documentation with a view to the legal implications. This helped us all to consider how vital it is that we keep records of EVERYTHING! We also discussed the issues surrounding therapeutic handling and as various people had also been to a couple of conferences and study days on the subject recently, this became a stimulating conversation. Jacqui was able to share with us the draft Position Statement that has just been written by the CSP.

After lunch we looked at the effects of occupational stress and how this has enormous implications to job satisfaction, staff retention etc. Glyn gave us a stress-inducing practical exercise to do which involved Lego and jelly beans and not only had us all in stitches but also gave us the opportunity to discuss the implications of job design and shiftwork and how we could assess the risk.

We completed the day with more practical exercises to complete using case studies – very thought provoking.

The feedback from the group was excellent. Everyone felt they had gained a new insight into ergonomics, had gained new knowledge and that there were aspects of the course they could use in their own roles. We all agreed that the course had been well worth it.

**Contact:** Julia Love or Carol Foster: 01924 328617

**Kent Group**

The Kent Group ended a very busy year with a thought provoking day entitled “Women’s Issues”. The day was led by invited speaker Dianne Steele, Senior lecturer in Midwifery at the University of Greenwich.

Her presentation began by considering the physiological changes taking place during pregnancy. Dianne related these changes to the effects it might have on the pregnant nurse who continues to move and handle patients before and after giving birth. This created much discussion around the role of the Moving and Handling Advisor and Occupational Health Department in respect of assessment for such workers.

We were then treated to a presentation of Dianne’s research project completed for her degree. This was the first presentation of this research entitled: “Working postures adopted by midwives when assisting women to breast feed”.

This was an in-depth piece of work into an area not previously covered, although Dianne concluded that there was much more still to do in this area.

Recommendations from this research included the need to adopt a hands-off approach when assisting in breast feeding, a
need for biomechanical focused training, a need to be in a seated position alongside the women, and a review of the environment and good housekeeping.

Our 2001 programme begins with a day to try to integrate risk management with key government initiatives and personal injury claims. The following subjects will be covered:

- **Controls Assurance**
  Manual Handling requirements within controls assurance
- **Clinical Governance and Clinical Negligence Scheme for Trusts (CNST)**
  Overview and principles of CNST
- **Claims for Personal Injury/Public Liability**
  The Litigation Authority and the role of the claims inspector. Working together, the claims inspector and the manual handling lead.

**Future scheduled days include:**

**20th March 2001**
Therapy versus Care Handling Revisited – Benenden Hospital

**23rd May 2001**
Design, Inanimate Load Handling and Seating – Staff Education Centre, Maidstone Hospital

**19th July 2001**
AGM, legal Issues, Case Studies, Preparing for Court – Staff Education Centre, Maidstone Hospital

**Contact:** Karen Bull – Work: 01342 410210 ext. 350 Home: 01580 752565 or Joyce Cheney (Kent Group Secretary) – Work: 01227 766877 ext. 4489

**London Group**
The fifth Workshop on Human Movement was held at the Yoga Therapy Centre in the Royal National Homeopathic Hospital, Great Ormond Street on Saturday 14th October 2000. Leslie Crozier and Sheila Cozens facilitated the morning session by leading an analysis of human movement with reference to the Neuromuscular Approach to human movement. The speakers from the previous workshops gave a short resume of their particular approach to human movement followed by group work comparing each approach, then summarising similarities and differences. There was an air of optimism in the group and a feeling that the workshops had achieved the breaking down of professional differences and the building of a new understanding in the interpretation of the management of the Manual Handling Operations Regulations. One of our speakers, Nicola Doyle, distributed a copy of the following Sanskrit prayer

"Let us be protected together and accepted together
Let us not resent each other
Let us be guided to each other and ourselves
Let us achieve strength together
And may our learning ever shine"

One of the workshop delegates said that this summed up for her the spirit of National Back Exchange.

A detailed report of this workshop and the final outcome of the series will be reported in a future edition of The Column.

Our October meeting was used as a practical problem solving evening and on 7th November 2000 Author Brennan, Senior Lecturer (research methods and psychology) Kingston University & Royal Bethlem Hospital gave an enlightening and stimulating talk on the management of aggression and breakaway techniques with some practical demonstrations. Author currently teaches student nurses and has had many years of experience working in mental health. We had four visitors from Russia at our December meeting who have close contact with two of our group members, Joan Gabbett and Elaine New. They are part of a small core of doctors and nurses (there are no physiotherapists or occupational therapists as such in Russia) who are developing the safe management of manual handling within healthcare in Russia. They have developed excellent practice within a few centres and hopefully these will be extended throughout USSR. The group enjoyed their wonderful sense of humour and the chocolate cake that they had brought with them from Russia to Britain.

The London Group Meetings for 2001 are as follows:-

**Tuesday 9th January**
Evaluation of favourite pieces of handling equipment / Select Healthcare

**Wednesday 7th February**
Mental Health Issues

**Thursday 8th March**
Feet, Gait and Posture – a Podiatrist

**Tuesday 10th April**
Practical problem solving

**Wednesday 9th May**
Alexander Technique – Stephen Shaw swimming

**Thursday 7th June**
London Group Annual General Meeting

**Tuesday 10th July**
Visit to H.N.E.

**Wednesday 8th August**
Training Issues – Content/duration/participant mix etc.

**Tuesday 18th/19th/20th September**
N.B.E. Conference

**Thursday 11th October**
Evidence based practice / Clinical governance

**Tuesday 6th November**
Practical session

**Wednesday 5th December**
Rermap and Christmas social evening

All our meetings begin at 6.00 for 6.15 p.m. unless otherwise stated and we meet at the Royal Temperance Hospital, 112, Hampstead Road, London.

**Contact:** Liz McCartney, 29, Birch Close, Broom, Beds. SG18 9NR. Tel: 01767 314669 or E-mail lizbeth.mccartney@virgin.net

**Somerset, Avon and Gloucester Group**
The meeting on 7th November was poorly attended and Hospital Direct were unable to come – all due to the flooding. They are being invited to the next meeting on 17th January 2001 instead and we look forward to a more successful evening.

Thursday 15th February has been added in as an additional meeting. The Health & Safety Executive and the Nursing Home Registration and Inspectorate Unit are to attend to present their criteria for assessing management of Manual Handling, this will be followed by a question and answer session when those attending can directly raise points with them. This meeting will be open to guests to encourage new membership of National Back Exchange in the South West.

Future plans are to run a workshop to consider the implications to handling of the UKCC Guidelines on abuse and the Human Rights Act. Details to be given at a later date.

**Meetings 2001:**
- January 17th 5pm St Monica’s Bristol
- February 15th 5pm St Monica’s Bristol
- March 22nd 5pm St Monica’s Bristol – AGM

**Contact:** for Somerset, Avon and Somerset Group – Pat Rhodes 01380 725613

**Essex Group**
The Essex Group continues to meet monthly at Care and Mobility in Rayleigh and alternate months at Broomfield Hospital in Chelmsford.

This year a wide variety of informative and diverse meetings were well attended and covered topics which included:

- Handling the obese patient
- Problem solving in the Community
- Risk assessment
A variety of speakers were invited to share their expertise with us, including Danielle Holmes on legal issues, Pat Alexander on a variety of topics we picked her brain about, and Joan Mackintosh regarding incontinence products for the obese patient.

An evening event was successfully organised where the Essex Group invited an audience from Care and Health organisations to listen to a presentation on Manual Handling and the work of National Back Exchange and the activities of the Essex group.

Next year’s programme continues to explore areas of new interest as well as re-visiting familiar topics to assess change in current practice and recommended handling.

January: ACM
February: Paediatric handling
March: School visit, equipment update
April: Paediatrics – challenging behaviour
May: Bariatric people – Hospital
June: Bariatric people – Community
July: Bariatric people – Equipment update
August: No meeting
September: Equipment update
October: Inanimate loads
November: Inanimate loads
December: Social event
Anyone requiring more information should contact Jan Kiernan- Chairman on 01376 572187. All present and new members warmly welcomed.

Southern Group

Meeting held on 15 June 2000 at The Meads, Chertsey:
This interesting presentation delivered by the guest speaker, Danielle Holmes, focused on risk assessment and the impact of the Woolf reforms. Danielle gave a fascinating insight into her role as an expert witness and answered endless questions put to her by the group. This was an extremely worthwhile afternoon which it is hoped will be repeated next year.

Meeting held on 21 September 2000, in Southampton, at the School of Health Professions and Rehabilitation Sciences:
The meeting was preceded by the Annual General Meeting. Officials elected were Chairman – Sara Peters, Secretary – Pam Phipps and Treasurer – Janet Brooks-Stephenson.

The remainder of the meeting was taken up with a presentation of equipment by a team from Molift and Keep Able. The group enthusiastically participated in the demonstration of the equipment and took the opportunity to do some practical problem solving.

Meeting held on 7 December 2000 at the Lord Mayor Treloar School at Alton:
Despite a wet and windy day several members made their way to the meeting. The group was given a guided tour of the school. There were striking differences between the older buildings and the spacious, newer, purpose built ones. The most modern accommodation housed a large variety of manual handling equipment. A real reminder of the advances made in the arena of moving and handling. It was of great benefit to us all to spend an afternoon in such a centre of excellence.

Future Meetings for 2001 – Dates, Venues, Topics and Speakers:
Monday, 12 February
Royal Surrey County Hospital, Inanimate Load Handling and Health & Safety Exhibition Feedback, Corinne Winter also the Isle of Wight, Back in Work Project, Judy Green.

Tuesday, 24 April
Tatchbury Mount, In & Out of Cars, Helen Eales.

Wednesday, 27 June
Venue and Speaker TBC.

Thursday, 27 September
AGM, Venue and Speaker TBC.

Friday, 7 December
Venue and Speaker TBC.

All meetings are programmed to run 1pm–4pm unless otherwise stated.

Contact: Pam Phipps, 01489 576311.

Regional Workshop reports

Healthcare Records on Trial

Carlisle Infirmary: 20 November 2000

This third National Back Exchange Regional Workshop to be held in the North West was organised by Mary Muir and Heather Heatherington.

The course was presented by Andrew Andrews, a lawyer by profession and formerly Lecturer at Law at Robert Gordons College in Aberdeen, and at Brooklands College in Weybridge. For eight years from 1983 Andrew held the post of Regional Legal Adviser to the South East Thames Regional Health Authority. He was then appointed Health Services Legal Adviser for Nabarro Nathanson.

In 1997 Andrew was appointed Director of the Scottish Office Executive Agency and is now the Director of Healthcare Records on Trial.

Carlisle Infirmary: 20 November 2000

Mary Muir and Heather Heatherington
instructions and thus not communicated to another health care professional with detrimental consequences for the patient, this would constitute professional misconduct. In addition, no one can hope to remember all the detail from patient contacts and therefore records become an important aide memoir.

Amidst the demands and pressures of work it is all too easy to perceive record keeping as a chore that gets in the way of direct contact with the patient. Such a view is clearly wrong. In planning the day or shift, the health professional should allocate time both for direct contact and for documenting what has taken place. It is these two components together which represent the total care commitment to the patient. Whenever record keeping is seen as a chore, to be fitted in wherever possible, the notes will fall short of the standard expected of a professional. Either the entries will be routine or meaningless or they will not convey a complete picture of events or amount to adequate instruction. How often have we read “two nurses to transfer”?

Health professionals are often uncertain of how much they should write. An effective task would be to ask yourself what information would I need to know to care for this patient I have not met before. Care should be a seamless continuum – do your records allow this to happen?

Documentation is therefore a tool which enables professionals to discharge their duty of care, but they also fulfil another function, which is their value as evidence. Long after a professional has finished with the notes, they may be required to respond to a complaint, or for use at an enquiry or for the purposes of litigation. The difficulty is usually that by then they will remember little or nothing, but for the patient or possibly an injured colleague the experience will have been relived and retold in great detail and will be firmly fixed in the memory.

Everything, which is written in the course of one’s work, has the potential status of a legal document and one day may see the light of day again, in a Court room. The cardinal rule is to keep entries simple and accurate. Will you be able to justify what you have written and will your professional colleagues endorse what you did or the decision you took. If records are professionally maintained for patient care they will be more than adequate for use in Court.

Before lunch delegates were divided into groups to discuss the cases and scenarios they had brought with them. Facilitated discussions took place during an enjoyable buffet lunch, and each group chose one case study to work with. The task was then to write a statement based on the case study. Each group was given a number as was each individual so that later selection from each group for a judge and for a witness by Andrew was anonymous.

During the afternoon a member of each group was duly selected and cross examined by Andrew. Some fared more confidently than others but it was a learning experience for all present as Andrew demonstrated his adversarial skills with a twinkle in his eye. The trick is not to take it personally, keep calm and give yourself time to think.

The day ended with questions and answers and a summary of key learning points.

Quotes of the day were:
“Not truth – but proof”
“A smile a day keeps the lawyer away”
“Caring is sharing”
For those with any remaining stamina we were escorted around the new PFI Cumberland Infirmary by Heather Heatherington whose input into the project was evident at every turn. Heather has promised to write an article for a future issue of the Column on the project and on her involvement with it.

Jacqui Smith

Regional Workshop Feedback from a New Member of NBE

WHAT AN enlightening and frightening study day!

I have only recently joined the NBE and this was my first taste of what it can offer me. The atmosphere throughout the day was very up beat. It was extremely useful to meet colleagues with varying depths of knowledge and expertise and to put faces to names. The break times gave me the opportunity to find out as much as I could from as many people as possible about this career path I have chosen. I am pleased to say that none of these conversations have put me off!

The day met all my original objectives and more. Should I ever be called upon as a witness, the first thing I shall do is reach for my notes from this study day. Mr Andrews had a seemingly never-ending supply of anecdotes to emphasise his points, most made me gasp with horror, and all were very thought provoking.

There were two main aspects of the day that struck me. Firstly – documentation, there is always room for improvement! I am much more aware of the language I am using and how it may be viewed in a court of law. It has highlighted to me the potential difficulties that could occur due to the lack of documentation on the wards with regards to handling of patients. Secondly – the game. It is quite clear that the witnesses are merely pawns in the game with the lawyers dictating the moves. If the witness is willing to play the game, he is more likely to come away relatively unscathed. I have never been involved in a court case and knew little of the proceedings.

The morning session concentrated on the need for clear and precise factual details when writing a witness statement and giving evidence in court. This was followed by a working lunch, during which we prepared witness statements to be used in role-play with Mr Andrews playing the prosecution barrister. I now have no doubt in my mind that all Lawyers must attend acting school before being allowed into the courtroom. Mr Andrews managed quite successfully to put the fear of God into the poor unfortunates who ended up in the witness box during the role-play – I let out a sigh of relief that it had not been me! The role-play highlighted the need to show respect for the court and above all be confident with your answers, as any hesitation will be picked up on and used against you.

I came away from this study day buzzing. I had learnt a great deal and had really enjoyed myself. The content of the day was serious but the atmosphere was friendly and jovial. I look forward to the next workshop and the chance to do some more networking.

Judith Goode
Minimal Handling Advisor
Royal Berkshire and Battle Hospitals NHS Trust.

Regional Workshops

THE REGIONAL workshops were originally set up as a forum for sharing good practice amongst members of the NBE. For instance – the first workshop that took place had a speaker share with the members how LOLER were being applied in her trust, and an ICU team demonstrated prone lying.

During 2001 I would like to return to that premise. However, in the interim there will be two study days organised which will be based on legal issues surrounding Back Care and Muscular Skeletal.

Mary Muir
Back Care Advisor, Royal Berkshire and Battle Hospitals NHS Trust.

News, Views and Information

HONORARY DOCTORATE FOR MARGARET HOLLIS

MARGARET HOLLIS, a Fellow of the Chartered Society of Physiotherapy, founding Principal of the Bradford Hospitals School of Physiotherapy (1950 – 1980) and former Trustee of National Back Exchange, was awarded the Honorary Degree of Doctor of Science by the University of Bradford in a ceremony which took place on Saturday 9 December 2000 in recognition of her extensive and tireless work in promoting the physiotherapy profession at national and international level and also her early vision and commitment that physiotherapy education be delivered in the context of higher education, and within Bradford University in particular.

In the oration given at the ceremony Margaret was described as “a woman of her time, a woman ahead of her time and a ‘Woman of Substance’”. Margaret has been honoured at various times in her life. In 1974 she was awarded an MBE. In 1982 she received an Honorary Master of Science degree from Bradford University. In 1984 she was honoured by her professional society and awarded a Fellowship in recognition of her work and publications.

Since retiring in 1980 Margaret has lectured on back care issues and the training of personnel in the moving and handling of patients and disabled people, producing a book, film and video in relation to these issues. Margaret went on to become an ‘Expert Witness’ in manual handling cases, dealing with almost 1,000 over a twelve year period representing both the plaintiff and the defendant.

Margaret has spent her life encouraging others to put their knowledge to work and at the same time extending her own. She challenges all of us today about our own Lifelong Learning.

Not surprisingly, at 80 years of age, Margaret felt exhausted both physically and emotionally after the ceremony. We wish her a speedy recovery and offer our congratulations on her honour and our best wishes on her retirement as our Trustee. Contact: Sheenagh Orchard

CSP DRAFT ‘POSITION STATEMENT’

A MEETING OF the Chartered Society of Physiotherapy Moving and Handling Review Group was held at the CSP on Monday 13 November.

Given recent concerns and apparent confusion regarding the interpretation of the MHOR 92 in relation to therapeutic interventions with patients which involve manual handling, a draft CSP ‘position statement’ has been developed as follows ...

‘Physiotherapy is an autonomous profession concerned with the rehabilitation of patients. Manual handling is integral to the practice of the profession of physiotherapy. It is not always reasonably practicable to avoid manual handling within the therapeutic process without abandoning the goal

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of rehabilitation of patients. Risk assessment must always be undertaken prior to handling any patient and appropriate steps taken to minimise the risk to the patient and to those delivering the physiotherapy intervention”.

The group and the CSP would welcome any feedback commenting upon the content of physiotherapy intervention taken prior to handling any patient and ratified in the very near future.

AN EXCELLENT Manual Handling in Neuro Rehab

AN EXCELLENT study day, organised by the Association of Chartered Physiotherapists Interested in Neurology (ACPIN), was held at the University of Hertfordshire on the 9th December. It was very well attended (about 150 delegates). There was a healthy mixture of clinical physiotherapists and BCAs.

The aim of the day was to look at current practice in the light of the MHO Regs. Pat Alexander managed to broaden the discussion on legal aspects to include the HRA, for instance. In her introduction Monica Busse set out ACPIN’s approach. Anthea Dendy told us that a working party formed to look at these issues has produced a framework and some guidance in a booklet, entitled “Neuro Physiotherapy – Manual Handling in Treatment”. This is still going through a consultation process and will be published shortly.

Vikki Sparkes described a survey carried out by her two years ago which showed a rather alarming level of LBP in neuro physiotherapists. This increases markedly with age. She linked this to some of the approaches therapists. This increases markedly with age.

In her introduction Monica Busse set out ACPIN’s approach. Anthea Dendy told us that a working party formed to look at these issues has produced a framework and some guidance in a booklet, entitled “Neuro Physiotherapy – Manual Handling in Treatment”. This is still going through a consultation process and will be published shortly.

The latter point revealed a discrepancy between the views of the users and the manufacturers of equipment, as highlighted by Sue’s work on product design and evaluation. The manufacturers were represented by Arjo who sponsored the refreshments and helped us to understand the process of product development and the mysteries of CE marking, etc. It was generally agreed that we need to talk to the equipment firms more.

Also included in the day were some absorbing case studies. In addition to the lectures/seminars a large amount of material was displayed in the foyer. Local groups had worked to produce protocols which seemed to emphasise clinical reasoning rather than risk assessment.

In summary, some familiar ground was covered, but there was some development of thinking and probably, much useful cross-fertilization. The high attendance in difficult circumstances indicated the interest in this subject area and the need for clear guidance. The need for an approach which is more evidence based will hopefully be satisfied to some degree, by the publication early next year by Routledge, of a book on this aspect of manual handling. This was announced on the day.

David Couzens-Howard

RULA on the Net

RULA (Rapid Upper Limb Assessment), the acclaimed survey method developed by Dr Lynn McAtamney and Professor Nigel Corlett, is now available on the Internet.

This new resource provides a graphical representation of the postures and loads to be considered and the assessor simply clicks on the appropriate options. Risk scores are calculated automatically and the final screen shows the options selected and the results. This page is formatted for printing so that a dated record can be retained.

The internet implementation has been developed by Osmond Group and is available free of charge from their web site at www.ergonomics.co.uk

Revised Management Regulations come into force

REVISED REGULATIONS which will help employers meet their responsibility to actively manage health and safety for employees came into force on 29 December.

The Management of Health and Safety at Work Regulations 1999, replace the 1992 Regulations and will also introduce some changes to health and safety law to clarify the UK’s implementation of the European Framework Directive (89/391/EEC).

As well as consolidating earlier amendments, the main changes are:

- implement principles of prevention in regulations rather than through an ACOP;
- clarify that employers should use competent employees in preference to external sources for competent advice and assistance on health and safety;
- include a specific requirement to arrange necessary contacts with emergency services regarding first aid, emergency medical care and rescue and designate workers to implement fire-fighting procedures;
- make it explicit that it is not a defence for employers to claim that they were unable to meet their obligations because of any act or default by employees or competent persons.

A revised Approved Code of Practice is being prepared to accompany the new regulations and will be published in the next 2-3 months. This document will cover all the changes and will also introduce general guidance material on the regulations.

The ‘Management of Health and Safety at Work Regulations 1999’, S.I No. 3242, are available from The Stationery Office.

HSE launches ‘gateway’ to Work Equipment Regulations

OPEN LEARNING training packages which explain the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER) and the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), have been produced by the Health & Safety Executive (HSE). Although intended primarily for use by local authority enforcement officers and HSE inspectors.

PUWER and LOLER affect all sectors and it is vital that they are properly understood, particularly by those with legal duties and those responsible for advising employers on legal requirements. These packages should give industry a better understanding of what is required under the Regulations.

The packages are made up of units which can be studied sequentially or in relation to a specific regulation. Each unit covers a separate regulation, summarising key points and explaining technical and legal terms. There are self-assessment tests at the end of each unit and readers are given practical tasks to help them understand and test their knowledge.

Both packages include case histories which illustrate the consequences of not meeting legal requirements. Another feature which readers should find helpful is that all the new requirements (i.e. those not in the original PUWER 1992) are clearly marked.

PUWER applies to all equipment used by workers at work, including mobile and lifting equipment. The main requirements are that equipment provided for use at work is suitable for the intended purpose and safe; should be maintained properly; used only by people with adequate training; and accompanied by suitable safety measures such as protective devices, markings, etc. The duty to meet these requirements is placed on anyone providing equipment for use at work, including employers, the self-employed, hire companies and people with control of work equipment, e.g. supervisors and managers.

Equipment provided for use from 5 December 1998 must meet all the requirements. However, duty holders have until 5 December 2002 to comply with certain requirements relating to mobile equipment provided for use before 5 December 1998.

LOLER applies to all lifting equipment and lifting accessories. The main requirements are: that equipment is strong and stable enough for the particular use; marked to indicate working loads; positioned and installed to minimise any risks; and used safe-
Duty holders are also required to have lifting equipment thoroughly examined by a competent person, either at periodic intervals set out in the Regulations or as specified in an examination scheme drawn up by a competent person. All work equipment subject to LOLER must also meet the requirements of PUWER.


**Musculoskeletal disorders – studying ways to evaluate risks**

A Health and Safety Executive (HSE) funded the study which describes the development of a practical method for assessing the risk of workers developing musculoskeletal disorders. It will be especially useful for evaluating the impact of changes in work systems.

The study was carried out by Professor Peter Buckle and Dr Guanyan Li from the Robens Centre for Health Ergonomics at the University of Surrey. The aim of the research was to develop a user-friendly, practical method for assessing exposure to physical risks for work-related musculoskeletal disorders (such as back problems or other aches and pains in the muscles and joints). The researchers wanted to develop a tool that could be used by health and safety practitioners, such as safety officers, who may not have extensive knowledge of musculoskeletal disorders or in-depth training on ergonomics.

The assessment tool consists of a checklist for the assessor and worker, a score sheet and guidance notes on its use. It covers areas such as workers’ posture, movements of the back, shoulders and arms, the weight of loads being lifted and time spent working on tasks. The studies showed that the prototype method has good sensitivity and usability, and reasonably good intra-observer reliability (reliability when used by the same assessor to make repeated measurements of similar tasks at different times). However, inter-observer reliability (reliability when the tool is used by different people to measure the same task) was rated lower at ‘acceptable’ or ‘moderate’.

The results suggest that the tool can help practitioners to quickly assess advantages and disadvantages to health and safety when changes are made in the design of workplaces or work equipment. However, the researchers found that the tool may benefit from further development, to improve reliability when measuring effects on certain parts of the body; to investigate better methods of training new users; to validate the scoring system; and to carry out further tests using the tool on a wide range of work situations and work tasks.


**European colloquium concludes that more action is needed to combat work-related musculoskeletal disorders**

The French Presidency / European Agency Colloquium on European Perspectives for the prevention of Musculoskeletal Disorders which was held in Bilbao on 27 November celebrated the end of the 2000 European Week for Safety and Health at Work. Attended by over 200 experts from more than 20 countries across Europe and further afield, the European Colloquium saw a lively debate between many sectors of work and society. Two main approaches were followed in the debate with the emphasis on examining the legislative approach as well as developing non-legislative measures which could be applied under current legislation in order to improve the present situation.

**Legislative measures**

The viewpoint was expressed that existing legislation should be evaluated and that the need for new legislation was not obvious, although the need for the simplification of existing legislation should be explored. It was also felt that existing legislation should be effectively implemented first before contemplating new legislative initiatives. However, some participants raised the possibility of extending existing EU legislation, such as Manual Handling and VDU Directives to better cover MSD risks. The European Commission informed about its legislative initiative to combat “Physical Agents” which would have some effect on certain types of vibration-related MSDs. The forthcoming European Community Safety and Health Strategy was clearly identified as a target of those suggesting legislative initiatives.

**Non-Legislative measures**

The legislative debate was complemented by a comprehensive discussion on non-legislative actions which could be taken in order to better enforce or implement existing legislation. Below are listed the main ones discussed during the colloquium:

- effective monitoring and risk evaluation, particularly of those most at risk to MSDs,
- better methods of work organisation to avoid MSD risks,
- better worker involvement to identify and avoid MSD risks,
- effective social dialogue in order to keep such safety and health risks at the top of the agenda at all levels,
- better training and education in the workplace,
- special attention in the research field to MSD issues, with particular attention to the effects of stress and long working hours on MSD incidence rates,
- exchange of information between all those involved at the European and international level in terms of research, good practice, developments in legislation (such as those in the US), training, education and in all other relevant spheres,
- the establishment of development and improvement targets (or even “benchmarking” targets) at the Member State level. Countries such as the UK, Denmark, The Netherlands and Sweden were mentioned as having some first experiences in this area,
- Improvements in workplace design and the provision of a sufficient number of trained MSD ergonomists,
- evaluation of the impact of contractor/sub-contractor relationships on MSD outcomes,
- better attention to the development, collection and dissemination of workplace good practice examples. The role of the European Agency in collecting and disseminating good practice within the framework of European Week was singled out for praise in this area,
- effective public health surveillance as a necessary compliment to workplace health monitoring,
- the need for effective rehabilitation in order to get MSD sufferers back to work and any necessary modifications in work organisation in order to cater for rehabilitated workers.

A second part of the colloquium consisted in a special prize ceremony of the European award scheme for good examples which have been developed by companies and organisations from across Europe. In all, 16 organisations from across Europe were selected to receive awards in recognition of their good practices in the first ever event of this type at the European level. The full list of winners and summaries of the good practice solutions can be accessed on the Agency WebPages at http://osha.eu.int/ew2000/prevmsds.pdf
A Look Back at Annual Conference 1999

Has HSE fulfilled its promise?

Introduction
In August 1998, the Health and Safety Executive (HSE) launched Developing an occupational health strategy for Great Britain to open a debate on occupational health, the nature of the challenge and how to meet that challenge. There was an enthusiastic response to this tentative admission by HSE that it is not the keeper of ‘occupational health’ and that as an organisation it could not solve the challenge of workplace risk prevention and injury by itself. The subsequent discussions helped the Health and Safety Commission (HSC) and HSE towards the realisation that work-related ill-health and health in the workplace are so interrelated that it is impossible to deal effectively with each in isolation. They have, therefore, set out to create a consensus on partnership and co-operation with all the stakeholders in the occupational health field.

HSE’s agreement to chair our 1999 Annual Conference in Colchester was early evidence of this new openness to bridge building. Dr Ron McCaig, Head of HSE’s Human Factors Unit, chaired the sessions on 9 September 1999 and Dr Peter Graham, HSE’s Health Director, chaired the sessions on the following day. The approach they adopted showed a reassuring absence of an HSE centred vision of occupational health and a willingness to listen to others point of view. Both made clear that HSE understood that building effective partnership involved joint determining of priorities and working closely together towards shared goals.

But has HSE been living up to these golden rules? Has it opened up its priority setting processes? Is it seeking and responding positively to stakeholder views and outside influences? Is it helping the National Back Exchange in its efforts to promote best practice in back care management?

The purpose of this article is to review what HSE has been doing over the past 12 months or so and determine whether there is substance behind the rhetoric. Though a member of HSE staff, the opinions expressed are my own and do not necessarily represent those of HSE.

Conference 1999 : Messages from the Chair

The Conference theme in 1999, Hidden Handling, fitted well with the Chair’s message that musculoskeletal disorders and manual handling are key areas of occupational health. With 1.2 million of the 2 million people reporting work-related ill-health suffering from some form of musculoskeletal disorder or back injury, Peter Graham pointed out that any strategy that does not prioritise these issues is doomed to failure. He emphasised that the changing nature of our operating environment, in terms of social inequalities, regulatory framework, technical progress and work organisation, demanded a considered response. And not just from Government. He foresaw that meeting the challenge of health and safety would take the co-ordinated efforts of all the players - employers, workers, health and safety and occupational health professionals. He reported that HSC had made a start on engaging others in its forward planning with the Way Ahead conference in May 1999 and that this process had been taken forward with the publication of the discussion document Developing an occupational health strategy for Great Britain.

Ron McCaig’s address also emphasised the importance of partnership. He reminded us how the interaction between the physical and psychosocial determines the scale of risk and called for good management systems, not only on prevention but also in treatment and return to work. To do this effectively, he suggested, demanded close co-operation and co-ordination between employers, workers and primary care providers. But to get results, these players need support. They need the right kind of regulatory framework and easy access to good advice, and that gets Government and a myriad of local and national support bodies involved. To make lasting improvements, however, meant changing attitudes and behaviour, both in those who were responsible for managing risk and those who are faced with risk taking. The primary focus for partnerships and working together must, therefore, be to ‘make a difference’.

These are the standards HSE has set for itself. To judge, I think we need to apply 3 simple tests to what it has been doing:

- **Test 1**: Is there an integrated approach to workplace health?
- **Test 2**: Are there real targets?
- **Test 3**: Is there a sharing of decision making on priorities?

**Integrated Approach**

Among the most significant developments over the past year was the launch in June of the Revitalising Health and Safety Strategy Statement and its follow up at the beginning of July with Securing Health Together, a long term occupational health strategy for England, Scotland and Wales. Both reports recognise the HSE must focus its interests on work-related health and safety. But they also stress that this must be integrated within the wider aim of establishing a ‘safe and healthy workforce’.

There is also evidence that HSE is taking this integrated approach seriously. A good example is their new leaflet on back pain, IND(G)333. A copy is enclosed with your copy of The Column. The leaflet builds on the guidelines for the management of low back pain (which were prepared by the Faculty of Occupational Medicine with the help of the British Occupational Health Research Foundation and Blue Circle Industries PLC) issued earlier this year, in March. The advice breaks with HSE’s traditional stance on work-related back pain and provides general advice to employers and workers in small businesses on how to deal with back pain in the workplace.

On test 1, therefore, HSE is heading in the right direction. But we will have to wait for more evidence to see if this is maintained.

**Real Targets**

One of the most reassuring features of these restatements of the importance of health in the workplace is the willingness, in spite of the scale of the challenge, to set the country unequivocal targets for improvement. The country is now committed to a 30% reduction in the number of days lost from work-
related injury and ill-health over the next 10 years and a 20% reduction in the number of people suffering from work-related ill-health. HSE's press release on the 'Revitalising Statement' was even honest enough to quote specific figures, i.e. a reduction of 7.5 million in the number of days lost each year and 80,000 fewer new cases of work-related ill-health. And that is only the easy part. It will be much more difficult to live up to the more difficult commitment to achieve half of these improvements by 2004.

But that is not all. Securing Health Together has added targets on rehabilitation and included as an integral part of the new occupational health strategy. Everyone with a disability who is off work or unemployed will be made aware of opportunities for rehabilitation or opportunities to prepare for and find work. This inclusiveness is particularly heartening and shows a new willingness to address real issues. Of course, the partners to Securing Health Together will each continue to lead on their own traditional areas of concern, but by sharing targets we can work together in new ways to greater effect.

On test 2, therefore, HSE has certainly passed muster.

Sharing Decisions

We have heard a lot about partnership in the past year or so but we have not yet seen many results. This may not be surprising. It takes time to convince others of a change of heart and that it is worthwhile for them to join new ventures. But as well as developing the new occupational health strategy, HSE has been working quietly to build the 14 member Securing Health Together Partnership Board that will help keep the strategy on track. Their task will be to produce the strategic ideas; to challenge assumptions and trouble shoot, where necessary, and to check up on progress. This is not a representative Executive Board. Members have been appointed on an individual basis to reflect a wide constituency of interests. They are experts in their field with good network and proven team building skills. They include:

- **Bill Callaghan** (Chair of Health and Safety Commission)
- **Stephen Hewitt** (Policy Director, Department of Social Security)
- **Michael Richardson** (Director for Employment Policy, Department for Education and Employment)
- **Pat Troop** (Deputy Chief Medical Officer, Department of Health)
- **Edwina Hart** (Assembly Secretary, Finance & Cross cutting health issues for National Assembly for Wales)
- **Andrew Fraser** (Deputy Chief Medical Officer, Scottish Executive)
- **Sandra Caldwell** (Director of Health Directorate, Health and Safety Executive)
- **Malcolm Harrington** (Institute of Occupational Health, University of Birmingham)
- **Rob Boty** (Chief Executive, South West Water)
- **Michael Morgan** (Director of Personnel, Northern Foods)
- **Yvonne Thompson** (Managing Director, ASAP Communications)
- **John Edmonds** (General Secretary of GMB)
- **Brian Briscoe** (Chief Executive of the Local Government Association)
- **Sara Nathan** (Journalist)

In addition, we have been promised Programme Action Groups to identify what needs to be done and set targets within each of the strategy's 5 programme areas. Their job will be vitally important in developing the integrated action programmes that are needed. It is disappointing that we have not yet heard more about who will be appointed and how they will set about their job. But again, we must accept that it takes time to lay solid foundations for such an ambitious initiative.

Obviously we will have to give the Partnership Board and the Programme Action Groups some time to prove themselves but, so far, HSE is looking promising on test 3.

Key Priorities

But what are HSE doing about their own contribution to this ‘integrated approach’. A major complaint, particularly in relation to health care and other areas of interest to National Back Exchange members, has been the lack of enforcement action. High profile prosecutions can have a salutary effect of other non-compliers but I have made no secret of my misgivings about this kind of ‘cure all’ suggestion. It is too easy to overestimate the effect of policing. Tell me, just how long did your determination to comply with the law the last time you got caught speeding or parking illegally?

But HSE does recognise that it needs to do better on enforcement, particularly on manual handling. Over the past year, a new system of enforcement programme priorities have been introduced to ensure consistency and appropriateness across industry sectors. Manual handling is obviously a wide spread challenge in many industries and many HSE Sector Groups are taking priority action to raise awareness, provide guidance, and, where appropriate, demand improvements through more formal enforcement activity.

In the health and social care sectors, for instance, solutions guidance is being prepared to help advise on manual handling in home care situations. This should be published early next year. In addition, there will be manual handling inspection initiatives covering social services, health services and fire services.

The Verdict?

So does this add up to a pass rating? On balance, my feeling is that we are heading in the right direction but the jury is still out on whether we have found the key that will unlock the barriers to effective occupational health promotion. The real proof will come with the results to be reported against the Revitalising Health and Safety Strategy Statement targets for 2004. The extent of progress made by then will indicate the likelihood of success and whether the whole initiative can live up to its promise.

But remember that emphasis on partnership. Given the proportion of work-related ill-health associated with musculoskeletal disorders and the number of those relating to back problems which handlers blame on heavy lifting, significant progress needs to be made on handling if there is to be any hope of achieving the targets. And the targets are for everyone. We cannot just blame HSE if they are not met.

The National Back Exchange has its own contribution to make to the success of the strategy. If we as members value occupational health and want the strategy to be a success, then we will all have to be busy over the next few years. We need to build on our well proven methods for exchanging information and help to create the conditions that will allow for easier implementation of the best practice we are trying to promote.

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Conference 2000

"How far do you have to travel before you can tell how far you have come?"

The theme for the 9th National Back Exchange Conference held at the College of St Hild and St Bede at the University of Durham on 13, 14 and 15 September was “Measurement and Evidence Based Practice”. The format was a combination of plenary sessions, interactive workshops, exhibition, social programme and the Annual General Meeting (reported in the November issue of the Column). The aims of the event were to develop and enhance the knowledge base of new, intermediate and advanced multidisciplinary professionals working to promote the “ergonomic” approach advocated by our current Health and Safety Legislation.

Plenary abstracts

Intervention strategies: an ergonomics approach
Professor David Stubbs, Robens Centre for Health Ergonomics, University of Surrey, Guilford. UK

Abstract
The literature on ergonomic work interventions provides some evidence, both in controlled and uncontrolled studies, of the potential benefits of workplace interventions.

The paper will briefly present a critical review on intervention studies using a simple model which considers the various components of the work system (eg the task, and in particular the physical aspects of the task in terms of load, force, posture, duration and frequency; the equipment; the work organisation; the working environment; and the characteristics of the individual).

The presentation will range from the common experience with interventions to possible feasible measures and priorities. It will conclude by focusing on interventions and nurses’ back pain as a prelude to the following paper which will report on a large scale ergonomics intervention that included policy, work organisation, focus groups, equipment and training that was implemented in an acute hospital in the UK for an eighteen month period.

Implementing and evaluating an ergonomics intervention in an acute hospital
Fiona Trevelyan, Research Fellow, Robens Center for Health Ergonomics, University of Surrey, Guilford UK

Abstract
Low back pain is a major cause of morbidity in the general population and is particularly common among nurses. Recent initiatives, including Health at Work in the NHS and Working Together, have drawn attention to the importance of maintaining the health of the NHS workforce. Similarly, the Manual Handling Operations Regulations 1992 aimed to reduce back pain by minimising workplace risk to the lowest level reasonably practicable. This has led to substantial investment into the health care sector in the UK, however, the effect of such investments is still not clear.

This prospective study involved the implementation of an ergonomics intervention and its evaluation using reported low back pain and exposure as the main outcomes measures. The intervention spanned 24 wards in an acute hospital for an eighteen-month period. Back pain and exposure measurements were taken before and after the intervention at two hospitals, namely the intervention site and a comparative site. Twenty nursing tasks were identified and described with respect to back pain risk factors. The results show that the proportion of a shift spent on nursing tasks remained unchanged before and after the intervention, but some changes were observed in the way ‘high risk’ tasks were performed after the ergonomics intervention.

Fiona has written a detailed article on her research at page ?? of this issue

In-vivo assessment of bending and compressive stresses acting on the lumbar spine
Dr. Patricia Dolan Department of Anatomy University of Bristol, UK

Abstract
Cadaver experiments have shown that combined loading in bending and compression can damage the intervertebral discs and ligaments. Furthermore, epidemiological studies have indicated that repetitive bending and lifting in the workplace is associated with an increased risk of low back pain and disc prolapse. These findings suggest that a combination of bending and compression may be particularly damaging to the spine, so we developed techniques that would enable us to measure the bending and compressive stresses acting on the lumbar spine in life.

Bending stresses are determined from in-vivo measurements of lumbar flexion obtained using the 3-Space Isotrak. Values of peak flexion during bending and lifting activities are expressed as a percentage of the range of lumbar flexion between erect standing and the fully flexed (toe-touching) position. These in-vivo measurements are then compared with bending stiffness data from cadaveric lumbar spines in order to determine the bending moment acting on the osteoligamentous lumbar spine in life.

These techniques were used to assess when bending and compressive stresses rise to potentially damaging levels. Lifting first thing in the morning when the intervertebral discs are swollen with fluid or lifting with the knees straight both caused the bending
moment to increase by more than 100%. Bending moments also increased significantly when bending was combined with twisting or when the back muscles became fatigued, and were up to 100% higher in people with poor spinal mobility. Compressive forces were highest when lifting tasks were performed rapidly, or at arm’s length. If the loading was sudden or unexpected, as in catching a falling object, then this increased the compressive force acting on the spine by 30 – 70%.

More recently, we have used these techniques in a large-scale prospective study of low back pain in healthcare workers which showed that those people who applied higher bending moments to their spines during standardised lifting tasks in the laboratory were more likely to develop future low back pain. The high bending stresses in these people may reflect poor motor control and hence a lack of co-ordination, and such characteristics may result in increased spinal bending in their normal everyday activities.

These findings suggest that arduous bending and lifting tasks should be avoided at the beginning of the day, when the bending stiffness of the spine is high, and at the end of the day, when the back muscles are more likely to be fatigued. Furthermore, the workplace should be designed so that manual handling tasks can be performed in a slow and controlled manner with a minimal amount of twisting. Finally, instruction in lifting techniques should advise on the benefits of lifting slowly with the load close to the body, and generally keeping the spine supple and the muscles in good condition. All of these factors could help to reduce occupational loading during manual handling tasks, and might therefore help to decrease the risk of back injury.

**Developing and validating biomechanical models for computerised simulations of manual exertions**

Don B. Chaffin, Ph.D. G. Lawton & Louise G. Johnson Chaired Professor, The University of Michigan USA

**Biography** Professor Chaffin has published 105 peer reviewed journal articles, 23 book chapters and co-authored 4 books, the latest entitled 'Occupational Biomechanics', which has been adopted by over 200 universities throughout the world. He has received awards for his research from the Academy of Occupational and Environmental Medicine, Society of Automotive Engineering, International Ergonomics Association, Human Factors and Ergonomics Society, International Biomechanics Society, American Society of Biomechanics, American Industrial Hygiene Association and the Institute of Industrial Engineers.

He has served as Secretary General of the International Society of Biomechanics and as a Past President of the American Society of Biomechanics. He is a lifetime Honorary Fellow of the Ergonomics Society and Fellow of the Human Factors and Ergonomics Society, the American Institute for Medical and Biological Engineering and the American Industrial Hygiene Association.

Professor Chaffin’s research focuses on developing and validating biomechanical models which provide the means to perform computerised simulations of manual tasks common to many different industries. Software developed in his work is used in companies and universities throughout the world to evaluate the risk of overexertion injuries when performing a variety of manual tasks and to assist in designing workplaces which can better accommodate people with physical disabilities.

**Abstract** This paper describes the development, validation and use of computerised biomechanical models for simulating manual exertions in industry. The present model is capable of simulating a very large array of manual materials handling tasks, wherein one is interested in predicting both the expected population strength capabilities and low back tissue injury risk.

Because the current simulations are of static exertions, there is a need to refine these models to be capable of predicting the stress on the low back during dynamic motions. The first development in this context is to predict normal motion kinematics. A new activity to accomplish this, known as the Human Motion Simulation (HUMOSIM) Laboratory, is described. It promises that in the future, prevention of injurious working conditions will be done with the assistance of fully dynamic human simulation systems.

**Concurrent session abstracts**

**Workshop for newly appointed Back Care Advisers including an introduction to National Back Exchange**

Maggie Williams Back Care Consultant (retired)

The field of Back Care and Manual Handling has developed rapidly in the past few years – largely due to the requirement for employers to comply with the Manual Handling Operations Regulations 1992. The need for competent persons to advise on this implementation in all workplaces, including healthcare establishments, has led to the creation of specialist posts and the demand for appropriately trained professionals to fill them.

Various courses have been set up – based on the "Inter-Professional Curriculum" (I.P.C.) and "I.P.C. Framework" – to train to a recognised standard. However, some Back Care Advisers (BCAs) commence their work with the plan of undertaking the course during work time, whilst some – probably fewer – complete a course before starting the job. In both cases, at the very beginning, there can be a feeling of near panic on the realisa-
tion that top management through the various professions and on to utilities services are looking to the BCA for legal, ergonomic and other advice. The completion of a course does not always totally prepare one for all the real-life demands of the job.

This workshop aims to impart some background information and ideas, but also, with the participation of delegates, to focus on some common problems and hopefully identify pragmatic solutions. It is particularly targeted at BCAs new to this rewarding field of work in the hope of giving reassurance, building confidence and a sense of belonging. As a member of National Back Exchange – one is no longer alone.

The measure of a hoist using BSI/ISO 10539
Bruce Somerton Chairman of ISO/CEN Standards Committee

Abstract
Continuing the theme of Measurement, I hope to share with you some of the key points contained within certain parts of the relevant standards that apply to mobile hoists. In addition I will try and explain the reasoning behind some of those measurements that have been put in place.

Perhaps more importantly, I will investigate the use of the standards (particularly EN standards in the assessment (‘measurement’) of the hoist itself, whether by you as a potential purchaser or by a third party test house. There is, understandably, a wide ranging number of views of which standards apply, how they apply, should they apply etc. and therefore, I hope that this can be made to be seen in a simpler light.

An Introduction to the NVQ Framework
Ellen Raine Back Care Advisor, Four Seasons Health Care

Abstract
The NVQ system is like everything else, – easy when you know how! What people in education mean about the NVQ system is quite complex. It covers such a vast array of careers and is governed by a multitude of ‘awarding bodies’. Then of course, there is the bureaucracy of it all. External or Internal Verifiers, what are they supposed to be doing?

What is the difference between a training centre, awarding body and the Tec?

What is MA and New Deal funding about? Do we really need Key skills and N tests?

The language of the NVQ is the most difficult to master, but it is English, very precise English. Once you have surmounted that, you will be able to find your way around, competencies, the range, knowledge evidence, direct observation, option groups, currency, action plans, work products, validity and witness testimony, with no problems at all ...

NVQ The role of the assessor
Phyllis Stanford Lecturer/Back Care Advisor, West Suffolk College, Bury St. Edmunds

Abstract
Following on from the previous two sessions on NVQ’s and Unit Z7, this session will examine the role of the Assessor and the skills necessary to ensure ‘measurement’ of candidate competence is standardised across awarding bodies and assessment centres. The assessment process will be addressed, highlighting the importance of effective communication between Assessor and candidate to achieve the best possible outcome with each assessment opportunity. Methods of evidence gathering will be discussed and the issues relating to the Assessor’s judgement on that evidence.

Sample paperwork will be available, including a written direct observation, an Assessment Plan and a ‘learning pack’.

Delegates may wish in discussion to share ideas on the various documentation available to plan and record assessment effectively and which facilitates the Quality Assurance process. Additionally, discussion of the range of workbooks and learning packs available to candidates working towards Z7 will be useful to ascertain their sufficiency and currency.

A detailed report on the NVQ sessions starts at page ?? of this issue.

Returning to work after a period of Low Back Pain: The Occupational Health perspective
Dr. John Harrison, Senior Lecturer in Occupational Medicine, Department of Environmental & Occupational Medicine, The Medical School, University of Newcastle-upon-Tyne

Abstract
Rehabilitation back to work of employees suffering from low back pain has attracted great attention, in recent months. The publication of the Faculty of Occupational Medicine’s Report “Occupational Health Guidelines for the Management of Low Back Pain at Work”, which complements the revised guidance to General Practitioners, has focused attention on the evidence supporting occupational health interventions. The need to take a holistic occupational health approach has been emphasised. This talk will review the functions of occupational health within organisations and will attempt to portray how the Faculty Guidelines might be implemented. The causes of absence from work due to ill health will be reviewed and the relevance of low back pain will be assessed. The difficulty of helping individuals working or small enterprises will be addressed.

A pilot study to investigate the lifting and sliding of patients up the bed
Joan Gabbett Senior Lecturer, Kingston University and St. George’s Hospital Medical School

Abstract
Moving a seated patient up the bed is a very common nursing task. However, there is little research to draw on to provide an evidence base for recommending sliding over lifting, or indeed one method of sliding over another. This paper presents a pilot study that compared these two methods, using an ergonomics systems approach.

Lifting and sliding, and two methods of sliding were compared in a simulated ward environment. Lifting and sliding were compared using a small group of eight experienced back care advisors. Biomechanical force and postural analyses were undertaken, although for the former a number of simplifications and assumptions had to be made.

Subsequently, the two methods of sliding were compared using a larger group of subjects. Perceived exertion, body part awareness and ‘patient’ comfort were also assessed and compared.

Evidence of differences in the biomechanical forces generated using each method was inconclusive. Large individual differences were found. While the postural results indicated a difference between lifting and sliding, it was minimal, with the risk categories being very high and high respectively. Thus neither method can be considered acceptable.

Whilst there was a very small difference
NVQ Concurrent Sessions Report

THREE LINKED concurrent sessions were allocated to the subject of vocational qualifications at Conference 2000 as a result of increasing concerns expressed by members, throughout the UK, in respect of the apparent lack of basic theoretical knowledge and practical manual handling skills exhibited by persons holding the Z7 Unit as part of their NVQ levels 2 and 3.

It was decided that, as the theme of the Conference was "Measurement", then it was appropriate that the assessment of the capabilities of carers to perform various manual handling tasks with confidence and in safety would lead to a consideration of the standards set down in the documentation of the QCA (Qualifications & Curriculum Authority), previously known as the NCVQ (National Council of Vocational Qualifications).

The first session, titled "An Introduction to the NVQ Framework" was delivered by Ellen Raine, RGN, Back Care Advisor with Four Seasons Health Care. NVQs came into being because the Government considered that too few of the working population had relevant qualifications – the existing system of qualifications was over complex and not closely related to the needs of employment. Ellen detailed the philosophy behind the attempt to make NVQs accessible, attainable and relevant to ordinary working people and the work in which they are currently involved.

She clarified the hierarchy; from candidates to assessors, internal verifiers, Centres, external verifiers, lead industry bodies, awarding and validating bodies to the National Council for Vocational Qualifications. The range of NVQs, 1 to 5, and the relationship to academic qualifications was also covered.

Ellen then looked at Unit Z7 in more detail. It occurs in Care Level 2 and 3; Diagnostic and Therapeutic Support Level 3; Dialysis Support Level 3 and Promoting Independence Level 3. It is composed of elements of competence:

Z7.1 Prepare individuals and environments for manual handling

Range Individuals
able to participate in the move
not able to participate in the move

Manual handling methods
change of position
transferring using equipment manually assisted or supported transfer

Z7.2 Assist individuals to move from one position to another

Range Individuals
able to participate in the move
not able to participate in the move

Manual handling methods
as for Z7.1

Z7.3 Assist individuals to prevent and minimise the adverse effects of pressure

Points raised as a result of this session included:-

1. Identify areas which may lead to different interpretations by those involved in the assessment process.

2. Can you identify any areas crucial to safer movement which are not covered within the requirement of Unit Z7.

Z7.2
a. The phrase "limiting abilities" of an individual requires clarification.

b. Performance criteria (2): "moves and changes of position are carried out in a manner which takes into account the individual's advice on the most appropriate method and equipment" is potentially a problem scenario. Performance criteria (3) "where the individual's advice and wishes conflict with safe practice, this is referred to the appropriate person without delay" does mitigate the previous criteria to some extent. However, the plan of care should reflect the individual's participation in the process of risk management.

c. There is no mention of environment in Performance criteria (4) "moving and handling methods used are appropriate to the individual, their condition, the worker's personal handling limits and the equipment available". Ellen comments that the environment is prepared in Element Z7.1. Holistic assessment methods are important here; the whole Unit is assessed, not just the element.

d. Delegates were concerned that there was no mention of updated risk assessments.

Z7.3
i. Performance criteria (3) suggests that the individual is passive. "the individual is dressed, positioned and supported in a manner which minimises the adverse effects of pressure and maximises their self-esteem". There is no mention of self-help.

ii. Performance criteria (3) and (8) may lead to ambiguity for the candidate and Assessor. (8) "the individual is left in a position which is as comfortable as possible given their plan of care".

iii. Performance criteria (4) "the individual is encouraged and supported to change position regularly in accordance with their plan of care" – in what context is the word "supported" used?

iv. Performance criteria (7) "pressure relieving equipment is used correctly, cleaned, maintained and stored in accordance with..."
Reflections of CoCONFERENCE 2000

Old friends of NBE Prof. Nigel Corlett & Dr Lyn (RULA) McTamney

Yorkshire Relish

Annual Dinner

Congratulations to the organisers & helpers

Pictures at an Exhibition
Conference 2000

Conference Organising Committee Chairman, Marian Morrison ‘in the pink’

Conference Chairman & Trustee Prof. David Stubbs

‘Born in the USA’ – Don Chaffin

‘At least it’s not a swivel chair!’

Annual dinner, Chris Tarling in the foreground
with the manufacturer’s instructions”. There is no reference to local policy and guidelines.

**Knowledge Specification for the Whole of this Unit**

- a Assessors may interpret the knowledge in different ways. It is also open to local interpretation.
- b An Assessor may not have manual handling qualifications to be competent to assess the Unit Z7 knowledge.
- c Section (13) “Sources of further help for moving individuals in different care settings (e.g. the ambulance service in the community)”. Specific examples should not be given. A candidate should show knowledge in relation to the services they would need.
- d Section (9) “Why the environment should be restored after the change of position”. The environment may not need to be restored, as a change may have been made for the individual’s continuing benefit.
- e Section (10) “Why the individual’s advice on moving and handling should be taken into account and the ways in which the individual’s rights and self-worth can be determined during the moving and handling process.” Individual choice should not be more important than Health and Safety boundaries.
- f There is nothing in relation to knowledge of the need for fitness and self-care.
- g Risk assessment and ergonomics is lacking.

The third session was delivered by Philippa Stanford, Lecturer/Back Care Advisor at West Suffolk College, Bury St. Edmonds. She examined the role of the Assessor and the skills necessary to ensure “measurement” of candidate competence is standardised across awarding bodies and assessment centres. She commented that the quality of the candidates in respect of their ability to satisfy the requirements of an employer must be the ultimate quality control.

Pippa went through the general duties of an Assessor and their role in the assessment process. She gave guidance on Assessment Planning emphasising that assessment must be carried out for each element and must cover all the circumstances described in the range statement. The Assessor is responsible for ensuring that the candidate has sufficient and relevant evidence and that the evidence meets all the criteria i.e. current, relevant, authentic and reliable. She commented that evidence may be provided in a number of ways and these were discussed in relation to the assessment process. An example of an Assessment Plan was provided which showed different evidence gathering methods and an Assessor’s Direct Observation report was available to delegates.

Pippa then discussed how a candidate’s evidence is judged and reiterated her own firm belief that it is essential that the measurement of candidate competence is standardised across awarding bodies and Assessment Centres. It is essential that there is effective communication between the Assessor and the candidate and this can be very time consuming particularly when the role of Assessor is secondary to a main job role.

Denise Denton had earlier given two brief litigation case studies which highlighted the theoretical and practical deficiencies in the risk assessment and manual handling capabilities of care staff in nursing homes despite the fact that the relevant staff had level 2 and 3 NVQs in Care (which included the Z7 Unit) – indeed one carer was an Assessor. In one case the nurse manager of the Home had completed a 5 day ROSPA course in 1995, but it appeared that in this particular instance the blind were leading the blind and one had to feel sympathy for the nurse manager and the care assistant, who were both the victims of incompetent training.

The matter of textbooks for candidates was raised and concern was expressed about the manual handling content of two publications “NVQs in Nursing & Residential Homes” by Linda Nazarko and “Care” by Yvonne Nolan. Many information leaflets, booklets etc. were provided for the delegates by Ellen and Pippa and by the end of the three sessions there was a feeling of satisfaction that at long last NBE had begun to analyse and discuss those areas of concern which had been bothering many of our members.

A summary was made of the areas of concern raised as a result of these three concurrent sessions:

1. As soon as a candidate gains their Level 2 it is possible to train to become an Assessor for others doing Level 2. Delegates were extremely concerned about issues surrounding competence (and experience).
2. Z7 unit is the same for Levels 2 and 3. Is the City and Guilds Guidance:
   - a Acceptable?

b Is there a need to write Unit Z7 into two levels?

Ellen comments that Level 2 and 3 can be for different job roles. It is not necessary to start with Level 2 and progress to Level 3.

c Is the competency to move and handle people the same at all levels?

4. The Unit Z7 requires review and comment on the Elements and Knowledge specification

5. Are the books available up to date and useful?

6. Would it be possible for the NBE Web site to be used for the following:
   - ask members for further comments/information
   - provide up to date references
   - offer a list of NBE members who are known to be qualified and competent to advise others on Unit Z7

Given that the majority of the delegates who attended these three sessions were clearly an informed group with significant concerns about the current state of affairs, it was felt that there was a clear mandate for a strong case to be put to the National Executive Committee to set up a working party. In the interim the delegates were of the opinion that the National Executive Committee should take steps to convey members’ concerns and suggestions to the Qualifications and Curriculum Authority and also the Training Standards Council (TSC).

Ellen Raine, Philippa Stanford, Christine Tarling, Denise Denton
September 2000

**CONFERENCE FEEDBACK**

“Congratulations on an excellent conference. We felt much less pressurised than in previous years and it was relaxed and informative. It was a shame we could not hear more from Don Chaffin.”

“The organisation was excellent and showed the hard work that was done by the team. Well done to everybody.”

These are just a few of the many comments given as feedback via the Conference Evaluation Forms. A brief summary of which is provided on page 32.

The conference aim was to develop and enhance the knowledge base of new, intermediate and advanced multidisciplinary professionals, working to promote the ergonomic approach advocated by our current health and safety legislation.

– Continued on page 32 –
National Back Exchange breaks with tradition this year and moves to a single site hotel venue which is centrally placed with good, easy motorway access and ample parking facilities. The Hanover International Hotel and Club is a four star hotel situated in open countryside between Coventry and Leicester, literally seconds from Junction 1 of the M69 and only minutes from the M6 and M1. The hotel facilities include a sauna, solarium, swimming pool, spa pool, steam room and gymnasium.

Those members who require regular doses of bracing fresh air (with or without rain), steep hills to climb and a minimum two mile walk each day will have to venture out into the Leicestershire countryside.

We have been offered a sponsored golf competition for the morning of the first day of Conference (18th. September) for those addicts who will be unable to cope without a game between weekends. However we do need sufficient numbers to make it a competition.

The theme of the Conference is “Partnerships in Practice”. The format will be a combination of plenary sessions, workshops, a trade and networking evening, our Annual General Meeting and the Conference dinner.

NBE members often comment that the job of a manual handling advisor/co-ordinator, health and safety officer, occupational health officer, ergonomic advisor or whatever the title, can be a lonely and frustrating one if there is little or no higher management support and commitment to general health and safety. This is one of the reasons why the local group network of NBE is such an important part of our organisation. Some members and groups have close links with professional bodies, government departments and agencies, charity organisations and academics who are at the leading edge of spinal research programmes. Our previous conferences amply demonstrate these relationships and our journal, the “Column”, increasingly includes commissioned articles which address changes that will impact on our workplaces. Our organisation is unusual in that there is such a close and constructive relationship with manufacturing companies which results in important, relevant product development. As a multi-disciplinary organisation partnership is part of our basic philosophy. Fortunately Government is beginning to realise that this is the way forward and is allocating resources to encourage partnerships.

The aim of this Conference is to develop existing partnerships, some strong and some more tenuous, explore the potential and also introduce some new partners. There is a need for topical issues to be included and time for this has been allocated. We shall attempt to attract new and prospective members by including a “beginners’ programme”, this year.

The Legal update session will be an interactive session with legal eagles and expert witnesses. Tuesday evening is one of the main opportunities for renewing old friendships with both colleagues and the trade personnel – over a meal and sponsored drinks.

Proposed sessions on the two full conference days include practical basic biomechanics and normal movement; therapeutic handling; Human Rights legislation and Community care; ALARM (the Association of Litigation and Risk Management); practical problem solving in Midwifery; practical problem solving in the Community (HSE);

Despite the change from our usual University accommodation to a hotel venue we intend to keep the price of this conference in line with our previous conferences. There will be the opportunity for delegates to share twin rooms with an appropriate reduction in cost. Day rates and non-accommodation bookings will be available as usual.

This is a draft programme and we are still accepting responses to our “Call for Papers” although the final acceptance date will have passed by the time of publication of this edition.

If you have any suggestions or comments please send them to the Chairman of Conference Committee, Jenny Duncan, at the NBE Administration Office.

Conferece 2001 commences on

Tuesday 18th September 2001
12.30 – 8.00 Registration desk open
2.00 Legal Update
4.00 Coffee, Tea & Trade Exhibition
4.45 AGM
6.30 – 9.30 Dinner with Trade Exhibitors in Trade Areas

Wednesday 19th September
8.00 Registration
9.30 Introduction and Welcome
Plenary sessions and concurrent sessions
4.30 Local Group Officers Meeting
Drinks Reception and Conference Dinner

Thursday 20th September
8.30 Registration
9.30 Plenary and concurrent sessions
4.00 Conference closes
The implementation and evaluation of an ergonomics intervention in an acute hospital

LOW BACK pain (LBP) is a major cause of morbidity in the general population and particularly common among nurses. Substantial investment has been made into the health services following the introduction of the Manual Handling Operations Regulations (MHOR) 1992 in an attempt to address the problem. However, the outcome of such action remains largely unknown. As a result the Robens Centre for Health Ergonomics at the University of Surrey and the Medical Research Council at the University of Southampton undertook a three-year collaborative project to evaluate the effectiveness of an ergonomics intervention aimed at reducing LBP among nurses in an acute hospital setting. The study was based at two acute NHS Trust hospitals in the south east of England. One of the Trusts was designated the intervention site while the other acted as the comparative site. Baseline measurements were collected from both Trust hospitals prior to the implementation of the ergonomics intervention (see Figure 1). All measurements were repeated at both sites during a re-assessment period, which occurred 12 to 18 months after the baseline data were collected.

**The ergonomics intervention**
The ergonomics intervention was targeted at the organisational level and involved the introduction of multiple risk reduction measures. It built on existing systems within the organisation and shared a common objective with the Trust, namely to reduce nurses’ exposure to “high-risk” tasks. The intervention strategy was based on a model described by McCalman & Paton (1992) which involved three stages: definition, design/evaluation and implementation. Background information collected during the definition stage determined subsequent stages of the intervention. Relevant information included the structure of the organisation, target areas for intervention, health & safety policies and arrangements for manual handling. Other factors important at this stage were the identification of a change agent(s) to facilitate the intervention and stakeholders whose views and contributions were considered fundamental to the success of the intervention. Active participation was encouraged throughout the intervention process to establish widespread ownership of the proposed changes in the organisation (Haines & Wilson, 1998). The intervention was based on the MHOR 1992 and comprised four components, which included policy, work organisation, equipment and training (see Figure 2).

The ergonomics intervention coincided with the launch of a minimal handling policy in the Trust. The shared objective of reducing LBP and exposure to "high-risk" tasks was recognised by senior managers, which ensured their support. Two groups were identified as particularly important in implementing the intervention, namely senior managers and ward based nurses. Support from senior managers was needed if the proposed changes were to be acted on and fully implemented. The Chief Executive, Director of Human Resources, Director of Finance and General Managers were particularly important during the early stages of the intervention, as their approval was required for full implementation of the strategy. Nurses at the ward level were also highly profiled in the intervention since a reduction in physical exposure was dependent on the way they performed “high-risk” nursing tasks. A network was established to spread ownership for manual handling through the organisation by identifying a nurse in each ward to become the manual handling link nurse (MHLN). The MHLN was the lead person for manual handling on the ward, a point of contact for the change agents and important in the dissemination of information. The MHLNs received training specifically designed to support their role and participated in focus groups to problem solve difficult patient handling scenarios. The MHLNs shared this information with their ward colleagues, however, they did not have a practical training role.

The equipment audit undertaken at the commencement of the project led to the development of an action plan to meet the identified needs. Equipment procurement extended over a four-month period during which discussion and planning took place regarding the financial implications of allowing the equipment on-site. As always there were unexpected difficulties, for example a change in senior management at a critical point in the process effectively stalled any decisions being made about the equipment for approximately eight weeks. Senior managers recognised that the equipment was needed to ensure staff could work in accordance with the Trust’s minimal handling policy and agreed to purchase the equipment at the end of the study. The equipment introduced during the intervention included 36 hoists, 2 hi/low baths and 120 transfer belts.

Existing arrangements for training involved a two-day programme, which was designed to meet all statutory training needs.
of new and existing staff in the Trust. The manual handling component of the programme was delivered by two health and safety advisers. Although the programme effectively met the training needs of new staff it was less satisfactory for existing staff who experienced difficulty attending the programme. As a result approximately 50% of existing nurses received manual handling training during the intervention period.

**Evaluation of the ergonomics intervention**

The study design used to evaluate the ergonomics intervention was based on comparison of before and after intervention measurements (see Figure 1). The methods used to evaluate the intervention included a self-report questionnaire and direct observation method (Portable Ergonomic Observation (PEO) tool). The self-report questionnaire was used to collect information about low back and neck pain in addition to physical exposure while PEO was used to assess exposure to physical factors associated with LBP among nurses. The remainder of this article presents the method and results obtained using PEO. Physical exposure among nurses was assessed using a task based strategy (Winkel & Mathiassen, 1994), which involved identifying the main nursing tasks and the proportion each occupied in a nursing shift and then describing each task in terms of physical risk factors (see Figure 3).

The identification of nursing tasks was made difficult by the high frequency of unfinished or ‘broken’ tasks in addition to the number of tasks that occurred concurrently. Twenty nursing tasks were identified and subsequently grouped into three categories depending on their association with the physical risk factors. ‘Intervention’ tasks were characterised by a high association with the risk factors and ‘non-intervention’ tasks a low association. The third or ‘other’ task category included tasks that comprised a small proportion of a shift. Data were collected about four combinations of nurse grade (staff nurse; health care assistant) and shift type (early; late) from a medical and orthopaedic ward at comparison and intervention sites by two researchers who coded alternate periods of thirty-minutes for the duration of a shift. Inter-observer reliability and validity were within acceptable levels of agreement for the method. Sixteen nurses were observed before and after the ergonomics intervention. The second phase of data collection described the nursing tasks with respect to ‘awkward posture’ and ‘load’. Exposure data were collected from four early and two late shifts from the medical and orthopaedic wards previously involved in data collection. A sampling strategy was devised to optimise the data collected about the ‘high-risk’ ‘intervention’ tasks. Forty-eight nurses were each observed for two hours before and after the intervention.

**Results**

The proportion of time spent on nursing tasks was similar at both hospital sites and remained largely unchanged following the intervention. An example of task analysis data collected from the intervention site is presented in Tables 1 and 2. Data were non-parametric and described using median and range. The total time spent on ‘intervention’ tasks at the intervention site was 44.2% before and 46.8% after the intervention (see Table 1). ‘Administration’ and ‘attend patient’ accounted for the greatest amount of time in a shift before and after the intervention. A range is not reported for patient transfers since the category is made up of seven different tasks. A large amount of variability is present in the time spent on ‘intervention’ tasks before and after the intervention.

Table 2 presents the amount of time accounted for by ‘non-intervention’ tasks in a nursing shift at the intervention site.

‘Communication’ accounted for the largest proportion of a shift at both sites before and after the intervention. The large range indicates the extent of variability present in the data.

Exposure data for the ‘intervention’ tasks were described in terms of task duration (see Table 3) and percentage time spent in trunk flexion > 20 degrees (see Table 4). Whether change occurred following the intervention was assessed with respect to the percentage of tasks that had more than 30% of task time in trunk flexion > 20 degrees. The classification was based on the OWAS method.

![Figure 2](image1)

**Figure 2** Content and strategy of the ergonomics intervention

<table>
<thead>
<tr>
<th>Component</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal handling</td>
<td>Implement minimal handling policy including risk assessment</td>
</tr>
<tr>
<td>policy</td>
<td>Liase with senior managers</td>
</tr>
<tr>
<td>Work organisation</td>
<td>Establish manual handling link nurse network</td>
</tr>
<tr>
<td>Equipment</td>
<td>Carry out equipment audit</td>
</tr>
<tr>
<td>Training</td>
<td>Review manual handling component of Trust mandatory training programme</td>
</tr>
</tbody>
</table>

![Figure 3](image2)

**Figure 3** Task based strategy (Winkel & Mathiassen, 1994)

<table>
<thead>
<tr>
<th>Process</th>
<th>Data</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One</td>
<td>Task analysis</td>
<td>1. Identify nursing tasks  2. Calculate the percentage time each task occupies in a shift</td>
</tr>
<tr>
<td>Stage Two</td>
<td>Exposure</td>
<td>1. Describe each nursing task with respect to physical risk factors: “awkward posture” and “load”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention tasks</th>
<th>Proportion of shift (% time)</th>
<th>Range (% time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>13.7</td>
<td>13.0</td>
</tr>
<tr>
<td>Attend patient</td>
<td>11.8</td>
<td>12.3</td>
</tr>
<tr>
<td>Clean/tidy</td>
<td>7.3</td>
<td>7.1</td>
</tr>
<tr>
<td>Make bed</td>
<td>3.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Wash/dress</td>
<td>5.7</td>
<td>6.9</td>
</tr>
<tr>
<td>Patient transfers</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>44.2</td>
<td>46.8</td>
</tr>
</tbody>
</table>

Key: Pre-int. = pre-intervention; Post-int. = post-intervention
Table 2 Proportion of shift spent on ‘non-intervention’ tasks before and after the intervention at the intervention site

<table>
<thead>
<tr>
<th>Intervention tasks</th>
<th>Proportion of shift (% time)</th>
<th>Range (% time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>23.4</td>
<td>24.1</td>
</tr>
<tr>
<td>Fetch/carry</td>
<td>6.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Other general</td>
<td>11.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Other miscellaneous</td>
<td>0.9</td>
<td>0</td>
</tr>
<tr>
<td>Rest break</td>
<td>7.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>49.8</td>
<td>47.5</td>
</tr>
</tbody>
</table>

Key: Pre-int. = pre-intervention; Post-int. = post-intervention

Table 3 Median task duration (seconds) of ‘intervention’ tasks at comparison and intervention sites before and after the intervention

<table>
<thead>
<tr>
<th>Intervention tasks</th>
<th>Proportion of shift (% time)</th>
<th>Range (% time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>52</td>
<td>55</td>
</tr>
<tr>
<td>Attend patient</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>Clean/tidy</td>
<td>68</td>
<td>60</td>
</tr>
<tr>
<td>Make bed</td>
<td>157</td>
<td>260</td>
</tr>
<tr>
<td>Wash/dress</td>
<td>415</td>
<td>342</td>
</tr>
</tbody>
</table>

Table 4 Proportion of ‘intervention’ tasks with 0-30% of task time in trunk flexion > 20 degrees at comparison and intervention sites before and after the intervention

<table>
<thead>
<tr>
<th>Intervention tasks</th>
<th>Proportion of shift (% time)</th>
<th>Range (% time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>80</td>
<td>71</td>
</tr>
<tr>
<td>Attend patient</td>
<td>43</td>
<td>56*</td>
</tr>
<tr>
<td>Clean/tidy</td>
<td>70</td>
<td>85**</td>
</tr>
<tr>
<td>Make bed</td>
<td>28</td>
<td>62*</td>
</tr>
<tr>
<td>Wash/dress</td>
<td>8</td>
<td>48**</td>
</tr>
</tbody>
</table>

Level of significance *p<0.05; **p<0.01

(Karhu et al., 1977). ‘Wash/dress’ was associated with the longest duration followed by ‘make bed’ tasks.

Table 4 shows that the proportion of tasks with 0-30% of task time in trunk flexion > 20 degrees increased at both sites after the intervention apart from ‘administration’ tasks at the comparison site, which reported a decrease. An increase denotes an improvement in the postural profile of the task with a greater proportion of observed tasks characterised by upright stance.

Discussion

A number of organisational factors appeared to influence the uptake of the intervention. These included its scale, which was large spanning 24 wards and involving approximately 1500 nurses, which meant that nurses’ exposure to the intervention varied across the Trust. Secondly problems experienced by staff in attending the Trust training programme meant that the intervention relied heavily on the MHLNs to influence behaviour at the ward level. The Health & Safety Advisers also had a high workload with responsibility for advising a Trust with 4500 employees on all matters related to health and safety making it difficult for them to commit time specifically to manual handling. Lastly health and safety appeared to be underrepresented in the Trust compared to its achievable benefits.

The amount of time spent on nursing tasks was unchanged after the ergonomics intervention at both hospitals. Tasks identified as “high-risk” (i.e. ‘intervention’ tasks) were associated with slightly less than 50% of a shift with the greatest amount of time spent on ‘administration’ and ‘attend patient’ tasks. Patient centred tasks (i.e. ‘attend patient’, ‘wash/dress’ and ‘patient transfers’) accounted for approximately 22% of a shift. Patient transfers accounted for approximately 3% of a shift at both sites before and after the intervention. No difference was observed in the time spent on patient transfers between shift types and nurse grades. Non-intervention or “low-risk” tasks accounted for approximately 50% of a shift, with ‘communication’ associated with the greatest amount of time out of all nursing tasks. Nursing work was characterised by a series of quickly changing tasks of approximately 60 seconds duration, apart from ‘wash/dress’ task, which were longer. Poor working postures were distributed over several activities e.g. ‘wash/dress’, ‘attend patient’ and ‘make bed’ tasks. This finding demonstrates the importance of including patient and non-patient activities in a strategy to reduce LBP, further suggesting that focussing on patient handling only would lead to an underestimation of the total load placed on the musculoskeletal system of nurses.

Conclusions

The implementation and evaluation of an ergonomics intervention in a NHS Trust was complex and challenging to execute. The ergonomics intervention had variable impact in different parts of the organisation due to its scale and organisational factors, which influenced its penetration in the organisation. Tasks likely to benefit from an intervention accounted for approximately 50% of a shift while patient transfers, traditionally the target of interventions aimed at reducing LBP accounted for 3%. The study highlights the need to consider change in exposure at the task level within the context of the organisation. Organisational factors influenced the intervention and are likely to determine what can be achieved in an intervention aimed at reducing LBP.

Fiona Trevelyan
Robens Centre for Health Ergonomics,
University of Surrey

References

Safer handling practice in a neuro-disability environment

THE ROYAL Hospital for Neuro-disability is a national charity which cares for the needs of people who are profoundly disabled due to a variety of neurological disorders, whether this be brain injury or a progressive neurological condition for example; multiple sclerosis or Huntington’s disease. Approximately 75% of the patients are cared for on a continuing care basis, whilst the remaining 25% are undergoing rehabilitation. All the patients have profound and complex disability with or without cognitive and/or behavioural problems.

Caring for people with neuro-disability poses a number of challenges. Postural changes resulting from the neuro-disability have a profound impact on how patients should be moved and handled. It is well-established that human posture is influenced by a number of stimuli, not least poor handling. The problems encountered when moving and handling people with profound and complex neuro-disability are often accentuated by the strategies used to prevent the complications of disability and promote ability. Therefore any moving and handling strategy has to take into account not only the person themselves, but also their wheelchair, seating system, bed mattress and other small positioning aids such as ‘T’ rolls and wedges, Billin (1998).

The Hospital has developed a number of strategies with regard to the moving and handling of patients with neuro-disability. However there has always been a balancing act between duty of care, staff safety and compliance with the Manual Handling Operations Regulations 1992. The current strategy has been in place since 1992. In the early years there was little moving and handling equipment, the aim being to teach those staff involved in moving and handling patients how to ‘lift’ and handle safely. As more equipment has become available, practices have changed and over time specialist slings, transfer sheets and sliding sheets have been introduced. Risk assessments have identified new problems and these have been dealt with as they have arisen. However, some handling problems have proven to be extremely difficult to deal with. Each disability brings with it its own set of problems, the handling problems of middle stage Huntington’s disease are completely different to those of brain injury, and those of multiple sclerosis are different again.

Handling difficulties posed by patients with Huntington’s disease have been managed by involving the manufacturers of chairs to design a ‘tilt in space’ chair which is at a height comfortable for staff to move and handle safely. Sling manufacturers have also been involved in order to design specialist slings for specific patients. Whilst not reducing the number of staff required in the transfer (in one case it was four), it has made the situation safer and staff were confident that the patient was not going to wriggle out of the sling. (See case study 1)

In brain injury, the physical, cognitive and behavioural problems all combine to present with sometimes an almost impossible situation. The complex extensor and flexor patterns that result can be very difficult to manage. It is not unknown for a patient who is being hoisted into a wheelchair to experience gross extensor spasm, which may require a great deal of effort on the part of staff to keep them within their wheelchair. There are occasions when up to three people may be required to seat a patient, one to guide the hoist, another to guide the patient into the chair from behind and a third to apply gentle pressure on the patient’s hips as they are lowered into the chair. Applying gentle pressure to the hips helps to flex the hips to an angle of 90° as possible which ensures that the patient is sat on the anterior aspect of ischial tuberosities and not the sacrum. This according to Zacharkow (1988) is the key to proper pressure distribution. If the person is sitting more towards the posterior aspect of the ischial tuberosities, distortion of the gluteus muscles results leading to ischaemia and pressure sores.

Whilst hoist and slings have transformed moving and handling and eliminated lifting, excessive pulling and pushing is recognised as a problem, especially when it comes to removing the sling after hoisting or placing the sling when returning a patient back to bed. Long seat slings have helped a great deal to eliminate excessive pulling and pushing. However, brain injured patients who have a complicated extensor pattern can slip out of long seat slings. Quick-fit slings made from mesh material have been found to be helpful in this situation. If positioned correctly with the leg pieces between each thigh, they can create slight abduction of the hips, which encourages hip flexion, thereby making it easier to seat the patient. The leg pieces can be removed gently from under the patient’s thighs and left to the side whilst the sling remains in place. Any potential pulling and pushing in an attempt to remove or replace the sling from behind the patient is therefore eliminated. (See case study 2)

Washing and dressing can prove to be very difficult when patients have high muscle tone. Educating staff on how to handle
patients with neuro-disability is vital to prevent injuries occurring to both staff and patients. Washing personal areas, changing penile sheaths and pads can prove to be almost impossible in the patient with flexion of knees and hips and internal rotation of the hips. Any attempt to use force to part the legs will result in damage to soft tissues which will make the situation worse therefore emphasis on teaching staff how to handle limbs with high tone is vital.

Sliding and transfer techniques have also been adopted over a number of years to reduce the risk of injury when positioning patients in bed. These have been successfully adopted by both staff and patients alike.

The current educational programme supporting the moving and handling initiative consists of twelve hours of both theory and practice. The content follows the recommendations by the Health and Safety Executive (1998) in their publication ‘The Guide to the Handling of Loads in the Health Services’. Besides general back care and specific moving and handling techniques, the programme also covers an introduction to the physical management and handling of people with profound disability. The programme is delivered centrally and participants are followed up in their clinical areas by ward-based moving and handling facilitators who attend a specific course to prepare them for their role.

All clinical staff who have direct patient handling contact, should participate in a yearly update, again this is co-ordinated centrally. A workbook has been found to be the best way of achieving updates. Staff complete a workbook that not only tests theory but also allows the ward based moving and handling facilitator to record practical assessments. It has also been designed in such a way that it can be used as evidence by staff involved in National Vocational Qualifications in Care.

Over the last eight years, there has been an increased awareness with regard to back care and musculoskeletal health in general. In 1992 the vast majority of reported musculoskeletal injuries originated from manual handling incidents. All these accidents were serious resulting in time off work. Within the last few years there has been a marked decrease in the number of serious injuries resulting from moving and handling incidents, however there has been a marked increase in reported incidents. Many of these have been ‘no injury’ incidents, ‘cause unknown’ incidents and minor injuries sustained when moving and handling patients, for example, scratches and bruises. Most of the scratches and bruises occur on the Huntington’s Disease Unit and the Behavioural Disorder Unit.

Over recent years, with the advent of a cohesive health and safety strategy and a risk management strategy, health and safety has achieved a ‘high profile’ within the Hospital. The Hospital has worked hard at achieving a ‘health and safety’ culture and this has helped staff to become more open in identifying and managing risk at local level. Staff have been actively encouraged to use the accident reporting system to bring to the attention of management anything within the work area that might be a potential threat to health and safety. From the available information this approach appears to be working.

Educational strategies in moving and handling can only succeed if management strategies are also in place. Safer handling practice is possible within a neuro-disability environment as long as objectives remain realistic. Whilst manual handling has not been completely eliminated, it is monitored and managed. There are always new challenges to face and it is hoped that as more specialised equipment becomes available risks will be reduced even further.

Case study one
Ms P is a middle-aged lady with late stage Huntington’s disease. She has very active choreic movements in all her limbs. To wash and dress her requires four members of staff with one person gently supporting her legs to prevent staff being kicked as they provide her care. Concerns were raised regarding her transfers to and from her chair.

Hoisting her to and from her wheelchair required four members of staff, as she wriggled so much there were concerns that she would injure herself, those around her; or that she could wriggle out of the sling. A specialist sling manufacturer was asked to assess Ms P. A quick-fit type mesh sling with ‘Velcro’ straps integral to the sling at chest and pelvis level was designed for her. (See figure 1). The sling has not eliminated the need for four members of staff, but the danger of her slipping out of the sling has been greatly reduced. Ms P has indicated that she now feels safer with the special sling than before. Staff have observed that whilst the choreic movements remain, they are not as gross as they were previously. This may be as a result of her feeling safer when being transferred.

Case study two
Ms J is a middle-aged lady who has sustained hypoxic brain injury which has left her profoundly disabled. Like most patients on the Brain Injury Unit she has a complicated pattern of flexion and extension deformities. She has flexion contractures of both elbows, right hip and knee. Her left hip and knee have fixed extension deformity. A matrix chair similar to that shown in figure 2 is used to provide her seating system. The aim of matrix seating is to conform closely to the person’s body to provide even pressure distribution and to provide postural support, the chair is ‘tilted in space’. Her left leg is supported in its extended position by a leg extension piece. The leg extension piece makes access to the chair difficult for staff.

Ms J is hoisted to and from her bed and chair by two members of staff who use a ‘Quick-fit’ mesh sling. Once in her chair, she is impossible to lean forwards to facilitate removal of the sling because of the closely fitting matrix and also her inability to bend at the hip. The sling therefore remains in place behind her, and the leg pieces are removed from under her thighs and placed to each side. The use of slings in this way reduces the burden on staff and allows Ms J to be placed in her chair without any loss of position.

Figure 1

Figure 2
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Dr. Elaine Pierce (Research and Development Manager at Royal Hospital for Neuro-disability) for comments, suggestions and reading the manuscript.
Wheelchair and Special Seating (Royal Hospital for Neuro-disability) for the photograph of matrix seating.

Disabled Living Foundation
Registered charity No. 290069

DLF offers a wide range of training courses, designed to meet the training needs of Health Care Professionals, associated staff and carers working with disabled people and older people. Courses include:

“Moving and Handling People”
+ “Paediatric Moving & Handling”
+ “Disability Discrimination Act Part III”

For further information contact:
DLF Training,
380-384 Harrow Road, London W9 2HU
Tel: 0171 289 6111 – Fax: 0171 266 2922
Top Tips

Top tip for carrying out tasks when kneeling

Tasks:
- Changing leg dressings
- Applying tight elastic stockings
- Applying anti-emboli stockings
- Floor work with small children
- Assisting obstetric procedures
  (page 8 – ‘Safer Birthing’ booklet)
- Fitting prostheses
- Fitting calipers

Risks:
- Asymmetrical/twisted/static posture
- Increased pressure on knees
- Acute hip and knee angles
- Increased pressure on ankles/foot arch
- Loss of concentration due to discomfort

Pillow Support:
- The handler kneels on a pillow on the floor, giving support to knees and ankles
- The feet of the handler are placed wider than the knees, to provide a wider base of support
- A second pillow is placed between the buttocks and legs of the handler, to open the hip and knee angles. This reduces lumbar intradiscal pressure.

Elizabeth Thompson
Northumbria Healthcare NHS Trust

Do you have any ideas or suggestions for future Top Tips?
If so, please contact the Editor
Applications for this Award are invited from postgraduate students, young researchers or young practitioners who have a keen interest in ergonomics associated with the musculoskeletal system, and should include a one page summary of the work as well as copies of any relevant reports or papers [which will be returned]. Evidence of publication in a reputable journal would strengthen the application. Preference will be given to those areas of special interest mentioned above. Applications must be received by March 30th 2001, should be in English, and supported by a senior colleague or tutor.

Send application to:
The Administrator,
Stephen Pheasant Memorial Award,
Robens Centre for Health Ergonomics, EIHMS,
Duke of Kent Building,
University of Surrey, Guildford,
Surrey GU2 7TE

The Award is financed by a fund established in memory of the late Professor Stephen Pheasant, who tragically died at the age of 47. He was renowned for his work in ergonomics and had a special interest in anatomy, anthropometry, biomechanics and musculoskeletal injury. Young people working and studying in these areas always had his enthusiastic support.

Trustees: Professor David Stubbs, Sheila Lee, Rachel Benedyk, Nicholas Sinclair-Brown.
LITERATURE REVIEW

The following excerpts of literature were taken from recent nursing journals in an attempt to postulate, yet a few more speculative perspectives into looking (sic) at the role of the nurses’ uniform. In the execution of manual handling some may see it more a hindrance than a help, but, as to the other aspects in its role? Let’s examine these before our interest is wearing thin! Enjoy...

Nurses’ attire in a special hospital: perceptions of patients and staff
Brennan W, Scully W, Tarbuck P, Young C
Nursing Standard 1995 Apr 26-May 2;9(31):35-8

NURSES’ UNIFORMS have been the subject of ongoing debate in many areas.
Following the Ashworth Hospital inquiry, two wards at the hospital piloted the wearing of casual clothes by nurses. Patients and nurses in these wards completed questionnaires to evaluate the effects of the change. The results showed that the patients felt casual clothes helped remove a ‘them and us’ distinction and enhanced nurse/patient relationships. Nurses found casual clothes to be more comfortable and practical. Although concern was expressed that, without uniform, nurses might not be readily identifiable in an emergency situation, the change to casual clothing was generally viewed positively by both patients and nurses.

Developing a new uniform policy for student nurses.
Foster J, Turner P
British Journal of Nursing 1992 Nov 26-Dec 9;11(14):717-8

IT HAS BEEN recognized that for many years traditional nurse uniforms are far from ideal. Inappropriate uniforms can be a contributory causative factor in back injury among nurses. Many nurses hold firmly to a traditional view of what constitutes a ‘proper’ nurse’s uniform. Uniforms can act as a barrier and hindrance in the development of the therapeutic relationship between nurse and patient. Many colleges of nursing face amalgamation. This presents them with an opportunity to re-examine their uniform policies and rationalize the many into the one.

An investigation into the assertive behaviour of trained nurses in general hospital settings.
Gerry E
Journal of Advanced Nursing 1989 Dec;14(12):1002-8

NURSES ARE often considered to be lacking in assertiveness skills. This exploratory study compares the assertive behaviour of trained nurses at work and in general life situations. Questionnaire and interview techniques are used to investigate the behaviour of a small sample of sisters, staff nurses and enrolled nurses in general hospital settings. Trained nurses are found to be less assertive at work than in general life situations. In the work situation sisters are more assertive than staff nurses. The enrolled nurses are the least assertive of the trained nurses. The complex nature of assertive behaviour becomes apparent.

Factors that promote assertiveness at work include knowledge, confidence, experience and the wearing of uniform. Factors that inhibit this behaviour are tradition, training and the hierarchical structure within the hospital. The use of assertiveness is viewed as a positive behaviour and is of value to nurses, but there are mixed feelings about the usefulness of assertiveness training.

Patients’ perceptions of nurse uniforms.
Rowland W
Nursing Standard 1994 Feb 2-8;8(19):32-6

THIS QUALITATIVE study was designed to discover what patients think of the uniforms worn by nurses in general practice, and whether they make a difference to the interactions between a patient and nurse. The results showed that a modern version of the traditional nurse’s uniform is acceptable to most patients, especially for ‘tasks and procedures’. Patients saw this aspect of a nurse’s work as a lower priority than providing help, information and advice in a readily accessible manner, and for this a less traditional and more ‘normal’ outfit was more acceptable.

Crossing the boundaries – experiences of neophyte nurses.
Seed A

BOUNDARIES EXIST that dictate socially acceptable degrees of bodily exposure and touch. Certain groups, for example nurses, appear to undertake emotionally charged work where they are called upon to cross these boundaries. This paper relates the experience of a student nurse cohort as they ‘crossed the boundaries’. The students’ views were collected by participant observation and interview, and analysed by employing grounded theory. Since the study was longitudinal the findings reflect how the neophytes’ views changed with the passage of time.

Early in their course students found giving intimate care stressful, while caring for those of the opposite sex created particular difficulties. Both male and female students developed coping strategies, for example ‘ways of seeing’ those they nursed. Students maintained that the nature of their work led others to view them in certain ways. In some instances female students might be seen as sexually available by men for whom they cared; however, with experience they dealt effectively with sexual advances. The cohort considered that wearing a uniform on the one hand protected and legitimized them in crossing boundaries, but on the other it signalled their occupation to others, which on occasions was something they might wish to conceal. These findings provide insights into the notion of crossing social boundaries, an area which warrants further investigation, since it involves an important aspect of caring.

Nurses’ uniform: an investigation of mobility.
Stubbs D, Buckle P, Hudson M, Butler P, Rivers P

AN INVESTIGATION of the mobility of nurses under three clothing conditions is reported. The need for such a study has arisen as a result of the concern over a possible mismatch between mobility and patient handling requirements. Thirty-seven nurses participated under two of the clothing conditions (‘National’ dress uniform, Trouser/tunic combination). In addition, ten of these nurses volunteered to provide control data by being measured in a leotard or a swimming costume. Eleven static and sixteen dynamic anthropometric measures were considered. Each nurse was asked to complete a short questionnaire, relating to her subjective attitudes to the uniform and to her own physical state at the time of measurement.

Whilst both uniforms imposed restrictions on the shoulder girdle and trunk of up to 10%, the area of greatest concern was the mobility of the hip joint. Hip flexion was reduced by 26% in the dress uniform. The implications of these findings for patient handling procedures are discussed, as are those of the relationship between the environment and the material. Uniform and the nursing image are also considered.

These abstracts have been compiled by Gabriel Ip
PRODUCT REVIEWS

Products included in this section have been reviewed by a professional group of National Back Exchange members who were nominated by their peers for their particular knowledge and expertise.

Inclusion of a product does not mean that the product is endorsed or recommended by National Back Exchange and no responsibility is assumed for any injury and/or damage to persons or property as a matter of product liability, negligence or otherwise.

The aim is to inform members of products available and it is for each individual to make their own assessment of the product before purchase. The manufacturer has had the opportunity to see the review prior to publication. All products reviewed are listed.

The following reviews were undertaken by the following members of the Northern Review Panel: Jean Bish, Ian Clancy, Emily Long, Julia Love, Sarah Tunstall and Lorna Williams.

Equipment reviewed:

Uplift Seat Assist (UL 100) standard model
Lifting Cushion
Portable lifting cushion with hydro-pneumatic piston mechanism. High density moulded foam cushion on a flexible seat. Folds flat, has velcro strap to hold closed for carrying, by carry handle. Very comfortable. Fire retardant, waterproof coating to foam cushion. Removable washable cover. Non-slip base. Silent. Excellent user instructions and safety precautions supplied. Easily adjustable from 35kg – 105kg via six adjustments to piston. Trial/demonstration recommended. 12 months warranty. Outer cover washable. Cushion foam coated and wipeable. Four models available – to accommodate up to 160kg, with option of ‘V foam’ cushion for increased pressure reduction Cushion cover available in 5 colours. Stated to be used with a range of seating.

SAFETY CONSIDERATIONS
Potential finger entrapment on lowering seat – a clear safety notice regarding this is supplied

DIMENSIONS
Seat: Depth 19”/48cm, Width 17”/43cm, Folds flat. Weight: 3.7kg/9lb. (Carry bag with shoulder strap available)
Price guide: £165 (standard) to £195 (for higher specifications)
Manufacturer: Ergon Design Co Ltd

Lift Assist Cushion
Manufacturer: Polymorrit Ltd
Publication withheld by manufacturer.

Levelator Lifting cushion
A twin chambered air-inflatable lifting cushion, designed for use in an armchair or wheelchair. Inflated by a 12v blower which is activated by a two way pneumatic hand control for inflation and deflation. The air goes through a self levelling valve into twin chambered cushions. Cushion needs to be secured with the strap to the chair. Comfortable. However, the position of the valve/tube which is centre-front, may be intrusive. Portable. Electrical safety tested EN 60335 – 1: 1994. Flammability standards to BS 7177: 1966. States that “a unique self levelling valve maintains stability, and automatically compensates for any tendency to slump sideways” and “alleviates pressure sore problems” Easy to operate hand controls. Careful assessment of clients ability crucial in relation to inflation/deflation of cushion. Noisy. Careful assessment necessary for clients with stability/balance problems. Demonstration and practice advisable. Wipe clean with water based cleaners. Removable cushion cover can be washed to 40 degrees. 25cm square non-slip mat available

SAFETY CONSIDERATIONS
States that “a unique self levelling valve maintains stability, and automatically compensates for any tendency to slump sideways” and “alleviates pressure sore problems” Cushion cover slippery

MANUFACTURERS RESPONSE
The straps provided are not always necessary. Cushion cover slippery only with certain clothing fabrics. Although care label states 40º, it can be washed at 72º according to manufacturer of the fabric.

DIMENSIONS
Weighs: 7.5kgs
Cushion: 45x45cm
Blower unit: 28cm x 20cm (stored under or at side of chair 16cm high)
Tube: 1 metre Lead to recharger 2 metres
Battery: One charge = 20 lifts up to 127 kgs (20 stone). With mains connected
Manufacturer: Williams v Benedict Ltd
Price guide: Approx. £375.00

Nominations for Review Panel members are still required. If you are interested please contact Robyn Allen or the Editor. At present we do not have sufficient members to produce reviews for all issues
CONFERENCE FEEDBACK
– Continued from page 20 –

- 84% of respondents felt that this outcome had been achieved, with 89% of them describing the programme as both participative and stimulating. The following additional comments were also provided.

- I would have liked some practical workshops.
- Closer links to social care need to be developed including problems encountered in the community setting. For non-medical people the content may have been a little too intense.
- Bearing in mind the broad base of knowledge and experience amongst the membership of NBEx it is an achievement in itself to meet the needs of such a diverse group.
- In planning the programme the conference committee endeavored to provide a different agenda to that which might be provided at a local group meeting, hence the invitation to a number of national and international speakers.
- The feedback from the plenary sessions was very positive although it was disappointing that a significant number of delegates were unable to stay until the end of conference to hear Prof. Chaffin’s presentation.
- The lessons to learn would be to schedule the key speaker for Day 1 of the conference and develop the concurrent sessions to meet the needs of less experienced members.
- To finish our thanks must go to Prof. David Stubbs, Prof. Don Chaffin, Prof. Nigel Corlett, Dr. Pat Dolan, Dr. Lyn McAtamney, Fiona Trevelyan and all of our concurrent speakers for their considerable efforts in making National Back Exchange Conference 2000 such a memorable event.

For a detailed conference evaluation please forward a A4 self-addressed envelope with a second class stamp to Linda Allen, School of Health University of Teesside, Borough Road, Middlesbrough TS1 3BA.
Dear Editor,

I would like to raise a discussion point for members of the National Back Exchange.

In “Manual Handling in the Health Services” it states that “Recent evidence suggests that even if all the techniques traditionally recognised as safe are adopted, lifting operations can still cause problems. Lifting with the ‘back straight and the knees bent’ may help to avoid some back problems, but if it is repeated often enough it can result in cumulative strain to the knee joints.

For these reasons, priority should be given to the creation of safe systems of work based on risk assessment. Once this has been done, education and skills training are needed for all relevant staff groups at all levels.”

My point is – what does this mean for trainers who deliver object and people handling training and who have to demonstrate the same techniques, repeatedly? Are we heading towards a generation of trainers with knee problems? I admit to having a personal interest in this, as, after a year of delivering object and people handling training, three days a week, mainly to homecare staff (low divan style beds) I have developed a condition called chondromalacia patellae. This means I suffer pain when bending, kneeling or putting a load on my knees and I have only delivered three days training in the last eight months because of this and my future is at stake.

In consequence I would like the membership to consider this issue and if anyone can come up with any answers I would be glad to hear from them.

Ian Minty.

email: iminty@aberdeenshire.gov.uk

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Dear Editor,

I am a Minimal Handling Advisor and am at present undertaking my MSc in Health Studies. For the research project I am evaluating the effectiveness of the competency based minimal handling training programme undertaken by nurses, midwives, physiotherapists and occupational therapists.

As far as I am aware, this is the only Trust undertaking a competency-based approach for minimal handling. I would like to know of any Trusts that have previously implemented or at present developing this approach. Any comments, information or advice that may be of help will be appreciated.

Mala Arunasalam

22 Morgan Road, Reading RG1 5HG.
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Lancashire and Greater Manchester Group, National Back Exchange

Following our successful ‘mini-conference’ last year, we will be organising another conference on:

TUESDAY 19 JUNE 2001
to be held at Mytton Fold, Nr Blackburn.

The two Conference topics will be:

**The OCCUPATIONAL HEALTH STRATEGY**
And the HUMAN RIGHTS ACT,
and their effect on Manual Handling.

Speakers are to be confirmed, but will include:

- H.S.E.
- Professional Occupational Health Expert
- Human Rights Legal Expert.

All local groups will receive booking forms and further information shortly.
Contact names and numbers will be made available at that time.

So keep this date free, and we look forward to seeing you.

**Membership details**

**AIMS OF THE NATIONAL BACK EXCHANGE**
The Association is established for the public benefit and for the following purposes:

1. To promote the exchange and dissemination of information and ideas on back care;
2. To develop and promote common standards of training in safer handling;
3. To promote initiatives and act as a forum for providing evaluation and audit of current practice in all matters associated with back care;
4. To lobby employers to provide back care advisory services to reduce work-related back problems;
5. To provide support and advice to members.

Annual membership for National Back Exchange costs £30. Members receive a quarterly Journal and are eligible to vote at the AGM, held at the annual conference. Members have a preferential booking fee for the annual conference.

Members will be informed of their nearest local group which is affiliated to the National Association and which may charge you a small annual fee. They have regular meetings where you can exchange information and meet socially. Affiliated groups can apply for funds (see local group guidelines).

Individual members can apply for research funding through the National Executive committee.

To become a member, please send a cheque for £30 made payable to "National Back Exchange" to:

**David Couzens – Howard**
MCSP, Grad.Dip.Phys., SRP
Membership Secretary, National Back Exchange, Plantation House, The Bell Plantation, Towcester, Northamptonshire NN12 6HN
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All materials to be submitted on disc or by email (ideally as a Word attachment). Hard copy will be accepted by prior arrangement with the Editor. Please supply a stamped addressed envelope if you require materials to be returned. Please note the editorial team and the National Back Exchange cannot be held responsible for the loss or damage of materials.

Submission for all sections of the journal are welcomed – even Diary Dates.

Content: Provide factual and verifiable details.
If speakers are referred to then give their full titles.
Local group submissions can refer to equipment, books etc that have been reviewed but not the review outcomes – members can contact the group for information.
Photographs and pictures to support the materials are always very welcome.

Style: Times New Roman, 12 point, 1.5 spacing. Avoid abbreviations – where they are necessary they must have been qualified in the article. Use the 24hr clock and write dates without the suffix e.g 1 not 1st.

Clearly specify any particular requirements that need to be considered by the editorial team.

All materials must be with the Editor by the copy date or they cannot be included.

Contacts around the country

Regional Officers: for contact details see page 3
East Region: Christine Dunn
East and West Midlands, Essex, East Anglia and Bedfordshire
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