POSTURE & MOBILITY GROUP

POSTURE & MOBILITY

Volume 22

Spring 2006

www.pmguk.co.uk

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Editorial

It has been a busy few months for members of the Committee with the annual training event having taken place in Blackpool in February. The Bursary winner's reports are in this edition, as is Stuart Weir's (the name badge taken out of the hat at the end of the conference winner) report from the Seating symposium in Vancouver. Survey results which also took place at PMG are also included but there is still time for those of you who did not attend the Blackpool event to also make your views know, by completing the questionnaires and sending them onto Olwen/Patricia (address in the inside cover).

Meetings (CSIP), reports (Scottish wheelchair service) and the DH country wide 'Listening and Learning events' about the wheelchair service continue and for many us attending the London meeting on March 10th, we felt we had been there/heard it all before – and many times since the McColl report in 1986! Inequity of national provision, lack of trained experienced staff, inadequate budgets, budget freezes, poor management, lack of CPD opportunities, lack of senior management interest, people not carrying evidence-based practice, Cinderella service etc came up over and over again. New workers in the service should remember that there are tomes of excellent material for you to use as starting points. These include for example, material produced by PMG, the National Wheelchair Managers Forum, BRSM reports, the Modernisation Agency, material from charities (i.e. SCOPE, Whizz-Kidz, MD Campaign), as well as peer reviewed literature as far back as 1986 for example, about powered chairs for younger children! Past editions of the newsletter will be added to the web site in the future and so keep looking there too. Also managers should start to realise that there are many experienced physiotherapists working in this area too and stop actively discriminating against them in adverts. I think there is employment law about this!

Some more members are contributing to the newsletter without being 'tied up', which is great news for PMG and more are informing the secretariat of any 'grey' publications, new ISBN publications, new booklets, new useful web sites or meetings, which, when appropriate, are now being added to the web site as quickly as we hear about them. (If you hear about something which you feel the rest of the membership would benefit from, *please, please* email Patricia or Olwen directly.) But I have only heard from a maximum of 20 members in the last 24 months. What on earth are the other 980 thinking about, reading, or

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even doing in their work place? If you do not write/share it, it is of little value to the membership/group or development of the speciality. (Who has used the Otto Bock Start Junior for example?) Those of you who have completed BSc or MSc or even PhD's know this! No writing, no sharing, no opinion, *and then long may the Cinderella service continue*.

The Newsletter is now well established (and the Blackpool survey comments will be taken 'on board') and my term of office comes to an end with this edition. I would like to thank the sub-group/team for their efforts in both writing and commissioning articles, the many members who have been coaxed (or not) into writing an article when caught 'at a weak moment' and especially Patricia and Olwen who have frankly 'made it happen'. I wish the new editor every success and would encourage readers and members to make the time to contribute to this *their* newsletter. Too many of the members are passive in my opinion and without some spirit and opinion out there, the PMG will never move on.

When will we see Cinderella at the next ball? That is up to you!

Ros Ham, March 2006

Letter from the Chair

I write this letter as interim chair ahead of the first committee meeting after the AGM, at which time the new chair will be elected formally into office.

It is a time of change for the committee. I am delighted to welcome Monica Young, Kevin Humphries and Nigel Shapcott on board – I am sure they will contribute much to the group in the coming months and years. Ros Ham has stood down from committee after her three year term and will no longer be heading up the Communications sub-committee, this being her last newsletter. She has done a fantastic job of bringing the newsletter up to date and has put in place mechanisms with administrative support from Patricia Marks to ensure the trend continues. Martin Moore has stood down from his position as chair of the Conference planning sub-committee but remains on committee in office as Vice-chair of the group. I would like to take this opportunity to thank him for sharing the workload with me over the last year. I look forward to working with the full new committee for the coming year.

We learnt a lot at the national training event in Pontins in February from presentations, posters, networking and the exhibition. I hope those of you in attendance felt the same way - certainly an informal review of the feedback forms seems to suggest this was the case. There is a phrase about adversity and thriving but it would probably be fair to say that we perhaps prefer accommodation and food more akin to previous conference facilities! We will be in Warwick University next year and you will be glad to hear that from what I've seen it looks more like the normal standard of accommodation for PMG conferences.

I was very pleased that at the AGM it was agreed that the research fund will be topped up to match last year's finances, subject to confirmation of the final figures from the conference. This aspect of the group has really taken off and we owe David Porter a debt of thanks for getting it off the ground so swiftly. The sub-committee has really taken off and it looks like there will be similar demand for funding this coming year.

Barend ter Haar has served us faithfully as treasurer for many years but stood down from this office at the AGM. He was formally thanked at the AGM but I would like everyone to be clear about the huge commitment he has put into the group while treasurer. No doubt he will continue to be a very active member of the committee. Henry Lumley has very kindly agreed to take on the role of treasurer and will do so with the assistance of a book keeper to handle the everyday financial matters.

I hope you enjoy this newsletter. Have a great spring and summer.

With best regards

Dave Long, PMG Chair, March 2006

Agenda for Change Survey Experiences

Dave Calder/Emma Stacey

Many thanks to those of you who completed the AfC survey.

Overall 47 complete responses were received and these figures provide a snapshot of initial outcomes across the UK, covering therapists, RE's and managers.

The tables below gives an 'at a glance' picture of the results received. It was difficult to break the professional roles down into grades, as generally this information was not submitted. The information has however, been broken down into the categories of RE's, Clinicians & Managers.

Rehabilitation Engineers

Profession/Grade	Banding	Total	General Feelings
Rehab Support Worker	5	1	Good
Clinical Technologist trainee	5	1	Very Good
Rehabilitation Engineer	5	2	Very Poor
Rehabilitation Engineer	6	11	OK
Rehabilitation Engineer	7	1	Good
Senior Rehabilitation Engineer	5	2	Very Poor
Senior Rehabilitation Engineer	6	1	Good
Senior Rehabilitation Engineer	7	2	Good

Clinicians

Profession/Grade	Banding	Total	General Feelings
Therapist	6	3	Poor
Therapist	7	2	OK
Senior Therapist	6	2	Poor
Senior Therapist	7	5	Good
Clinical Specialist	6	1	Poor

Managers

Profession/Grade	Banding	Total	General Feelings
Deputy Head OT	7	1	Good
Workshop Manager	6	1	Very Poor
Workshop Manager	7	1	Good
RE Manager	7	2	Good
RE Manager	8B	1	Good
Head PT	8B	3	Good
Head OT	7	3	Poor
Head OT	8A	1	Very Good

Generally, the matching results show a positive outcome, however, anyone who is dissatisfied with their result can request a review, within 3 months, of receiving official notification of their matching outcome, and should request details of the profile they were matched to and the individual levels their post was awarded in each job evaluation factor. They should also speak to their manager to gain their agreement that any additional information they intend submitting to the review is correct. More detailed advice can be found in section 47 of the Agenda for Change – NHS Terms & Conditions of Service Handbook. This can be accessed via the Department of Health website on www.dh.gov.uk

POSTURE & MOBILITY GROUP

AGENDA FOR CHANGE – SURVEY

Please spend a few minutes in completing this survey *(if not completed in Blackpool)* and mail back to Patricia Marks, PMG Administration, c/o PO Box 776, Taunton, Somerset, TA1 9BR

With a lack of national profiles and each Trust matching jobs separately it would seem that Agenda For Change (AfC) is turning into a national lottery. There does not seem to be any published score card available. So that we can all best understand the outcome of AfC PMG feel that a 2 minute survey during the conference would help to raise the visibility of AfC results and provide a scale for comparison.

Q	Question	Answer	√
1	I work in the County of		
2	My Job Title is		
3	My Profession is		
4	Clinical role	If you assess or prescribe to clients please tick the box	
5	Management role	If you manage other people please tick the box	
6	Have you been assimilated	If yes tick the box	
7	Actual / Target Band	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8a / 8b / 8c / 8d / 9	
8	Do you think the band is appropriate for the job	very good / good / ok / poor / very poor	

Thank you for your input to this survey.

PMG Editorial Team

Possible Alternative Funding Opportunities available for Mobility Equipment beyond the NHS

Ros Ham FCSP, Portsmouth Wheelchair Service, Portsmouth PO3 6BR
Patsy Aldersea, COT, Kendal, Cumbria

Background – The Professional staff member.

Increasingly staff working in wheelchair services are unable to meet the needs of their clients for a variety of reasons which may include: advancing technology which is beyond the remit of their NHS services, prescriptions beyond the assessed clinical need, requests for more than one item, additional features not supplied by their NHS service or overspent budgets.

But before staff start to search out suitable sources for funding, it is important that they are aware of their own roles within the service in which they work. Are they for example aware of their professional role in the service as stated in the Codes of Ethics and Professional Conduct (COT) or Core Standards of Physiotherapy practice (CSP) or other Professional bodies standards and that of the Health Professions Council? Do they know for example that;

- they should be recording unmet need (COT July 2000, 3.3.5)? 'Failure to do so would be considered unacceptable'.
- clients should be given sufficient information to enable them to make informed decisions (COT 2.1.2)
- at times of resource deficiency, the recorded assessment of need should also clearly state those objectives that have to be achieved in order to maintain a minimum level of satisfactory and safe occupational therapy service to clients and carers (COT 3.3.6) and that..
- if OT's feel unable to reach these minimum standards, the appropriate manager should be notified in writing with a copy to the referrer if applicable (COT 3.3.7)
- the physiotherapist demonstrates that they have considered the patients and/or carer's needs within the social context (8.2 CSP 2005),
- the plan clearly documents planned interventions including: timescales, goals, outcome measures, risk assessment. If clinical guidelines, local protocols are used these should be referred to. (8.4 CSP 2005)
- as a health professional, you must protect the health and wellbeing of people who use and need your services in every circumstances (Core Standards HPC 2003)
- staff must act in the best interests of your patients, clients and users. You must not do anything or allow anything to be done that you have good reason to believe will put the health or safety of a patient, client or user in danger (Core Standards HPC 2003)
- staff must understand the need to consider the assessment of both health and social care needs of clients and carers (HPC OT specific 2a.2)
- the specific contribution that physiotherapy can potentially make to enhancing individual's functional ability together with the evidence base for this (HPC PT specific 3a1).

Staff members roles in service development.

Staff must also realise their own roles in the development of the service within which they work. For example in; drawing up, and updating, policy for the service provision, applying current legislation to provision, the service eligibility criteria for the population served, in raising the service profile with senior managers and commissioners, in the service stock lists of the equipment product ranges available from their NHS service, with searching out evidence based practice (EPB) and its application to the services in which they work, in their own job purpose, in developing user group involvement with the service and an genuine empathy with service users and their carers/families.

Staff should also review their Voucher Scheme criteria and the financial values offered. For example, are they up to date and would the criteria and amounts stand up to scrutiny? Have they been benchmarked with others? Staff should also ensure that the Vouchers offered are equivalent to the real (and 2006), cost of the prescription and that users are not put into an unrealistic band or restricted in some other means that has not been annually reviewed.

When to start the search for funding.

When each staff member is happy that the service in which they work is:

- appropriate for their client group,
- 'legal' and up to date,
- empathetic to the users it serves with active user involvement,
- senior management interest and involvement,
- happy to be challenged by users,

and is still unable to meet the needs of their clients, then alternative funding sources should be sort. Alternative funding should not be seen as an easy option to not addressing the current issues that each service faces and not being up to date.

Possible reasons for requiring Alternative Funding.

Alternative funding for equipment may be required by a service when, for example:

- the assessed prescription is beyond the service's current agreed eligibility criteria,
- the assessed prescription is of a higher specification than 'standard' and that generally agreed to be supplied,
- an item that is required is in additional to that already supplied,
- the prescribed equipment item prescribed is 'extraordinary' or one-off,
- for developmental purposes and may not be the final prescription,
- for trial purposes or
- for usage within a variety of other agencies/settings where the clinical need is not the greatest requirement.

Other examples are found on a daily basis, but the NHS services have a provision equity responsibility as with all other NHS services and a requirement to meet the needs of the majority (NWMF 2005).

Sources for Alternative Funding.

Seeking additional funding is not easy and is a laborious process in many cases. Many families do not want to 'go to charities'. Some prefer to find the funds themselves or they have other sources to approach (eg place of work). Some users are able to apply for funding themselves and in some cases, families can assist the user in contacting various organisations. Often these alternative bodies require a report of identified need from the assessing therapist, others have long application forms which some users may need help in completing. The list attached here may assist the reader and their clients in 'getting started' down the road of greater independence and functional achievement.

Equipment Provision: Alternatives to the NHS wheelchair service.

1. Examples of Voluntary Sector Contacts:

UK wide

i. Meningitis Trust. Fern House Bath Road Stroud Glos. GL5 3TJ www.meningitis-trust.org. 'discretionary support grants to enhance the quality of life for those who may have been affected by meningitis or meningococcal septicaemia'.

ii. MS Society, National Centre 372 Edgware Road Cricklewood, London NW2 6ND 020 8438 0700. www.mssociety.org.uk/grants. 'does award grants towards wheelchairs for people with MS whose needs are not met by standard wheelchairs provided by the NHS'. Apply to applicants nearest MS Society branch for an application form.

iii. Association of Charity Officers. 01707 651777 www.aco.uk.net an umbrella organisation with links to charities or grant giving trusts who do provide grants to individuals.

iv. Parkinson's Disease Society, 215 Vauxhall Bridge road, London SW1V 1EJ. 020 7932 1336. www.parkinsons.org.uk. Grants to value of £250 from Mali Jenkins Fund for people with Parkinson's disease.

v. Muscular Dystrophy Campaign, 7-11 Prescott Place London SW4 6BS 020 7720 8055. www.muscular-dystrophy.org Grants available through the Joseph Patrick Trust

vi. Motor Neurone Disease Association, PO Box 246 Northampton NN1 2PR 01604 624726 www.mndassociation.org. Grants available to value of 750 available from local branch. Application needs to be supported by a Health or Social Care professional

vii. Whizz-Kidz, Elliott House, 10-12 Allington Street, London SW1E 5EH 020 7233 6600 www.whizz-kidz.ord.uk. Funds individual applications for mobility equipment for under 18 year olds and mobility is permanently restricted.

viii. Ataxia-Telangiectasia Society IACR, Rothamsted, Harpenden, Herts. AL5 2JQ 01582 760733 www.atsociety.org.uk Support grants for families of

children/adults with A-T. Each case treated on an individual basis.

ix. Mobility Trust, 50 High Street, Hungerford, RG 17 0NE 01488 686335 www.mobilitytrust.org.uk

x. Action For Kids 15a Tottenham Lane, London N8 9DJ 020 8347 8111 fax: 020 8347 3482 www.actionforkids.org. Funds specialist mobility equipment (not available from NHS) and other aids to children and young people with disabilities up to the age of 26. 'This equipment creates opportunities, freedom, self-reliance and greater opportunities'. OT/PT assessment/supporting report required.

xi. Family Fund 0845 130 4542 Unit 4, Alpha Court, Monks Cross drive, Huntington, York Yo32 9WN www.familyfund.org.uk . Funded by the four governments of England, Northern Ireland, Scotland and Wales to provide grants to families caring for severely disabled or seriously ill children aged 15 and under.

xii. Association of Wheelchair Children 0870 121 0053 Fax 0870 121 005 www.wheelchairchildren.org.uk Provide equipment and training programmes for children in wheelchairs to help them move independently and with confidence.

xii. ACT (Association for Children with Life-threatening or Terminal Conditions and their families) Orchard House, Orchard Lane, Bristol BS1 5DT Tel: 0117 922 1556 www.act.org.uk ACT a national charity seeking to promote excellence and equity of provision of care and support for all children and young people with life-threatening conditions and their families. ACT has an information database of any support services that may be available for families and professionals working with them, which includes any organisations that may be able to help with funding for the provision of wheelchairs for children.

xiii. Variety Club Children's Charity 93 Bayham Street London NW1 0AG 020 Tel: 0207428 8100 Fax: 0207428 8111 www.varietyclub.org.uk Supply to children & young people up to age of 18 years.

xiv Lady Hoare Trust www.ladyhoaretrust.org.uk. Helping children and their families with arthritis or limb disabilities by providing them with practical , financial and emotional support.

Examples for Individual country/area:

i. Chest, Heart and Stroke Scotland 65 Castle Street Edinburgh EH2 3LT. Tel:0131 225 6963 www.chss.org.uk. Towards the cost of some mobility equipment for Scottish residents

ii. Barnwood House Trust. For people with disabilities who live in Gloucestershire. The Manor House, 162, Barnwood Road, Gloucester GL4 3JX. Tel: 01452 61122 www.barnwoodhousetrust.org

Useful publications available from reference section of Public Libraries:

1. Director of Grant Making Trusts CAF ISBN 0-903991-58-7
2. The Voluntary Agencies Directory 2005 ISBN 0-7199 1645-3
3. Charity Choice (Edition 13 2005) Waterlow ISBN 1-85783-035-0
4. Charities digest 2005 Waterlow ISBN 1-8578 30059

Association of Medical Research Charities. Previously produced a handbook annually but now the information is on the web site. www.amrc.org.uk/about our members

2. Private Purchases:

i. Exchange and Mart Adverts

ii. Reputable Dealer: Serviced second-hand models

iii. Notice boards at Mobility Centres

iv. Local papers, newsagent's boards/windows

3. Motability: Tel: 01279 635999

For those people who are receiving one of the following benefits;

- Higher rate Mobility Component of the Disability Living allowance
- War Pensioners' Mobility Supplement.

The person should expect to receive the allowance for the full length of the agreement chosen.

A new or used powered wheelchair or scooter on hire purchase, over a term of one to three years, or a new or used powered wheelchair or scooter on contract hire lease for up to three years is available from Motability. Wheelchairs and Scooters are available from two types of dealers; local dealers who are accredited through Motability or Direct sellers who are also accredited. For more details about the Wheelchair and Scooter Scheme

contact route2mobility 0845 60 76260 or down load information from the web site www.motability.co.uk

4. Access to Work (AtW) provides advice and practical support to disabled people and their employers to help to overcome work related obstacles resulting from disability. Examples of the amounts are as follows: 100% costs for people starting a job, self employed people and those in work for less than 6 weeks. For others AtW pays a proportion of the costs of support i.e. cost of less than £300 –nil, between £300-£10,000 80% of costs over £300 and over £10,000, 80% of costs between £300 and £10,000 and 100% cost over £10,000.

For example: London Region Windsor House, 185 Ealing Road, Alperton, Middlx HA04LW 020 8218 2710 (London boroughs), South East Region 01272 364750 (Berks, Bucks, Hants &IoW, Oxon, Sussex, Kent &Surrey), East of England 01206 288788 (Essex, Beds, Herts.) www.jobcentreplus.gov.uk

How Stable is your Wheelchair?

BHTA, New Loom House, Suite 4.06, 101 Back Church Lane, London, E1 1LU
Tel: 020 7702 2141 Fax: 020 7680 4048

It is common sense that wheelchair users need to take care on the pavement and crossing the road, as obstacles and weather can make their wheelchair unstable. But the British Healthcare Trades Association (BHTA) is also concerned about a user unwittingly altering the stability of their wheelchair through mechanical means (such as adding cushions), making it hazardous. This is why it has launched a new 'Get Wise' leaflet for manual and powered wheelchair users called 'How to make sure your wheelchair remains stable'.

Produced with the support of the government's Medicines & Healthcare Products Regulatory Agency (MHRA), the leaflet simply and clearly sets out all the elements that can affect the stability of a wheelchair. A wheelchair is only stable if the combined centre of mass of the wheelchair and user is within the wheelbase of the wheelchair.

Comments BHTA director general Ray Hodgkinson: "I think many wheelchair users will be surprised at how easy it is to cause their wheelchair to become unstable, with potentially dangerous consequences. We hope this leaflet will help all users."

Users can reduce the stability of their wheelchair by adding cushions and seating systems; adding weight (e.g. shopping bags, oxygen cylinders) will also cause instability when climbing a slope or ramp. The effectiveness of brakes too can be reduced when the wheelchair approaches its stability limits for example, going down a slope, as can anti-tip devices.

For example, ramps and slopes, steps, kerbs and soft ground should only be negotiated after reading the manufacturers' wheelchair instructions – they will list such things as the maximum safe slope to negotiate and to avoid soft ground if the wheels are small.

A lack of maintenance can lead to wear or failure of components which will cause the wheelchair to change position unexpectedly, or even tip over. The BHTA says users should always use a qualified technician to service or repair the wheelchair. Tie-downs for transportation must also be approved by the manufacturer (or they may not work properly).

You can obtain copies of the leaflet by sending an A5 sae to BHTA, Suite 4.06, New Loom House, Back Church Lane, London E1 1LU. Tel: 020 7702 2141, email bhta@bhta and website www.bhta.com where you can see a full list of BHTA publications.

Standing Isn't a Luxury: Review of the Literature.

Anne Harris and Joanne McConnell Mobility Therapists, Whizz-Kidz,
Elliott House, 10-12 Allington Street, London SW1E 5EH

Introduction

It was surprising to read that 'standing wheelchairs' have been available for twenty five years (Lifestand usa 2005) as their availability on the UK market is much more recent. Most are purchased privately because, as yet, they are not considered part of statutory service provision and could be considered luxuries when many services have restricted budgets. However, putting funding aside, it is important to be aware of new developments within the field of mobility assistive technology and to consider the evidence for their use. Internationally standing wheelchairs are gaining recognition as a useful therapeutic intervention.

Currently, much of the evidence to support the provision of standing wheelchairs is anecdotal or individual case studies found within manufacturers' information. However this evidence should not be dismissed as an independent satisfaction study by Dunn et al (1998) found that 79% of users would also highly recommend the use of standing wheelchairs. Whizz-Kidz has noted an increase in demand for standing wheelchairs, with some applications raising questions of suitability. Therefore with limited evidence available it was considered prudent to consider the evidence for use of standing frames and tilt tables. This article presents a summary of the evidence identified that could inform the use of standing wheelchairs and the development of practice guidelines to ensure appropriate prescription and the best use of resources.

The Importance of Standing

Users of standing wheelchairs describe how 'to stand is to see life through the eyes of our peers' and how the world and 'our bodies are made to stand' (Lifestand usa 2005). Consequently the ability to stand has many physiological, psychosocial and functional benefits. Stewart (1998) considers that the physiological benefits accrued by passive standing include:

- Prevention or reversal of osteoporosis
- Prevention of contractures and improvement in joint range of movement
- Reduction of spasticity
- Prevention of pressure ulcers
- Improvement in renal and bowel function
- Improvement in circulation

No studies have specifically identified the psychosocial and functional benefits of standing, although a positive impact on self esteem, self image and morale and a perception of improved well-being and health were reported by Dunn et al (1998) and Kunkel et al (1993). Beattie (2001) has documented the possible functional benefits to children of static standing, but perhaps there is an assumption that the functional benefits of standing and moving are obvious (Finke and Muldoon 2003). Experience has shown that users of standing wheelchairs value small functional skills such as changing position for comfort or standing to sing in the choir, while carers value the reduction in manual handling and the financial savings from reduction in multiple equipment. Examples of these benefits are summarised in Table 1 *(see overleaf)*.

For many users and their families standing wheelchairs can appear to be a practical solution to many of the difficulties experienced using a standing frame and living in a world designed for standing people (Finke and Muldoon 2003). These aspirations can often be hindered by the quality of the stand required or achieved, but how to define this is difficult.

The Quality of Standing Required

While the complications that arise from immobilisation and lack of standing are well documented, evidence to quantify the quality of the standing required to have a positive effect to reverse or stall the effects of not standing are few (Stuberg 1992). Therefore, the evidence or professional opinions available will be discussed in relation to posture, time, position, function and practical issues.

Posture

The Association of Paediatric Charartered Physiotherapists (APCP) (2001) recommended that an optimal standing posture for children was one that promoted load bearing through vertical femurs and flat feet, with knees that were slightly flexed, but able to extend, the pelvis in an anterior/neutral position and the shoulders protracted. However, contraindications are not so clearly defined, although Lifestand usa (2005) advised consideration should be given to established contractures, serious orthopaedic disorders, hip and knee flexion of more than 20 degrees; - in other words, clinical reasoning should guide practice.

Table 1: The Possible Benefits from Using a Standing Wheelchair

Possible Benefits from Using a Standing Wheelchairs			
Physiological gains	**Psycho-social gains**	**Functional gains**	**Financial Savings**
Change of position for pressure relief	Eliminates undignified transfers into standing frames	Integrated standing into every day activities	Reduce manual handling to stand
Reduce risk of contractures	Social status through equal height	Stand for choir	Reduce devices used, multi-functional
Reduce bone mineral loss & risk of fractures	Personal choice of when/ where to stand	Access work surfaces ie kitchens, labs	Reduce assistance to change position
Improves bladder function & aids digestion	Self esteem and confidence (stand tall)	Men access toilet unaided	Reduce need to modify school, work place or home
Reduce spasticity	Interaction at equal eye level	Stand at bar with mates	Less storage space required for equipment
Improve respiratory function	Comfort within own body	Reach shelves/till in shops, libraries	Eliminate repeat of devices in different settings
Improves circulation	Improve well-being	Reach whiteboard at school	Increase participation

Time

Poutney et al (2004) consider that the purpose for standing guides the frequency of standing. Following studies investigating bone mineral density (BMD), Stuberg (1992) recommended standing for 60 minutes 4-5 times a week to gain an improvement. However Caulton et al (2004) found that while longer periods of standing resulted in significant increases to the vertebral BMD, it did not significantly increase tibia BMD and concluded that longer periods of standing are unlikely to reduce the risk of fractures. Perhaps the overall recommendation is that standing should be encouraged as Stuberg (1992) and Chad (1999) report that decreases in BMD could occur even after not standing for two to three months. This supports the need for a method that is easy for users and carers to use in their daily environments and for prospective planning to ensure that when equipment is required, there is continuity of provision during periods of clinical change.

Poutney et al (2004) suggest that hourly sessions, three times a week could reduce the risk of hip dislocation and control hip flexion contractures, as research has indicated that standing in children with Cerebral Palsy promotes the development of a more stable hip joint (Gudjonsdottir 1997). However Tardieu et al (1988) and Lespargot et al (1994) recommend passive stretching of 6 hours per day for maintenance of muscle length. They considered that stretching less than 2 hours per day leads to progressive contractures and that a 6-8 week period of non-stretching in the majority of cases will also lead to contractures. This would place unreasonable demands on carers if using a static standing frame, therefore stretching in a standing position using a standing wheelchair could offer clients an independent and practical means of achieving this. Standing and moving would also enable clients to participate in everyday activities. This is limited when using a static standing frame within the 'ordinary' workplace, school or home. However it is acknowledged that for some clients a static frame may offer better posture and position and may be their only method of achieving standing when taking into consideration other physical, cognitive or emotional factors.

Position

Research has also suggested that weight bearing can reduce lower limb muscle tone in spastic paraplegia (Oedeen and Knutssoon 1981). Some studies have considered the angle of the standing frame in relation to the amount of weight bearing achieved. Miedaner (1990) found that children with Cerebral Palsy, who had poor head and trunk control, achieved best weight bearing of 74% of body weight when standing at a prone angle of 20 degrees from the vertical. Daniels et al (2004) found that the highest percentage of body weight (60-91%) was borne when standing at a vertical angle of 900 or 950; however these results are not necessarily consistent across all makes of standing frames. Further research is required to investigate how the features of standing frames and standing wheelchairs impact on weight bearing, the role of secondary points of weight transference and perhaps whether weight bearing varies between static or dynamic positions.

Function and Practical Issues

Bush (2003) found greater weight bearing variability in the more active child and recommended that standing should be carried out during occupations that actively involved the individual. This is supported by the work of Thompson (2000), who considered that it is the active participation by the individual, with intermittent loading of the long bones during dynamic standing and muscle activity which increases the strain on the bone, as opposed to increasing the time of a static programme. This is a clear advantage of using standing wheelchairs, as a standing position can be achieved by the user actively going a through a sit-to-stand movement to carry out functional tasks such as reaching cupboards or standing and talking at eye-level.

Moving through sit-to-stand may not be possible for all users; however some users have reported improved hip and knee extension to achieve a standing position by using standing wheelchairs that have a lie-to-stand motion. This was also suggested by Daniels et al (2005) who found that moving from supine to standing as opposed to being hoisted into a standing position achieved straighter legs for weight bearing.

There is little evidence to support when standing wheelchairs should be considered an option to gain maximum benefit. Frequently this is when other methods of standing have failed or becoming too difficult for carers to manage. Perhaps consideration should be given to the achievement of autonomous standing much earlier, as some users have considered that the ability to adjust their own position in standing or between standing and lying is beneficial for comfort and increased tolerance, compliance (Shields & Dudley-Javoroski 2005) and personal control (Daniel et al 2004). Clinical experience has shown that standing wheelchairs lend themselves to ease of use in the home, mainstream senior schools, higher education establishments or the workplace. Finke and Muldoon (2003) suggest that 'standing wheelchairs may also be beneficial to clients who are able to stand, but who are not capable of sustaining the standing position long enough to successfully manage a functional task due to lack of balance, safety, lack of strength, medical need to use energy conservation techniques, lack of motor control, or inability to control tone'. Perhaps, this indicates that more emphasis needs to be given to how clients carry out everyday tasks and achieve autonomy or for these factors to be considered of equal importance to physiological factors when developing standing programmes.

Types of Standing Wheelchairs

Giving personal control and movement is reflected in the availability of an increase range of children's standing frames which are motorised or have self-propelling wheels and are readily available on the international market (www.standingdani.com). Therefore there is a trend towards providing equipment that achieves standing with mobility for use in daily life, rather than as static exercise. Tables 2 and 3 describe standing wheelchairs available on the UK market which can meet this need for some users. They are available as manual or powered wheelchairs, with the stand achieved manually or powered, using a sit-to-stand motion or a lie-to stand motion. (Contact details of manufacturers and dealers are provided in the Appendix.)

Table 2: Manual Standing Wheelchairs

Manual Standing Wheelchair				
Dealer /Make	**How Stand Achieved**		**Sizes Available**	
	Manual stand	Powered stand	From 7yrs	Teenagers/Adult
Balder	no	no	no	no
Cyclone (Lifestand)	yes	yes	yes	yes
Easy Care Ltd (Genie)	no	no	no	no
Gerald Simonds (Levo)	yes	yes	yes	yes
Permobil	no	no	no	no

Table 3: Powered standing wheelchairs

Powered Standing Wheelchairs				
Dealer/Make	**Movement into Standing**		**Sizes Available**	
	Sit to stand	Recline / lie to stand	From 7 yrs	Teenagers/adult
Balder	yes	yes	yes	yes
Cyclone (Lifestand)	yes	yes	yes	yes
Easy Care Ltd (Genie)	yes	no	yes	yes
Gerald Simonds (Levo)	yes	no	10+ yr	yes
Permobil	yes	yes	yes	yes

Standing wheelchairs for small children are not currently available because of difficulties solving engineering problems regarding size and the need for growth. When purchasing these devices, consideration must always be given to financing the continual adjustments required especially for growing children or for adults with changing clinical conditions. These wheelchairs can provide disabled people with a 'tool' to access their everyday environments, therefore it is imperative that issues of funding are considered creatively and opportunities for joint funding, whether with other statutory services, charities or individuals, explored.

Future Work

From considering the literature there is much evidence to support the physiological benefits of standing, however there is little evidence to support the psychological and functional benefits described by clients and their families (Finke and Muldoon 2003). With the ICF (WHO 2002) promoting the evaluation of participation and activity, and social policies promoting inclusion and life opportunities for disabled people (Prime Minister's Strategy Unit 2005), life style choices need to be given more consideration. Further research is required to understand;

- how standing wheelchairs are used during everyday activities,
- how benefits are accrued to justify the cost of such equipment and,
- how to make sure prescriptions are user-led and appropriate.

Conclusion

Standing wheelchairs have the potential to make a difference to the lives of disabled people, but further research is required to understand the benefits accrued and how functional needs can guide prescription.

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Appendix

1. Easy Care Products Ltd
Park Lane Old Park Telford Shropshire TF3 4TE
Tel: (01952) 610300
Email: genie@easycareproducs.freeserve.co.uk
Home Page: www.easycareproducts.co.uk

2. CYCLONE MOBILITY AND FITNESS LTD
Unit 5, Apex Court, Croft Business Park
Bassendale Road
Bromborough, Wirral, CH62 3RE
Tel: (0151) 346 2311; free 08001804850
Email: info@cyclonemobility.com
Home Page: www.cyclonemobility.com

3. SIMONDS, GERALD HEALTHCARE LTD
9 March Place, Gatehouse Way
Aylesbury Buckinghamshire HP19 8UA
Tel: (01296) 380200
Email: sales@gerald-simonds.co.uk
Home Page www.gerald-simonds.co.uk

4. BALDER UK Ltd
24 Murrell Green Business Park
London Road, Hook, Hampshire, RG27 9GR
Tel: 01256 767 181
Email info@balder.co.uk
Home Page: www.balder.co.uk

5. PERMOBIL LTD
Unit 4 West Vale Building Wakefield Rd
Brighouse HD6 1PE
Tel: (01484) 722888
Email: m.rheenen@permobil.nl
Home Page: www.permobil.com

Part of a patient's notes…

"She enjoyed talking to people here and said that she had more conversation here than she did with her husband (she also commented that she had more conversation from her parrots than from her husband, and one of her parrots is stuffed)."

Conference Report: The Patsy Aldersea Lecture

Speaker: Pauline Pope

This years Aldersea lecture (always a highlight of the PMG conference) was given by the renowned and widely respected Pauline Pope.

Pauline aimed in her lecture, to give the audience a little insight into her life and experiences in the field of postural management and the pathway and motivations behind her success in this specialist area, as well as her views on the current position and potential for future progress.

Shortly after graduating as a Physiotherapist, Pauline married a man who's career would take them all over the world to a variety of countries, in often very rural and under developed areas including Pakistan and Argentina. This enabled Pauline to experience work as a physiotherapist in local hospitals, in some very humbling conditions. During this period of travel Pauline learnt some very valuable lessons from her experiences that she would take forward and would remain with her throughout both her career and personal life.

On returning to the UK she completed an MSc in Biomechanics and then started work at the 'Hospital for Incurables', now known as The Royal Hospital for Neuro-Disability (RHN) in Putney, London. At this time the RHN had approximately 300 residents with severe and complex disabilities, many had severe pressure ulcers and were bedfast with severe joint contractures. These residents were being forced to live under a rigid regime enforced by hospital management (including restricted toileting times). Pauline understandably found this situation to be intolerable and refused to accept that these conditions were an inevitable result of their severe pathologies.

It was the preconception of hospital staff that rehabilitation and therapist input was a waste of time for these individuals as previous intervention had had little effect. Pauline identified that a change in emphasis was required with the focus of therapeutic intervention being placed on the physical management of these individuals rather than trying to specifically treat them.

In 1985 she published a paper which highlighted the need for this management to be a multi-disciplinary approach and she campaigned tirelessly to involve nursing and care staff at all times, to ensure that they would be on board as the main care providers (this including working all manner of shifts to reach all staff). During this time at Putney, Pauline identified huge inadequacies in the wheelchair and positioning equipment that was currently available for these complex individuals. Together with her Engineering and Therapy colleagues, she studied the presenting postures and problems that these individuals had and worked on designing more appropriate equipment that would provide the level of support that they required. These designs included the Putney Alternative Positioning (PAP) chair, the SAM seat and bed positioning equipment.

The PAP chair is unfortunately no longer in use due to a lack manufacturing interest and so many of its unique features that worked so well, are not available even on some of the most advanced chairs available on the current market. "It had features that allowed the chair to accommodate hamstring shortening, a common problem that is difficult to accommodate with today's chairs".

The SAM seat was rather more successful commercially; it took its original design inspiration from the position that is adopted by a motorbike rider and proved to be very successful in providing a functional and controlled position for many individuals for whom seating in other positions did not facilitate functional enhancement. The SAM is still available on the commercial market, however it is currently having it's own difficulties with manufacturing issues which are threatening it's future availability. Pauline and her team were also involved in developing some of the first bed positioning equipment (mainly because she was one of the first people to acknowledge the importance of 24-hour management), the now widely used T-roll and log roll are some of her simple yet effective innovations.

In the 10 years that she was at Putney, she implemented significant changes which were all beneficial to the overall care and management of these previously ignored individuals. She saw at the RHN a decreased prevalence of pressure ulcers and tissue viability issues during this time (a decrease from 13% to 5%), a reduction in the magnitude of joint contractures and deformities and fewer patients were considered to be in a bed fast state.

Following this successful 'shake-up' at the RHN, Pauline moved into a

community based setting at the White Lodge Day Centre, where she discovered that community working presented itself with a new range of challenges for her. Pauline identified that residing in their own home appeared to be empowering for the individual and they were less compliant with therapist-imposed regimes and equipment than in a hospital setting. The home environment appeared to facilitate assertiveness and highlighted that people's priorities in the community were different. She learned a valuable lesson that an agreed approach is essential and that compromise will nearly always be inevitable, unless the prescribed equipment and regime is deemed necessary by the individual and fits in with their desired lifestyle then it will not be successful.

It was around this time that Pauline became pro-active in the setting up of three special interest groups including what is now the PMG. She also began work to highlight the need for specialist seating provision within the NHS. Much has been achieved through the dedicated work of campaigners such as Pauline with postural management becoming increasingly widely recognised, with specific courses now being available to train professionals even at Masters level. Pauline, however is keen that we do not complacent with what has been achieved and feels that there is considerable scope for improvement. Amongst the areas that she feels need improving are:

- Mandatory training – physical management of such complex individuals is still not recognised in general graduate training courses, there is no standard requirement that Clinicians working in this field need to attain, therefore there is considerable scope for inappropriate prescriptions to be made which as well as potentially being detrimental the individual will inevitable result in wasted funds and resources.

Pauline Pope delivering the Lecture.

- The nationwide service provided is still fragmented with anomalies in equipment provision, knowledge and skills base and it is still segregated from other health services. In order to improve this we need to look at uniting services in order that we consider the physical management of the whole person within his/her own lifestyle.

- The need to develop regional centres of excellence in order to provide these most complex individuals with the specialist skilled and knowledgeable clinical input that they require and deserve. These centres would assist in facilitating research and development that is essential for equipment and knowledge development. Pauline also feels strongly that these centres are a more efficient use of resources and would facilitate a reduction in prescription error.

- The development of specialist day services/centres that cater specifically for these complex clients, with staff who have the specialists skills to support and train carers, monitor conditions and enable equipment trials - which again would wean out the degree of prescription error seen.

- Further support needs to be in place for the carers and assistants of these individuals to ensure maximum compliance with management regimes and equipment.

- As health professionals we need to be more pro-active in producing evidence to support our clinical decisions and prove the efficacy of our interventions in order to not only ensure we are providing the best care for our clients but to highlight and entice the need for funders to invest in these services.

Pauline's parting thoughts to end her thought provoking talk was to highlight the need for clinicians to accept that not all of the problems that present themselves in clinics have realistic and achievable solutions. Compromise has and will always be inevitable. Unless we as health professionals accept this, then we are lining up ourselves, and our clients, for failure and disappointment.

Jane Harding
Head IV Occupational Therapist
The Royal Hospital for
Neuro-Disability,
Putney, London

"Driving, Communicating, Living"

Speakers: Mike Loxley, Rehabilitation Engineer and Coral Smith, Occupational Therapist, Treloar Trust Alton, Hampshire.

Treloar College is a national specialist college of Further Education for young people aged 16+ who have physical disabilities. It is based in Alton, Hampshire and has space for 180 students, the majority of whom are resident during term time. It offers a range of courses including skills for life, vocational and independent living skills and course to advanced level.

This presentation illustrated how a co-ordinated multi-disciplinary approach enabled a student to use an integrated system to independently access driving a powered chair, communicate and use other electronic equipment.

Coral Smith opened this session with an introduction to Treloar College and to introduce us to Hannah, a 19-year-old student who's journey towards using an integrated system on her powered wheelchair, was to form the focus of this wake-up session.

Hannah has a diagnosis of Cerebral Palsy with both spastic quadriplegia and athetoid movements. She is also dysarthric, but is a very keen communicator using non-verbal, eye pointing, a wordbook and a TELUS communication aid. For mobility she sits in a CAPS 11 seat on a manual base.

Whilst at Treloar School, Hannah had tried driving a powered wheelchair using a head switch as part of a pilot project. This had been unsuccessful as it gave Hannah neck pain and backache. However she was keen to try again as she wished to gain independent mobility and she suggested trying a chin switch as she had used this in the past to play playstation with her brother. Her family were also certain that any equipment provision should be via NHS wheelchair service, as they were not in a financial position to afford maintenance and repair costs if it should be charity funded.

Mike Loxley then spoke of the rehabilitation engineering challenges to providing a chin switch for accessing powered mobility:

Potential problems:
- Obtrusive
- Can obstruct care routines – Hannah is hoisted for all transfers and eats orally.
- Client can change position in seating both intentionally and unintentionally and so problem of accurately and repeatedly positioning joystick.
- Hygiene – as Hannah salivates a lot
- Safety – due to spasms.

Advantages:
- Joystick provides speed, proportionality and spontaneity when driving
- Commercial range available

An assessment Spectra powered wheelchair was set up with a chin switch using a Daessy mounting system. This mount was chosen as the mounting tube hinges and folds behind the wheelchair so it will not interfere with care routines and also has a positive safety lock so position is secure. Treloar College currently have 35 of these mounting systems being used and so far they have proved reliable.

The trial was a success as Hannah was so motivated and she was able to drive the powered chair, with supervision, by end of one school term. The skin around her chin reacted, but she used a barrier cream and this resolved the problem. Attention turned to her communication methods, as Hannah used a TELUS system, with a head-pointer and used a computer for educational work, again using a head-pointer. This was causing concern as Hannah had neck pain and she was also finding the head-pointer set-up not to be very elegant for a young fashion conscious girl! An integrated system was considered to allow the option of interfacing switches for communication and the computer with her chin control.

Mike urged caution in using integrated systems for the following reasons:

1. *Potential problems:*
   - Can be overly complex
   - Problems with reliability
   - Difficult to alter and system may need to 'grow' as needs change
   - Based around power chair and common access method, so there is a single point of failure

2. *Advantages:*
   - Uses hardware, so no setting up for carers, everything is there ready for client.
   - Wireless connections

Hannah's Requirements were:
- To drive her powered wheelchair
- To operate a TELUS communication aid
- To access the class computer for her college courses
- To operate the computer for leisure
- To control her environment potentially in future.

The technical specification for an integrated system for Hannah were to be:
- Versatile, reliable, affordable
- Robust and able to withstand inevitable knocks
- Easy for non-technical people to understand
- Able to be supported beyond Treloar College.

Early trials were initiated using a *WiseDX* system. Mike pointed out the obvious advantages of a college environment as staff were able to make adjustments at any time to make the system perfect for Hannah.

As the trials continued with the integrated system, the therapists contacted Hannah's local NHS wheelchair service to discuss her case, as it was felt she now needed her own powered wheelchair. As she had previously has an old RMS Gill Junior powered wheelchair, this was exchanged for a Barrett GEM EPIOC with an interface for a CAPS 11 seating system. A Radcliffe Shadow tilt-in-space manual base was also provided to increase her comfort in a manual chair.

Hannah was now able to drive independently on the college campus and she wrote:

"Thanks so much. It has given me freedom and feels like flying. I can go round College with my friends and go to the disco."

The Occupational Therapist and Physiotherapist now turned attention to Hannah's posture and comfort in her wheelchairs. Hannah preferred to sit in her CAPS 11 on the manual Tilt in space base as she experienced back pain and increased spasm in her powered chair. Driving without footplates allowed more accuracy of control and less spasm in her body, but she required more ramping in her seat cushion. Seating was discussed with her NHS wheelchair service and a moulded seat on a TIS EPIOC was agreed. A Invacare Spectra Plus EPIOC was provided and the moulded seat provided an increase in both her stability and comfort. This was set up with the integrated switch system and the mounting system for her joystick.

So how was all this funded?
- NHS Wheelchair service funded Invacare Spectra Plus EPIOC and moulded seat insert
- IMPact grant of £2500, (a fund set up for independent mobility by therapists at Treloar College) helped the NHS wheelchair service fund the equipment.
- The Learning Skills Council provided £2000 to fund the WiseDX system. (This is an educational grant for equipment needed for college, as the computer was part of integrated system).

Hannah is now learning to acknowledge when she is unable to manage the driving, for instance, if she has particularly bad spasms or a cold. She is learning to manage her disability and direct carers to assist her if required. The equipment has been handed over to be used by care staff, class assistants, tutors at the college and her family, after a training package was devised to enable them to use system easily. Support materials, in the form of easy to read laminated sheets, were produced to be kept with the wheelchair. These sheets cover the use of the integrated system, powered wheelchair and 'trouble shooting' sheets. A technical manual has also been compiled to cover wiring and technical details which will go with Hannah and her chair, when she leaves Treloar College.

The session ended with the audience seeing pictures of Hannah using her powered wheelchair and integrated system to good effect. The session was enthusiastically presented and received and certainly a good start to the day!

Natalie Dean,
Occupational Therapist,
North & West Belfast Health
& Social Services Trust

The Impact of Perception, Cognition and Behaviour on Seating clients Following a Stroke

Speakers: Natalie Woodman, Senior Physiotherapist and Alison Baxter, Senior Occupational Therapist

The Posture and Mobility Group Annual Learning Event was held this year at Lytham, Lancashire on February 7th and 8th. Among the lectures and presentations was an informative and enjoyable talk given by Alison Baxter and Natalie Woodman, Senior Therapists with the Posture, Independence and Mobility Service at the Oxford Centre for Enablement.

With the difficulties and challenges that Therapists often encounter when assessing stroke clients for seating, the lecture focused on the perceptual, cognitive and behavioural changes that can occur and how these changes can effect seating needs. Using their considerable experience in this field, Alison and Natalie then provided strategies for helping to overcome these problems.

A Stroke occurs when the blood supply to the brain is disturbed in some way. The resulting loss of oxygen to brain cells leads to the death or damage of some of these cells. The effects can be catastrophic and may result in lasting problems with physical functioning (motor and sensory), communication and language as well as cognition, perception and behaviour. This in turn can lead to fatigue, depression and anxiety, mood changes, pain, incontinence and sleep disturbance.

It is useful at this stage to define *Cognition* and *Perception*. *Cognition* can be described as 'all the mental processes that allow us to perform meaningful behaviour'. *Perception* is 'The process by which the brain receives information from the senses, the integration of these sensations and the organisation of them in association with past experiences to make a meaningful and functional whole.' Seating can be defined as ''appropriate equipment within the wheelchair to provide comfort, postural support (correction and accommodation) and pressure relief without compromising function.'

All facets of Perception and Cognition, if damaged by a Stroke, can have an effect on seating. Memory difficulties, a common effect of Stroke, may leave the client with difficulty recalling why a cushion or support is needed and the way it should be fitted. If *Attention* and *Concentration* are effected, the assessing therapist should be aware of the client's inability to follow information, as well as the client's possible difficulty in keeping alert all the way through what may be a long appointment. Difficulties with insight, or self awareness, can cause problems with understanding, compliance and safety issues. Isolating a shape or object from its background, figure ground, or to be able to judge depths and distances are areas of perception that when damaged by a stroke, can lead to problems transferring, as well as moving within the environment. Locating brakes or a seat belt could, for instance, become a problem.

Unilateral neglect, failure to respond to stimuli on the side of the body affected by the stroke, may lead to difficulties moving or transferring safely in a chair or to lack of awareness of posture. A client with *Ideational Dyspraxia* would have problems sequencing due to a lack of understanding of the concept of the task while someone with *Ideomotor Dyspraxia*, although understanding the task, would be prone to clumsy movements and even perseveration, a constant repetition of certain movements. *Dysexecutive Syndrome* in which the persons ability to plan, organise and monitor thinking and behaviour is affected can result in disorganised, slow thinking and impulsive behaviour.

Behaviour was defined as 'the way an individual responds or interacts to the environment in response to an internally or externally driven stimulus'. Changes in facial expression, refusal to cooperate, anger and agitation are all manifestations of ways clients could communicate problems with their seating through their behaviour. Carers saying that the client is a 'different person in bed than in the wheelchair'', he is 'naughty' and deliberately slides out of the chair, he 'refuses' to get up and that he exhibits challenging behaviour during moving and handling, could all be examples of behaviour indicative of seating problems. Behaviour such as the client only wanting to sit out for short periods, constant shouting or rocking or generally being non-compliant are other examples. This kind of behaviour can be divided into that which results in physical or verbal aggression and sexually inappropriate behaviour, and that with the more passive behaviour of avoidance, non-compliance and reduced volition and drive.

The importance of seating in

behavioural management can be shown in several ways. It potentially enables the client to change his environment and be stimulated by this change. With the right equipment the client can do and learn more and different seating can be used for different functions. It can give vital access to social interaction as well as community and leisure activities.

Strategies to use

Alison and Natalie then focused on the strategies that can be used to help overcome these difficulties, emphasising that it was based on their clinical experience.

When assessing a client with *memory/attention/executive functioning/communication* and *behavioural difficulties* it is necessary to be fully prepared. The environment should be quiet and undisturbed with one person to lead the assessment and if possible a family member present to provide information and to reinforce spoken points made by the therapist. If a good rapport can be obtained this will lead to mutual trust and enable goals to be negotiated. It is important for the therapist to be aware of his or her own safety while maintaining a posture and position that is non threatening to the client. The therapist should dress appropriately and stay calm and speak calmly.

A client with *dyspraxia* would need to be given clear instructions while the therapist should be prepared to repeat them until the client is able to carry out the task. The use of markers can be useful to help overcome problems of positioning associated with unilateral neglect or inattention while the therapist should always be aware of his or her own position when dealing with such a client.

For a wheelchair user with *perceptual problems*, repetition, step-by-step instructions and prompts are needed while, if possible, the beneficial effects of different coloured equipment should be assessed.

It is important to remember as general points, that a client centred approach is vital and that adequate time is devoted both to the preparation and to the assessment itself with interdisciplinary teamwork being essential. Stroke patients/clients often become tired very quickly, so fatigue management is important. Verbal and visual reinforcement can be used, perhaps with the involvement of Speech and Language Therapists. Basic seating principles, including 24-hour posture management, unilateral movement, symmetry and spasticity management should be observed while recognising that compromises, especially between comfort and function, are often necessary.

Alison and Natalie ended their presentation by recognising the ongoing challenges presented by lack of resources and low staffing levels as well as that of the behaviour of clients themselves, issues of restraint and function of the wheelchair. The whole process was summed up using the *four 'C's; Complex, Comprehensive* (in terms of the information gathering exercise needed), *Challenging* and *Compromise*.

Nick Sewell,
Occupational Therapist,
Isle of Wight Wheelchair Service

Wordly Wise

1. ARBITRATOR – a cook that leaves Arby's to work at McDonalds
2. AVOIDABEL – what a bullfighter tried to do
3. BERNADETTE – the act of torching a mortgage
4. BURGLARIZE – what a crook sees with
5. CONTROL – a short, ugly inmate
6. COUNTERFEITERS – workers who put together kitchen caxx
7. ECLIPSE – what an English barber does for a living
8. EYEDROPPER – a clumsy ophthalmologist
9. HEREOS – what a guy in a boat does
10. LEFTBANK – what the robber did when his bag was full
11. MISTY – how golfers create divots
12. PARADOX – two physicians
13. PARASITES – what you see from the top of the Eiffel tower
14. PHARMACIST – a helper on a farm
15. POLARIZE – what penguins see with
16. PRIMATE – removing your wife from in front of the TV
17. RELEIF – what trees do in the spring
18. RUBBERNECK – what you do to relax your wife
19. SELFISH – what the owner of a seafood store does
20. SUDAFED – brought litigation against government of xxx

Dynamic Seating To Reduce Lower Back Pain

Speaker: Carmen Platvoet, Engineer, B-Seated

I have worked in the field of Posture and Mobility for 18 months and although I have seen only static seating in clinical practice, I have developed a healthy interest in dynamic seating. My interest started when I attended the Posture and Mobility Conference in Exeter in April 2005. J.M. Malborg gave a presentation regarding his work on dynamic seating and the variety of solutions that he had provided for his clients. The presentation illustrated how typical current solutions had been adapted to allow movement within the system.

I was pleased to see that this year's conference had made provision for dynamic seating so I attended the Wake up Session on Dynamic Seating to Reduce Lower Back Pain.

Carmen A. Platvoet, the session presenter, is an Engineer for B-Seated who are based in Helmond in the Netherlands. B-Seated was founded in 1996 and they provide high quality dynamic seating solutions to a European customer base. The session focused on the 'Flow' range of dynamic cushions aimed at the ageing population suffering with lower back pain, particularly when statically seated.

Carmen began the presentation with a brief overview of lower back pain and how prevalent the condition is in Netherlands. I was taken aback by the fact that up to 85% of people in the Netherlands will suffer with lower back pain at some point in their lives. The incidence of this condition increases in industrialised areas of the country. A large majority of the population is affected and it costs the Netherlands government an estimated 5 Billion US dollars per annum.

The core of the presentation was based around Leo van Deursen's thesis, Low Back Pain and Everyday Activities (Deursen, 2003). Leo van Deursen's research concentrated on the influence of axial spinal rotation on lower back pain. A chart was shown illustrating pain experience while performing some common physical everyday activities of sitting, standing, lying down, walking and cycling. The lowest level of back pain was reported for cycling and the highest level of pain was reported when statically seated. A second chart was shown illustrating torsion rates at the lower spine in relation to activity. The chart illustrated that the highest torsion rate occurred when cycling. In conclusion, it was said that the lowest level of pain was recorded at the highest rate of torsion.

The torsion in the lower spine was measured using a technique common to gait analysis. Markers that reflect infrared light were placed on the relevant points of the body. Cameras that record infrared reflections were used to record the movement of the markers and map the lower spine rotation from vertebrae L4 to T8.

Even with all the developments in mobility products, typical levels of physical activity are still low. The B-Seated 'Flow' cushion aims to provide an evidence based approach to reducing actively lower back pain in line with one of the conclusions of Leo van Deursens's research, that it is not solely intradiscal pressure that causes lower back pain but a lack of axial spinal rotation.

The cushion consists of two plates that move laterally and a 10 cm polyurethane foam cushion top. The two plates are located side by side and move in a linear forward and reverse motion. A motor, which is located under the plates, provides the power to create the linear movement. The motor is powered from a rechargeable battery in the base.

Each plate moves 5 mm individually and in the opposite direction to each other. This creates a cumulative movement distance of 10 mm. B seated describe the movement as "Longitudal Continuous Passive Motion" (LCPM®). The frequency of operation is 6 cycles per minute. The movement of the plates when the cushion is in use causes between 1 and 2 degrees of lower axial spinal rotations.

Carmen explained and discussed the methods used to determine how the B-Seated 'Flow' cushion can provide a significant decrease in oedema and a significant increase in blood perfusion of the skin, particularly in the area of the ischial tuberosities. The cushion provides constant stimulation of the muscles, ligaments and discs of the lumbar and lower thoracic region of the spine. The constant spinal torsion creates "alternating pressure gradient between the centre and periphery of the intervertebral disc" (Deursen, 2003). The consequence of this 'Pumping' action promotes increased disc height and a-vascular nutrition.

Static seating has developed to provide increased support and pressure relief. This is reflected through solutions involving pressure relieving foams, air filled cushions designed to mould around the contours of the

body and powered seating functions, which have not historically been in use for a long period time. Dynamic seating takes the principles of static seating, and introduces movement to create varied support and allow a higher degree of user freedom. The principles conveyed by Carmen represent a new approach in evidence based dynamic seating; to reduce lower back pain through movement induced by the seating.

I tried the cushion. The sensation of movement is very small and not unpleasant. I do not suffer from lower back pain and could not give a definitive answer on whether it would help relieve any kind of pain. I must admit prior to trying the cushion I was rather sceptical. However, the evidence presented in this workshop, together with references given below, suggest that this approach would be effective in helping to treat lower back pain due to prolonged seating. The principles discussed by Carmen are definitely food for thought.

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One minute of silence…..

Today we mourn the passing of a beloved old friend, Common Sense, who has been with us for many years.

No one knows for sure how old he was since his birth records were long ago lost in bureaucratic red tape.

He will be remembered as having cultivated such valuable lessons as knowing when to come in out of the rain, why the early bird gets the worm, life isn't always fair, and maybe it was my fault.

Common Sense lived by simple, sound financial policies (don't spend more than you earn) and reliable parenting strategies (adults, not children, are in charge).

His health began to deteriorate rapidly when well intentioned but overbearing regulations were set in place.

Reports of a six-year-old boy charged with sexual harassment for kissing a classmate; teens suspended from school for using mouthwash after lunch; and a teacher fired for reprimanding an unruly student, only worsened his condition.

Common Sense lost ground when parents attacked teachers for doing the job they failed to do in disciplining their unruly children. It declined even further when schools were required to get parental consent to administer paracetamol, sun lotion or a sticky plaster to a student; but, could not inform the parents when a student became pregnant and wanted to have an abortion.

Common Sense lost the will to live as the Ten Commandments became contraband; police forces became businesses; and criminals received better treatment than their victims.

Common Sense took a beating when you couldn't defend yourself from a burglar in your own home and the burglar can sue you for assault.

Common Sense finally gave up the will to live, after a woman failed to realise that a steaming cup of coffee was hot. She spilled a little in her lap, and was promptly awarded a huge settlement for her injuries!

Common Sense was preceded in death by his parents, Truth and Trust; his wife, Discretion; his daughter, Responsibility; and his son, Reason. He is survived by three stepbrothers; I Know My Rights, Someone Else is to Blame, and I'm A Victim.

Not many attended his funeral because so few realised he was gone.

"Let me inform you" – Users' views

Speakers: Lindsay Dutton, Patient Education Co-ordinator, National Spinal Injuries Centre, Stoke Mandeville Hospital
Dr. David Thornberry, Consultant in Rehabilitation Medicine – Disablement Services Centre, Plymouth
Ruth Everard, Solicitor, London

Three speakers gave their unique perspective of personal experiences of wheelchair services. This session was of particular importance being a Health Care Professional working within the field of wheelchair and specialist seating. Time constraints and large caseloads make it difficult to listen and discuss with service users their views.

It was an enlightening and beneficial session that encouraged discussion from the floor and individual reflection on one's own practice.

1. Lindsay Dutton

Lindsay started by stating she has been a wheelchair user since 1972. Her experiences as a child are rather negative. Her wheelchair were heavy, cumbersome, noisy (lots of clunking) and continuously required repair. Consequently, she suffered long-term damage to her wrists, upper limbs and shoulders as a result of fifteen years as a full-time wheelchair user.

The wheelchair service implied she was at fault for the high level of repairs needed. In reality, Lindsay felt she was trying to be an active teenager wanting to go to college, university and travel. On occasion, repairs could not be carried out until the following day, leaving her immobile. She felt she had no control and no confidence with the wheelchair given or service provided.

Lindsay therefore, privately purchased a wheelchair as she felt this was her only option. This proved to be an excellent experience and the wheelchair never let her down.

Lindsay lost touch with the wheelchair service authority until she heard about the Voucher Scheme. She then purchased an active user wheelchair with a lightweight rigid frame and found the change to be extremely positive. It highlighted to her how much she had been held back previously.

Lindsay meets many wheelchair users in her work at Salisbury. She gets frustrated by the wheelchair 'postcode lottery'. There appears to be no standard criteria for provision across the country. She concluded that a well built, well designed wheelchair that meets an individual's clinical needs should be provided across the board and not be dependant upon where you live.

2. David Thornberry

David believes he has had favoured treatment due to his job and place of work and therefore not had 'normal' provision. He has obtained his wheelchair in the following ways: private purchase; Access to Work and N.H.S. wheelchair. His main experience is with powered wheelchair as he has never been able to effectively self-propel. He states that as health care professionals we should be aware of potential changes in individual's roles, responsibilities and attitudes if their disability is progressive.

David's first wheelchair was a standard self-propel manual with quick release wheel. He needed the wheelchair for casual use. It was used on a family holiday to Norfolk where there were lots of hills. He said his role had changed. He went from being independently mobile to a dependant person. He was passive but a willing passenger pushed by his 5ft. 2" wife. Her role had also changed.

David knew early on that he would be likely to require help for future mobility and independence. He investigated electric powered wheelchairs. There was limited funding at his service therefore he bought privately.

From his experience, he gave the following advice about the private market:

- visit a retailer with sufficient variety of stock and manufacturers,
- preferably visit several dealers;
- know the space limits within your home,
- know what you want wheelchair to do,
- if you are unable to get a timely assessment through the wheelchair service, a private Occupational Therapy assessment may be an option,
- avoid week-end newspaper supplements due to their limited range and possibility of no 'come-back' in some instances,
- be cautious of charity sources (not charity funding) as provision can be inappropriate,
- wheelchair users should consider how their wheelchair will be transported -plane, train, car, van?

- insurance is also important, especially third party for outdoor electric wheelchair provision,
- funding can be obtained via various sources,
- Motability provide electric wheelchair but most people tend to chose cars with their allowance,
- there are a number of good charities who fund equipment such as 'Whizz Kidz' for children,

However many individuals have to rely on their Disablement Services Centre and may be restricted by the waiting list and criteria.

David concluded by stating that provision of a wheelchair should be an enabling event. His quality of life greatly improved with his electric wheelchair. He could access shops, theatres, pubs and so forth.

3. Ruth Everard

Ruth said that a disabled person must put in more effort to have the same experience as an able-bodied person. She was born to an engineer father and a social worker mother who were keen for her to experience as many 'normal' life events as possible. They believed she should be mobile at the age a child without disabilities would be. She was issued with a powered wheelchair at twenty months and qualified recently as a Solicitor. Her parents own the company Dragon Mobility and she uses one of their wheelchairs with a riser facility.

Nicola Tamsett
Occupational Therapist
North Bristol Trust

PMG Logo Redesign Competition

*Design a new Logo for PMG and **WIN £100***

PMG need's a new up-to-date modern logo that represents what the organisation stands for.

Here are samples of the logos we have had in the past:

POSTURE & MOBILITY

Criteria: The logo design's finished size to be no more the 3cm x 3cm in size.

All entries to be submitted no later than the 30th June 2006.

Submissions to be made either by mail to:
Patricia Marks, PMG Administration 2006, PO Box 776, Taunton, Somerset TA1 9BR
or via e-mail to: patricia.marks@pmguk.co.uk

All entries to be judged by the PMG Committee.

The winner will be notified in writing no later than 31st July 2006.

The Regional Medical Physics Department, Bioengineering Section Clinical workload and Research

Prof R J Minns, Mr M Broadhurst (Acting Head of the Section) and Mr B Smith (Head of RREMS)

The Bioengineering Section is responsible for the application of engineering expertise in clinical medicine to improve patient care. In addition to the Regional Centre, facilities are available at the Cleveland, Cumbria and Durham Units. This ensures a local service with regional support. The Section provides both bioengineering and mechanical engineering support to other Sections and Units of the Department, ensuring quality assurance for the mechanical aspects of the Department's activities. The Section has strong links with Communicate at the Regional Rehabilitation Centre and the Centre for Rehabilitation Engineering Studies (CREST) at the University of Newcastle Upon Tyne.

Regional Rehabilitation Engineering

Regional Rehabilitation Engineering, consisting of the Mobility Service (RREMS) and the Technical Aid Service (RTAS), provides engineering support to a wide range of District, Sub-Regional and Regional rehabilitation agencies within the former Northern Region. Good links are maintained with the Medicines and Healthcare products Regulatory Agency (MHRA) at the Department of Health and, in particular, with the Wheelchair Evaluation Centre at Blackpool. A new and developing service, Gait Assessment in the North (GAiN), is being increasingly recognised as important in the area of Clinical Audit. Compliance with international regulations has high priority and the Section has developed its procedures in line with the Medical Device Directive and is a registered (CE) manufacturer of Class 1 rehabilitation equipment.

Regional Technical Aid Service (RTAS)

This service has been available for almost thirty years and is nationally recognised as an appropriate mechanism to deliver Assistive Technology to people with disabilities. The combination of local cover and regional structure means that all technical problems can be referred to the service and an appropriate solution can often be found. Staff in the Section have developed considerable expertise in the assessment of client ability especially concerning communication, computer access and mobility. The service provides technical support to Communicate at the Regional Rehabilitation Centre, Newcastle and important developments have taken place in this arena. Although Communicate offer a short term loan service to establish the value of communication aids before purchase, this is often frustrated because special mounting kits have to be obtained to provide the optimum operational position as determined from the RTAS assessment. We now hold versatile mounting kits that can be used on short term loan allowing complete systems to be tested by clients before a commitment to purchase is made. This considerably enhances the overall level of service provided to clients.

Environmental control coordination

Bioengineering staff are involved in coordination of the environment control service in Newcastle. The role of the coordinator is to ensure that the equipment provided in the client's home meets the needs of the client; this involves the organisation of a case conference, writing of a report, checking the provision and ensuring the installation is successful. A Regional Assessor/Coordinator is now employed by Northgate and Prudhoe Trust who have take over the budget for the northern region – this has led to increased involvement by RMPD in offshoots from the EC provision, such as computer access assessments and technical aid service referrals.

Telecare provision

Telecare is a relatively new area of assistive technology encompassing the remote monitoring of a client's home environment to give early warning of hazards such as gas escapes, wandering, flooding due to running taps etc. Bioengineering staff have been advising Newcastle Social Services on the setting up of a pilot project, in conjunction with the Community Care Alarm Service, to demonstrate the feasibility of provision. This has been in operation for the past 18 months and a full service is preparing to go on stream from April 2006.

Gait Assessment in the North (GAiN)

After many years planning the Newcastle gait lab opened in December 2004 sharing space with the Sport Science Department at the University of Northumbria on the city centre campus. The lab offers 3D movement analysis, force measurement, electromyography and energy consumption measures. The lab is run collaboratively between the Orthopaedics Department at the Freeman and Bioengineering at RMPD with an

orthopaedic consultant, a paediatric physiotherapist and a clinical engineer. Patients who previously had to travel to Oxford or Oswestry can now be seen more locally and demand for the service is good with patients coming from around the Northern region.

The equipment previously used for the 2D gait service in Jarrow has been adapted to provide a mobile video vector service, using three modified electric wheelchairs. The service visits physiotherapy departments around the region and the clinical engineers work with the local physiotherapists and orthotists to provide an assessment service for prescribing and tuning orthoses.

Education and Training

The Section continues to support education and training both within the Department and through contributing to University undergraduate and post graduate teaching programmes.

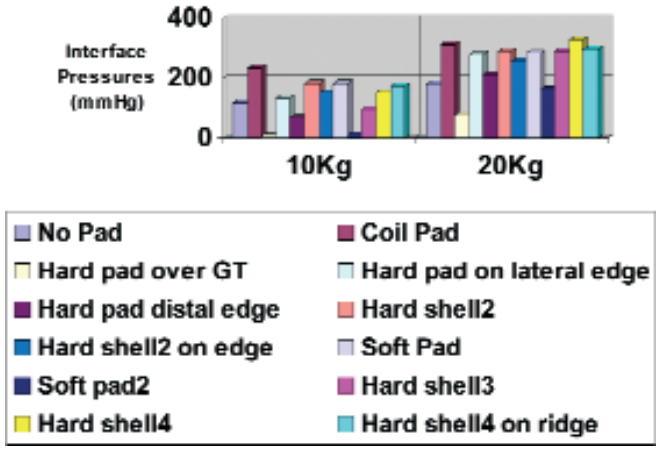
Research & Development

R & D work has taken place in a number of areas encompassing fundamental new work and commercial development. A collaborative project, with Physiotherapy staff at Northgate Hospital, investigating the influence of differing care regimes on standing therapy has been completed and is being written up

An assessment rig has been produced to provide an objective measure of whiplash injury, in an attempt to categorise the severity. Load cells are used to measure the force generated by the neck muscles, to determine whether there is a link between the measured force and the level of pain or decrease in function described by the patient.

Interface pressure pad under a rigid hip protector pad

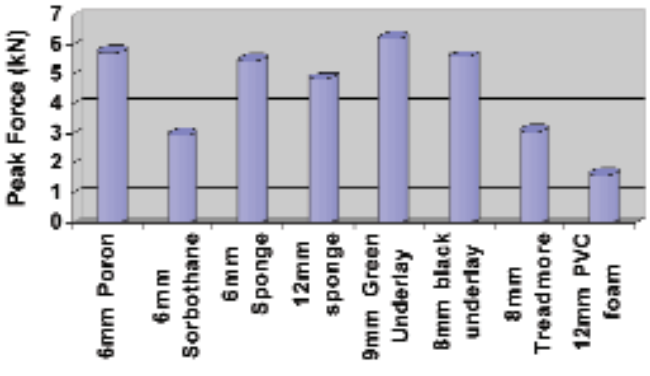
Methods of testing hip protectors are being designed and evaluated to help improve the lives of elderly patients at risk of falling and sustaining a fracture of the femoral neck. The position and the tissue viability aspects of wearing the hip protectors in garments have been evaluated, in particular the interface pressures that may exist whilst lying in bed.



Interface pressures for various designs of hip protector

Flooring research

Retrospective measures such as floor mats, could be put in areas where the elderly are known to fall and break their hip, next to the bed is a common site. However, floor mats present another potential source of tripping and are only transient measures. The underlay, and its role as reducing the energy and peak forces transmitted to the hip from a lateral fall onto the greater trochanter, provides a more permanent solution and because it is hidden from view, aspects of texture and colour are not considered when floor coverings are purchased. Tests on flooring materials using the impact tester for hip protectors clearly show that the impact resistance of conventional floor coverings such as the common Vinyls and carpets are not necessarily improved to levels that would reduce the energy levels and peak



Reduction in impact force on different flooring materials

forces to safe levels with the pressed rubber foam underlays that are commonly used.

Thick underlays greater than 15mm may present with other problems such as traction of wheeled devices (Hoists/wheelchairs) and we are currently evaluating this effect with these new materials. The force to move hoists and wheelchairs over different flooring materials are to be evaluated.

Effect of wheelchair angulation and footrests on interface pressures.

A wheelchair base was developed that is able to display the interface pressures. The frame was angulated at 5 degree lateral slopes and footrests raised and removed to ascertain the pressures under the Ischial tuberosities. A dynamic representation of using the wheels shows the movement of the interface pressures and could be used to show the effect of wheelchair speed on the generation of shear stresses at the interface between the Ischial tuberosities and the wheelchair seat.

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The development of an in-house EMC test facility for the management of risk associated with Electro-Magnetic Compatibility issues in the modification and manufacture of special controls for powered wheelchairs and other Electronic Assistive Technology

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Towards the end of the last millennium, as the then manager of the Special Controls Service, I became increasingly concerned about the complex systems we were implementing for some of our clients. Not in terms of the electromechanical construction techniques, but in terms of the possible adverse effects we may be having on the electro-magnetic compatibility of the systems we were modifying, i.e. increasing their emissions beyond regulatory limits, or reducing their immunity and therefore their safety and fitness for purpose.

The Special Controls Service, part of the West Midlands Rehabilitation Centre, focuses on the needs of people with complex disabilities, with a view to providing a measure of independent powered mobility. This is achieved by an initial assessment, followed by a clinical/technical report to the referring or funding authority. The SCS then undertakes to supply standard commercial items of equipment, often in a non-standard configuration, to satisfy the particular needs of that client. Where suitable commercial equipment is unavailable, the SCS undertakes to modify available equipment, or design equipment or systems that will perform the function required. This often involves modifications to the existing installed electrical control systems.

Electronic components are susceptible to Radio Frequency Electro-Magnetic Interference, but a number of design principals and counter measures can be applied to reduce their sensitivity, in order to minimise the risk of the system malfunctioning with possible dangerous consequences.

It is true that risk cannot always be designed out of systems, and EMC issues are a particularly uncontrollable set of risks as sources of RF interference can be mobile – vehicle CB radio and police, ambulance and fire service radio systems – whilst at the same time the recipient systems are also mobile, i.e. manual and powered wheelchairs. Powered wheelchairs in particular do not have a fail safe mode, and if you are driving your EPIOC across the road, if there was a fault, would you want the chair to keep going, or to stop, in the middle of the road!

One approach to this problem is to do the modifications and hope to God nothing goes wrong. As I had a good knowledge of the regulatory and technical systems requirements

for EMC and Medical Devices, this option was becoming increasingly impossible for any professional engineer to contemplate. And in any case, if something did go seriously wrong, and we had made no attempts to ascertain the EMC compliance status of our modifications, we could be open to litigation and indeed criminal proceeding.

It is currently a legal requirement to make a declaration on the EMC performance of medical electrical and electronic products that are manufactured in house. Whilst a risk analysis can suffice on one or two of the simpler products, the majority must be tested in order to determine and/or confirm their level of compliance. Testing would provide us with a greatly enhanced confidence that the products and systems we supply to our clients are safe for them to use as far as it is reasonably practicable to determine.

By not undertaking the testing of systems provided to clients, our Trust is placing itself at risk. Should an incident occur and the EMC status of the system be called to account, the lack of any testing could reflect very badly on the Trust.

Commercial EMC testing facilities charge in the region of £1000 per day for tests of this nature. This would severely limit the efficiency and effectiveness of the components or systems developed by the SCS as we did not have access to, nor can we pass on to the local Wheelchair Services, costings of this magnitude. For this reason the in-house system was considered.

A bid was made to the Trust for a modest initial sum of money with which to purchase some basic test equipment and to construct what one could describe as a "good amateur" chamber. The bid was successful and in 2000 construction began.

The design of the chamber is a simple timber construction with a steel tin plate outer shield, and an inner lining of woven wire mesh which acts as a partial absorber. Six tons of timber were used in the construction. The design is able to carry another nine tons of ferrite absorber which we plan to install as and when funds allow.

The chamber is 9.6m long, 5.8m wide and 4m high. This is big enough to be upgraded to full International compliance in the future by the installation of the correct RF absorber.

The steel plate was applied by soldering two sheets together to form a 4m length and lifting it into place like wallpaper. This was then nailed into place with galvanized broad headed nails. The sheets are overlapped to form an effective and continuous RF shield which extends over the top and bottom of the chamber.

The door to the chamber is 1.2m wide by 2m high. The door is designed to carry 200kg of absorber, and is big enough to accommodate most types of equipment suitable for testing in a chamber this size.

The floor of the chamber is raised by some 200 mm, which will allow us to incorporate a turntable in the future. The turntable is particularly useful for easily finding the angle of maximum emission for the equipment under test (EUT). Varying the height of the antenna is the other part of finding the maximum emissions. A full emissions scan can take a long time to perform and at the moment we tend to take a more pragmatic approach of testing from the four notional sides of the wheelchair / EUT.

In subsequent years we were lucky enough to benefit from further end of year monies, allowing us to purchase a professional RF receiver, 50W RF amplifier and some other items of test equipment which together allow us to begin undertaking pre-compliance testing with an acceptable level of repeatability and reliability.

In terms of the tests we are now able to perform, we can measure emissions from 150kHz to 2.75GHz, test for susceptibility to ESD and mains transient effects and perform some basic radiated immunity testing – which was our biggest concern. We have also constructed a wheelchair wheel speed monitoring rig, although this needs implementing in a more elegant way by the creation of some in house software to compare the wheel speed readings and perform the calculations as per the limits in the standards for allowable wheel speed variance.

An emerging theme is that the electrical noise radiated from the older powered chairs we are testing, before we have modified them, is close to or sometimes exceeds the limits in the regulations.. We don't yet have a sufficiently large statistical sample to say if this is a significant issue, and we know the noise is predominantly from the motors when they are running. This information may be useful as a predictor for the life expectancy of motors, or for determining if a particular set of motors needs replacing. This may be an opportunity for further research.

We have also found that some of the computer equipment mounted to chairs is very electrically noisy, and while different standards apply for computer equipment, what exactly is the case when that equipment is mounted on a wheelchair in a clinical environment?

We now regularly use the chamber to test wheelchairs which are having more complex modifications such as the mounting of ventilators which require either an on board generated mains supply, or voltage conversion from the wheelchair 24v to 12v for instance. One area of interest that I wish to pursue is to be able to measure the conducted noise being fed into a ventilator by an on-board generated DC supply, or indeed the level of noise being fed back into the wheelchair control loom from such a system. This requires the manufacture or purchase of a Line Impedance Stabilisation Network – or LISN. This has specific impedances, inductances and filter characteristics, but is normally employed for mains measurements. I have yet to explore locating a suitable commercial LISN for low voltage DC circuit measurement.

The final outcome of this work would be the provision of an EMC testing facility meeting all the National and International field uniformity requirements, enabling us to test to International Standards. We recognise that this will take a considerable amount of time, money and effort. The end result however, would be confidence that we are meeting our regulatory requirement in terms of the electromagnetic compatibility of the work of the service. This reduces the risk to the Trust, and more importantly to the clients we serve.

The "Learning Journey"

Dr Linda Marks, Consultant in Rehabilitation Medicine, RNOH Stanmore Middlx

Inserted in this publication, to accompany this article, is a reference guide to the Learning Journey that can be used as a possible aid memoir, future reference resource and potential discussion document. (Learning Journey guide printed on blue paper).

The "Learning Journey" was presented at one of the Wake-up sessions (CPD – "Are you fit to practice….?") at this year's PMG National Trainig Event in Lytham St Annes. As a result I have been asked to provide a short section on 'what it all means' for the broader membership.

The "Learning Journey" was developed by the Health Council of The Prince of Wales' Disability Partnership. It came into being almost by accident as a result of discussions around the General Medical Council document "Tomorrow's Doctors" (GMC 2002). Whilst considering this document, the council commented that there was very little discussion about the particular interactions with patients who are disabled, nor was there much acknowledgement about the changing relationship between doctors and their patients, particularly those with long term or chronic impairments. Furthermore it rapidly became apparent that many of the 'requirements 'for doctors were equally applicable to other health and social care professionals. The resulting document is actually called 'Learning Journey for Health and Social Care Professionals who Work with Disabled People'.

I started the process by trying to define what students needed to know at the various stages of their careers, and decided on undergraduate, postgraduate and consultant. For each of these grades the familiar knowledge, skills and attitudes framework was applied (Miller 1996). However, it was agreed that one of the underlying themes must be lifelong learning (rather than just a linear progression from left to right) with the implication that if one fails to develop one's knowledge it can rapidly become out of date. It was therefore decided to replace undergraduate with *novice*, postgraduate with *competent* and consultant with *expert*. As a result the 'journey' is more of a matrix with the potential for someone to have different levels in different areas, but with the assumption they are trying to continually strive for the expert categories, and not slip back to becoming a novice.

The 'Learning Journey' was developed by an iterative process amongst the council members, their colleagues and contacts, and most critically with disabled people. Although this informal process could be critcised, the matrix was compared with the rigorously structured Delphi Consultation in Different Differences (2005) and there was a gratifying degree of consensus. However in order to address this weakness, the "Learning Journey" is now being validated and developed in conjunction with Keele University.

Currently the "Learning Journey" can be used in a number of ways e.g. as a personal tool for assessing one's own developmental needs; as a template for planning training rotations; as a framework for setting standards when working with disabled people. However it is still in a developmental stage and is likely to be modified with ongoing work.

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Produced by "Partners in Practice": a collaboration between the University of Bristol and the University of the West of England and the Peninsula Medical School.

Learning

"What I hear, I forget.

What I see, I remember.

What I do, I understand."

Confucius

Clients Drop in to Roll Out Faster

Joanne Willett, Senior Wheelchair Therapist and Emma Stacey, Wheelchair Service Manager,
Newham Wheelchair Service

On the 2nd Tuesday of every month, the doors at Newham Wheelchair Service are open for all to "drop-in". Clients, carers, families or professionals are welcome to discuss any matter ranging from new equipment, pressure problems, to simply having a chat about the 'latest Olympic developments'. On this day, the whole team are present allowing efficient yet friendly service, including a cup of tea for those waiting.

The Drop-In-Clinic evolved directly from clients and staffs' desire to have a more accessible wheelchair service and to reduce waiting times. It enables clients to choose the time most suitable for them, providing control over their treatment. Not only can clients be assessed for new equipment, they can access staff for advice including wheelchair fitness, transport issues & holidays, collection of equipment, trial of cushions/ wheelchairs and general update/chat.

The Department of Health (DH 2004) have identified that by offering a choice of time it enables clients to fit their treatment in with their life, not the other way around. They also state that if clients are able to discuss their treatment options, they experience a more personalized health service.

Through discussion with the wheelchair user group, it was decided that the best approach would be to offer the same day of every month and advertise by letters to those on the waiting list and flyers to GP's, social services, Allied Health Professionals (AHP's) and local charities. Information is also accessible on the PCT website. The clinic has been running since January 2004 and has welcomed 295 clients resulting in a reduction of waiting times from 52 weeks to just 4 weeks.

Every user who attends is sent a simple questionnaire asking them about their experiences of the drop in clinic and we welcome all views.

Having audited the drop in clinic, 99% of people were happy with the service and felt they had a positive experience and over 50% of clients were issued with new equipment, examples of client comments made includes:

"Thanks to everyone for assisting myself and my family for dealing with a once living nightmare."

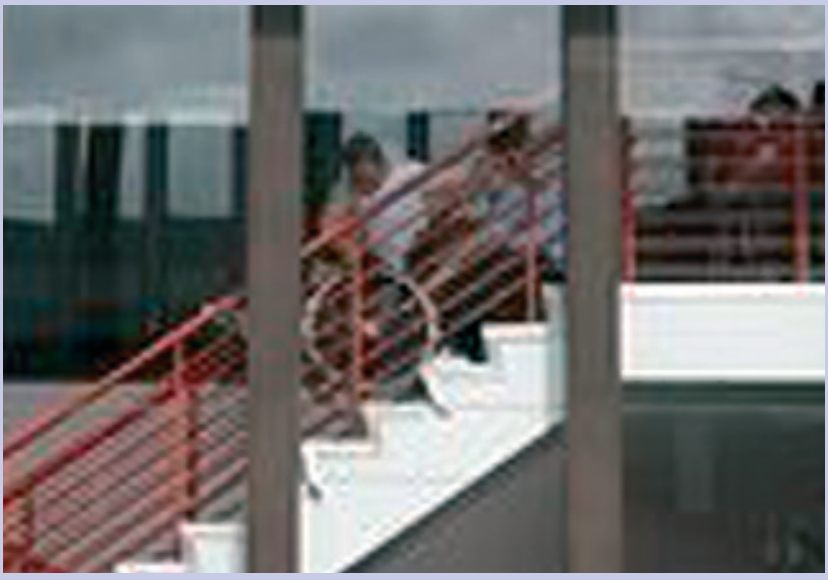
"Everyone was professional yet flexible enabling me to feel relaxed and comfortable with the transition of using a wheelchair"

"I am very happy now because I can go out in my chair, this is possible because of the drop in clinic. Thank you very much!"

It was also discovered that although hospital transport is offered to clients, only 17% choose to use this method of travel, the majority choosing to use public or private transport.

As a spin off a group of ladies who found a slimming club inaccessible, 'drop in' regularly to "weigh in" as a way of watching their weight.

This innovation in service delivery means that clients can now 'drop in', be assessed and 'roll out' faster.



'Easy Access' in 2006?!?!?

Reference:

DH (2004) 'Choose & Book' – Patient's Choice of Hospital and Booked Appointment. DH London pub 40578

The Need for Independant Testing

Michael Edwards and Michael Hare, Rehabilitation Engineers, Leeds Wheelchair Service.

The Wheelchair Centre staff from all the independent District Centre's in Yorkshire Region discussed the statement by PASA and the MHRA, "that it is up to the Purchasers (Wheelchair Centre's) to verify the Safety and Suitability of the equipment we buy on contract and not them."

The outcome from this discussion was a call for the equipment to be independently tested or a full Technical investigation to take place before it is put on contract. Followed by independent testing and technical inspection during the life of the product.

It was a surprise to hear PASA just look at the chairs, cushions and equipment, they do no technical investigations, do not ask for the Technical file, do not verify the claims made by the companies. In the past Technical Assessments were completed by the MHRA's predecessors (STB & MDA) and creditable, critical reports were circulated.

It has become apparent that because there is minimal vigilance towards CE Marking prior to the products being placed on the market and during the service life, some manufactures are cutting corners.

Examples of evidence of this seen recently:
Metallurgic tests show that the steel used in some products is both of inferior quality and inconsistent throughout a single item, so how much could be found across the range of equipment. On the market and offered to the manufacturer's is steel tubing costing 30 pence a metre, some made from recycled steel of uncertain origins. (Standard steel tubing is £1.10 a metre.) Much this cheaper steel is seam welded, some in an inferior manner where the seam splits when bent.

Where this type tubing is used on in a straight section, the faulty welding would not become apparent until stressed in use, heavy client or an accident.

A good coat of paint (or not such a good coat of paint another issue is the quality and varying thickness of paint.) covers a multitude of sins. In the past Non-destructive testing was carried out on these products and the thickness of paint monitored.

Chairs independently crash tested proved unsafe, despite the manufactures claims they were crash tested and safe for use on transport.

Equipment manufactures that make brackets that clamp onto chairs are finding they have to use shims, or grind out the inside of clamps because there is so much variation in size of the tube/square section used in one model of wheelchair. Indicating poor quality control with oversized and undersized tubing used.

Buying cheap sub-standard chairs has been justified on the grounds they are only used for occasional users. What happens if their use changes and becomes frequent? What identifies these chairs from a standard chair of similar build in use? What would happen if one of these chairs got into the general stock when refurbished. Would you know the difference?

Consideration should be given to what would happen if a chair that was sub standard failed and the user was injured and sued.

Chair and cushion materials. The Regulations say that the upholstery on the chair should be fire Retardant and Bio-compatible.

However, when independently tested chairs have failed the fire Retardant standards and the Bio-compatibility standards, despite being CE Marked. Is this an isolated case? Think back to the number of recalls we have had on products from reputable firms. How much is there in service that would fail?

Documentation : There seems to be a lack of the correct Documentation. I am finding chairs being delivered with out hand books, also recently told by a manufacturer that I could not have Technical and Parts manual for a new chair on contract, because they have not been written yet. Life cycle cost that should be quoted in Technical files, we are told that they are either not quoted or not verified.

Taking into consideration that the Medical Devices regulation clearly say that the CE Mark "should not be seen as a guarantee of safety" What steps have you taken to verify the Manufacture's claims?

The Manufacture can exclude certain sections of the CE

requirements and testing if they do not think they are relevant.

Was their assessment correct?

An Example of this is the Regulations say the arms should either come off or stay on if some one tries to lift the chair occupied. Some Manufactures make the arm so it lifts out. If they make it a tight fit to stop it from rattling, this allows the chair to be partially lifted unoccupied then separates and could injure the lifter.

The Regulations also say the Manufacture should risk assess to see if any action could lead to an injury. Do you think the lift out Manufactures have done this?

The Regulations say as a Service we should adhere to the Manufactures maintenance instruction regarding the chairs and using trained staff and the correct parts. - Failure to do so reduces the life of the chair, invalidates the warranty, product liability, and possibly its crash tested status and CE mark. Can we show our Repair Contractors are doing this?

Cushion material. Have the claims for Fire Retardency, Biocompatibility and pressure relief been independently verified? - Swapping lose covers can invalidate all the above.

Do Manufactures get it wrong? Remember that we had a big recall on cushions and canvases

EMC Tests: added electrical equipment (power packs for example) should have and EMC test, because each different chair frame structure has a different affect on the emissions of the electrical equipment, that its Manufacturer cannot test for unless they know exactly where you are going to fit it on what frame.

Is the Information and Labelling on all chairs and cushions adequate? e.g. are Appropriate decontamination and washing instructions available?

Summary

CE Marking does not provide or prove integrity.

If you are in any doubt ask to see the Technical file and satisfy yourself that the product is appropriately CE marked.

- Ensure that the product is issued in accordance with the Manufacture's instructions.
- Train the user in the appropriate product use.
- Ensure that the product is adequately maintained in accordance with the manufactures instructions, trained staff and correct parts.
- Don't modify the product without contacting the Manufacturer or carrying out your own Risk Assessment.
- Correctly marked CE Products should minimise any risk and potential litigation.
- Is the equipment being used for it's intended purpose?

We should not forget about the end user, they deserve an included lifestyle using products that do not put them at risk.

PMG 2006 International Seating Symposium Winner's report.

The Vancouver Experience

Stuart Weir BSc, Greenwich Wheelchair Service, Memorial Hospital Shooter Hill, Woolwich London SE18 3RZ

"No pressure, you can think about it but if you want to ……". "Fantastic, you'll be absolutely knackered but while you're there you must ……" Just a couple of remarks I was hearing within a couple of minutes of learning I'd won a trip to the 22nd International Seating Symposium in Vancouver. I didn't really take in that it was to be held in only three weeks! The rest of my time in Blackpool and the trip home was a bit of a blur.

Having rearranged a number of work and domestic commitments, spent many hours on the Internet sorting flights, accommodation and booking which sessions I wanted to attend, to say nothing of giving the old credit card anaphylactic shock, I was off on my travels.

The journey took twenty one hours door to door and with the eight-hour time difference, it made for a very long day. The journey was straightforward, although we were not told exactly how a member of the flight crew managed to break her ankle during the flight! I'd lay money that if she needs a wheelchair, the baggage handlers won't trash hers like they do ours! Sitting for almost 15 hours was a timely reminder of what some our clients do day after day, though. Think I'll take a pressure-relieving cushion next time.

Held annually, the International Symposium alternates between Vancouver and Orlando with 630 participants including 60 exhibitors attending this year. The format of the Symposium is similar to the PMG Conference (or should that now be Training Event) with plenary and individual sessions, as well as poster displays and exhibition held over a two and a half day period. There was also a one day pre-symposium workshop I was able to attend.

The pre-symposium workshops I attended were informative hands-on events. The morning one was on maintenance, setting up and adjusting wheelchairs. Although a little basic, it suited me after the previous days flight and there is always something to learn.

The afternoon workshop covered the evaluation of switch selection by matching users needs and abilities with appropriate technology and mounting options. Funding issues were also discussed, which seem to be a universal problem. The session ended with an opportunity to try out some of the special controls on a variety of chairs. Great fun!

Dr Martha Piper, the keynote speaker, encouraged everyone attending to question presenters and exhibitors and think how to apply their learning and take the knowledge back to their places of work. Highlighting the constant change to service provision and how easy it is to look back to "the good old days" ,she pointed out that there were no "good old days" for people with a mobility problem. She then gave a personal account of how relatively simple mobility aids have given her elderly mother a new lease of life by highlighting the advances in design and the number of products available in recent years that made this possible.

With this in mind I felt prepared. Before leaving home, I'd already asked the question, "What's the difference between a Conference and a Symposium? - Very little according to my dictionary although I liked the definition that stated it's "a drinking party with intellectual conversation, music etc." So what's the difference between a Conference and a Training Event? It's supposed to be easier to get managers to fund Training Events.

Here's just a flavour of presentations I attended …….

Having cited Karen Kangas when writing a study assignment on powered mobility for young children, I was particularly pleased to see she was presenting two sessions at the symposium – 'Powered Mobility Training for Young Children' and a joint presentation with Lisa Rotelli on 'Mouse Emulation with Multiple Switch Access'.

Her humorous "no holds barred" approach was refreshing to listen to and is clearly a champion for young children to be given the opportunity for powered mobility. The crux of her presentation was how the thinking behind how young children are taught to drive a wheelchair needs to change. A child is not taught to walk by setting up a series of cones and told to walk between them, turn right, turn left etc. so why should a child in a wheelchair? Interesting stuff.

The 'mouse emulation and switch access' presentation used a number

of case studies to demonstrate types of switch available and imaginative ways of mounting them. A video of a switch mounted into the hand splint of a young girl controlling her chair with her thumb was particularly novel.

A trip down memory lane demonstrated just how far special seating has advanced in the past 30 years. Karen Hardwick gave an entertaining and graphical view of the journey from early standard chairs with pillows and restraints, early contouring using FIP with rubberised paint, through to TIS and the use of current day evaluation techniques using pressure mapping, Doppler ultrasound and pulse oximetry (don't ask!) She did however finish up by saying sometimes simple solutions are still the best.

A video presentation entitled "Pulling It All Together: Wheelchair Distribution in Kenya" highlighted how many teams and organisations are required to ship the new and refurbished equipment and then to distribute, set up and train users/carers in its use. It was a huge challenge in a difficult environment and an example of collaborative working making a substantial difference.

"Keep on Pushing" was a presentation on the pros and cons of remaining in a manual, as opposed to using a powered wheelchair. If the manual wheelchair is chosen, prescribed and set up appropriately for each client, then the numerous therapeutic benefits of manual mobility are possible.

The 6th Chris Bar Research Forum was a highly entertaining debate. The subject - "This house believes that client choice takes precedence over professional judgement". The panel was made up of two teams of three plus chairman (Geoff Bardsley) all dressed in courtroom attire complete with gowns and wigs. The arguments were made with great humour and deliberately extreme but important and serious points were made and debated. Two votes were taken. At the start the house was almost unanimous that client choice should take precedent but the second vote at the end was very close – but client choice still won the day.

The networking, as at the PMG Conference is always useful and I met a number of interesting people. With such a short time between winning the trip and going to Vancouver, I was unable to arrange any visits and would have liked to visit Sunny Hill Health Centre for Children, one of the symposiums sponsors. Staff I met from there were both friendly and helpful, not least by telling me of places to visit in Vancouver.

As can be seen, there were presentations from across a wide spectrum of mobility and assitive technology fields and the above is far from comprehensive. Research papers, case studies, best practice ideas were all there. Regarding the individual sessions, I often come away wondering what were the sessions like I was unable to attend. I know there are the abstracts to read but as the majority of presenters use PowerPoint, perhaps copies of their slides could be made available to delegates to download after the conference? Just a thought.

The exhibition was similar to that of PMG. Most of the major players in wheelchair and cushion manufacture were represented; the main differences were those of accessory manufacturers. There are usually one or two products that catch the eye and this was no exception. A product called i2i is a head and neck positioning and support system from Stealth Products. I understand there is a UK importer, so I'll look into it as one of our users would benefit from such a support although price, import costs and CE Marking may well be stumbling blocks.

Of course it wasn't all work. I really didn't want to have travelled all that way and not see any of what Vancouver has to offer a tourist, so I delayed my departure for a day and did a little sightseeing. Vancouver really is a city worth a visit and I would love to have spent more time there. Perhaps a return trip in 2010 to attend the Symposium and watch the Winter Olympics. Very tempting!

So was it worth travelling over 11,000 miles in 7 days? – You bet!
Did I learn anything? – A great deal
Was I knackered? - Extremely

Many thanks to:
- The PMG Committee for making the whole experience possible with special thanks to Barend/BES
- Greenwich PCT for allowing study leave and funding the pre symposium workshop
- Work colleagues for covering while I was away and listening to me recounting my adventures.

…….. and just in case anyone was wondering about the venue. The symposium was held in a hotel overlooking the harbour and waterfront with views across the bay to Stanley Park, North Vancouver and Grouse Mountain. Suffice to say, I heard no talk of digging tunnels and escape committees – as I had in Blackpool!

Listening and Learning Event – London March 10th 2006

Ros Ham

The Care Services Improvement Partnership (CSIP) of the Department of Health's *Health & Social Care Change Agent Team*, has been running events all over England during February and March to try to learn from people's experiences and comments about the wheelchair service. The team have also been looking at other European countries method of service delivery (ie Norway), asking users to complete on line or phone questionnaires (www LOST at present).

The session in London was held at the Holiday Inn in Bloomsbury and the largest number of users was said to have attended this event compared to any of the other events around England – even more disabled loos were comendeered! (Congratulations to wheelchair services for spreading the word and often for bringing users with them). The attendees were from a wide variety of backgrounds including; users (young people and adults), PA/care staff, teachers and teaching assistants, wheelchair service therapists, RE's managers, commissioner (1), Rehabilitation Medicine Consultant (1), charities and numerous DH facilitators. The large group was divided into 6 groups (changing at lunch time so you were with different people), to share knowledge, discuss experiences, discuss the way forward and a vision for the future and the usual 'quick wins'! A novel idea was that of the 'conference illustrator', who produced flip chart sized cartoons during the day, to which the audience were invited to add their comments of agreement (yellow post it) or disagreement (pink post it) to the illustrations. (These will be available to us all to use in the future, with no breach of copyright I gather). The report of the day will be compiled for the CSIP lead and all attendees will be sent copies of this. The report of this 'Learning day' will be added to the information gained during the whole exercise and will provide evidence fore the Minister about wheelchair services.

So **'WATCH THIS SPACE!'**

What is BSI and what relevance does it have to wheelchairs anyway?

Alison Johnston, Clinical Specialist Physiotherapist, Bromley Wheelchair Service

The short answer is …….lots!

ISO a worldwide federation of national standards bodies, BSI is one of these. The work of preparing International Standards is normally carried out through technical committees. "Assistive products for persons with a disability" is one of these committees and "wheelchairs" is a sub committee of this.

The work includes reading and commenting on draft standards, so that the final document is technically accurate and relevant to the subject it refers to. The committee is made up of representatives from interested bodies such as the MHRA, CSP, BAOT, emPower, wheelchair manufacturers etc and is chaired very effectively by Alan Lynch from the MHRA.

The main groups of standards discussed will be familiar to many of you, and include 7176 parts 1-26, 16840 parts 1-4 and 10542 parts 1-5. These cover many aspects of wheelchairs including transportation, measuring, crash test dummies, batteries, brakes….the list is very long!

These standards are used by manufacturers to ensure the wheelchairs we purchase are safe for our users. So by now you will be realizing that these standards are very relevant to those us concerned with the provision of wheelchairs.

The production of a standard is a long process. There are international working groups, made up of people who are experts in certain areas; their task is to draw up new work items that will be looked at by the committees in all countries involved. The document will have comments submitted from these countries and changes made to the original. This is then returned to the committees for re-reading until it gets to an agreeable format and content. The work is finally produced as a FDIS (final draft international standard) and at this stage only editorial comments can be entered. (Literally dotting the "i"s and crossing the "t"s!) From here the standard is voted on and accepted (or not) as an International and/or British standard. There is a time frame that all this has to be completed within, and there is nothing more frustrating than carrying out all this work, only to lose it off the schedule because it has overrun its time.

The last year has seen a lot of revisions of standards, whist still working on some new ones. Some of these, e.g. 7179-19, which covers wheelchair tie-down and occupant restraint systems (WTORS), were not adopted as British standards first time round, but with the revision comes the possibility of changing it to make it more acceptable.

There is a lot of dry reading involved in this committee work. However it has been a chance to make change and there is a lot to be learnt from these standards. My intention was to attend a few meetings and find out what happens before actually getting involved. I think it was half an hour before I began questioning what was written and it's relevance to the world of wheelchairs!

NHS PaSA SCEP CCG for PAC?! Update, March 2006

Dave Long

Right, now I've got your attention I shall explain. This topic was discussed in my Chair's report to the AGM. It is the NHS (you should know what this stands for …) Purchasing and Supply Agency's (PaSA) Supply Chain Excellence Programme (SCEP) Customer Consultation Group (CCG) for the Pressure Area Care (PAC) national framework agreement in relation to products for posture and wheeled mobility i.e. what are commonly called, perhaps unhelpfully, "pressure cushions", although it now also extends to back cushions too.

The CCG has five representatives from wheelchair services who have given input to the development of the new cushion specification for the tender exercise which is currently underway.

We have been impressing on the PASA team the clinical importance of these cushions beyond pressure distribution into the areas of postural and functional aspects which are so critical to those who use these devices.

Following Mike Hare's report in the last newsletter you should be aware of the proposal for the possible use of reverse e-auctions as part of the tender process. This is the opposite of e-bay bidding and therefore has the potential to drive prices down, but also has the potential to squash product choice and innovation which may ultimately affect effectiveness for the user.

As well as contributing to discussion at the CCG on this subject I also put my thoughts in writing to Val Atwood, who is part of PaSA and is heading up the CCG, and the text of this letter follows:

5th January 2006

Dear Val

I am writing on behalf of the Posture and Mobility Group executive committee to express concern about the e-auction process and how it might relate to seating cushions.

At the Customer Consultation Group meeting for the Pressure Area Care national framework agreement held yesterday in Wolverhampton, we discussed the possibility of some PAC products going into an e-auction process. Based on the explanation that an e-auction can only be used for comparable products I am concerned how these comparisons will be made.

In all my clinical work I liaise directly with the client to assess for the most suitable cushion. This will usually involve the client trying out a number of cushions to see which they find most comfortable and from which they can achieve optimal function, such as propelling and transferring in/out of their wheelchair.

While for simple blocks of foam of the same size, density, etc, comparisons would probably be straightforward, it is difficult to see how e-auctions would be useful for more complex cushions. There is a lot of variety and I don't believe conclusive and comprehensive research findings exist to support the use of one cushion over another in a particular situation.

It is therefore of paramount importance that the user in need of a cushion continues to have a wide variety of options open to them and that the prescriber is able to find a cushion to meet that individual's need. The e-auction process could be extremely detrimental to meeting this need if it is implemented in such a way that comparisons are not made on equal terms.

If you decide to take the concept of e-auctions further with regard to the PAC agreement I would urge you strongly to make reference to the relevant clinical members of the CCG or indeed a wider clinical audience with experience in the field. Such a group can advise on the suitability of including any product type in an e-auction thus ensuring we continue to have available choice in the products our users require.

I hope these comments are useful. If you would like to discuss anything further please feel free to contact me.

With best wishes

Yours sincerely

David Long, PMG Chair

Clinical Scientist, Oxford Centre for Enablement, Nuffield Orthopaedic Centre NHS Trust

cc (by e-mail).
1. *John Cooper, Director for MET, Clinical Equipment and Specialties, NHS PASA*
2. *Neil Griffiths, Lead Category Manager - Clinical Consumables, NHS PASA*
3. *Paddy Howlin, Category Manager for Wheelchairs, CES and EAT, NHS PASA*
4. *Andy Gudgeon, Category Specialist, Wheelchairs, CES and EAT, NHS PASA*
5. *Melissa Gaselee, Category Specialist for Pressure Area Care and Surgical Instruments, NHS PASA*
6. *Ray Hodgkinson, Director, British Healthcare Trades Association*
7. *Sarah Lepak, Assistant Director, British Healthcare Trades Association*
8. *Martin Moore, Vice-chair, PMG*
9. *Olwen Ellis, Administrator for PMG*

I await a reply from Val but discussions in the interim with Andy Gudgeon from PaSA, whom many of us know, are favourable. I therefore have hope that we will continue to have choice available to us and that cushions for wheelchair users will not be seen simply as commodity items like tins of beans.

NHS-PASA Briefing: February 2006

Andy Gudgeon, NHS Purchasing and Supplies Agency

As part of a recent review of the Wheelchairs and Associated Equipment framework agreement, the Wheelchairs, CES and EAT Category has introduced additional volume based discounts and retrospective annual based discounts within the existing national framework agreement.

These terms are available to all NHS organisations (including Collaborative Procurement Hubs, Supply Management Confederations), Wheelchairs Services, their contracted repairers and maintenance providers and Local Authority equipment services within England and the home countries. The new discount structures where introduced into the national framework agreement on 1 December 2005.

The review undertaken will also see additional appliances being added to the framework agreement in February 2006. Further information will be published on the PASA website shortly.

A briefing note regarding the recent adaptations to the national framework agreement can be viewed at http://www.pasa.nhs.uk/wheelchairs

Organisations wishing to take advantage of the revised terms introduced to the national framework agreement MUST read the terms and conditions applicable. Detailed information regarding the terms is provided in Parts D and E of the briefing note.

For further information, contact Andy Gudgeon on 077 7577 7943 or via e-mail at andy.gudgeon@pasa.nhs.uk.

RADAR – the disability network www.radar.org.uk

Chris Brace Campaigns and Research Manager

RADAR will be producing a new practical and independent Guide which will help disabled and older people find and finance mobility scooters and powered wheelchairs. Called **'Get Mobile'**, the new Guide will be published at the end of March 2006. The entire project has been kindly supported by Motability.

'Get mobile' will provide an independent source on the kind of products available, the methods of purchase and how to finance the purchase as well as advising on operating costs. The market is still in the process of raising its standards, so there is also in-depth advice on the buyer's rights as a consumer and sources of redress as well as straight forward advice on avoiding any potential pitfalls.

The Guide will be distributed through the Motability and Radar networks.

The website is www.radar.org.uk. The best number is the switchboard, 020 7250 3222 and to ask for Simon Higginbottom.

Assisted Technology Forum January 31st meeting held at College of Occupational Therapists, London

Ros Ham

This meeting was attended by approximately 60 members including representatives from the following organisations: Disability Right Commission, various charities, BHTA, BAPO, PMG, BSRM, CORE,DLF, Assist (formerly DLCC), FAST, MHRA, IPEM, NAEP, NHS PASA, RADAR, DofT, Skills for Health. It was an extremely full day which was I found very interesting, useful and well organised. Free too!

The study day began by Keren Down from FAST, reminding the audience of the Audit Commission report (2000) and the AT Forum position paper (Summer 2004) which covered 5 Key proposals;

- Standards of service delivery,
- User Involvement
- Service integration
- Professional development and Training
- Information

Two areas of the key proposals had now been worked on; Standards and Professional development. These would be reported at this meeting.

It was a full prog

nd workforce competencies in assistive technology

i. Competency framework for Trusted assessors – community equipment. (Assist UK formerly DLCC and South Bank University). Maggie Winchcombe and Dr Claire Ballinger updated the group on this work and explained that this had originated out of the work of the ICES project and had been supported by a Dept of Health Section 64 grant. The work covers a set of pre-determined competency for the assessment and provision of equipment – a competence Framework. There are seven outcomes and they act as a benchmark for assessor component in different roles and sectors and for education and training courses. The work is available to be down loaded from www.tap.assist-uk.org or hard copies are available from Assist UK

ii. Assistive Technology – an education, a career, a partnership. Keren Down told the group about this document which was published in November 2005 and is available from the FAST web site. The document covers;
   - Documenting indicators of need
   - Highlighting the agenda to be delivered
   - Mapping current activity
   - Establishing an effective approach.

   The document is available from; www.fastuk.org or info@fastuk.org 020 7253 3303

iiii. National Occupational standards in AT – a partnership approach. Rav Jayram (Project lead Skills for Health) Skills for Health (SfH) was created 2002 as a work force solutions that are flexible in healthcare. Rav spoke about the National Occupational Standards, NVQ, core competencies and optional competencies. The academic and vocational pathways, career

framework and qualifications frameworks were all mentioned and the plan is produce 'building blocks' for the national workforce to acquire. The Skills for Health are currently mapping occupational standards for AHP and the competencies required to implement the NSF for long term conditions. SfH are linked to the Knowledge Skills framework which is closely associated with Agenda for Change. For more information look at; www.skillsforhealth.org.uk or call 0117 922 1155 or email:office@skillsforhealth.org.uk.

2. **Assistive Technology Service Standards – a mapping survey and report.**
   i. Standard setting – the government's approach. David Wardle covered the recent government documents that affect the NHS and the Annual Health Check such as NICE, Standards for Better Health, NSF's, Healthcare Commission. This talk was a foundation to the standards document talk that followed.
   ii. Existing standards – a mapping survey and analysis document launch. This document (Assistive Technology – Standards for Service Provision Wardle D, Mitchell M, Down K, Final Consultation draft January 2006), has been produced by FAST and is now in its final document stage. It is available on the FAST web site and comments from interested parties are welcomed. This tome is a very useful collection of the AT standards and relevant documents that are out there at this time. It is anticipated that staff will welcome this collection of useful documents relevant to their practice. Documents can be downloaded from www.fastuk.org or details from 020 7253 3303 email: info@fastuk.org.

3. **Centre for Evidence-based purchasing (NHS PASA) AT evaluation.** Stephen Harbron updated the audience about the work of this department which 'replaces' the old MDA evaluation service and links with the MHRA evaluation centres (ie Derby). Evidence/evaluation of products will be closely linked to the PASA purchasing strategy in the future and the department covers health and social care priorities. Members interested in the evaluation of products should review the site. Further details are available from www.pasa.nhs.uk/cep and submitting products for evaluation is through the web site also:www.pasa.nhs.uk/cep/evaluation/prose_project

4. **Information needs of users and professional DLF data and SARA update.** Nicole Penn-Symons updated the group about SARA developments and how this helps clients/users obtain information about basic equipment for independence through questions on the web. Useful tips are also given on the site and users are directed to expert assessments for more complex equipment.

www.dlf.org.uk/sara or call 0845 130 9177 for more information.

Assistech WIKI – Sharing Assistive Technology Information

Marcus Friday Clinical Scientist, Barnsley Hospital, Medical Physics and Clinical Engineering Service

I'm sure most of you would agree that sharing experience and contributing to the evidence base for our field is a positive aim. Fellow Clinical Scientists, Simon Judge and Aejaz Zahid, have set up a website for this very purpose at: www.assistech.org.uk/doku.php

Being a 'WIKI' anyone registered can contribute and edit any page on the site. The two main areas are termed the evidence base and experience base.

Evidence Base – an area describing and reporting research and evidence within the field. In this area you can: learn how to access evidence base tools; read and publish literature searches; discuss and review evidence; brainstorm, develop and publish research areas; document evidence on aspects of the field.

Experience Base – there is a wealth of experience (rather than evidence) within the Assistive Technology field. This area offers somewhere to store and share this experience. It's purpose is to serve as a permanent version of the well established assistech mailing list – www.jiscmail.ac.uk/lists/assistech.html

The experience base has a section for sharing experience in the area of powered mobility, so feel free to contribute to this or any other section. You can also post announcements relating to meetings, conferences, calls for papers, training, jobs and new products.

It's a new resource and all of us have the opportunity to contribute to its success.

EU revision of the Medical Devices Directive

Sarah Lepak, Assistant Director, BHTA, Email: sarah.lepak@bhta.com

The EU Commission, having consulted during the spring last year, has now published proposals for amendments to the Medical Devices Directive (which it is obliged to review regularly).

The first meeting of the EU Council to consider the proposed amendments to the Directive, as published on 22 December 2005, will be held on 23/24 January 2006. The MHRA will be attending and need input from industry so they can go armed with evidence of any amendments which will cause problems, and why.

The link below will take you to the page from which you can access the proposals: http://europa.eu.int/comm/enterprise/medical_devices/revision_mdd_en.htm

If you cannot find your copy of the existing Directive, you can get it at: http://europa.eu.int/eur-lex/en/consleg/main/1993/ en_1993L0042_index.html

The changes that the Secretariat believes may cause members concern are outlined below, but please look at the whole thing carefully, as we may have missed something!

Clinical data:

The amendments seek to make it very difficult not to provide clinical data/clinical evidence for all medical devices (only Annex X 1.1e gives even a hint of a get-out clause). A new clause (k) has been added to Article 1.2 which defines "clinical data".

We need examples from you of products where a requirement to provide clinical data would be impractical etc – perhaps product designs which have been on the market for many years without significant alteration; or where clinical evaluation would be nonsensical because the product is so simple/low value; or where it is not feasible to carry out a proper clinical trial because numbers will be too low… the more actual examples you can send in, the better. The MHRA will then be in a position to make the case that this should not be a requirement across the board.

New requirement to include on labels "the respective code of an internationally recognized generic medical device nomenclature" (Annex II, 13.3 b):

The MHRA already intends asking "why?"; if there is a compelling argument as to why this should be done, they will propose one nomenclature should be used (they will suggest the obvious one to use – GMDN = the Global Medical Devices Nomenclature).

However, the codes may be too broad to be meaningful, and there may be medical devices which cannot be coded using GMDN. Please let me know of any examples where this may pertain (and any compelling arguments why the principle in itself is a bad idea – perhaps in terms of practicality).

Info on GMDN can be found at: http://www.gmdn.org

Single authorised representative:

For those of you who import (and may be an authorised representative), there are two clauses which you need to look at. The first is Article 14 (2) where it has been added that where a manufacturer who places devices on the market under his own name does not have a registered place of business in a Member State, he shall designate "a single" authorised representative.

This would mean that for a manufacturer outside the EU, all of their products would have to go through just ONE authorised representative. Would this be a problem? If so, please give examples.

Linked to this approach, Annex II 13.3 (a) says that information to be supplied on the label or outer packaging or instructions for use shall contain in addition, the name and address of the authorised representative "where the manufacturer does not have a registered place of business in the Community".

(The thinking behind this is clearly to make it easier to trace who is responsible in the first instance when there are adverse incidents etc.)

Custom made devices:

Article 4 (2) brings in a new requirement that the statement called for in Annex VIII (about who the manufacturer is etc) "shall be provided to the named patient".

It has been pointed out that in the case of, for example, dental technicians, they will manufacture the device, but the dentist will fit it and the technician has no control over whether the patient receives the statement. It would therefore be impractical to enforce or police. Would it cause problems for orthotics and prosthetics?

A new Section 5 has been added to Annex VIII which extends the requirement for post market surveillance and adverse incident reporting to custom made devices.

Lifetime of a product:
Throughout the document, new reference is made to the necessity to keep technical documentation for a period at least equivalent to "the intended lifetime of the product as defined by the manufacturer…." Previously, it simply had to be kept for a period not less than five years. We anticipate that this requirement may present problems and we do not think it has been thought out properly. For example, do you have products out there, which are still going strong many years after they were first sold? (Perhaps, for example, a wheelchair frame – all the moving parts may have been replaced over time, but the frame itself is still going strong?) Is the lifetime of the product entirely dependent on proper maintenance? Please send in any examples where you would find it difficult to state the intended lifetime of the product, and/or difficult to keep the technical documents for that length of time. (The question has also been asked, is it intended life from the date of first sale?)

Other additions which, although self-evident, may give you pause for thought and perhaps necessitate an overhaul/revision of all your technical files, are:
Annex I 1 – devices must be designed and manufactured in such a way…."This shall include reducing, as far as possible, risks posed by user error due to the ergonomic features of the device and its intended user environment".
Annex I 13.1 – each device must be accompanied by the information needed to use it safely and "properly, taking account of the training and knowledge of the potential users…"

AbilityNet, Adapting Technology – Changing Lives

Jo Greenwell, Head of Public Access/Sector Services, AbilityNet (SouthEast Region), Tel: 01932 814 558

AbilityNet is a national charity with nine regional offices and is the UK's leading provider of advice on computing technologies and disability. We work with disabled people in all age groups at home, in education and at work. We have experience of working with people and groups with different disabilities and know what obstacles they face in daily life when using computers and what solutions are available. Our approach is practical and pragmatic, judging the value of a solution by its suitability to a particular individual and their needs, rather than by a product's technical sophistication.

Technology offers the potential to open up access to information and services, for example:

- Being able to fill in information on the computer is becoming a required skill; it may be the only way some people can fill in a form and for others without assistive software such as voice recognition or adapted keyboards and mice it may be impossible.
- Accessibly designed web sites can be used by visually impaired users who may have no other way to access that information.

Our work with individuals includes free advice and information available through our national helpline and where appropriate, access to remote assessment over the internet or assessment at an AbilityNet centre. For example, individual wheelchair users have been able to try out suitable keyboards and mice that can be used on a wheelchair tray. Windows Accessibility options can be tried and adapted to the individual user's needs and users can also try out assistive software, such as text prediction to speed up text input or voice recognition software. This information can be used to adapt an existing system or to purchase new equipment. Individuals are able to purchase equipment and training from us if they wish.

Our work with organisations includes work with schools, Further Education (FE) colleges and Universities, learndirect, UK Online centres, local and national voluntary organisations, the NHS etc. We have also advised on the accessibility of IT facilities, supplied adaptive kits with training, carried out individual assessments, run clinic days etc. We have advised on issues faced by wheelchair users when trying to use a standard height workstation, as well as adaptive hardware and software that can be beneficial.

We also deliver courses to professionals at our centres, or on site at the workplace and these can be tailored to specific needs. Our accessible website provides a wealth of information and advice including over 80 factsheets which give detailed information on a wide range of assistive technology, services and organisations that can help you get the most out of IT for your clients.

To find out more or for advice and information call freephone 0800 269545 or visit our website at www.abilitynet.org.uk

Education and Conference Planning Sub Committee

Martin Moore, Wheelchair and Special Seating Service, DSC, Southmead Hospital, Bristol, BS10 5NB
Tel: 0117 9595474martin.moore@nbt.nhs.uk

I hope that those of you who were able to go to the recent National Training Event in Blackpool had a good time. For those who sadly missed out, you missed a cracker!

The general consensus was that we had some excellent speakers and presentations and that the educational content was of a high standard.

The venue was a little different to what we are normally used to but I hope that any difficulties didn't compromise the whole experience too much. I have to say the committee was disappointed with the quality of the food and some of the equipment and staff at Pontins, promises were made on several site visits and the food at those times was both hearty and very tasty. So, sorry for the disappointing aspects of the event. Having said that, the consensus from the feedback forms was that it was an interesting choice and one we should re-visit in the future.

Only kidding!

Still, most of you seemed to enjoy yourselves at the dinner and the show, some things remain constant no matter where the venue is.

As you will have read and heard before, venue finding is both time consuming and difficult. Many venues can only offer us partial coverage of our requirements, Pontins were able to cover all aspects and at time of booking were the only venue able to accommodate our size and budget.

Next year we will be holding the event at Warwick University, near Coventry on the 19th and 20th April. Many of you may remember the conference in 1996, they have expanded since and it will be nice to make a return visit.

The sub committee is going through a little transitional period, I am stepping down as chair, the new chair will be formally announced soon. I will still be involved and we are going to focus on running some 1 day events around the country. We have had many requests for this and when we have run courses they have always been oversubscribed. There are many talented presenters out there and so we will hopefully be able to get some good focused days for you to come and enjoy.

If you have any burning topics that you want covered or have been on 1 day seminars / courses and can recommend any speakers / tutors, please let me know, my contact details are printed below.

Many thanks for your support for the Blackpool event, it was difficult for many of you, what with Exeter in the same financial year.

Keep your eyes out for training opportunities both in the post and on the website.

Here are some of the feedback comments you gave us, thank you for taking the time to give us these, we'll bear them in mind when we look at next years event.

Conference quality was high as always, but the Hi-de-Hi conference venue did distract from the content

An 'interesting' choice of venue. We think somebody has a sense of humour! (we appreciate the difficulty of finding sites)

Many thanks – a very enjoyable conference

Dreadful food, slightly dodgy accommodation (I won't come here for a holiday!!)

Excellent conference content!

Very well organised programme

Excellent conference content – best for a while

I am sure the Committee will have been disappointed by accommodation/venue as well, but I have now seen a Pontins' Entertainment!

Start time change between both days is confusing. It would perhaps be helpful to remind us at the end of day 1 that start time is ? hour earlier. Unfortunately this resulted in me missing WS6 lecture which I was really keen to attend. Agreed it is in black and white on our timetable, but extra verbal reminder would be very helpful

In some ways a more low key conference but I found it more relevant to day to day practice in content

Poor accommodation but great easy on site locations for talks, exhibition and dining facilities

In the many years I have been attending, it is the first time I have been disappointed. It is a pity because content was very interesting.

However I would like to thank the committee for all their hard work – I am glad that people are prepared to do it…for my benefit! Thank you.

Research & Development Sub Committee

David Porter

A scheme to fund small scale research studies was successfully launched during 2005. At the 2005 AGM the PMG membership had agreed to allocate £20k for this purpose. The scheme was open to all members of PMG proposing to carry out a relevant research study and the application process involved an outline proposal followed by a full application which was peer reviewed. Seven applications were received and offers were made to fund four studies covering a range of topics. Summaries of the four studies being funded are shown below.

The PMG membership agreed to allocate further funding to the scheme at the AGM this year and therefore there will be a fresh round during 2006. Outline proposals will be invited during the summer. Please visit the PMG website for more information on the application process. The new application deadlines will be posted on the website in May.

- visit www.pmguk.co.uk and click on the *Research* tab, or
- go direct to http://research.pmguk.co.uk/

Dr David Punt, Faculty of Health (AHP), Leeds Metropolitan University

Wheelchair mobility for people following stroke with perceptual problems.

- What is the nature of wheelchair navigation problems in people with unilateral neglect?
- Can affected people benefit from theoretically-driven strategies to improve navigation?

Stroke is the primary cause of chronic mobility problems in the UK and affected people are often dependent on wheelchairs for their mobility. Some people who could otherwise benefit from a powered wheelchair are denied this opportunity due to acquired perceptual problems. These difficulties (e.g. unilateral neglect) can reduce their navigational skills such that they are generally considered unsafe under the relatively strict guidelines for provision. However, recent progress through research concerning the rehabilitation of perceptual deficits may offer affected people the opportunity to improve their navigational skills and thus offer them the opportunity to take advantage of powered mobility. This study will aim to harness these promising approaches to rehabilitation that have hitherto been mainly confined to measuring performance on laboratory-based tasks and apply them to the real world activity of wheelchair navigation.

Alice Goldwyn, Chailey Heritage Clinical Services, Rehabilitation Engineering Service

A study of the Biomechanics and Kinematics of Standing During Development and in Children with Cerebral Palsy. A three phase study.

- Is there a recognisable pattern of biomechanical and kinematic activity during set tasks in typically developing children in standing?
- Is this pattern different for typically developing pre/early walking children and children with cerebral palsy?
- Can the pattern for typically developing children be replicated in supported standing?

This study aims to define the parameters for standing support provision. The study has three phases. This application for funding is to cover some of the costs in the first phase of the study. The first phase of the study is a cross sectional experimental design using a convenience sample of adults to develop the methodology for measuring the biomechanics and kinematics of standing during set activities. This will inform the protocol used in the later parts of the study.

The second phase will collect control data from typically developing children and investigate if there is a recognisable pattern of muscle activity and joint position. Children will be tested in free and supported standing. The third phase will collect data from children with cerebral palsy and compare this to patterns obtained from typically developing children.

Lynne Hills, Occupational Therapy, Spinal Cord Injury Centre, RNOH

Balancing manual wheelchair stability and ' tippiness' for functional independence.

- Does increased 'tippiness' lead to instability?

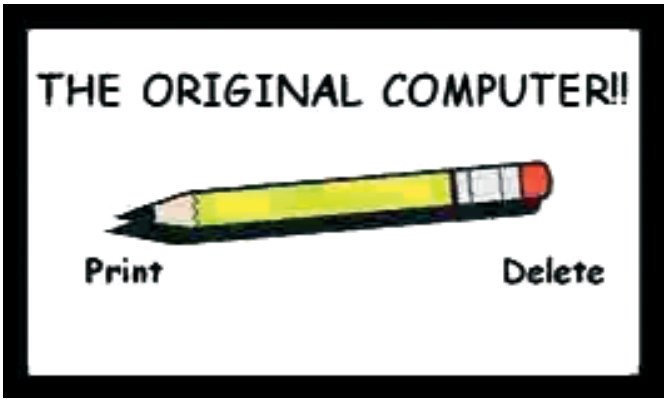
There have been many studies measuring the static stability of manual wheelchairs but very little on dynamic stability, or how this relates to static stability. A smaller static tip angle has traditionally indicated reduced wheelchair stability. However, wheelchair users with advanced wheelchair skills can manage this effectively and increase their functional independence. The aim of this project is to measure dynamic functional performance over different terrains typical of everyday use and make a comparison with the wheelchair user's indicated static "stability". For 10 experienced SCI wheelchair users their static stability will be measured using a tilting platform, and their dynamic stability determined by measurement of the weight distribution using instrumented front castors, and propulsion forces and acceleration using an instrumented wheel (SmartWheel) during standardised functional tasks.

James Hollington, Eastern Region Postural Management Service, Enable Ireland

Is Static Interface Pressure Mapping Reliable for Ranking Pressure-Relieving Cushions for Active (Dynamic) Wheelchair Users?

Pressure mapping is a readily available technology to assist clinicians in pressure care assessment. 'Currently, seat interface pressure distributions are measured statically with the patient in a fixed (static) position' (Kernozek, & Lewin, 1997 &1998). However, seated activities such as wheelchair propulsion have been shown to be dynamic (Tam, Mak, & Lam, et al's 2003; Taylor, 1999). No studies have looked into whether finding the optimal pressure-relieving cushion through ranking static interface pressure maps reflects the optimal surface for dynamic sitting.

Active wheelchair users will each have pressure-relieving cushions ranked according to their interface pressure measurements under static and dynamic conditions. Measurements will be made using an FSA interface pressure mapping system and a wheelchair ergometer. Agreement between static and dynamic ranking will be investigated using the Spearman correlation coefficient.



Recent Publications & Web Sites

Ros Ham

Recent Publications

1. Review of Class 2and Class 3 Powered Wheelchairs and Powered Scooters.

   Dept for Transport January 2006 PPAD 9/72/89

2. NSF for Children, young people and maternity services. Responding to domestic abuse. A handbook for professionals DH (January 2005) www.dh.gov.uk

3. NSF for Children, young people and maternity services. Palliative Care Services guide (Nov 2005)

4. DDA update (Dec 05)

5. Older and disabled people to receive virtual money box. www.dh.gov.uk/publicationsandstatistics/pressreleases

6. 'You can make a difference' Improving hospital services for disabled people 40210.(June 2004)

   'You can make a difference' Improving primary care services for disabled people 40581.(Sept 2004)

   A5 DRC/DH publications for Primary Care Services and Hospital services. 08701 555455 or email: dh@prolog.uk.com

7. Improvement Leaders' Guides. (2005) NHS Institute for Innovation and improvement

   From Email: institute@prolog.uk.com

8. SCOPE Free booklets

   'A lot to say': A guide for social workers, personal advisors and others working with disabled children and young people with communication impairments.

   'The good practice guide' for support workers and Personal assistants working with disabled people with communication impairments.

9. Harris A, Pinnington LL, ward CD (2005) Evaluating the impact of mobility-related assistive technology on the lives of disabled people: a review of Outcome measures BJOT 68;(12);553-558.

10. DH Our health, our care, our say: a new direction for community services. A brief guide. (2005) NHS

11. SIA newsletter: 'Forward' sia@spinal.co.uk

12. Able magazine Email: enquiries@cravenpublishing.co.uk

13. ASPIRE newsletter. Email: info@aspire.org.uk

    Wheelpower & Step Forward. Limbless Association. Email: grania@limbless-association.org

14. 'All you need to know… to help and advise your clients!' Motability www.motability or 0845 456 4566

Useful web sites

1. www.info4local.gov.uk Sign up and receive regular updates from government departments

2. www.assistech.org.uk

3. Wheelchairnet.org

4. Rehabcentral.com

5. www.easystand.com/downloads/pdf/Funding_guide.pdf (from Carolien Uddin)

6. Dept for Work and Pensions Media Centre – statistics on Disabled people www.dwp.gov.uk/mediacentre/pressrelease/2006/feb.

7. The Health Foundation www.health.org.uk is seeking applications for the Engaging with Quality in Primary Health Care. Details from the web site. Deadline 31st March 2006.

Minutes of Annual General Meeting 2006

Stardust Room, Pontin's, Lytham St. Annes, Lancs
8th February 2006

Chair: David Long
Vice-chair: Martin Moore
Treasurer: Barend ter Haar
Minutes: Patricia Marks (PMG administrator)

Apologies were received from: Penny van Berkel, Russ Jewell, Joanne McConnell, Ayo Menkiti, David Porter.

Dave Long welcomed everyone to the 2006 AGM.

Minutes of the AGM 2005

Lone Rose proposed that the minutes of last year's AGM be accepted. Steve Russell seconded and the minutes were approved unanimously.

Chairs Report

The chair thanked all committees and sub-committees past and present for getting PMG to where it is now – a thriving group.

The **conference planning sub-committee** was thanked for all their hard work in pulling together another event and in less than a year.

Financial planning and treasurership – the chair acknowledged and thanked Barend ter Haar for his work in supporting PMG in his role as treasurer for many years. Barend is standing down as treasurer at this AGM.

Communications sub-committee is the result of the merger of the editorial and website sub-committees to encompass all forms of PMG communication. The chair thanked Ros Ham for her work with this committee, the production of two excellent newsletters and a template for the future. Ros will be standing down after the production of the spring 2006 newsletter.

Scottish Posture and Mobility Network

The Scottish Seating and Wheelchair Group (SSWG) has reformed into SPMN after an internal review and the aim is that PMG will maintain and develop strong links with this group in the future.

Committee

The Chair confirmed he would be standing down this year by rotation after his three year term in office. He thanked Ros Ham, Russ Jewell, Charlie Nyein and Jacqui Romer for their hard work on committee as all have now stood down. Ros put a huge effort into the newsletter, as described above, with assistance from Charlie in the early days. Jacqui was very active on main committee and the 2005 international conference planning group. Russ was Chair from 2002 to 2003 and put in place the sub-committee structure which has flourished and given more time in main committee for addressing issues other than conference planning.

Robin Luff (also Chairman of ISPO) asked if we were taking forward the minute from last year's AGM of PMG approaching ISPO about joint conferences. The Chair stated that the international conference planning committee was in the process of making a number of approaches to similar organisations in preparation for an international event planned for 2009/10.

Henry Lumley proposed the adoption of the Chairs report.

Linda Marks seconded and the Chair's report was approved unanimously.

Research sub-committee

Lone Rose thanked David Porter (sub committee chair) for this hard work in getting the research fund application process underway.

Lone reported how the research fund worked. It was confirmed that the application standard was very high and that 4 applications received full funding. It was reported that there was a surplus of £3080.

Questions from the floor for the Research sub-committee:

Q: Was research proposed relevant to PMG?
A: It was explained that the sub-committee judged applicants on the basis of relevance to the objectives of the group, as laid down in the constitution.
Q: Will the research reports be published?
A: It was confirmed that publication of the reports was a condition of the applications. The reports would be made available to the membership via the website.
Q: Is the research funding exclusive to a PMG topic or can it be used with matched funding?

A: The content of research criteria to be checked and confirmed to the membership.

The sub committee proposed that the fund be topped up to £20,000 for the forthcoming year. The membership were asked to vote on this with the proviso that the conference would generate surplus and were unanimously in favour. Motion carried.

Treasurer and Membership Secretary's Report

No accounts available to be circulated; the accountants were not able to complete the work in time for the AGM which is earlier in the year than usual. To be presented at the next committee meeting. The treasurer presented a brief financial report and proposed that there be a postal ballot once the accounts are complete for approval.

The membership were asked to vote on the proposal of the postal ballot. The membership voted unanimously in favour. There were no votes against or abstentions.

The Chair thanked Barend ter Haar for his excellent service and for putting the group on a very sound financial footing. Barend was presented with a gift on behalf of the Committee and the membership.

The Chair then announced that Henry Lumley would be taking over the role of treasurer and with the membership's approval would employ a book keeper – see future financial planning below.

Elections to Committee

There were three nominations to join the committee:

Nigel Shapcott
Kevin Humphries
Monica Young

All three accepted. No objections were raised.

Martin Moore confirmed that PMG has one space available on the committee and asked if anyone from the membership would like to join as a co-opted member for one year that they either speak to himself or Dave Long at the end of the session.

Membership Eligibility – proposed change to the constitution

The chair then proposed a change in the constitution, as per circulated papers. In essence the change will allow any individual to join. Previously membership was not open to individual "users" but to representatives of user's bodies. The membership voted unanimously in favour. Motion carried.

Future Financial Planning

Henry Lumley made a presentation on the future budgeting for PMG highlighting the costs of running a group such as PMG and the requirement for paid administrative support to support voluntary committee members, especially for the purposes of conference planning, membership renewals, day to day financial duties and to support the administration of the research fund.

It was proposed that the membership fees should support administration costs, plus the development of the website. It was proposed the PMG membership fee rise to £25 per annum, the first rise since the group's inception fourteen years ago.

Chair of ISPO, Robin Luff – indicated that his group had the same issue and had to raise their fees. He supported the proposal.

Barend ter Haar indicated his support for the £25 increase.

The membership were asked to vote on the proposal of increasing the membership fees. The vast majority were in favour, three votes against, no abstentions. Motion carried.

Barend ter Haar also requested that the membership support the committee with the completion of their Gift Aid forms. Andrew Frank showed his support.

Any other competent business

None.

Date of Next Meeting

20th April 2007, Warwick University.

PMG Committee Membership

Member	Profession	Date on	Date due off	Extension
Dave Calder	Joint Head of Rehabilitation Engineering Division	2005	2008	
Barend ter Haar		2001	2004	2009
Kevin Humphries	NHS Commercial Director	2006	2009	
Dave Long	Clinical Scientist	2002	2005	2008
Henry Lumley	Assistant General Manager, Musculo Skeletal Directorate	2004	2007	2010
Joanne McConnell	Senior Mobility Therapist	2005	2008	
Linda Marks	Consultant in Rehabilitation Medicine	2005	2008	
Martin Moore	Senior Rehabilitation Engineer	2002	2005	2008
Sue Pimentel	Senior Occupational Therapist	2004	2007	
David Porter	Elizabeth Casson Trust Reader in Occupational Therapy	2004	2007	
Lone Rose	Clinical Specialist - Physiotherapy	2004	2007	
Nigel Shapcott	Head of Rehabilitation Engineering	2006	2009	
Emma Stacey	Manager/Occupational Therapist	2005	2008	
Monica Young	Rehabilitation Engineer	2006	2009	

What is yor trade?

On a more factious note, a sad tale of job applications.

A man went to a job centre and was asked, "What is your trade?" He replied:

My first job was working in an orange juice factory, but I got canned; I jus couldn't concentrate.

Then I worked in the woods as a lumberjack but just couldn't hack it, so they gave me the axe.

After that I tried to be a tailor but I wasn't suited for it, mainly 'cos it was a so and so job.

Next, I had a go working at Kwik Fit, but it was exhausting.

I wanted to be a barber, but I couldn't cut it.

Then I tried to be a chief – figured that it would add a little spice to my life – but I just didn't have the thyme.

Do you remember when I attempted to be a deli worker? Unfortunately, any way I sliced it, I couldn't cut the mustard.

My best job was being a musician, but I found I wasn't particularly noteworthy.

I studied to be a doctor but I didn't have any patients.

Next, was a promising job in a shoe factory but my manager cobbled together some excuse and booted me out.

I became a professional fisherman but discovered that I

couldn't live on my net income.

Thought I might become a wizard, so I tried that for a spell.

I managed to get a good job working for a pool maintenance company but the work was too draining.

I got quite a stretching job at a zoo, feeding giraffes, but was fired as I wasn't up to it.

So then I got a job in a gym but they said I wasn't fit for the job.

Next, I found being an electrician interesting, but the work was just shocking.

After many years of trying to find steady work, I finally got a job as an historian – until I realised there was no future in it.

Then I turned to the wheelchair service and became a:

i. Rehabilitation engineer …
ii. wheelchair therapist…
iii. Clinical scientist…
iv. Wheelchair manager…

but……

Abridged from 'Bodiam, Ewhurst Green, Staplecross and Cripps corner Parish News' February 2006

An experimental study in chickens for the pathogenesis of idiopathic scoliosis

Machida M, Dubousset J, Imamura Y, Iwaya T, Yamada T, Kimura J,
Department of Orthopaedic Surgery, Nihon University School of Medicine, Tokyo, Japan.

Experimentally induced scoliosis was investigated in pinealectomized chickens using pathologic and neurophysiologic means. A total of 90 chickens were tested; 30 served as a normal control, 30 received an autografted pineal body in the intramuscular tissue of the trunk, and 30 underwent pinealectomy without autograft. Scoliosis developed in all pinealectomized chickens within 2 weeks, showing gradual progression during the next 5 or 6 weeks. At 3 months, the three-dimensional spinal deformity consisted of lateral curvature and vertebral body rotation, resulting in a prominent lordoscoliosis at the thoracic level. In contrast, scoliosis developed in only 10% of the autografted chickens. Histologic examination revealed no pathologic change in the brain in either the pinealectomized scoliosis group or in the autografted nonscoliosis group. Cortical potentials in the scoliosis group were delayed, thus suggesting conduction disturbance rostral to the brain stem. Although the relationship between the cause and effect is uncertain, these findings implicate neurotransmitters or neurohormonal systems in the pineal body as a major contributing factor in this type of experimental scoliosis.

MeSH Terms:

- Animals
- Brain/pathology
- Brain/physiopathology
- Chickens
- Electric Stimulation
- Evoked Potentials, Somatosensory
- Female
- Hindlimb/physiopathology
- Male
- Pineal Gland/physiology
- Pineal Gland/transplantation
- Reaction Time
- Scoliosis/etiology*
- Scoliosis/pathology
- Scoliosis/physiopathology
- Spine/radiography
- Transplantation, Autologous

Don't Forget

To fill out BOTH your questionnaires

See pages 7 and 55

Do wheelchair services have a future? – Update, March 2006

Dave Long

I write this report as an update from the last newsletter article as the Care Services Improvement Partnership conduct "listening" events up and down the country to gather the views of "users" and "professionals" on wheelchair services.

I was able to attend the event in Birmingham at the beginning of March. Of course many people from wheelchair services were there and knew each other well but there was wider representation from users, charities, manufacturers and even someone from the local transport service. We had various workshops throughout the day, facilitated by Dee Hamilton and her team (none of whom are DH employees). The workshops were designed to generate discussion in order to gather peoples' views, feelings and experiences of wheelchair services. These were recorded on paper for further analysis by the team. There was also a conference illustrator present who listened in on our conversations, picked out the most interesting ones and from these produced a series of cartoons which we were then able to support, criticise, disagree with, etc. Overall it was a useful day and seemed to be supportive of wheelchair services by recognising the pressures we are under and the limitations in resource we have to contend with.

The steering committee for the wheelchair service project is due to meet again at the end of March / early April and Bernadette Simpson, who is heading the project, is due to submit her report sometime in the Spring. It is helpful that the PMG has been asked specifically to contribute to this important project and even more helpful that there are three other PMG members on the steering group representing other groups (Linda Marks, Henry Lumley and Peter Gage).

I flagged a concern in the last newsletter regarding the possibility that the expertise needed to prescribe wheelchairs might be overlooked by the review. While at the very basic level it might be appropriate to provide wheelchairs as commodity items through community equipment stores, I believe the steering group has convinced the DH team of the need for qualified assessment of individual, and frequently complex, levels of need with regard to wheelchair prescription.

It will be interesting to see what the final report looks like and I expect that it will be widely available by the time of the next edition of the PMG newsletter.

POSTURE & MOBILITY GROUP

PMG NEWSLETTER & WEBSITE - SURVEY

The Editorial committee would like to know what you think about the website and newsletter

Please spend a few minutes in completing this survey *(if not completed in Blackpool)* and mail back to Patricia Marks, PMG Administration, c/o PO Box 776, Taunton, Somerset, TA1 9BR

Website:

1. Have you ever accessed this website? Yes ☐ No ☐
2. What have you used the website for? bookings, information, membership, research. *comments*
3. Were you able to access the information you needed? Yes ☐ No ☐

Newsletter:

1. In which ways do you find the newsletter useful? *comments*
2. What other features would you like in the newsletter?

• Courses available	Yes	☐	No	☐
• Regional Update	Yes	☐	No	☐
• Jobs available	Yes	☐	No	☐
• Research features	Yes	☐	No	☐
• Book reviews	Yes	☐	No	☐

Additional suggestions:

3. Is there anything that you would remove from the newsletter? *comments*
4. Would you be willing to write an article for the newsletter? *comments*
5. What are your views on a peer referenced journal? *comments*

Thank you for your time, if you have any further suggestions/ideas or would like to contribute to the either the website or journal please contact Emma Stacey at emma.stacey@newhamhealth.nhs.uk

Does the use of a knee block influence hip deformity, functional ability and pain in non ambulant children with bilateral cerebral palsy?

Lead Researchers: David Porter (d.porter@brookes.ac.uk), Shona Michael (ssm@medphysics.leeds.ac.uk), Terry Pountney (terry.pountney@southdowns.nhs.uk),
Research Assistant: Frances Wainwright (fwainwright@brookes.ac.uk)

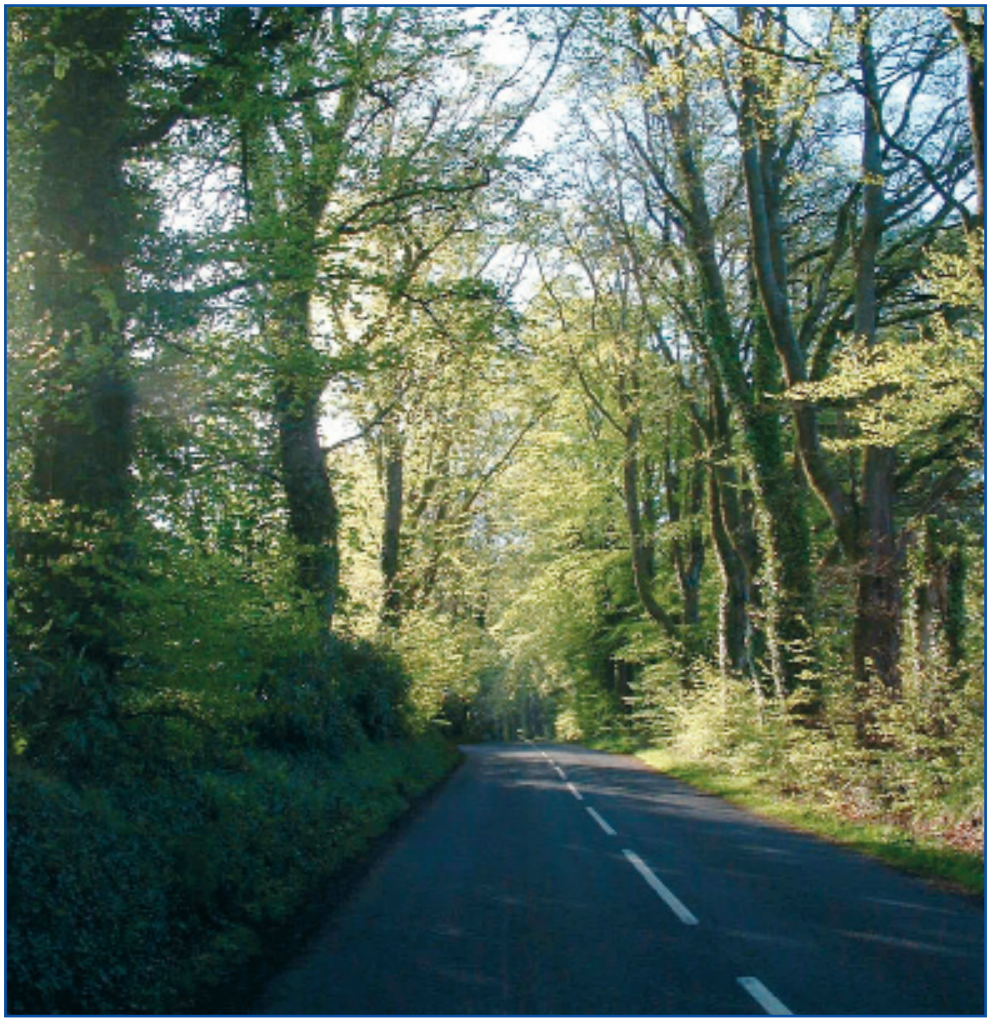
A new study is about to commence that will seek to answer the above question and in doing so provide much needed evidence in this area. It is thanks to generous funding from Remedi and Cerebra that this important project can take place.

A randomized controlled trial will be conducted in two centers – Oxfordshire and Leeds, over the next 5 years. The subjects, 100 children between the ages of 2 and 12, will be randomly assigned into an intervention group using a modular seat with knee block and sacral pad or control group, using the same seat but without the knee block and sacral pad.

The outcome measures will be: Hip migration percentage, hip joint range of motion, sitting ability on the Chailey scale, upper limb function, pain and the Quebec User Evaluation of Satisfaction with Assistive Technology (QUEST).

Considering the lively debate at the PMG conference in 2004 (Nottingham), there is much interest in this area. With this in mind, the researchers would very much like to hear from clinicians to discuss the project. The research team looks forward to keeping PMG up to date with findings as they emerge, both through this publication and at conference.

A research assistant has been recruited for the Oxford center but a vacancy still exists in the Leeds area for a 0.5wte researcher. Again, please contact the research team if you would like further details of this post.



POSTURE & MOBILITY GROUP

National Training Event 2007

We would like to invite you to join us at
The University of Warwick for the PMG National Training Event 2007 which will be held from the 18th – 20th April 2007

Keep a watch for updates
on the website:

www.pmguk.co.uk

The next issue of Posture & Mobility will be **October 2006**. The deadline for this issue is the **15th September 2006**. The aim of Posture & Mobility is to keep members in touch with current events in the world of posture and mobility and to provide the opportunity to share ideas and learn of new initiatives. Articles should be between 500 and 2,000 words. Photos and/or cartoons are welcome as are jokes and mindbenders etc. Please send contributions, preferably by **email or post,** to **Patricia Marks** at **patricia.marks@pmguk.co.uk or PMG Admin, PO Box 776, Taunton TA1 9BR (send all pictures in their original format, not as part of a word document)**. Otherwise post a floppy disk, compact disc, or print in Times New Roman 12pt.

Something for Everyone

Spring into Action

Whether you need a chair for occasional or day long use the new Action 2000 is ideally suited for both. This lightweight, aluminium chair is very easy to handle for either client or carer and has many adjustable features. Available as either a transit or self propel model with a maximum user weight of 120kg, this is a high quality low cost chair.

Make mine a Pronto!

This well designed, centre wheel power chair will move you around in comfort and with style. Its compact base and fingertip precision controls gives optimum manoeuvrability, and it comes with a 5" seat riser as a standard feature, ideal for those awkward objects. No need for a kerb climber as the Pronto M61 features Invacare's unique Sure Step Technology that allows you to move smoothly over thresholds and kerbs.

Spring is here with the new Azalea

For optimum comfort and adjustability, the new Rea Azalea Assist from Invacare has it all. This multi-adjustable chair features tilt in space and is ideal for clients who require comfort and stability all day.

A Lightweight Performer

Invacare Kuschall have built their name around quality, good design and exceptional handling, and the new K-series is now even better. This lightweight chair (only 9.2kg based on 36cm seat width) has been re-designed to keep all visible parts to a minimum creating a sleek and dynamic model for everyday living.

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