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Provision Models in Posture & Mobility

POSTURE & MOBILITY GROUP

1st Announcement and Call for Papers

National Training Event 2009

Warwick University

15th – 17th April 2009

Papers (for platform and/or poster)

Contributions are invited from the PMG membership and all professionals working in the rehabilitation, posture and mobility fields.

Full details of the format required for abstracts and the submission form itself will be found on the PMG website (www.pmguk.co.uk) in due course. Abstracts should be submitted online via the website; however if you do not have access to the internet please contact the conference organiser.

Abstract submissions open on PMG website (www.pmguk.co.uk) from 1st September 2008

Please ensure that all abstracts adhere to the submission criteria. The abstracts for the 2009 event will be published in the conference compendium.

Bursaries

The Posture & Mobility Group will be offering a limited number of funded places at the event. This is an opportunity for individuals working in the wheelchair and special seating service, or those who have a particular interest in this specialist field, to apply for a funded place. Bursary applicants must hold current membership of PMG.

Successful candidates will receive free attendance to the lectures (this includes lunch and conference refreshments), plus bed & breakfast accommodation and evening meals at the venue. Travel expenses will not be paid.

As a condition of receiving the award, a bursar agrees to write a report of 1000 words about one of the 2009 PMG National Training Event plenary or parallel sessions they attend.

Bursary applications open on the PMG website (www.pmguk.co.uk) 1st September 2008.

Prizes

Best Free Paper: Free attendance to NTE 09

Best Poster: £100

'Last person standing' award: free attendance at the International Seating Symposium 2009.

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Front Cover: Dave Long teaching a group of students at Oxford Centre for Enablement

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Editorial

I find it hard to believe that it's time to write my editorial again, and yet again the house is full of Easter eggs, but my children are guarding them from me. This is a very busy time of year for PMG with the last minute preparations taking place for NTE and, by the time you read this, many of you will have hopefully enjoyed another valuable learning and networking experience at our annual gathering.

For those of you who didn't attend the AGM at NTE, it's all change on the committee: new faces, old faces in new roles, and some committee members, like me, having finished their term on the committee. You can read more in the journal about various changes in appointments. Although my term on the main committee has finished you are stuck with me as editor for another year. I have decided to carry on so that we maintain continuity. We are still a young sub-committee which has welcomed with open arms some great new members in the last year; this seemed like a good reason to stick around and do another two journal issues as editor by becoming a co-opted member of the Publications & Marketing sub-committee (PaM) instead of being on the PMG executive committee. I will no longer be chair of PaM and Jane Harding has agreed to take on that role. We have recently welcomed Carolyn Nichols to the group as a co-opted member. Carolyn will be a great asset to the team with her wealth of clinical experience as a Paediatric physio working both in the UK and the USA in a range of highly relevant roles to PMG. I was delighted when Carolyn approached me after a plea for help in the last journal – it's fantastic news as it means that some of you do actually read it!

Please take the time to contact us with your feedback after reading any of the articles: we would love to hear your thoughts – how does your work differ from what you read about in this edition? I have said it before but will say it again – it is *your* Journal and we will welcome your opinions and especially your articles. We will be here to guide you through it if it's your first attempt at writing, and it will be worth it when you see your work in print. Go on, you might surprise yourself, and your colleagues!

Many thanks to all the contributors in this issue. There really is some excellent reading matter and I think this issue more than most reflects its theme ***Provision Models within Posture and Mobility.*** We have excellent main articles from Ragna Flo, Andrew Frank, Ros Ham and Lloyd Walker, and were excited to be approached by Margaret McGrath from Enable Ireland offering her article after a plea in the last bulletin. We also have an interesting case study from Lindsey Melarakis, a paediatric OT in Bristol, about a child using special controls and how they progressed, plus the second installment on Crash Testing from Bob Appleyard.

Thanks as always to the editorial team. It really is team work at its best and I wouldn't be staying as editor for another year if you all weren't such a great team to work with. Hey, you know what's coming next… its huge thanks to Olwen – as always she has been my right (and left) hand woman and I would be running for the hills if she wasn't there to prompt me at every point. Diolch yn fawr Olwen.

Happy reading and best wishes for a pleasant summer. The next issue will include reports from NTE08. We hope to announcean extra theme in the bulletins shortly and I wait in hope of attracting some new writers.

Joanne McConnell, April 2008

Journal Production Team:

Editor: Joanne McConnell

Editorial Team: Barend ter Haar, Geoff Harbach, Jane Harding, Helen Hislop and Carolyn Nichols

Editorial Assistant: Olwen Ellis

Printer: SPS Communications, Ilford, Essex.

Deadline for copy for the Autumn 08 issue is 15th September 2008, and the focus will be the National Training Event 2008. The aim of the Posture & Mobility journal 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 submitted can be between 500 and 2,000 words. For details on format, or if you need to write a longer article, please contact **Olwen Ellis** at **olwen.ellis@pmguk.co.uk** or **Telelephone: 0845 1301 764**.

Letters from the Chairs

I write this column from the other side of the NTE so I hope it was good! By the time you read this I will have stood down as Chair of the PMG. I am very pleased to be passing on the baton to Nigel Shapcott who I am sure will take the group forwards in leaps and bounds over the coming years.


Dave Long in 2003!

My Chair's report presented at the AGM contains details of the previous year's activities, and is published later in this journal, so I won't repeat these here. Instead I will simply say that I've had a great time as Chair, and that I feel ever more motivated to work in the field of 24 hour postural management and wheeled mobility. It is exciting to be involved with real people and to assist them in finding successful solutions to tricky problems. Our field is growing. Our knowledge is increasing. The science is deepening. What a great place to be! The only downside is that our budgets get trickier, but it is down to you and to me not to make our work fit the budget but to shout from the rooftops for the real needs of our clients!

I hope you stick around in this field. I am certainly planning nothing else. See you around,

Dave Long, Ex-PMG Chair, April 2008

First of all a very large thank you to Dave Long for all his work as Chair of PMG over the last 5 years. I have worked with him on the Committee for a number of years and have found him to be a great listener, and very supportive at all times. Dave has overseen the development of a core of expertise, administrative support, and research & development opportunities which have made a huge difference to the way PMG works. He will be a very hard act to follow. Thanks again Dave for all your work to date, and I look forward to your contributions over the coming years.


Nigel Shapcott

National Training Event (NTE)

During the last few months I have been thinking about what the priorities are for PMG, and covered these at the NTE. They are important to cover in this article also, as there are a significant number of people that do not manage to come to the NTE for a number of reasons. I am concerned about the people that cannot or choose not to attend our annual meeting and hope to address this to some extent by webcasting and Special Interest Groups. In my new role the PMG NTE is an opportunity to listen to the membership, to catch up with the latest advances in the field and of course to network in a convivial atmosphere – a place and time to recharge batteries.

Webcasting

Under Dave's leadership we have embarked upon a new venture to try to reach out to those who are unable to attend the NTE by providing them with the opportunity to sign up for webcasts of this year's plenary presentations. I am hoping that by the time you read this, we will have made this happen, and we will let you know via email how to access this service. If it is successful it may well have significant implications for continuous professional development for those working within the NHS and industry. We have also started to negotiate with other organisations in our field in the UK and North America to see if we can mutually share conference proceedings and other training events by webcasting. Clearly it will need to be done in a manner that complements the conferences and finances of all these organisations. We

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look forward to your feedback on this experiment.

Special Interest Groups (SIGs)

One of the key issues for us at the annual NTE is how we need to develop it to reflect the needs of our membership. As some of you may know, RESNA, the Rehabilitation Engineering and Assistive Technology Society of North America, is a similar organisation to our own. 20 or more years ago it was very top down, R&D orientated, which created some resentment amongst service providers who felt left out. Eventually a series of SIGs were set up which between them had representation on the Board (the equivalent of the PMG Committee). Their SIG structure has matured, and SIGs now form a backbone of RESNA's activities: a way of communication within the membership; a forum for development of priorities; national policies; paper presentations; and lifelong friendship and support. If we adopt a SIG structure my feeling is that it will improve our organisation and will improve what our membership get from PMG. We would need to: allow time for SIGs to get together at the NTE; develop list serves and internal support structure to support the SIGs; and we would need to develop organisational rules for SIGs. A SIG structure might enable us to attract other smaller groups to ally themselves with PMG forming a larger, more effective and robust organisation. There are a lot of possibilities and I invite your feedback.

PMG Committee

Lastly, by the time you read this, we will have a new look to our committee. I welcome the new committee members and look forward with enthusiasm to working with them and the "oldies" in the pursuit of the goals of PMG.

Thank you.

Nigel Shapcott, PMG Chair, March 2008

Making a Penguin

How many designers does it take to create a "penguin" poster? In the case of PMG, quite a few, but there are some key people who should be thanked for making the brand new promotional poster *(right)* and getting it to the PMG stand at Warwick NTE on time. This poster will be displayed at all PMG sponsored events in future.

The designer-in-chief of the new Penguin was Geoff Harbach from the Publications & Marketing sub-committee, and, after weeks of sourcing photos and debating their merits, the final push came from Barend ter Haar getting the finished design to the printer who somehow beat the deadline.

Many other members and companies helped on the way and, even if we didn't use your photos in the end, I would like to acknowledge your efforts in seeking out suitable images and sending them to us, or giving us permission to use your photographs:

Active Design, Association of Wheelchair Children, Contour 886, David Harrison, Helping Hand, Lynne Hills, Ginny Humphreys, Alison Johnston, Leckey and, of course, Catherine the main star of the poster. Thanks to you all.

Joanne McConnell
Publications & Marketing Chair, 2005/8

Provision Models in Posture & Mobility

The Australian Perspective

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Abstract: *Australians with physical disabilities often face challenges to their full participation. These come not just from the environment and limitations of existing equipment, but also from the government equipment schemes that purport to maintain and enhance their function and thus activity. While many end users and professionals are focusing on participation and achieving their maximum potential (in line with the ICF understanding), the funding schemes are struggling to find equitable ways to meet need with severely constrained funding that fails to reflect the economic savings good AT offers the community as a whole.*

The Island Continent

Over 1.7 million Australians rely on Assistive Technologies (AT) to live independently. In 2003 almost 118,000 Australians (about 8.5% of the population with disabilities) were using a wheelchair or scooter for mobility. The vast majority of Australia's AT is imported. This is a shift over the last twenty years and mostly the result of the influence of multinational operators, some of whom have purchased local manufacturers, acquired their key innovations, and then used the brand to act as a bridgehead against parochial consumers and funders. While this change has probably not seen a significant reduction in choice, the substitution of product has resulted in less access and influence over designers and manufacturers. Many posture and mobility solutions now offered in Australia are targeted at the needs of metropolitan users, while the options for rural and remote Australians have reduced.

Australia is an island continent of almost 7.7 million square kilometres in size, a land area similar to the United States of America. It has climatic conditions from snow to arid desert and tropical rainforest, and the population lives mainly around the east and south coasts, but with a notable population in small rural and remote communities inland. People with disabilities thus face an ongoing challenge to gain access to effective AT service delivery and support, and also to find products suited to where they live. To illustrate the challenge some face, Australians who live in the western tropical regions may see their electronic equipment fail either through condensate or conductive dust getting into control boxes. Such a user would probably have had the equipment issued in the state capital (a subtropical metropolitan setting) that morning, before flying home. In order to have the problem rectified there can be a delay of up to two weeks while parts are sourced from an international supplier and then fitted.

History and increasing fragmentation

The Australian government support for equipment for people with disabilities primarily commenced in 1981 with the Program of Aids for Disabled People (PADP). Those lobbying for such a scheme were seeking assistance with the high capital costs associated with AT in order to participate in mainstream society, and in particular to gain and maintain employment. On introduction however, the scheme was established with a means or income test – the focus was to be on meeting the needs of poorer Australians unable to afford AT. The PADP was a federal scheme and operated through state service centres (usually Department of Health offices) under a consistent set of rules and guidelines. In 1987 the federal government transferred most of the funding and all of the responsibility for the programme to the State Governments. The Federal Government took no further role in AT except for War Veterans' equipment and hearing devices (and more recently some support for continence aids).

The Federal Government undertook a review in 1996 of services for people with disabilities (CSDA Review), which included a substantial national review and report on 'equipment need'. This report provided the most comprehensive review of AT provision in Australia at the time and found a range of programmes at federal, state and local government level, all with some responsibility for AT, but few, if any, achieving their function fully. It was suggested that several programmes had been established simply because other existing programmes were not achieving the desired outcomes. Unfortunately that same year saw a change of government federally, and the report and its recommendations was shelved. In the last 12 years, there has been an antagonistic attitude between state and federal governments on the funding and outcomes associated with a number of social programmes. State governments continue to provide all the funds to the broader AT schemes (the successors to the PADP), but do so often using 'once off' funding to reduce extensive perennial waiting lists that have developed due to significant recurrent underfunding.

State reviews of their schemes seem to occur at regular intervals and usually reflect consistent (albeit depressing) problems and recommendations. In recent years the failure of most jurisdictions to act effectively on review findings (and in some cases, refusal to make the reports public) has prompted end users to commission their own reviews with some stronger economic and social impact data developed to highlight the failure of policy in this area to enhance participation and reduce health costs. With the recent change of federal government, there may be a willingness to seek a unifying national approach again.

How the schemes operate

An Australian needing mobility and posture AT is required to be assessed by an allied health practitioner (medical practitioner assessments have generally been discontinued under most schemes) who develops a prescription for the appropriate device and completes the necessary administrative paperwork for their intended funding scheme. There is no means of self referral or assessment under any scheme. Only some schemes require advanced training to undertake assessments and generally only for complex devices. A key issue to be resolved by the clinician and client is the client's eligibility for one of the schemes mentioned.

If the user is a defence forces veteran, after assessment the Department of Veterans Affairs arranges funding to meet the full costs of providing the AT necessary – and maintain it.

The vast majority of Australians are dependent on the State AT schemes. The differences between the schemes are illustrated in Table 1. This table does not show the breadth of services (and the associated demands) some schemes offer, such as oxygen, communication devices, etc. In nearly all cases an income test applies (although Victoria has recently rejected such a recommendation) so that many people with disabilities in employment are ineligible for the scheme and must self fund. All schemes operate a waiting list that varies from a few weeks to almost 18 months, and then fund as either a subsidy or the full cost of equipment. In the former case (Queensland, Victoria), the user is required to provide the balance of the cost of the AT (either personally or from another source) before the item is issued. Other schemes purchase the item in full, but levy a nominal ongoing charge. After oxygen and home modifications, wheelchairs (and particularly power wheelchairs) are both the highest single item purchase and have the highest total impact on equipment scheme budgets.

The scheme orders the required equipment and it is delivered usually directly to the end user, with the prescriber responsible for training, delivery, set up and follow-up services. In most cases the schemes do not fund the prescriber responsibilities, nor is it claimable under the national health insurance services (Medicare).

Most Australian schemes operate a recycling system and thus items purchased under these schemes remain the property of the government. This generally avoids any concern from users about repairs and maintenance which (apart from worn tyres, etc) is fully covered. It does create difficulties for indigenous communities (who often struggle with 'personal' ownership rather than community ownership) and is a significant issue for users who pay a substantial part of the cost (as part of a subsidy scheme), but gain no beneficial ownership should they need to change to another item (as the result of a degenerating condition, for example). The extent of recycling varies, and some adult schemes struggle to achieve 10% of items recycled, while

A telemedicine centre in the north west of Australia.

Table 1: Australian state AT funding schemes (as at March 2008, AU$1= €0.58)

	New South Wales	**South Australia**	**Tasmania**	**Victoria**	**Western Australia**	**Queensland**	**Australian Capital Territory**	**Northern Territories**
Scheme	PADP	ILEP	CES	A&EP	CAEP	MASS	ACTES	TIMES
Total budget	$23M	$3.1M	$0.5M	$22.5M	$7M	$14M	$0.54M	$0.83M
Population*	6.82M	1.57M	0.49M	5.13M	2.06M	4.1M	0.33M	0.21M
Budget per person	$3.37	$1.97	$1.02	$4.39	$3.40	$3.41	$1.64	$3.95
Client contribution	$100pa	$5/item/week	Yes	Subsidy only	No	Subsidy only	Yes	Yes
Hardship/ Income test	Yes	No	Yes	No	Yes	Yes	Yes	
Specialist seating programme	Limited**	Included	–	–	Included	Limited **	Yes	Yes
Continence	Inc.	Inc+	Inc	Inc	$2.6M	Inc	$0.14M	Inc
Orthoses		Inc		Inc	Inc	Inc	Inc	
Home modifications		Inc		Inc	Inc		Inc	
Separate funds for Repairs and Maintenance		Yes	Yes	No	No	No	Yes	No
External prescribers	Yes	For children only	Yes	Yes	Yes	Yes	Yes	Yes
Training and support provided					Limited	Yes		
Scheme being reviewed	Yes	Yes	Yes	Yes			Yes	

* ABS Population Data June 2006

** Seating service provided through specialized services (2 in each state) with labour funded separately by government.

Table developed by the Independent Living Centres (Australia) & updated by author.

children's services often manage to recycle around 25% or more, leading to substantial savings.

Implications for end-users and professionals

The variations between schemes mean that there is no consistent approach to the provision of assistive technology in Australia. Users who can gain support from a Federal scheme appear to gain a more timely and effective service that is nationally consistent. State schemes have now created such diversity in their eligibility criteria, processes, items and levels of support that some end-users choose to move states depending on their needs. Criticism is also levelled at some state schemes that the variations between areas of the state can lead to substantial inequity.

Currently no scheme in Australia has been identified by end users as ideal. Most users accept the need for some contribution, yet many cannot afford the substantial copayments expected. Procedural and funding delays, and artificial restrictions based on cost and not function, result in many professionals and end users working 'around' the systems rather than with them.

The major concern for many is the inadequacy of government support for assistive technology needs. Evidence is now growing that people with disabilities from a vehicle accident (covered by road injury compensation) achieve better outcomes and are more likely to maximize their post injury participation than others with a disability reliant on government schemes.

A study now underway in Australia (www.at.org.au) is highlighting the long term economic costs of tardy and inadequate funding when meeting the AT needs of end users. Cases have been documented of delays to wheelchair prescription and delivery that have resulted in substantial costs associated with spinal surgery and even tissue ulceration.

Conclusions

Australians needing wheeled mobility and posture solutions often find the schemes that aim to 'maintain independence' to be bureaucratic and limited. Levels of support vary between state and circumstance and there remains a failure to integrate the different funding streams that go to meeting the needs of people with disabilities so that the cost effectiveness of AT is appropriately costed. Despite the challenges of climate, distance and the schemes themselves, professionals and users in the sector generally maintain a reasonable standard of assistive technology skill and use. The 2008 ARATA Conference in Adelaide in September will focus on several of these success stories and explore the contribution AT plays in achieving valuable participation. It is hoped that the new Federal Government will also take a more holistic approach to ensuring participation by all, irrespective of functional limitations.

References

Ernst and Young. 1996. Commonwealth/State Disability Agreement Evaluation: Supporting Paper 5 – The Equipment Study. Australian Government Publishing Service, Canberra.

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Working towards an Integrated Model of Postural Management Service Delivery

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and Elaine Murray, Dip COT, Manager
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Abstract: *In 2000, Enable Ireland Seating Service was re-designated to being an Eastern Region Postural Management Service (ERPM) as an outcome of a Strategic Review of the National Organisation. The focus of the service shifted from that of seating provision, to supporting a 24-Hour Postural Management approach in local Enable Ireland centres. Instead of duplicating interventions across disciplines and services, the aim was to integrate postural management, where the service would be accessible through a primary therapy team in a systematic way. This article explains how the approach has been successfully implemented into children's services locally, through the standardization of practice and the provision of specialised training. It also demonstrates how the approach has shifted pre-existing ideas that therapy was only therapy if it involved clinical handling, toward being a family-owned, lifelong process of care, supported by therapists' intervention.*

Who are we?

Enable Ireland is a state supported, national, voluntary organisation which provides services to children and adults with physical and sensory disabilities. It provides therapeutic, educational, training, employment and community supports to service users.

Developing a new approach; where have we come from?

In order to orchestrate a change in how services were to be delivered, ERPM set up a working group in each local centre in the region. The aim was to examine service delivery in an effort to develop strategies which would improve service equity and quality for children requiring postural and mobility supports. Each group looked at the current methods of work within their own centres and how they could become more efficient. At that time, the services lacked coherence. There were loosely defined teams employing therapeutic tools to address needs; the processes used, however, were disjointed and lacked strategy. There was a lack of integrated planning for service provision for families. This resulted in the child and family not receiving an effective and satisfactory outcome. They were unable to see their therapeutic experience as 'one picture' and received services in a splintered manner.

In this context, interventions were primarily therapy-led; families were not active participants in choosing how they would be involved in their child's postural management programme or how it could be implemented into family life. There was an expectation that the child received therapy; but less so that services provided by different disciplines should be more streamlined and correctly structured to meet child and family driven functional goals. Parents were not always clear on the reasoning behind interventions; they viewed the disciplines as separate entities instead of one service working towards common goals. This led to poor carry-over and compliance outside of therapy settings, highlighting the need for increased family education and participation.

What do we mean by Postural Management Programmes?

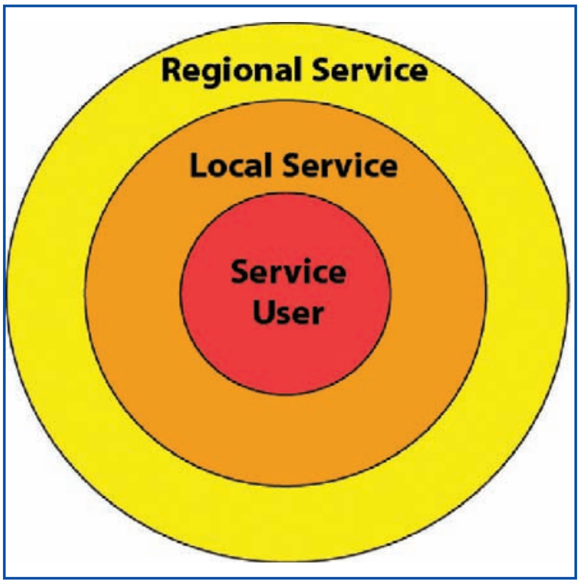
'A postural management programme is a planned approach encompassing all activities and interventions which impact on an individual's posture and function. Programmes are tailored specifically for each child and may include special seating, night-time support, standing supports, active exercise, orthotics, surgical interventions and individual therapy sessions' (Gericke, 2006)

Why is it so important?

To better understand the fundamental reasoning behind developing and using a 24-Hour Postural Management approach, it is useful to describe a child's typical routine in hours over a year. In an 8760 hour year, for a child with a significant physical disability (GMFCS Level 5), it is likely that they will spend 1440 hours in school and 7620 hours with their family, of which 3600 will be spent in bed (Goldsmith's, 1999). Based on staff resources in one Enable Ireland centre, it is estimated that each child receives only 15-20 hours of direct therapy intervention annually. This statistic alone highlights the importance of a holistic approach to therapeutic care through a programme of Postural Management.

How did we get there?

An improved level of transparency in the way services were accessed and provided was identified as a way forward. The European Foundation for Quality Management (EFQM) programme has been adopted to plan, structure and implement changes. Using this, modifications of the service could be progressively tracked year-to-year. Making large adjustments to service provision was (and still is) a learning process for all involved, so with each stage, new ideas and plans evolved. ERPM in consultation with the working groups remodelled the existing assessment packages. It was recognised that much of the work around a child's postural management programme is a duplicate role of occupational therapists and physiotherapists.



A Policy of Provision (2003) was developed for the region to guide the implementation of Postural Management Programmes. This policy states that *'children attending Enable Ireland Services with posture and mobility difficulties should have at least one formal 24-Hour Postural Management and mobility assessment each year'*. Procedures were developed to implement this policy at a local and regional level. The next stage was to provide interdisciplinary professional training to consolidate Postural Management as a joint initiative between disciplines. Using existing approaches and tools that best matched the ethos of Enable Ireland, this professional training was provided to the Primary Therapy Teams. Included were the 'Chailey Approach to Postural Management', the 'Goldsmith's Family Approach to Postural Care' and also specific training on the service delivery model, and tools and procedures designed and developed for the region. Skills were attained practically and theoretically in need assessment, identification of goals, equipment awareness and how to access appropriate resources to meet needs. The aim was to provide occupational therapists, physiotherapists, engineers and technicians with skills and knowledge to jointly collaborate with families in making choices for their child's Postural Management.

Local services then began to develop the team-based approach with stronger emphasis on familycenteredness. The outcome of this was that a primary team of therapists would work directly with the child and family for all their needs. If specialised support was required e.g. for equipment prescription, the Primary Therapy Team would be responsible for seeking these supports e.g. technical or engineering interventions, but would continue to be actively involved and lead the process. Teams became more integrated where goal-setting was organised through annual family meetings with active participation from families. If common goals were set, therapy interventions could be provided in joint programmes between disciplines. Primary Therapy Teams meet on a weekly/monthly basis to discuss caseload issues. Through much of this evolving process, a systematic, equitable intervention began to become more apparent.

It was identified that families and children need to be empowered to actively participate in their on-going Postural Management Programme. The aim is to encourage long-term understanding and commitment to managing their child's individual needs. It is vital that families are supported to be advocates for their child's postural management needs if they are to ensure that the programmes continue seamlessly as therapy providers change over time. Using the present system, families are acknowledged as 'experts'; to be considered as significant sources of information (Rosenbaum at al, 1998), and are encouraged to be an integral part of the team. This is supported by Enable Ireland (Enable Ireland Strategic Plan 2006-2008). Parents are encouraged to be actively involved by attending goal-setting meetings, appointments, and by documenting preferences for postural and mobility equipment. They also have the opportunity to attend education sessions around the interventions used and the reasoning behind them, to encourage participation and understanding.

Night Positioning course at Sandymount.

ERPM operates as a consultative service for the Primary Therapy Teams specifically in relation to the use of positioning and mobility equipment. Work is on-going with local services aiming to ensure that Postural Management Services delivered are of the highest quality. ERPM is accessed through referral where needed to help in finding solutions for specific requirements through the support and intervention of clinical, engineering and/or technical staff. Following referral, the process continues to be led by the Primary Therapists to ensure continuity of approach and one point of contact to discuss management needs.

Where are we now?

Through this work the following Postural Management Pathway to implement individual programmes was defined:

An assessment is completed jointly by the child's primary therapists at least annually. It consists of a review of function, within social and environmental contexts and a comprehensive assessment of their physical status. An equipment review is undertaken; where necessary adjustments and repairs are completed. Once information is gathered from these assessments and goals/objectives established, the Primary Therapy Team with the family manage the child's needs. The team identifies, agrees, organises, monitors and reviews the child's postural management programme. Even where additional support is engaged, the Primary Therapy Team is still responsible for leading the process, incorporating recommendations made as relevant.

Support mechanisms are in place to systematically manage the process including database tracking, shared clinical files and an annual paper based equipment audit system. A working procedural document *'A Therapist's Guide to Postural Management'* was developed and is an integral part of the induction process. In some centres personal passports are being developed for children to ensure those working with them get a clear understanding of their postural needs.

Conclusion

24-Hour Postural Management is now a vibrant, living element at the core of our Family-Centred Service and the planning for intervention with families. As we know, advances in medical science and technology have resulted in increasing numbers of children surviving severe trauma and disease (Miller, 1991). With this in mind, the notion of providing treatment which reduces the impairment will be recognised as insufficient and ineffective in preventing the secondary complications which are frequently the consequence of severe neurological pathologies (Condie, 1991). Such an approach would lead to dissatisfaction and disillusionment for both client and professional (Pope 1992). It is therefore wise to upgrade our current therapeutic practices to meet the challenging evolution of complex and severe disabilities. It should be noted that in some cases, there will be occurrences of complications such as deformities and other health issues which are inevitable. With intervention which starts early, using an integrated team approach that includes parents/carers and children, 24-Hour Postural Management can be a very successful pathway to optimise a client's functional capacity and overall well being.

References

Condie, E. 1991. A Therapeutic Approach to Physical Disability. Physiotherapy, 77 (2), 72-76

Enable Ireland. 2006. Enable Ireland Strategic Plan 2006-2008. Dublin: Enable Ireland

Gerike, T. 2006. Postural Management for children with cerebral palsy: consensus statement. Developmental Medicine and Child Neurology, 48: 244-244

Goldsmith, J & Goldsmith, L. 1999. 'Sarah's Story', The Symmetrikit Profile of Postural Care. The Helping Hand Company, Ledbury Limited

Miller, J D. 1991. Changing patterns in acute management of brain injury. In: Pope, P M. 1992. Management of the physical condition in patients with chronic and severe neurological pathologies. Physiotherapy, 78 (12), 896-902

Pope, P M. 1992. Management of the physical condition in patients with chronic and severe neurological pathologies. Physiotherapy, 78 (12), 896-902

Pountney, T. E. Mulcahy, C. M. Clarke, S. M. & Green, E. M. 2004. The Chailey Approach to Postural Management: Second Edition. South Downs Health NHS: Chailey Heritage Clinical Services

Rosenbaum, P King, S Law, M King, G & Evans, J. 1998. Family Centred Service: a conceptual framework and research review. Physical & Occupational Therapy in Paediatrics, 18, 1-20

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The Norwegian system for provision of assistive technology: An integrated model

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Abstract: *In Norway the system for the provision of wheelchairs is integrated with the system of provision of all types of assistive technology in the home, at kindergarten, at school, at work or for leisure activities. The range of assistive devices provided has to cover most disabilities, be it physical, intellectual, visual or hearing impairment. Even interpreters for persons who are deaf or deaf-blind are integrated into the services provided by the assistive technology centres. Exceptions are hearing aids, orthopaedic aids and guide dogs for blind people. These areas have different provision systems which are not dealt with here.*

Ragna Flø explains in her article why the integrated model came about, and describes the influences that helped create and develop the current provision system.

I will first explain the system for the provision of assistive technology in general before I describe wheelchair provision.

There are Assistive Technology Centres (ATCs) in all counties in Norway, 19 altogether. Since 1994 the ATCs have been financed and run by the state, with a national administration located in Oslo. The reasons for centralising were to improve the user's right to assistive devices, to ensure equal access of provision to users throughout the country and to integrate all types of assistive devices (one system, same legislation and procedures, etc.). Another intention was to improve economic control and get additional value from the investment through recycling.

All this has resulted in a stronger focus on effective management of this state financed assistive technology (purchase, storage, distribution and delivery to the user, maintenance, repair and recycling). For example 75 percent of the devices must be delivered within 3 weeks of the time of ordering and 75 percent of repairs have to be done within set times according to their priority (24 hours, 2 days, 7 days, 2 weeks, with some devices being repaired according to special agreements). The ATCs use the same IT-based application form for registration, which means that the national administration can produce statistics from all the centres. Each ATC is compared to the rest for effectiveness and their spending on different types of devices is monitored. It also means that devices can be delivered for recycling across county borders instead of being held in storage.

An integrated model has an important advantage, as both the users and their service providers have one centre in their county responsible for every type of device. The procedures and legislation are the same whether the devices are to be used at home, at school or at work. It means that when people become wheelchair-users, they will be able to get mobility devices such as wheelchairs, specially adapted seating in their cars, vehicle steering-systems, adaptations at home and in the workplace, all from the same centre.

The influence of the user organisations is of great importance in the development of the provision system in Norway. In comparison to other countries, the integrated model with a national administration makes it easier for the user organisations to direct their complaints and demands. Their ability to attract attention also makes the politicians at national level aware of this sector. Easy and accessible assistive devices together with an effective provision system are important in enabling users to participate in society.

The role of the ATC

The provision of assistive technology requires skills from various sectors and at various levels. Municipalities are responsible for the health and rehabilitation of all their citizens. The provision of assistive technology is part of that responsibility. The ATC is a second-line service and is a multi-disciplinary resource and skill centre in each county. This means that both simple and more complex problems can be resolved at front-line level if the municipality has experience of similar problems. Rare and more complex problems often require specialist skills at a higher level of professional competence. People are encouraged to ask for advice and guidance from the ATC if they don't have the relevant skills.

The ATC is responsible for creating adequate conditions for decentralized provision and to develop skills in each county. Consequently they have established networks between people working on the front-line in different areas and offer them a wide range of training programmes.

Funding and rules for supporting assistive technology

Assistive devices are financed by state funding. The government grants money to the *Assistance Budget* which is prepared for each ATC on an annual basis.

The allocation of assistive devices is based on the individual rights of users. This means that if users meet the criteria for receiving assistive devices, the devices must be acquired even if the budget is exceeded. People suffering from a long-term disability (more than 2 years) with significantly impaired abilities due to illness, injury or physical defects, receive support for assistive devices. The assistive devices must be necessary and appropriate for enhancing disabled people's abilities to solve practical problems in their day-to-day lives, or for ensuring their care at home. The most cost-effective assistive device meeting the needs of that user is usually provided.

The population of Norway is approximately 4.7 million. 152,416 users borrowed one or several assistive devices in 2007, which amounts to a cost of about £230 million (not including motor vehicles, hearing aids and orthopaedic devices). On average this is about £1,500 per user or about £50 per inhabitant. About 11% of the users are under the age of 18, about 28% are between 18 and 67, and 61% are over 67 years old.

In 2007 the ATCs bought 10,618 manual wheelchairs costing a total of £11.5 million and 6,949 powered wheelchairs totalling £26.7 million. In addition, the recycling of wheelchairs was about 51% (about 8,960 wheelchairs). However, the total number of users is actually lower because some users need more than one wheelchair. Recently we have seen a growing demand for powered wheelchairs due to the older generations wanting to maintain their social life as their walking ability reduces.

Wheelchair provision

The ATCs differ in size depending on the population in each county. This means that the therapists and technicians working with seating and positioning have varying facilities for specialising. In the smallest centres they may deal mostly with mobility equipment, both manual and powered wheelchairs. In the bigger centres they can specialise much more.

For the simpler adaptations, the local therapist will analyse the user's needs and apply for the wheelchair, maybe with some advice from the ATC. For the rare and complex adaptations, the most experienced therapist/technician/engineer at the ATC becomes involved with the user and the local therapist.

In addition several ATCs have set up multi-disciplinary Seating Clinics to deal with the most complicated cases. Input from the local level is important to make sure that all aspects have been taken into account when deciding on solutions and to ensure good follow-up.

Pic. 1 – Assessment at the ATC, including pressure mapping.

Pic. 2 – Manufacture of asymmetrical cushion.

Pic. 3 – Provision of new seating support.

Two examples are shown. Pics. 1, 2 and 3 show the adaptation of a powered wheelchair for an 8 year old boy with spinal muscular atrophy, scoliosis, and tilted pelvis. He uses a corset in sitting and needs additional trunk support.

The second example, Pic. 4 *(overleaf)*, shows adaptation at work, including an adjustable table, a magnified computer and a new wheelchair in which the client can work in a prone position to prevent pressure sores.

The development of multi-disciplinary Seating Clinics

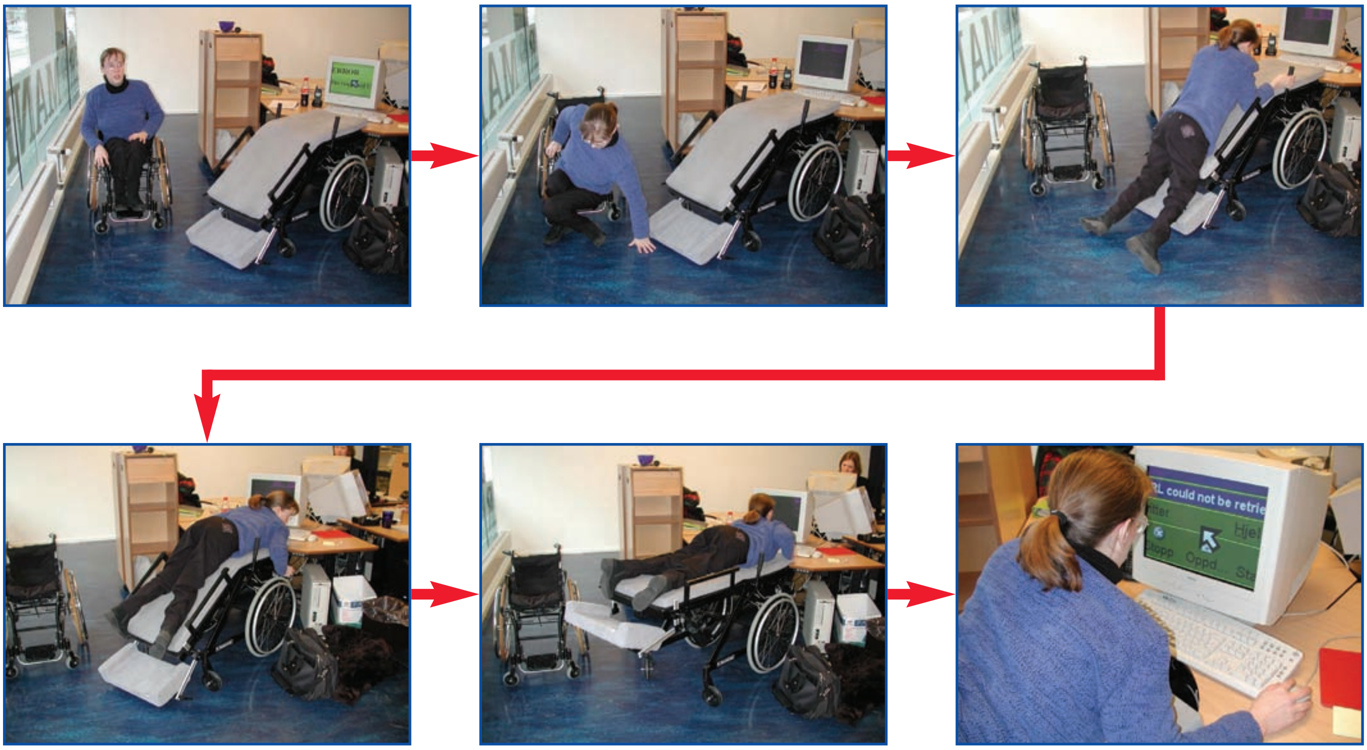
The multi-disciplinary Seating Clinic involves specialised units from the County Hospital. The collaboration between the ATC and the Hospital was a new type of partnership and based on a voluntary agreement between the different partners. The background for this model is explained in the following section.

Background

In the late nineties the ATCs realised that there was a lack of knowledge about special adaptations. They were outsourcing the complex cases to the suppliers, which meant that they themselves did not gain the relevant skills. Solutions often did not work and within a short space of time a new prescription would be required. They realised that the local physiotherapist and occupational therapist often disagreed about what was the best solution and their prescribing was therefore not coordinated. In addition they were experiencing an increasing demand from the local therapists for advice and assistance.

The process of growing the organisation and knowledge base

When it became clear that the Norwegian ATCs had less therapists working in seating and positioning compared with Denmark and Sweden, we had to consider a different model for improving assessment skills and the understanding of potential solutions. It was decided to set up a 2 year project which would attempt to establish a multi-disciplinary Seating Clinic in collaboration with the specialised sections at the County Hospital. It did take some time and persuasion……. but eventually the clinics were established. During a period of 5 years eleven of the ATCs were able to establish some type of collaborative working. The clinics vary according to the composition possible in each county.



Pic. 4 – Adaptation at the workplace.

During the project and in the following years it was important to improve the skills of the therapists and technicians/engineers at the ATCs and those of their partners. The national administration was responsible for arranging seminars; ATCs in Denmark and Sweden were visited to adopt the best ideas; new improved guidelines and handbooks were created. This type of systematic working and learning across county borders is made easier when a national administration has overall responsibility for the quality of provision.

The advantages and challenges of the model

The ATCs and their partners have improved their assessment skills and understanding about potential solutions. This has resulted in a stronger consensus about the chosen approach at the local and specialist level. In some counties this model also gives access to medical specialists. "Knife and needle" can also be part of the total assessment (surgical intervention, Botox injection, orthopaedic aids etc).

The challenge is in continuing to improve in order to give the users a high quality coordinated service. At local level, there is the need for a continuous education programme to train local therapists to deal with the simpler adaptations, leaving the ATCs to specialise to a greater extent on the more complex cases. At national level the challenge is to continue being the prime mover in this specific field against competition from other sectors with similar demands. The partnership between the ATC and the County Hospital has great advantages, but a model based on voluntary agreement is also vulnerable when there are differing priorities.

References

Berg, R. Photographs. Occupational Therapist, Assistive Technology Centre in Vestfold.

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Use of the voucher scheme for provision of Electric Powered Indoor/outdoor Wheelchairs (EPIOCs): Experience of Stanmore Specialist Wheelchair Service

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Abstract: *Vouchers appear to have been available for those given Electric Powered Indoor/outdoor wheelchairs (EPIOCs) since 2000. This study was designed to describe the use made of the voucher scheme by the Specialist Wheelchair Service at Stanmore (SWS), investigate users' experience of the scheme and to make recommendations.*
Methods: All users who had received vouchers were identified by the SWS and descriptive statistics used to characterise users of the scheme. They were all sent a simple questionnaire by mail investigating their experiences. Ten users responded and a further 11 interviews were performed by telephone. Comments were analysed using thematic content analysis.
Results: Twenty eight vouchers were used by 27 recipients between November 2000 and August 2007 at a mean cost of £4,750 of which £1,947 was assumed to contribute to the maintenance costs. Almost half were aged 17 or under. Chairs were purchased with specific functions, mostly riser, standing or tilt/recline functions. Over half used all the voucher monies in the initial chair purchase and over half expressed difficulties in funding chair maintenance. Additional financial resources were used from charities (7), alternative NHS budgets (2) and other sources (3).
Other themes which emerged included problems with the maintenance (and associated costs) of the EPIOCs, associated with some dissatisfaction with the service provided. Raising additional funds was time-consuming.
Discussion: It is likely that use of the voucher scheme will lessen with the ready availability of tilting and reclining chairs, but it is clear that meeting the developmental, educational and social needs of children prompts the purchase of additional features, predominantly risers which are seen to be essential for their needs.
Recommendations are made which include the facility of joint-funding of EPIOCs for those in full-time education by education and health services.

Introduction

The government introduced the voucher scheme in 1996[1] in response to the McColl Report that recommended that 'disabled people should be able to enhance the provision available from wheelchair services'[2]. This scheme was initially evaluated in 2000 when it was described as being 'bureaucratic, time-consuming and inefficient'[3]. However, most users of the voucher scheme felt they had more mobility and improved quality of life, with independent voucher users enjoying the greatest improvements[3]. The government recently reported centrally held information about the use of vouchers used for the provision of wheelchairs[4], although between 1998-99 and 2000-1 the number of vouchers was projected to rise to 6,806. These were issued for all types of wheelchairs[5]. Vouchers were not originally used for powered wheelchairs[6], and were probably first used for them around 2000.

Three forms of wheelchair provision are allowed[7]:

1. The standard option:- the provision of a wheelchair supplied, repaired and maintained free of charge by the service.
2. The partnership option:- allows selection of an alternative type of wheelchair of a higher standard than that which the National Health Service (NHS) Wheelchair Service supplies. The voucher given reflects the value of the wheelchair originally recommended and then the difference is paid by the user. The wheelchair is repaired and maintained free of charge but the choice is limited to chairs supplied by an 'approved supplier' who will have met certain standards including quality of service.
3. The independent option: is similar to the partnership option but the chair is owned by the user who is responsible for the chair's repair and maintenance. The voucher received includes an amount towards the anticipated costs of repair and maintenance over 5 years.

In practice, the partnership option appears to be used very infrequently[8]. The voucher system has been argued to improve services by giving the wheelchair user (hereafter referred to as the user) a wider range of choice[9]. There are differences between the rules governing voucher provision between manual and powered wheelchairs.

Even countries that apparently invest much more in disability equipment services than the United Kingdom

(UK) recognise that funding cannot be open-ended. Thus in Denmark cash grants can be given for some assistive devices, and 'there is a general tendency for users themselves to pay more and more, such as paying for their own batteries for electric wheelchairs[10]. Finland subsidises assistive technology services through the Finland Slot Machine Association via charities[10]. Iceland demands contributions up to 30% of the costs of certain assistive devices whilst Norway predominantly funds assistive devices freely although for hearing aids there is a 'co-payment'[10]. In Sweden 'it is usual for users to pay for consumer goods such as tyres for wheelchairs, batteries etc'[10].

The SCAMP project in the UK suggested that there was 'a substantial gap between current levels of funding provision for people with complex seating and mobility needs'[11]. The project also demonstrated the enormous challenge faced by wheelchair users wishing to use the voucher where top-up funding was sought from charities[11]. Powered mobility for children remains a major issue in the UK, with many services not providing any form of powered mobility for children[12]. This remains true in North West London where the Specialist Wheelchair Service (SWS) has provided very limited numbers of powered wheelchairs for children. The youngest age we have reported has been aged six[13], but every effort is made to ensure powered mobility for those referred to the service for children about to go to secondary school. In general, if a child's behaviour is age-appropriate, we deem them as suitable for EPIOC provision provided all other criteria are met[13]. For those who do not meet the criteria, arrangements are usually made with the district service to ensure that a suitable electric powered indoor chair (EPIC) is provided to facilitate their personal, educational and social development. The SWS has collaborated with Whizz-Kidz in recent years to provide additional features from the standard NHS range, with Whizz-Kidz funding the appropriate additional feature, e.g. a riser function, and the cost of its maintenance/repair – the voucher system in all but name. This system has developed following the view from Whizz-Kidz that charitable monies should not be spent on providing EPIOCs for those who are eligible for state provision.

In recent years, another developing partner has been the Department for Work & Pensions which has a responsibility to provide wheelchairs needed to facilitate an individual with disabilities being able to get to, and perform, their job via the Access to Work Scheme (AtW)[14;15].

The objectives of this study are to:

1. Review the use of the voucher scheme by the Specialist Wheelchair Service (SWS)
2. Ascertain the advantages and disadvantages of the scheme from the perspective of voucher recipients
3. Make recommendations about the future use of the voucher scheme for EPIOC users

Methods

Study 1. The administrative records of those using the voucher scheme since its inception were reviewed to ascertain the number of voucher users, their demographic and medical characteristics and the cost of the vouchers given.

Study 2. A questionnaire was devised and sent to all EPIOC voucher recipients to establish if:

- The total sum of the voucher was used in the initial purchase of the chair
- Difficulties were experienced in funding the chair's maintenance?
- The user/family paid for all additional costs or whether other sources were used e.g. charities, Department for Work and Pensions etc?
- Funding the 'user-portion' of the voucher had been a 'straightforward process'?
- The features in the chair eventually purchased were perceived to be unavailable from the SWS?
- The users were satisfied with the service provided by SWS and whether the SWS could have facilitated the process better?
- The users wished to make comments on any of the above?

Results

Specialist Wheelchair Service Assessment Clinic

The potential for use of vouchers is not advertised in the waiting room, and not raised in the assessment clinic[16] as a routine. Their use is mentioned when it is clear that specific features are needed by the individual wheelchair user e.g. a 'riser' function. When users come prepared with a clear knowledge and understanding of what they want from their chair, the potential use of the voucher is normally mentioned as an option to be considered if the required chair is likely to lie outside standard provision.

The clinic considers all aspects of the user's lifestyle and the medical or therapeutic information that has been given in the referral from the district service. In the case of children, specific additional information is provided by the relevant paediatric service, usually a therapist. This ensures that the SWS is aware of any specific behavioural, emotional, intellectual or physical potential obstacles to EPIOC provision.

An examination of the user is then performed to ensure visual safety and that specialised seating[17] is not required. A driving assessment is then performed to ensure safe independent mobility (as required by our eligibility criteria[13]) and then the team + the user + any family/carers present decide on the chair best able to meet the objectives that are agreed between the team and the user[18]. It is at this stage that the use of vouchers may be raised if the user's objectives in having an EPIOC cannot be achieved by standard EPIOC provision.

The SWS did not offer users a 'partnership' option – all received independent vouchers.

Calculation of the value of the voucher

Value is based on the price of the equipment offered by the NHS including VAT. This includes an amount for maintenance, which was initially calculated to be 100% of the cost of the chair purchased. Should the value of the equipment selected by the client be the full value of the voucher, or more, all maintenance costs are met by the user. Some users may, however agree to meet the difference between the voucher value and the equipment cost through their own funds or from charitable means such as WhizzKidz, Muscular Dystrophy Campaign etc. In these cases the maintenance portion is retained by the NHS assessor and any maintenance costs are met from these funds until they are exhausted.

From November 2000, when the first voucher was issued, maintenance costs were calculated on the basis of 100% of the capital cost of the chair. Following an internal audit which suggested that EPIOCs were becoming more reliable and thus less costly to maintain (Jon Ward – personal communication), from June 2004 the maintenance costs were calculated at 50% of the capital costs of the chair.

Users were advised that the voucher should be used for the same class of chair i.e. should not be used to purchase an electric powered outdoor chair (EPOC).

The regional SWS have simplified the original scheme by providing a:

1. Standard method of calculating voucher value based on NHS chair provision.
2. Voucher Pack which explains the process.
3. Knowledgeable contact point for holders of vouchers who require additional information or guidance.

When the user has chosen their potential chair, this is discussed with the SWS team to ensure they are supportive of the choice being made (safe and meeting perceived need) before the voucher is issued.

Results – those issued with vouchers

Users

Of the 27 users who had received their chairs using the voucher scheme, 13 (48%) were aged 17 or under. There were 14 men, mean age 29 (range 8-55) and 13 women mean age 31 (range 8-77) years. The diagnoses and ages are given in Table 1. One user repeated a voucher option in 2007, having had an original voucher in 2000.

Continues overleaf...

NTE 08 Prize~winners

The NTE prize winners were as follows::

Best Free Paper:	**Anne Harris and Joanne McConnell** for their paper entitled: *Where and Why I stand: Children's perceptions of standing wheelchairs.*
Prize:	**Free attendance at NTE 2009**
Best Poster:	**Lynley Page** for her poster entitled *Does the use of a knee block influence hip deformity, functional ability and pain in children with bilateral cerebral palsy?* **Prize: £100**
Last person standing:	**Trevor Graham** from dragonmobility
Prize:	Free trip to the International Seating Symposium, Orlando, Florida in 2009

Table 1 – Age, sex and diagnosis

Diagnosis	No. Men	No. Women	Total	Mean age	Range
Cerebral Palsy	3	5	8	24	10 - 42
Inherited / Metabolic	2	4	6	14	8 - 29
Spinal cord injury	2	2	4	47	36 - 55
Muscular Dystrophy	3	0	3	15	9 – 21
Cerebrovascular Disease	2	0	2	53	51 - 55
Adult neurological disease	1	1	2	59	41 - 77
Spina Bifida	0	1	1	13	N/A
Not known	1	0	1	52	N/A
TOTAL	13	14	27	30	8 - 77

Chairs

Twenty eight vouchers have been issued between January 2000 and August 2007. The chairs provided were Permobils (6), Pride/Jazzy (4), Storm/Typhoon (4), Balder (3), Chairman (2), Spectra with Riser function (2), Sunrise Medical (2) and five miscellaneous chairs (2 of which were a manual chair with E-fix system).

Voucher use is increasing, with one chair being provided in 2000, three in 2001, four in 2002, five in 2003, seven in 2004, four in 2005, one in 2006 and three in 2007. However, this is trivial compared to the 810 EPIOCs provided or taken over during the period 2000-2007. Thus approximately 3% of chairs provided by the SWS make use of the voucher scheme.

The total value of 27 vouchers provided by the SWS was £128,263, of which £52,579 was calculated to support the costs of maintenance. The average cost per chair was £4,750 (range £2,598 – £8,404) of which £1,947 (range £918 – 4,202) was calculated to support the costs of maintenance.

Results of those completing the questionnaires

Twenty one users responded on the basis of the 22 vouchers that had been issued to them. Ten users returned completed questionnaires through the post. A further 11 interviews relating to 12 vouchers were completed on the telephone. Two users had died and four were unable to be contacted.

Functions

The extra functions that users required from their voucher chair are shown in Table 2 (data from 21 users). Although a wide range of features were listed, the big issues related to the need for a riser function, followed by tilt-in-space (which was not readily available from Stanmore till about 2004), and chairs with a standing function. These merited extra comments (Table 3). The mean age of the 9 users buying a chair with a riser was 22 (range 9-41) years, whilst the mean age of the 13 not buying a chair with a riser function was 36 (range 8-77) years.

Table 2 – Extra facilities (21 users)*	**N =**
Riser	9
Tilt	6
Standing chair	5
Better quality	3
Recline	3
Elevated Leg Rests	3
Manual with E-Fix system – less bulky	2
Lights**	2
Comfort	1
Less bulky	1
Chin control	1
Safety	1
Speed	1
Manoeuvrability	1
Terrain access	1
Integrated infra red system to operate computer and ECU	1
Reliability	1
Ricaro seat	1
Tray	1
Lower chair	1
None	2

* many users stated they wanted more than one additional function
** Same user wanted this function on repeat voucher

Table 3 – Comments relating to the need for additional features

I feel that lights are particularly important … e.g. when she is in car parks at night.

….needs the riser to get books out of the library at

school (commented on twice) and to reach door handles etc.
The reclining back rest was essential for …..after his spinal fusion…
The standing mechanism was essential to get him into his standing frame [as recommended by a physiotherapist] and the extended leg raise, together with the recline function, to enable the physiotherapist to stretch him when he is fully reclined in his chair.
The college paid for the riser function and the tray as needed for educational purposes.
It is really important to have the extra functions.
I wanted and needed a chair to stand me up.

Voucher issues

Fifteen (54%) reported that they used the total sum of the voucher on the initial purchase of the chair. Ten (43% of 21 who answered) stated that they had difficulties funding the maintenance of the chair (Tables 4-5). Those with financial difficulties funding the maintenance of the chair (mean age 27, range 9-55, SD 18 years) were younger than those who did not (mean age 36, range 8-77, SD 22 years). Of the 10 vouchers issued to 9 users aged 17 or less, only three parents (using four vouchers) had no difficulties with funding. This compares with seven of the 11 adults who denied having difficulties in funding their chairs.

Table 4 – Comments relating to difficulties funding the maintenance of the chair

Heavy user gives added stresses and increased risk of damage due to overuse.
Both parents having part-time work only – meant a struggle to fund it.
Had an accident just after the insurance had run out – ……… repaired it and did a good job but I can't use my manual backup chair – it's too heavy and I live by myself – took two months to repair the chair.
Cost £1200 in last 6 months – call-out charge is £80 – estimated cost to family of £2-3K.
Funded by Action for Kids.
Spares for my ……... are very expensive and take many weeks to arrive.
Regular maintenance very costly.
Warranty worn off – only £300 left on voucher.
Parents paid.
Large cost of insurance.
Difficult finding the funding for the chair.

Table 5. Other comments relating to funding

I am a highly skilled negotiator on behalf of my children.
Applying to charities hard as I am now over 21.
Quite a struggle – got to get to NHS clinic – try out chair – research to find right chair – time-consuming and long-winded process.
Partly – took a long time.
…………[charity] can't fund everything and there are long (1y) waiting times for [charity].
The chair finally provided after months of arguments and files of letters is excellent.
Parents have knowledge of other agencies i.e. AtW.

Ten (45%) stated that they (or their family) totally funded the difference in the cost of the chair. Others funded their chair from a variety of sources – some from more than one source – seven from charities, two from other areas of the NHS and one respectively from the Access to Work Scheme (from the Department of Work and Pensions), the Balder Charity (linked to the wheelchair company) and an educational facility. Whizz-Kidz supported five users, Action for Kids two users and the Jennifer Trust for Spinal Muscular Atrophy one user.
Eighteen users (82%) were satisfied with the Specialist Wheelchair Service and four (18%) were not – although additional critical comments were made (Table 6). Other comments given are listed in Table 7. A number of criticisms were made about the service provided within the private sector (Table 8).

Table 6 – Comments relating to Stanmore Specialist Wheelchair Service

Specialised seating is well integrated.
SWS staff excellent – [long paragraph].
Wanted wider range of features and more trendy chairs.
Driving test was very frightening – bumpy pavements etc and not properly supported in chair.
The voucher only covered a quarter of the cost of the chair.
Stanmore was straightforward but getting charitable funds was quite onerous – need for verification of income, evidence from Bills etc.
Matrix seat not satisfactory.
SSWC very helpful and helped me get the right chair.
The special medical conditions please consult with the specialist hospital consultant – "blanketing" leads to misunderstanding and patient frustration/ dissatisfaction. I found the consultant did not have a good grasp of my medical condition and made no attempt to consult with my specialist consultant/hospital. You could do with a specialist therapist and/or arrange for one to advise/follow-up.
We planned to go to [charity] all along so no problem with Stanmore.

Do we think there should be a wider range of specification? Yes!. Do we think the service offers ‘trendy’ chairs for users? – No!

…Stanmore staff should be increased to allow them to give the required support. Often a long discussion is required and many questions asked to ensure that the wheelchair really is suitable. Further, sometimes phone enquiries and discussion are needed to discuss the wheelchair issues. These are time-consuming but necessary…

Needs bigger stock of assessment chairs.

Stanmore forgot to tell us there was a contingency fund [user was presumably referring to the sum for maintenance which would have been explained in the literature].

Table 7. Miscellaneous comments

I am a fan of the voucher scheme – an effective use of resources.

Extra features are really important.

The voucher principle needs to be extended for the backup manual chair as well – vital for visiting friends and family e.g. Auntie in second floor flat.

More frequent check-ups needed – at least once annually.

5y is too long for growing children – outgrown chair within 3years. OTs too obsessed with funding and not enough about clinical need.

I am wheelchair-bound – not a ‘wheelchair user’. I feel that the period of 5y between chairs is excessive.

I needed a chair with a chin control which was not on offer under the NHS, so I had to find an independent company which was very hard.

A situation that is not recognised is that wheelchair users often need more than one wheelchair (like people need more than one pair of shoes)…studies geography at University and is hard on his wheelchair – he needs a very strong one for field work which is different requirement for general daily use…added to this the maintenance costs are high…mobility money goes nowhere near this.

I would like to see the process speeded up significantly.

Table 8. Dissatisfaction with private sector provision

Private company didn’t maintain the chair – service so bad we came back to the NHS.

…it took two months to repair the chair.

Spares for my … are very expensive and take many weeks to arrive.

…[company] refuse to service the chair unless I pay myself & then get refunded from Stanmore.

Private company did not service or maintain the chair properly.

It was impossible to take out insurance in 2003 – there are constant repairs – often needing a parent to go to school – twice a day sometimes. When working the chair is fantastic at school and when ...is with the family

New wheelchair had technical problems which took 6-8 weeks to get right.

Discussion

Overall the impression given was that users appreciated the choice that the voucher scheme offered them. For many the additional features were of great value or deemed essential (Table 3). The scheme appears to be particularly suitable for, and used by, children, although meeting the costs can be difficult even with charitable assistance.

Users

The age of this population (30 years) was younger than that of our average EPIOC user (aged 44 – Frank AO – unpublished data), although similar to the average age of those needing specialised seating (Dr Marks – personal communication). Just under half were aged 17 or less, compared with 14% of 305 EPIOC users recently analysed (Frank AO – unpublished data). Thus the voucher scheme is used by younger users, often children. This adds to the financial burden falling on parents of those with congenital disorders (or those acquired early in life)[19]. This study also highlights the risks that the burden of caring for these children also diminishes the earning potential of their parents (Table 4), thus complicating the funding of specialist chairs.

The SWS does not recommend chin-operated control functions for those using EPIOCs as driving is inherently more risky when going over uneven ground, potholes in pavements etc (Table 7).

Children/adolescents

The importance of powered mobility for children with cerebral palsy has been expressed: *‘participants all received their first manual wheelchairs between the ages of 5 and 9 years. All recalled experiences of mobility in wheelchairs and on go-carts as among the best memories of childhood therapy’*[20]. The developmental value of EPIOCs for teenagers has also been recently described[21]. It is not surprising that these chairs are costly to maintain as children will be heavy users of their chairs often sat all day in their chairs, seven days per week. They may be used for wheelchair sport which is important for their development[21]. It should be remembered that EPIOCs are essentially 'pavement' chairs and not designed for such activities as wheelchair football, so additional damage is almost inevitable. Chairs provided for those likely to want to play wheelchair sport should be as tough as possible to reduce consequent repair/replacement costs – irrespective of the funding of the chair. It must also be recognised that those chairs with many additional features are more likely to have mechanical problems with financial consequences.

It is noteworthy that some district services are now giving vouchers to children for a shorter time period due to projected child growth, reducing the maintenance component of the voucher. Thus a 3-year voucher would offer 30% maintenance instead of 50% (Mike Belcher – personal communication). One parent felt very strongly about this issue (Table 7).

Wheelchair issues

The more general introduction of chairs with Tilt-in-Space (TIS) and recline functions since about 2004 may explain the reduction in the use of vouchers since that time.

A wide range of chairs were purchased, but the key factor appears to be that users needed the voucher in order to get the features they needed for their lifestyle. The need for the riser function in children clearly indicates the particular needs of children's education e.g. to get books out of the school/university library. The standing function clearly, on occasions, meets 'clinical' need – e.g. to facilitate standing and thus control spasticity for those with residual function in their legs, even though this function was not provided by the SWS. We accept, however, that chairs with standing functions do not allow contoured bespoke seating systems.

The reliability of privately purchased wheelchairs cannot be taken for granted and a number of comments related to the costs incurred (Tables 4, 5 and 8) – particularly as the period of the voucher may exceed that of the warranty of the chair. This is not surprising as the more sophisticated chairs have more functions that can go wrong. Some manufacturers have a poor reputation for speedy service (Mike Belcher – personal communication).

At least two vouchers were given out in response to complaints. One complaint was limited to our inability to meet user requirements – in this case for a standing chair as suggested by the physiotherapist to facilitate overall management – and in another situation when there were multiple issues between the user and various wheelchair services.

As most chairs purchased with the vouchers are outside the NHS range an independent voucher generally applies and this may explain why the independent voucher was used for all our users.

Service issues

The SWS initially was careful to avoid using vouchers to provide chairs that would be considered Class 3 (roadworthy and able to travel at 6+ miles per hour – EPOC) on the basis that the voucher should only be used for a similar class of vehicle. Although set to 4 miles per hour (pavement legal maximum) it could be argued that this is potentially dangerous because a chair in future could be programmed up to 6 miles per hour, lights fitted and used on roads as a Class 3 vehicle or at dangerous speeds on pavements. Thus many wheelchair services would not provide a voucher for an EPOC. The reality appears to be that the distinction between EPOCs and EPIOCs is becoming blurred and the SWS has tended in recent years to support any chair that clearly meets user needs. Any chair that is capable of doing 8 miles per hour currently would have to be registered with the Private Vehicle Licensing Agency (DVLA) at Swansea.

Another drawback for wheelchair services is how a voucher can cost £4,500 upfront whereas a reconditioned EPIOC for the same client may have cost £300. When added to the fact that some of the maintenance costs are given out to facilitate the initial chair purchase (utilising in one financial year a sum that would normally be spent in another), there is a clear additional cost to the wheelchair services which may explain the reluctance of services to actively promote the voucher scheme. The scheme may also be expensive in terms of both clinical (Table 6) and management time.

Chairs are provided on the basis of 'clinical' need, which may be divorced from educational, employment or social needs of users for their (re)integration into the community[22]. It can be argued that such a definition is now redundant and that wheelchair provision should take account of educational and social need. This may require rethinking the funding of wheelchair services. In reality however, one accepts that developments in technology will always exceed the ability of the state to provide, and thus the future of schemes such as the voucher scheme seems assured. Funding, however, seems to require review, particularly in meeting the needs of children where joint funding with education requires consideration. The current system of providing powered wheelchairs seems unnecessarily complex and burdensome for children and families that are already severely disadvantaged. This complexity seems at variance with the government's clear objectives to 'support young people to overcome barriers in participation, which is the key to ensuring that all young people, especially those who would benefit most, can easily engage….'[23]. Assistive technology needs to be seen as an enabling support for all disabled individuals who need it, providing increased independence and relief for carers[21;24;25], and this appears particularly important for children maturing into young people who need support to enable them to grow away from their parents as non-disabled teenagers do[21;24;25]. There appear to be good grounds for simplifying provision of complex seating systems for young people.

If the government is serious about expanding the workforce to include those with disabilities, then closer working relations need to be developed between wheelchair services and the AtW Scheme. Specifically, powered wheelchairs may need to be provided for those of working age prior to being job ready as part of their vocational rehabilitation – let alone having been offered a job.

The manual chair which is provided by the district service should no longer be considered as a 'back-up' chair, but remains critical for much long-distance travel and visiting friends and relatives[21]. It can be argued that the SWS should be responsible for all chairs needed by the user – split responsibilities have a habit of giving rise to confusion.

Limitations of the study

This is a small study which relies on users' recollections of events taken place over a long period, sometimes several years previously. It does however provide some pointers in an area which has been little studied.

No adjustment has been made for any change in the value of the pound over the period of the study.

Conclusions

The voucher option appears to be of great value to users with particular needs – usually for additional functions that the SWS is not able to provide, which are predominantly determined by the cost of the chair. As the costs fall, so the SWS is able to provide chairs with additional features – as has occurred with powered tilt and recline functions.

The scheme has been used particularly to meet children's needs, but this has added to the additional burdens that these parents already carry – both in terms of stress, time and money.

There are however costs to wheelchair services in relation to initial financial outlay, increased clinical & management time, and inability to use reconditioned chairs which may explain a reluctance to advocate the scheme more widely.

Recommendations

NHS Providers of powered wheelchairs should consider providing additional information (both verbal and written) to those considering voucher use regarding the potential costs of wheelchair insurance and maintenance/repair – see Appendix 1.

NHS providers of wheelchairs to children who are still growing should consider reducing the life of the voucher e.g. to three years.

Consideration should be given to the joint funding of all wheelchairs provided to those undergoing full-time education by the departments of health and education.

Consideration should be given to the joint funding of wheelchairs for those of working age, and with work potential, with the DWP irrespective of work readiness.

Chairs with standing functions should be made more available under the present EPIOC scheme.

Acknowledgements

We are grateful to all the users and family members who assisted in giving us information about their experiences; to David Mitchell for data on EPIOC provision, Wendi O'Donnell for clerical assistance and to Mike Belcher, Peter Kemp (National Forum of Wheelchair User Groups), Dr Linda Marks and Mike Pugh for helpful comments on early drafts of the manuscript. We are indebted to all our colleagues at the Specialist Wheelchair Service whose efforts and skills have contributed to our ability to write this paper.

For those interested in getting some feedback from the public about the voucher scheme, you can interrogate

‘Ouch – disability message board’ from the BBC www.bbc.co.uk/dna/mbouch/F3611783?thread=3935206

Appendix 1

Notes for Voucher recipients of powered chairs:

Voucher recipients (of powered wheelchairs) who intend to use the full value of their voucher to purchase the chair of their choice should negotiate with the supplier for an extended guarantee period which may cover the greater period of the voucher. Upon inquiry, the supplier may also be prepared to provide a powered chair to provide basic mobility at moderate cost during repair periods.

Voucher recipients are advised to take out insurance on any chair purchased. Those receiving charitable financial assistance are advised to ascertain whether financial support can be provided towards the costs of insurance and maintenance.

Should recipients have problems with the Private Sector Dealers who supplied their chairs, they can raise the issues of concern with the regulatory body for these dealers – the British Health Trades Association (BHTA) – www.bhta.net/mainnav/ services/index.html. Recipients of Vouchers would be well advised to buy their equipment from a dealer who is a member of this body.

References

1. Department of Health. Voucher Scheme: Health Service Guidelines NHS Executive HSG [96]53. London: Department of Health; 1996.
2. McColl I. Review of artificial limb and appliance centre services. London: DHSS; 1986.
3. Sanderson D. Evaluation of the Powered Wheelchair and Voucher Scheme Initiatives for the NHS Executive and the Department of Health. York Health Economics Consortium, University of York; 1999.
4. Lansley A, Lewis I. Wheelchairs: voucher scheme. London, Hansard. 12-5-2007.
5. Baroness Darcy de Knayth, Lord Hunt of Kings Heath. Written answers, House of Lords – Wheelchairs. London: Hansard 10-5-2001.
6. Winyard G. Wheelchair voucher scheme: funding in 1997-98 and 1998-99. London: Great Britain, Department of Health NHS Executive; 1998.
7. Anonymous. Voucher schemes: hiring or buying a wheelchair. www.direct.gov.uk, Directgov. Accessed 1-2-2008
8. White EA. The wheelchair voucher scheme: a comparative study. Br J Ther Rehabil 1998; 5(9):448-454.
9. Monro A, Mulley GP. How to get a wheelchair – a physician’s guide. CME Geriatric Medicine 2004; 6(1):23-26.
10. Petren F. Provision of Assistive Technology in the Nordic Countries. First ed. Stockholm: Nordic Cooperation on Disability; 2004.
11. Fergusson-Pell M. Increasing mobility and changing lives: final report of the SCAMP project. London: Institute of Orthopaedics and Musculo-skeletal Science; 2004.
12. Home AM, Ham R. Provision of powered mobility equipment to young children: the Whizz- Kidz experience... including commentary by Nilsson L. International Journal of Therapy and Rehabilitation 2003; 10(11):511-519.
13. Frank AO, Ward JH, Orwell NJ, McCullagh C, Belcher M. Introduction of the new NHS Electric Powered Indoor/outdoor Chair (EPIOC) service: benefits, risks and implications for prescribers. Clin Rehabil 2000; 14(December):665-673.
14. Department for Work & Pensions. Access to Work. London: Department for Work and Pensions; 2008.
15. Frank AO, Thurgood J. Vocational rehabilitation in the UK: opportunities for health-care professionals. Int J Ther Rehabil 2006; 13(3):126-134.
16. Ward JH, Hall MG, Frank AO, Orwell NJ, Belcher M, McCullagh C. The set-up and audit of a regional EPIOC service. Posture and Mobility 1999; 9(Spring):5-11.
17. British Society of Rehabilitation Medicine. Specialised wheelchair seating national clinical guidelines. Report of a multidisciplinary expert group (Chair: Marks, LJ). London: British Society of Rehabilitation Medicine; 2004.
18. Swann P, Walker L, Frank AO, Marks L, De Souza LH. What can be learned from objective setting: a cohort study of 97 users from a regional special seating service (abstract). York: Posture & Mobility Group: improving the outcome pp 4-5; 2003.
19. Hull RG, Prouse PJ, Sherratt C, Brennan P, Townsend J, Frank AO. Capital costs of supporting very severely handicapped (VSH) and appreciably handicapped (AH) people at home. Health Trends 1994; 26:80-85.
20. Kibele A. Occupational therapy’s role in improving the quality of life for persons with cerebral palsy. The American journal of occupational therapy : official publication of the American Occupational Therapy Association 1989; 43(6):371-377.
21. Evans S, Neophytou C, De Souza LH, Frank AO.

Reflecting on the findings and recommendations of the McColl Report from 1986 – what issues are the same today?

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Abstract: *The artificial limb and appliance (ALAC) services were formed to serve the many young veterans returning from the Second World War. The needs of these relatively young and fit ex-service men were very different from the population accessing these services in the 1970's and 80's. Improvements in medical care led to more patients surviving severe incidents/accidents, a higher rate of survival for disabled children and a growing elderly population.*

*In 1984, following many complaints from service users, a working party was set up to review the ALAC services in England. The working party's terms of reference were, "*to review and report on the adequacy, quality and management of the various services received by patients and on the respective roles of the staff of the centres, the NHS and manufacturers, having regard to the need to promote efficiency and cost effectiveness*".*

At that time, the wheelchair service was the smaller of the two main services with a cost of £32m/annum while the 'limb' service cost £38m/annum.

The wheelchair service review focused on three main problems areas:

- Assessment, prescription and advice,
- Hardware
- 'Back up' services.

1. Assessment, prescription and advice:

The **report** highlighted "the number of people in unsuitable wheelchairs" which they felt indicated that "the standard of assessment, prescription and advice were inadequate". It went on to say, "the full-time medical officers spend little time on wheelchairs generally and assessments in particular, and technical officers are not qualified bio-engineers. Most of the work is done by part-time examining medical officers who are retired ALAC doctors who look at more files than people. Their work load is not excessive and the average number seen over two months at the largest ALAC was one per day".

From the Department of Health & Social Security Handbook of Wheelchairs and Bicycles and Tricycles, 1982.

Comment: In the 1980's the emphasis of ALAC services was on prosthetic provision and there were few ALAC staff interested in the wheelchair service. Chair models were basic, few and heavy, special seating was in its infancy and engineering support was provided by 'ministry' technical officers who came from a variety of backgrounds but chiefly from ministry establishments, having completed apprenticeships. There were few therapists working in this area in the NHS.

The **report** went on to say, "therapists should become involved – once a doctor has established the clinical need – and training for those who may become involved in wheelchair prescriptions should be improved both in undergraduate and post-graduate training and tuition once qualified. Staff should be accredited by ALAC with the 'possibility of additional remuneration' and each ALAC should have such a competent therapist on its staff".

Comment: Medical prescriptions with doctors signing the ALAC referral forms was the practice of the day but as local services developed this gradually stopped, though not entirely in some areas of the country. Training was negligible, much coming from the Oxford centre at the time. Although basic local 'accredited courses' are now run nationally, there remains no accepted pathway for continuing professional development and working in this speciality. Few staff have the evaluation and reporting skills to develop the speciality through evidence based practice and so the gap widens between the prosthetic service (i.e. graduate HPC registered staff) and the wheelchair service (i.e. mixed level, generalists).

In the future, the **report** said, "the effectiveness of wheelchair assessment and prescription should be monitored focussing on consumer and prescriber satisfaction. Prescriptions for a disabled person should be regarded in the same way as a pair of shoes for an able bodied person (outdoor and indoor for example)".

Comment: Little work has been carried out in this area over the last twenty years and consumer satisfaction remains low – hence the numerous reviews over the period since the McColl report.

The **report** noted that there were "ill defined service objectives and few guidelines for prescription, leading to inconsistencies and anomalies". The service should meet the basic need for short-range mobility for people of all ages with serious and permanent difficulties in walking – the 'normal walking range of an able bodied person, being perhaps two-three miles".

Comment: Although service objectives, standards, protocols, guidelines are available in some services, inconsistencies and anomalies remain. Many services, due to financial constraints, are limiting provision to this group.

It was felt that "a two tier service would be needed for the less-severely and severely disabled groups" providing local services at one end and multidisciplinary 'expert' teams at wheelchair clinics at the other end of the spectrum. Providing wheelchair services that were not isolated from the many other services a disabled person may require should also be planned "since the wheelchair is part of the whole rehabilitation process".

Comment: Local services (and staff) have developed successfully, in being close to rehabilitation specialities and communities but the severity of disabilities seen in clients today has also increased considerably, which means the need for the 'expert multidisciplinary team' at a hub is as essential as ever. Increased numbers of complex clients will increase expertise and reduce costs. However, these 'expert' services have to join up and be an integral part of the local rehabilitation provision, rather than working in isolation and at a 'relative' distance.

2. Hardware and equipment:

The **report** asked "Was the right equipment being supplied and were there better ways of meeting the needs of disabled people? The service should provide for a simple push-chair up to special provision and custom made items". The cash or voucher scheme was proposed with three choices as we know them today – "giving power to the *chair people*".

From the Department of Health & Social Security Handbook of Wheelchairs and Bicycles and Tricycles, 1982.

Comment: The working party could not have foreseen the considerable changes in the disabilities of the client group using the service and the assistive technology that would be developed over the next two decades.

There were four main areas in the **report** where there was felt to be inadequacy of supply:

i. occasional user low cost chairs,
ii. children's models (including buggies, bicycles and tricycles),
iii. high performance chairs for severely disabled people on the recommendation of 'expert therapists',
iv. Dual-purpose powered chairs for indoor/outdoor use for either occupant or attendant control.

Suppliers would be required in future to take full product liability and would manufacture special wheelchairs as necessary. A free consultancy service would also be extended to those ineligible for the service.

Comment: Provision of these categories is not national and some items have been lost completely from the services. New technologies are slow to be adopted due to the financial situation in many services, and many users requiring high performance models are better informed than 'expert' therapists.

3. 'Back up' support:

"Management was felt to be poor with inadequate operational needs and financial reporting and staff who had little experience of purchasing or supply. It was felt that the central distribution system should be replaced by direct delivery by suppliers from a call off schedule and the repairs and out of hours/emergency service should be improved. There should be tighter management of the spare parts used and review of the repair costs and call out rates charged by the approved repairer service".

Comment: Direct delivery from suppliers is now the norm as are the recommended changes to the maintenance and repair contracts but the management training of staff in the services remains poor. IT equipment and database systems are not in all services and business cases which link the wheelchair service to other local relevant patient pathways are rare.

So which findings are the same today?

1 Data

The McColl report noted the 'lack of adequate data and management accounts' in 1986, including from the following: the amount of money spent on goods and services; information about wheelchair users and the total numbers supplied with wheelchairs from the Department of Health & Social Security; links with other government services/benefit agencies such as Mobility allowance.

2. Staff roles

The RE role has evolved since this report but the lack of consistent competencies and post graduate training programmes for all staff before they take up 'expert' senior positions means the service is not comparable to other NHS services. Few wheelchair staff today have a higher degree for example or have trained under peer reviewed 'expert' staff.

3. Work load and client profiles

This has changed enormously decade after decade and the service has been slow to adapt to this change in demand. Managers have not reported these changes to commissioners or explained the benefits relevant technological advances can have for this group, and thus have not proactively managed this growth.

4. Social and economic inclusion

"Investing in rehabilitation of disabled people to live more independent lives" was reported as "making economic sense" but there was no mention of employment/benefit services and social inclusion in 1986. Employment, social inclusion, vocational rehabilitation and the 'self-care agenda' are very much on the Government's agenda today and these initiatives also apply to wheelchair services clients (and their carers) today.

References

McColl.1986. Review of the ALAC services. ISBN 0-948064-26-9

Waddell, G and Burton A.K. 2006. Is work good for your health and well being? TSO, London

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General Articles, Reports and News

Has it been Crash Tested? Part II: Wheelchair tie-downs and Occupant restraint systems

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Chair of BSI Committee CH173/1: Assistive Products for People with Disabilities – wheelchairs

Abstract: *This is the second of a multi-part series of articles relating to the transport of passengers seated in wheelchairs.*

The first part (in PMG Journal 24:2) looked at the requirements for a wheelchair as a component part in a transport system. This second part will focus on the role of the wheelchair tie-down and occupant restraint system and its part in that complete system.

In common with wheelchair manufacturers the suppliers of wheelchair tie-downs and occupant restraint systems need to observe regulatory requirements to the satisfaction of the Essential Requirements of the Medical Devices Directive, when categorised as Class I Medical Devices. The objective to 'reduce risk by design' and provide clear warnings of residual risk that cannot be removed by design applies equally.

The 'System' Performance

When considering wheelchair seated passenger safety in transport, it is important to view the overall scenario as one made up of separate parts that together make up a complete 'system'.

The overall 'system' comprises the vehicle – the wheelchair – the wheelchair securement device – the occupant restraints – and the occupant.

Naturally, hardware compatibility for the parts that make up the 'system' is very much the turf of industry standards. As far as possible, system hardware standards treat each part as a separate unit with common key links to achieve compatibility.

An essential part of the hardware is of course the vehicle, and certainly variations occur according to vehicle type. It is commonly accepted that vehicle crash severity decreases as the vehicle size increases. A small vehicle such as a saloon car or 'people carrier' has a more severe crash characteristic whereas that for a minibus decreases, and decreases again for a low-floor bus.

For the meaningful application of industry standards, the most severe crash characteristic is used to assess performance, thus removing the need for control of use of equipment according to vehicle type. The crash severity selected is common with that used for the assessment of Child Restraint Systems.

Provisions for hardware in the 'system' can be created using an engineering approach, but that is not always possible for the most important part of the 'system' – the occupant. This will be discussed later.

Tie-down Hardware

The term wheelchair tie-downs and occupant restraint systems is commonly abbreviated to WTORS. The ISO 10542 Standard, in 5 parts, provides design and performance requirements for the different types of tie-down methods, and are validated in a dynamic test of the same nature employed for wheelchair assessment.

The ISO 10542 test method is a fine example of 'bench-mark' testing. In this approach, the bench-mark test method and performance requirements provide a point of reference against which a product can be measured.

The test method of ISO 10542 may not represent real world usage with 100% accuracy – but it is a fair means of assessment.

The test method requires a wheelchair tie-down and an occupant restraint to secure an 85kg surrogate wheelchair of a specified design, and effectively restrain a 75kg ATD (anthropomorphic test dummy) occupant when exposed to the standard 20g/48kmh dynamic test, representing the more severe crash experienced in the range of vehicle types.

The parts of the standard are as follows:
Part 1 – Requirements for all systems
Part 2 – Four point tie-downs
Part 3 – Docking systems
Part 4 – Clamps
Part 5 – Systems for specific wheelchairs.

As the name suggests the WTORS equipment has two principle functions – firstly to **secure** the wheelchair and then to **restrain** the occupant in the event of a vehicle crash. The terminology is important.

Securing the Wheelchair

Wheelchair tie-downs are all about converting a mobility aid, designed to be free moving, into a static seat in a motor vehicle. In addition to providing a stable seat for the passenger, tie-downs may be used to secure an unoccupied wheelchair, its owner having transferred to a vehicle seat. In this case the tie-downs are securing the wheelchair to prevent injury to other passengers in the vehicle.

Of the types of tie-down methods, 4-point webbing tie-downs are by far the most common, mainly due to their flexibility for use with a wide range of both manual and powered wheelchairs. The wheelchair standard ISO 7176 Part 19 currently requires a manufacturer to prepare the wheelchair for securement with 4-point tie-downs, such is their acceptance as a satisfactory method.

However, a downside is that fitting 4-point webbing tie-downs requires assistance from a carer or the vehicle driver to effect the securement. Docking type methods can provide a solution to unaided wheelchair securement but realising an effective method for a significantly wide range of wheelchairs has so far proven elusive.

As 4-point tie-downs are the currently preferred tie-down type, it is a fundamental purpose of standardisation to ensure compatibility of tie-down end fittings with attachment points on the wheelchair, which need to be clearly marked and accessible.

The Hook Gauge, as given in the ISO 7176 Part 19 Standard, provides wheelchair manufacturers with a means to ensure compatibility of end fittings and securement points. End fitting design guidelines are similarly included in the ISO 10542 Standard.

Restrain the Occupant

The main function of occupant restraint is to allow the occupant to 'ride down' the forces created in a crash and to prevent a passenger from making contact with the vehicle interior.

The design and performance requirements for occupant restraints given in ISO 10542 are based on the principles for risk control adopted by the automotive industry for non-disabled passengers. Restraints are generally made up from components supplied to the automotive industry.

The standard follows the automotive approach, with occupant restraint to be of the 3-point lap and diagonal type having a side wall mounting for the shoulder belt with upper anchorage above shoulder level.

The tight controls of the location of seatbelt anchorages for automotive passengers are not rigorously applied for passengers seated in wheelchairs. Anchorage locations are given for 3-point occupant restraints and they ensure that basic principles are applied in a similar manner. However, the use of the vehicle floor for the anchorage of shoulder belts is way outside the basic conditions for effective occupant restraint.

At this point we must start to consider the most important part of the overall 'system', i.e. the wheelchair user who, because of their clinical condition, will often have a reduced injury tolerance compared to a non-disabled person. Additionally, the physical proportions of a wheelchair user will most likely bear little resemblance to the orthogonal properties of a crash test dummy as used in the development of restraint systems in the automotive test and development.

Similar to the fitting of wheelchair tie-downs, fitting an occupant restraint will often require the assistance of a carer or the driver of the vehicle. Very often the correct use and positioning of the restraint will depend on the time available, the facilities available and the level of training and understanding of the task in hand.

These considerations combine to indicate that, unless great care is taken, wheelchair seated passengers will seldom be provided with equivalent levels of injury protection compared to vehicle seated passengers, the difference frequently increasing with the extent of a passenger's physical disability.

By understanding potential sources of harm for wheelchair users in transport, action can be taken across the spectrum of activities to control risk and enable benefits.

Improved understanding will lead to better facilities in correctly specified vehicles with better engineered products that have moved toward removing risk by design.

Training aimed at creating an understanding of sources of harm will mean better use of time and greater staff confidence in transport providers.

Ultimately, understanding and action will be at the source of improved levels of safe transport for wheelchair users.

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There are plans to develop the PMG website over the next year or so, but in the meantime, don't forget that you can post job ads there free of charge, as well as posting information about training courses, open days, product awareness events etc. For more details or advice contact PMG administration:

olwen.ellis@pmguk.co.uk

The website sub-committee would also welcome your views and ideas about the future of the website as a resource for the membership, so please get in touch via the PMG administration email address above, and your message will be forwarded to the sub-committee.

Independent Mobility – Case Study

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Abstract: *Training a child with cerebral palsy to use a powered wheelchair is a lengthy and complex process, partly due to the complexities of incorporating mobility training into the national curriculum. This requires an interface between various agencies, namely education, the health service and professionals with specialist skills for this to be successful.*

BJ has 4-limb athetoid cerebral palsy and is totally reliant on supportive seating. Maintaining trunk stability, including head control is very difficult for him. A dynamic approach to his postural management is vital to enable him to carry out functional activities. BJ was introduced to switch work pre-school and by aged 3 had a clear understanding of the purpose of 2 switches. He showed excellent understanding and was able to access computer software. BJ went to a special school and by the age of 7 had been provided with a powered wheelchair. Initially training was incorporated into his physiotherapy sessions with advice from an Occupational Therapist. BJ was also referred to an Independent Microtechnology Service for advice on mobility training.*

School found it difficult to move the powered chair in the classroom when BJ wasn't driving. It was recommended that attendant controls be attached to the back of the chair, to assist the class team. A request was put to the Disablement Services Centre, who agreed to provide these controls if they were funded by education.

Independent mobility training recommendations

Due to his athetoid cerebral palsy, BJ learnt to keep his right elbow tucked in close to his body to obtain better control of a joystick. His head was often held to one side of his body and he required reminding to keep it up. It was recognised how tiring this was for him. Consideration was given to the following:

- The type of knob attachment to enable BJ to maintain a grasp on the control.
- The position of joystick on the tray of wheelchair.
- The uses of a cuff to maintain his non-driving arm in a stable position and reduce unwanted movements.

Positioning the joystick on the wheelchair tray put it out of BJ's reach. Lifting his arm up onto the tray required an additional movement that required more effort for him. He needed to be able to move in a linear plane. This meant removing the tray and fitting the joystick control lower down. The Micro technology advisor on one of her visits to school suggested mounting the joystick on a variable function arm, which could be clamped onto the wheelchair. This was positioned at the same level as the knee block. BJ found the lower position easier to access.

Ongoing reviews & discussions

The suggestion was discussed with the local DSC, in order to obtain a permanent mounting solution. The position of the joystick in relation to BJ's body became crucial to his success. It was vital to reduce the effort required for the task and consider ways of enabling BJ to maintain his head in an upright position.

BJ hard at work.

Whilst a joystick mounted at knee-block level was initially a good position for BJ, it remained hard for him to place and maintain his hand on the joystick. Several attachments were tried; a T-bar control was considered the best option at this time.

As BJ made progress with his hand control and driving skills, the DSC made the decision to move the joystick onto the right side of the chair. This prevented him having to come forward in his chair to control the joystick. In this position, BJ could maintain his arm tucked close into his side and had the armrest of the wheelchair for his forearm to rest on.

Discussions were taking place prior to BJ's 9th birthday of the possibility of an integrated access system to control power chair, communication aid and computer. At the same time BJ was referred to a Neuro orthopaedic surgeon for advice on spinal management, in particular head control. It was raised at this appointment that the CAPS II seating system was not maintaining his posture in a good position. The team at school and his parents highlighted that when the chair ceased to provide adequate support for him, BJ's mobility skills deteriorated.

How to implement mobility training

It was evident that in order to support BJ's progress with driving skills he would require additional help that had to be resourced. Additional funding from the LEA was requested via the annual review process. The NHS OT provided a block of weekly sessions for 2 months to help progress this initiative further, while the outcome of the LEA was awaited. This took a year.

The most practical way of incorporating this training into BJ's day was to allow him to drive himself to and from lunch. The decision had to be made to keep BJ in his power chair in lessons to alleviate the necessity for manual handling to transfer between static and power chair seating systems.

The NHS OT provided the class team with an outline of a safe system of working to support the independent mobility training, with further advice and reports from the Micro technology advisor following school reviews. The debate about the supply of a multi-functional control box carried on for the remainder of BJ's time in primary school and was not resolved when he entered into secondary education.

Summary

BJ was identified at an early age as a child with a lot of potential who would be reliant on technology in order to maximise his potential at home and at school. Developing switch-access for powered wheelchair mobility was a new development for the OT service and highlighted many complexities involved in training. Many lessons were learned and several questions were raised about the best avenue to follow for assessment, provision and training in the use of powered wheelchairs.

Not all therapists have had opportunities to gain experience in this area and many services lack the therapy resources to assist with mobility training due to many pressures on clinical time. The Disablement Services Centre lacks resources to provide training, which is increasingly put onto learning support assistants in schools and parents. Due to lack of funding the Disablement Services Centre has been unable to resource the provision of switch operated powered wheelchairs. Parents are advised to apply to Whizz-Kidz if their child requires this type of access. The need for LEAs to approach the independent sector for specialist advice and teaching has been raised with one PCT. Providing powered mobility training is a pressure on under-resourced therapy services.

Developments in technology for children are being acknowledged in the private and charitable sectors, and continue to raise awareness of this unmet need. How to address funding issues in order to access specialist services for children is one that commissioners and providers must be made aware of.

*The Microtechnology Service is now part of Optech

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Achieving Mobility for Life

A Meeting Jointly Organised by the BHTA and the PMG Including a Range of Speakers and Subjects

Geoff Harbach, I.Eng, MIED, IIPEM, RegBHTA, West Midlands Rehabilitation Centre
Kirsty-Ann Cutler, OT, Clinical Lead, Birmingham Wheelchair Service

Abstract: *Proceedings from a one day conference, co-organised by the BHTA and PMG, bringing together representatives from Industry, Charitable Organisations, Standards bodies, NHS Rehabilitation Professionals and other interested parties to discuss the barriers to mobility experienced by disabled persons and, importantly, to formulate a number of specific actions that will be taken forward by the organisers of this meeting in order to reduce these barriers. The official action report is published elsewhere in this publication.*

This meeting was held at the premises of the Volvo Group UK Ltd in Warwick who graciously provided the conference facilities.

The meeting was attended by approximately 40 people ranging from a consultant in rehabilitation medicine, through representatives from charitable organisations and associated industries, to technologists and other therapy based professionals from the NHS and the private sector.

Volvo Group UK Ltd's premises in Warwick.

The meeting was chaired by Ann Frye, an independent transport consultant, who posed the question, *"How do we make sure we maximise independence whilst maintaining safety?"* Six speakers gave their presentations on various subjects ranging from the development of the "Blister" paving adjacent to road crossings to the role of Standards in consumer transportation. The meeting did not focus on wheelchair mobility alone but included visual, cognitive, physical and auditory disabilities as well.

The first speaker was Susan Sharp, head of Public Policy for the Guide Dogs for the Blind Association. Susan highlighted the changes in the pedestrian environment over the years citing that not all changes were necessarily beneficial – for instance drop kerbs do not always provide guidance as to the orientation of the crossing for visually disabled persons, and that not all disabled persons use a wheelchair. She explained that there is no statutory guidance on the design of drop kerbs, which is subsequently left to the local councils. Blister paving was introduced in 1986 and there are presently seven varieties, some better than others. There are a number of UK acts and legislations concerning the pedestrian environment, parking control equipment, public transport infrastructure and inclusive mobility, although it was noted that railway stations presently have Crown exemption and are not covered by the general building regulations. One of many notable things highlighted was BS8300 – Design of buildings and their approaches to meet the needs of disabled people – a code of practice which goes further than the general building regulations and "should be used as a reference document for preparation of design and access statements".

Next to present was Donald Macdonald, head of the Accessibility branch in the Department for Transport's "Transport Technology and Standards" division. Donald discussed many aspects of national legislation and regulations, BSI and ISO Standards, codes of practice, research by various organisations, and in particular the Disability Discrimination Act (DDA) 1995 and 2005, plus vehicle construction regulations and vehicle use regulations.

Donald reported that in ISO 7193, 8L style manual wheelchair is still used for assessing accessibility on public transport, being 1.2m long, 70cm wide and 1.35m high when occupied. He recognised that this is unlikely to be representative of modern manual and powered chairs. He reported that much progress has been made on increasing the accessibility of buses and coaches, but doubted that full fleet compliance would be achieved by 2016/17. The presentation also covered cars versus taxis, bus drivers' responsibilities, rail vehicle access regulations 1998 No.2456, airplanes, airports and even cruise liners.

"Guidance on Infrastructure" from Inclusive Mobility is a useful booklet for local authorities and transport providers. Similarly "Wheels Within Wheels" is a booklet from Ricability giving guidance on public transport rights.

As a final note he commented that the mean weight of an electric chair has risen from 168kg in 1999 – to 180.1kg in 2005, and that the 95th percentile weights had risen from 258kg in 1999 – to 273.4kg in 2005.

Further information can be obtained from http://dft.gov.uk/ and http://www.dptac.gov.uk.

Coffee in the annex.

The presentation by Barbara Hatton, manager for the Wrightington Mobility Centre, centred around the issues of providing driving assessments for older and disabled drivers requiring personal transport. Barbara reported that because there are so many issues with public transport for the elderly and disabled, a private motor vehicle is sometimes the only choice. These will of course need adapting to suit the individual need. Some interesting statistics from DVLA 2005 were presented:

Driving Licence holders:	
over 75 years of age:	>1,500,000
over 91 years of age:	>21,400
over 96 years of age:	>1,500
over 101 years of age	34

There are 17 members of the Forum of Mobility Centres offering information, advice, assessment of ability, and seating & posture requirements for motor vehicle mobility. Increasingly, cognitive issues are becoming as common as physical abilities issues. Barbara reported that physical impairment alone is rarely a bar to driving. Many examples of adaptations were presented, some very simple, some highly technological.

For more information, telephone 01257 256 409, or Email: mobility.centre@alwpct.nhs.uk .

The next speaker needed little introduction to a large proportion of the attendees. Andrew Frank is a Consultant in Rehabilitation Medicine & Rheumatology and Medical Director of Kynixa – an independent provider of Rehabilitation Services. Andrew gave an impassioned presentation on the findings of his involvement with the provision of powered wheelchairs. The NHS provides EPICs and EPIOCs and rarely EPOCs, (indoor, indoor/outdoor, outdoor). However an increasing number of users are requesting EPOCs because of their greater comfort, range and terrain handling. The information is from research and audit from Stanmore Specialist Wheelchair Service based on 64 EPIOC users in 2002.

Andrew spoke of the liberating effect EPIOC provision can have for users, particularly those in or entering education. Some elderly users complained of the poor state of pavements and they reported that they would like better/some suspension. Even where EPIC provision to children would be the norm, consultants can influence the system to provide EPIOCs with their superior performance and stability. Tilt in space was seen as particularly desirable for relieving pressure and being able to change position for function or relaxation. The provision of an EPIOC provides the user with the freedom to go out on public pavements and open spaces. This can transform not only the life of the user but also of their carer(s). Andrew sited a number of encouraging and positive quotes from EPIOC users who all reported how enabling the provision of an EPIOC had been.

EPIOCs are not however without problems. They are big and heavy, difficult to load into many vehicles, and the results of accidents and collisions are likely to be more serious because of the environment they may be in. They are not always as reliable as they should be, and travelling over uneven ground can be uncomfortable, even painful.

The provision of an EPIOC may allow a user to return to work, and this was seen as a very important benefit to the economic community and for the self esteem of the user. Employers are obliged to make reasonable adjustments, users take on their responsibility to make the effort to get to work, and health professionals must inform both user and employer of the risks and benefits involved.

In conclusion Andrew reported that whilst an EPIOC can transform a user's experience of independent mobility, their varying degrees of reliability in different environments may not always provide a wholly positive outcome.

Next, the user's perspective was presented by Kevin Fitzpatrick. Kevin is the founder and director of *Inclusion21*, offering training and consultancy in equality and diversity issues. The thrust of Kevin's presentation was that the user must become the centre of the process for the provision of assistive equipment, and must become the providers' "main resource" for guidance about the success or otherwise of their intervention. In the early years of the NHS the Medical Model saw the professional as the expert and the patient as passive and grateful. The process needs to become much more of a partnership, with the patient becoming the leader of the process: patients need *"Skills not Pills"*. Kevin did however recognise that not all patients were in a position to take on this role.

He advocates that users should become the co-ordinator of their care because so many different components seem to operate without efficient inter-departmental communication, and this can result in a disjointed service provision and much frustration.

Kevin advocates greater patient education so that they can make informed decisions about their healthcare. This would involve a greater understanding of patients' rights and responsibilities. He cited the fact that 99% of 999 calls are non-emergency, and that 90% of chest pain is due to stress or fear, and not "medical" in origin. He also suggested that the health and social risks of unemployment were equivalent to smoking 20 cigarettes a day.

Citing a report that having lights on EPIOCs is often an unnecessary expense from the user's point of view, he wondered if this is perhaps something the manufacturers and legislators could look into.

The final presentation from the morning session was provided by Campbell McKee, Managing Director of Unwin Safety Systems. During his involvement with the preparations for CH173/1 (standards for wheelchairs for use in transport), he realised that the user's needs were not considered paramount and therefore he decided to place the user's needs, when considering the transportation of users and their mobility equipment, as the central theme for his presentation.

Campbell suggested that many Standards were concerned with the safety of the wheelchair as opposed to the safety of the user. The CH173/1 data cite an 85kg chair, 75kg user, 30mph and 20g deceleration. This is a compromise in order that a manufacturer can demonstrate compliance with a standard, not necessarily that the client will survive the crash. During normal driving, users experience on average up to 0.5g; during heavy braking up to 0.8g; in a crash in a large bus, 8g to 12g; in a crash in a car, 25 to 30g. The Medical Devices Directive seeks to eliminate or reduce risk through the design process backed up by market surveillance. However this cannot take into account the multitude of accessories that may be affixed to a chair, such as communication aids, special seating and controls etc.

It is necessary to employ a *sensible* risk management process, one that does not unnecessarily reduce the user's mobility, safety, dignity and confidence. Campbell suggested that it would be useful to include a much greater involvement in the Standards development process; this would help to reduce the unproductive minutiae about a particular dimensional preference and introduce some real world pragmatism. Finally, he reminded us all that "there is no such thing as absolute safety".

The after lunch session.

Following a rather excellent finger buffet, the meeting re-convened and formed themselves into six workshops to look at various issues relating the theme of the meeting in parallel sessions. These being:

1. Design for the built environment – external
2. Design for the built environment – internal
3. Design for public transport
4. Design for personal transport
5. Social models v Medical models
6. Design for work and leisure

We were asked to come up with five or so proposals that could be presented back to the meeting at the end of the session, with the intention of at least one of them from each group being taken forwards after the meeting to attempt to produce a concrete and recognizable outcome in the real world.

The following lists are the comments and ideas that emerged during our debate, which were grouped into themes as best as we were able.

1.&2. Design for the built environment – external & internal

- Pavement – drop kerbs.
- 2006 building regs – life time homes.
- User involvement – building design – needs proper funding.
- Indication of slopes – GPS.
- Suspension on wheelchairs.

3. Design for public transport

- Change in lifestyle of wheelchair users, expectations and age.
- Increase in mass of powered chairs – classification anomalies.
- Better education of all stakeholders in public transportation.
- Develop concept of wheelchair passports – re transport providers.
- Improve transport of current chairs, e.g. tie down points.
- Standards should not hold back development.

4: Personal transport

- Personal transport = wheelchair.
- Standards should be enabling.
- Informed choice, risks/independence.
- Education of all parties.
- Wheelchair Services employ health professionals not wheelchair professionals.
- One wheelchair rarely meets all of a person's needs.
- Lack of joined-up Government services.
- Lifestyle needs not wheelchair needs.

5. Social models v Medical models

- Consistent service provision across the country.
- All agencies working together.
- Standards for risk assessment should be turned on their head – assess the risk for each individual/situation.

6. Design for work and leisure

- Lifestyle disability/capability assessment centres.
- PMG/BHTA to develop closer liaison, political agendas.
- Write to Dame Carol Black, Director for Health and Wellbeing regarding the sensible use of funds from the "Access to Work" initiative to support the provision of EPIOCs through Wheelchair Services where the "Voucher Scheme" is plainly inadequate.
- Promoting mobility, not protecting wheelchair services and manufacturers.

As a result of our final deliberations, the concrete proposal our group wished to take forward was to:

Formally write to Dame Carol Black as the Director for Health and Wellbeing to request that funds from multiple agencies should be available to provide robust EPIOCs, with suspension, with sit-to-stand or riser-recliner and/or lights, as may be appropriate in order to provide the greatest level of independence and opportunities for gainful employment and an active and fulfilling lifestyle for persons who use powered wheelchairs. (see http://workingforhealth.gov.uk/Carol-Blacks-Review/Default.aspx).

All groups then reconvened together and fed back on their deliberations. The scribe sheets were collected and retained for future reference. It was agreed that the proceedings from the meeting should be written up and circulated to all attendees, in addition to being published in future editions of both the PMG and BHTA journals.

It was the general opinion of those present that this meeting had been a worthwhile and productive event, perhaps one that could be undertaken annually in the future.

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An Experience Abroad at the Oxford Centre for Enablement

Pt. Chiara Pasqualetti, Physiotherapist, Assistive Technologies Centre,
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Abstract: *Chiara Pasqualetti, a PMG member living and working in Italy, was awarded a bursary by the Education & Training fund in 2007 so that she could spend two weeks learning about clinical practice in the UK. In her article she describes her time at the Oxford Centre for Enablement, and the impact it has had on her own practice.*

I had been searching for a long time for a way of working in another country to evaluate and compare clinical practice in postural seating and wheelchair assessment.

When I found PMG my idea became a reality. I was lucky to be awarded a bursary to finance my project and so… I packed my bag and left Italy. My destination: the Oxford Centre for Enablement. My emotions ran high as I left Italy not knowing what I would find in England, and not knowing what I would bring home with me from this experience. The moment I arrived in England all my worries disappeared and I soon felt welcome in every area of daily life – especially people's kindness (real English manners!!).

The first step was to get to know the English National Health Service: the service organisation and the professionals involved. The differences between the Italian and English NHS aren't so great. In both systems the Government provides a budget to local health services, who then decide how to manage the budget. The NHS provides for assistive technologies for people who need them, and can use them, from walking orthoses to powered wheelchairs.

After arriving in Oxford and being shown how things worked there, the similarities to the Italian NHS made my experience more interesting. I found the focus the same as in Italy, with limited funds for AT requiring that seating and other aids have to be carefully prescribed.

The main difference is the way the clients in Italy acquire assistive technologies: normally in Italy there aren't physiotherapists or occupational therapists in the local wheelchair service making decisions about this provision. So the clients have prescriptions from the Medical Doctor or PT/OT of the Rehabilitation Centre and then present the request to the specific service in the NHS. There are no clinical engineers either, so we don't have specialised professionals making decisions on funding, only administrators. It's often hard to explain the needs of your client to them while having to consider the economic aspects.

In my two weeks at OCE I was able to see all the services offered: mobile arm support evaluations, gait analysis, electronic assistive technologies, assessments and casts for seating. Every experience allowed me to see a different way to make evaluations and assessments, and I have to tell the truth: I found a more careful assessment method.

The most interesting thing was absolutely the postural assessment in people with severe disabilities. In my daily job it's difficult to correctly assess the requirements of clients with complex disabilities. So this was a great opportunity to study the postural management approach, with day and night postural care – this is not so common here in Italy (thank you Pat!!). [Pat Postill]

All the other colleagues were also very kind to me, explaining their daily work (and understanding my English) and I learnt a great deal from everyone there, especially the way to care for the patients.

I have to thank all the OCE staff: it was a great experience and I brought home with me a lot of things that I use every day. A special thank you to Dave [Long] who planned my stay at Oxford so well and to Olwen (we will meet one day).

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24th International Seating Symposium Vancouver 2008

Les Harper, Rehabilitation Engineer, Northern Lincolnshire and Goole Hospitals NHS Foundation Trust,
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Abstract: *This article gives an overview of the 24th International Seating Symposium held in Vancouver from 6-8 March 2008. Some highlights from the Symposium are discussed briefly with reference to their presenters. The presentations discussed are of particular interest to the author along with his appreciation at being given the opportunity by the PMG to attend this prestigious event. This event is of particular significance as the author is retiring this year and is a fitting culmination at the end of his second career.*

We arrived in Vancouver after a 10 hour flight from Amsterdam coming in to land over the Rockies. We then had a day to overcome our jet lag and a chance for a bit of sightseeing in the local vicinity of the hotel before the start of the symposium.

The site for the symposium at the Westin Bayshore Hotel could not have been better in terms of location and facilities. Everything was of the highest standard and the staff could not be more helpful.

As the title suggests it really was an International Symposium with delegates from around the world. There were 865 registered delegates and 125 Presentations. (The first symposium took place in 1983). Selection of what Instructional Sessions to attend was a daunting task as everything on offer was of great interest. A selection of the sessions which we attended follows in this article. We also felt we needed to support our UK colleagues who were presenting.

The opening plenary talk by Geoff Fernie was very inspiring including the banter between Geoff Fernie and Geoff Bardsley. Geoff Fernie discussed the outstanding results in the field of mobility, seating, and function that could be achieved with therapists and engineers working together.

The first session of the morning was by Maureen Story and David Cooper on Craniopagus Conjoined Twins (twins joined at the cranium) and the particular challenging problems associated with positioning, car seats, buggies, and bathing. Customised carved foam systems for seating and positioning were used, along with foam-in-place moulds for the car seats. These systems had to be continually adapted to allow for growth.

Allen Siekman gave an update on one of the standards being developed for wheelchair cushions. Allen's presentation was "Testing the Heat and Water Vapour Transmission Characteristics of Wheelchair Cushions". His pilot study was to measure the cushion/user microclimate in a clinical setting. The results confirmed that it was possible to develop a clinical tool for measuring cushion microclimate; however further hardware development is necessary.

There was ample time between sessions to view the poster presentations and to visit the product suppliers stands.

The poster presentations were of a very high standard and included titles such as "I love my new chair, but how do I get inside my house?" by Paul Jensen, "Rocking Chair Exercises as a Training Method for People With Physical Disabilities" by Marju Huuhtanen and Kristina Niemela, and "Evaluating the Characteristics of a New Wheelchair's Adjustable Back Support" by Shigeo Nishimura and Tatsuo Hatta.

Some points noted when visiting the product displays were that nearly all the powered wheelchairs were of a mid-line drive configuration. Another feature on some chairs was a lateral tilt facility (a presentation entitled "When to Think About Lateral Tilt and Why" was presented by Stephanie Tanguay). Discussions with other colleagues revealed that nearly all the problems facing us in our daily work, such as ramping and access around housing, are to be found in North America as well.

Doug Hobson and colleagues gave an excellent talk on their work on a self-positioning device or “Butt Scooter” as it is affectionately known. This is a device to allow users to re-position themselves in a wheelchair, changing the relationship of the pelvis to the seat and back surfaces. Three users were selected to test the prototype and, although two subjects produced mixed results, they felt the device assisted with their transfers. The third subject met all the inclusive criteria and demonstrated the characteristics for which this device was designed. The dramatic improvements in comfort demonstrated the potential for this design.

Jean Minkel gave two inspiring and excellent presentations about her work with MS clients. In the first presentation she referred to a book written by Dave Williams entitled “Battling the Beast Within: Success in Living With Adversity”. This book is a must read for any healthcare professional. The theme of Jean’s presentation was “Let’s Try This” which requires a participation in partnership with the client and their family. A holistic approach is needed as healthcare providers can be a resource to help clients with MS to explore their own “Functional Activity Triangle”. Jean presented some case histories and how they were approached.

Not forgetting the UK (yes we were represented): David Porter presented his paper on “Postural support influence and ability to perform attention tasks in children with cerebral palsy”. There is little research in this subject and David tried to establish whether support had an effect on attention tasks in children with bilateral cerebral palsy. Three types of support were evaluated in terms of the subject’s speed and accuracy in alertness and in carrying out a computerised game of snap. The results obtained were encouraging giving a reduction of response time and lapses in attention with postural support. There was also an increase in score and reduction of attention lapses with the game of snap. Most participants preferred the trunk and pelvis stabilised.

Leckey, a familiar name, was also represented, with a presentation from Clare Wright entitled “How Effective is your Seating Prescription? Using Case Histories To Generate Evidence”. Further information, including a complete package for therapists, can be found on their website at http://www.leckey.com/downloads.asp?pid=10000 under Early Activity System.

There was also an excellent and little researched subject presented by Catherine Holloway, a PhD student from University College London, entitled “Carer Wheelchair Propulsion: Factors Affecting a Carer’s Capacity”. This discussed the strength required for a carer to push a wheelchair in carrying out routine tasks. This research would be useful to those providing wheelchairs primarily being pushed by a carer in preventing injuries.

On the final day there were some inspiring presentations and in particular two that I really enjoyed. One was “Darius Goes West” presented by Ellen Koch. This was about a 15 year old boy called Darius Weems with Duchenne Muscular Dystrophy. It was about his adventure from Georgia to Los Angeles to convince MTV’s “Pimp My Ride” to customize Darius’s wheelchair. It was the kindness of strangers in the end that produced him a customised wheelchair – really customised with a Play Station2, a cell phone, 13 inch flat screen TV, and a stereo system – complete with speakers - encased in a customised shell custom painted Lamborghini Orange. The emerging moral is that you can trust in the kindness of strangers, but not in certain cable networks. This story has been made into a documentary and has won 25 film festival awards.

I would defy anyone not to be touched by this film and further details can be found at www.dariusgoeswest.com

The second presentation was by Kelly Smith, Paralympic Athlete and Air Traffic Controller. Kelly fell when climbing, receiving a spinal injury confining him to a wheelchair. He related how he overcame his injury and was not going to be limited by his disability, and how he went on to be a Paralympic champion. He also was not going to give up his outdoor pursuits and he continues to snowboard, water ski, bungee jump and anything else you can think of. One point to note is that he still has his original wheelchair which he takes extremely good care of!

To end on the Paralympics would be apt because the 26th International Seating Symposium is back in Vancouver in 2010 and the last day of the Symposium coincides with the start of the Paralympics. Wouldn't it be great if the PMG could sponsor a user to attend this event in conjunction with the Seating Symposium?

After the Symposium my wife and I had three days to visit some of the local highlights and the City bus tour proved interesting as the other passengers consisted of an Irish Member of Parliament and the Olympic Luge team from Germany!

I sincerely hope the PMG committee will continue to offer this opportunity to others and I would particularly like to thank Olwen and Barend for their assistance in making this memorable trip.

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Is a tippy chair easier to push?

(Balancing manual wheelchair stability and 'tippiness' for functional independence)

Lynne Hills, Occupational Therapist, Aspire Centre of Disability Sciences, RNOH Brockley Hill, Stanmore, Middlesex
with Catherine Holloway and Professor Martin Ferguson-Pell

Abstract: *This report highlights the findings of a recent study supported by the PMG Research fund and forms part of a Masters in Research through University College London. The study explored the impact of a manual wheelchair's Rear Axle Position (RAP) on castor forces and push rim forces, recorded during a series of straight line, functional mobility tasks, performed by a wheelchair user.*

Rear axle adjustment has an effect on the stability of a user's wheelchair. Usually, wheelchairs are delivered with the axle set in its most rearward position, with guidelines and cautionary advice on its forward adjustment. This is contrary to current clinical recommendations: 'adjust the rear axle as far forwards as possible without compromising the stability of the user' (Paralysed Veterans of America, 2005). Thus, clinicians adjust the rear axle forward incrementally, working with the wheelchair user in order to maintain safety and maximise performance. Theoretically, a more forward axle position has been shown to decrease rolling resistance by reducing the weight transferred through the front castors (Brubaker 1986). Therefore, most clinicians assume that moving the rear axle forward will make the wheelchair significantly easier to propel.

The current study was set up to investigate if this was true. Following rear axle adjustment (from the most stable position to the tippiest position) propulsion moments generated through the push-rim and the castor forces were recorded during a series of straight line, functional mobility tasks performed by eight experienced wheelchair users, all of whom had a spinal cord injury below the level of T1 and were at least 2 years post injury.

Subjects were set up in a control wheelchair (Quickie GPV) to perform a standardised protocol of functional mobility tasks: propulsion in a straight line over lino & Astro, ascending of a slope and ascending a 3” curb. All 4 conditions were performed in both the tippy and stable configuration.

Castor forces and pushrim forces during each propulsion cycle were gathered using instrumented castors and an instrumented hand-rim (SmartWheel™).

The synchronisation of the hand-rim and castor data allowed a detailed examination of how the push forces changed during a propulsion stroke, and how this relates to castor weight. By changing the axle position, and hence the tippiness of the chair, it was possible to measure the effect of stability on push stroke dynamics.

It was found that dynamic changes in castor forces were significantly affected by Rear Axle Position (RAP) (Table 1), although this did not translate directly into reduced propulsion forces (Table 2).

Key:
↓ = reduction
↑ = increase
→ = remains the same

Table 1: Influence of rear axle position on steady state castor forces and push-rim moments

RAP	Castor Forces	Peak MZ
Tippy	↓	→
Stable	↑	→

Table 2: Influence of surface of castor forces and push-rim moments

Terrain	Castor Forces	Peak MZ
Lino	→	→
Astro	↑	→
Slope	→	↑

The kerb analysis showed a greater first propulsion moment was needed with the RAP rearwards (stable) compared to the less stable configuration. For a clinician this makes sense: when teaching users to flip their castors it is much easier for them to achieve this with a less stable configuration. Kerb performance also influences the forces needed to perform flipping the castors to negotiate a kerb.

This study reinforces the importance of configuring a wheelchair for a full range of tasks anticipated for the user, rather than simply those used for forward movement, whilst also considering the frequency of such tasks as part of their daily routine.

The message to clinicians is that they should not be concerned about the effect of RAP on propulsion forces in a straight line for these types of conditions aside from negotiating a kerb. This study does not however provide information about the effect RAP may have on propulsion forces when manoeuvring, an important consideration for future studies.

References

1. Paralysed Veterans of America (2005) – Preservation of Upper Limb Function Following Spinal Cord Injury: A Clinical Practice Guideline for Health-Care Professionals. Consortium for Spinal Cord Medicine
2. C. E. Brubaker, “Wheelchair prescription: an analysis of factors that affect mobility and performance,” J Rehabil Res Dev 23, no. 4 (1986): 19-26

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See the full report on the PMG website:
www.pmguk.co.uk/Research/2005+Projects/Lynne+Hills

PMG Research Fund

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The next closing date for the submission of outline proposals is 30th August 2008. Apply via www.pmguk.co.uk/Research/Application+Form

Scottish Posture and Mobility Network (SPMN)

Catherine Mathieson, Chair

SPMN ran a successful annual meeting in November 2007. The theme of the day was innovation in the delivery of posture and mobility techniques, technologies and services for diverse clinical conditions.

We heard from clinicians who have successfully taken forward original ideas for postural devices and turned them into commercial reality with help from Scottish Health Innovations Ltd. We heard about a project which is gaining momentum in carers' training as well as other aspects of innovative practice.

In response to requests from the membership, SPMN now plans to run two events per year. One will be a practical, hands-on training day while the other will be the more usual conference style.

SPMN has funded the training of one trainer in the Postural Carers Skills Programme UK Ltd. Training for trainers has started and will ultimately equip them to train carers over a 30 hour programme in general postural skills.

SPMN is working with Quality Improvement Scotland (QIS) to plan Master classes in the 24-hour postural management of children.

Dates for 2008

4th June: Practical Workshops on Wheelchair Technologies, Kirkaldy.

5th November: 24-Hour Postural Management and AGM, Erskine

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Recent Publications

Carolyn Nichols, MCSP, Paediatric Physiotherapist, PMG Publications and Marketing sub-committee

1. **Two articles published on young people's and older adults' use of EPIOCs**

At the PMG 2007 NTE Andrew Frank, Consultant Physician in Rehabilitation Medicine at Stanmore, presented findings from a study which examined the experiences of older children and older people using electric powered indoor/outdoor chairs (EPIOCs). Two papers relating to this study have now been published. A wealth of information was gathered during these interviews which may be of interest to those who wish to improve their services, or to undertake further research in this area. Copies of the articles are available on the PMG website under Publications.

The aim of the study was to gather information about the experiences of older children and older adults regarding the provision, use and maintenance of NHS supplied EPIOCs. Themes explored included chair use (e.g. use during different weather conditions, situations that limit chair use, new activities possible as a result of having an EPIOC), chair safety (including provision of safety material and training, accidents, perception of safety), service provision (including waiting times, assessment and provision, staff, approved repairers), pain and discomfort (general pain / pain related to use of EPIOC, steps taken to manage pain), and effect on quality of life.

Areas highlighted as needing further investigation and development include:

- Anticipation of, and timely provision for, changing needs e.g. with growing children and changing/ deteriorating conditions.
- Understanding of how the concerns and needs of users change with age.
- Who gets maximum use and enjoyment from EPIOCs?
- Efficacy of provision of other powered mobility devices (e.g. scooters) that might more adequately satisfy the needs of older adults.
- Adequacy of stability testing.
- Effectiveness of information for professionals, clients and potential clients regarding the wheelchair service.

- Development and dissemination of information regarding vehicles for travel in EPIOCs.

Evans, S., Frank, A.O., Neophytou, C. and De Souza, L. 2007. 'Older adults' use of, and satisfaction with, electric powered indoor/outdoor wheelchairs.' Age and Ageing, 36: 1-5.

Evans, S., Neophytou, C., De Souza, L. and Frank, A.O. 2007. 'Young people's experiences using electric powered indoor-outdoor wheelchairs (EPIOCs): Potential for enhancing users' development?' Disability and Rehabilitation, 1-14.

2. **'Tilted seat position for non-ambulant individuals with neurological and neuromuscular impairment: a systematic review'.** Michael, S.M., Porter, D., Pountney, T.E. 2007. Clinical Rehabilitation, 21: 1063-1074.
    - 19 studies identified in which the effects of seat tilt on outcome for the seated individual were investigated, all on populations with neurological impairment. There is some evidence to suggest a posterior seat tilt reduces pressures under the pelvis for people with neurological impairment.

3. **'Patterns of postural deformity in non-ambulant people with cerebral palsy: what is the relationship between the direction of scoliosis, direction of pelvic obliquity, direction of windswept hip deformity and side of hip dislocation?'** Porter, D., Michael, S., and Kirkwood, C. 2007. Clinical Rehabilitation, 21: 1087-1096.
    - This article reports on an observational study of non-ambulant people at level 5 on the Gross Motor Classification System for cerebral palsy. The study found that the convexity of the lateral spinal curve is more likely to be opposite to the direction of windsweeping.

4. **Paediatric Orthotics.** Morris, C., and Dias, L. 2007. Blackwell Science Ltd.
    - One of the Clinics in Developmental Medicine, this book includes sections which relate orthotic provision to posture management.

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Achieving Mobility for Life

Barend ter Haar

Abstract: *Are the supposed beneficiaries of Assistive Technology (AT) design being consulted at all? Are they involved in producing AT standards so that these protect their needs and interests? How aware is anybody of the standards in development and published anyway? Are the standards relevant? Do they balance the risks of life with purist engineering? What changes are needed to improve the applicability and relevance of AT design?*

A meeting was held on 22nd November 2007 at Volvo UK, Warwick, to look at these questions, under the title 'Achieving Mobility for Life'. An exciting range of action points was created for PMG, BHTA, and standards makers to take forward.

The intention of the *Achieving Mobility for Life* meeting was to bring AT users together with medical professionals (including therapists and engineers) and commercial companies to look at what users need in the design of AT, how standards can be used to help achieve these needs, and how everyone can then be kept aware of the standards and the benefits they offer.

This joint event was organised by PMG and BHTA, with the initial idea to hold such an event coming from Bob Appleyard, Donald Macdonald and Barend ter Haar. The event was chaired by Ann Frye, Independent Transport Consultant, and the morning's speakers were: Sue Sharp, Guide Dogs for the Blind Association; Donald Macdonald, Department of Transport; Barbara Hatton, Wrightington Mobility Centre, Ashton Leigh & Wigan PCT; Andrew Frank, Consultant in Rehabilitation Medicine; Kevin Fitzpatrick, Inclusion21 and former Disability Rights Commissioner for Wales; Campbell McKee, Unwin Safety Systems and member of the BSI committee responsible for wheelchairs.

The afternoon was taken up by workshops looking at different arenas where mobility is involved, and the participants were asked to report on action points arising from their discussions. This article homes in on the action points that came out of the discussions. The next step forward is to achieve agreement as to which of the sponsoring groups (PMG, BHTA, BSI CH173), either individually or collectively, can bring the most pressures to effect the recommended changes. In the summary below, the most suitable groups have been indicated in italics.

Workshop Summaries and Action Points

A. Design for the built environment, external and internal.

Action points:

1. Pavements

Improved designs needed for vehicle access across pavements for private property *(BSI, PMG)*

One standard design required for flush kerbs. *(BSI, PMG)*

General maintenance of kerbs and pavements needs to be improved. *(?)*

2. 2006 Building regulations

Enforce the policy that new homes should be designed and built as 'Lifetime homes'. *(?)*

3. User involvement

This is essential in building design. *(?)*

4. Systems needed to indicate presence and angle of slopes

Improve and standardise signage. *(BSI)*

Technological solution: GPS systems in equipment carrying this information. *(BSI, BHTA)*

5. Suspension on wheelchairs

This should be a requirement for outdoor wheelchairs: there should be more availability and choice. *(BHTA)*

B. Design for Personal Transport

Personal transport was defined as wheelchairs etc. The group included two people with wheelchairs.

This summary considers areas of concern, of which many are beyond the remit of design alone, and a punt at some actions. The meeting agreed that the PMG and BHTA might be best suited to put some meat onto the action points, and use their influence with government, parliamentary advisers, and manufacturers to help bring some of the changes to fruition.

1. Standards

Most of the relevant standards are not legally binding, and therefore can only be taken as guidelines rather than rules. However, in a court of law, in the absence of anything else, then standards need to be taken aboard in risk assessments.

Action: Standards writers to take aboard that the standards with which they are involved need to be enabling. (One specific request was that wheelchairs should have an attached plate indicating the manufacturer, model no, and whether passed crashworthiness tests, with the plate fixed in a standardised position, plus clear indications of where to attach tie-downs). *(BSI)*

2. Informed Choice

Users request that they be given sufficient information to make their own informed choices for their equipment. The equipment makes up the tools for everyday life, and for those with the mental abilities to designate the priorities in their lives: they should take an active part in making the decisions which affect them.

Action: An application of medical input vs medical model. *(BHTA, PMG)*

3. Education

There is a need for broader education of all those who interact with those with disabilities whether directly or indirectly.

Action: Make more use of consultation with those with disabilities, but do not take the individuals' time for granted – input needs to be recompensed financially. *(BHTA, PMG)*

4. Risk vs Independence

Where individuals have the ability to make their own decisions about the risk balance for their independence, they should be allowed to make their own decisions, providing this does not increase the risk significantly for others, rather than being told that they cannot have certain equipment because of the risk.

Action: Flexibility needs to be shown by prescribers. *(PMG)*

5. Wheelchair professionals

Wheelchair services are staffed by health professionals, but not enough of these health professionals were considered by the users present to be wheelchair professionals.

Action: PMG to take aboard and work on. *(PMG)*

6. Assessment process

Because wheelchair and seating provision is encompassed within the NHS, assessments tend to be oriented towards meeting clinical needs, and not lifestyle needs.

Action: Medical input not medical model; wheelchair professionals rather than health professionals; integration of health, social services, education, and DWP budgets. *(PMG)*

7. *Research*

Powerful consumer research is needed to guide government, standard writers, manufacturers. *(BHTA, PMG, BSI)*

8. *Tools for needs*

Recognition needs to be made that different equipment is needed for different needs. One wheelchair may not meet all needs, and when an EPIOC is provided, this does not mean that a smaller chair is still not needed to get around the house.

Action: Assessment, budgets, and provision should recognise this need. *(BHTA, PMG)*

9. *Sharing of Resources*

There is often unused equipment sitting in a store in one district while it could be used in another.

Action: Create a national register of available equipment, and means to share it. *(PMG)*

10. *Reduce Postcode lottery*

Local priorities mean variation in funding for different services.

Actions:

i) Create benchmarking for commissioners to use when allocating budgets. *(PMG)*

ii) Work with RCP/BSRM to ensure that a Consultant in Rehab Medicine is involved with every wheelchair service (recognising that Consultants have influence in raising wheelchair services above Cinderella status). (PMG)

iii) Merge health, social services, education and DWP financial provision. *(BHTA, PMG)*

11. *Lack of joined up government services*

Action: As 10.

12. *Action needed*

The government is always seen as reviewing, and never doing. *(BHTA, PMG)*

C. Design for Public Transport

1. *Recognition of Increasing Demands*

It is important that a general awareness of the increasing need for accessible public transport will be required in the foreseeable future. Increasing demands will be driven by an increasing proportion of elderly persons with mobility limitations as the average age of the UK (and global) population rises.

Action: Need to identify an effective line of communication with National policy makers with a view to ensuring that future demands have been anticipated. Structured responses to these demands can then be developed with confidence. *(BHTA, PMG)*

2. *Classification of, and Developments in, Mobility Aids*

The continued development of mobility aids, especially with regard to wheelchairs, is occurring relentlessly. Larger, heavier and smarter devices are becoming available to individuals with disabilities and play an important part in achieving enhanced social mobility and inclusion.

Action: The current national mobility aid classifications system, which is 20+ years old, may well need review to fall in line with current, and accommodate future, product development. *(BHTA, PMG)*

Action: There are some positive aspects to a 'Wheelchair Passport System', an opportunity for a means of classification of device to be employed effectively as part of increased understanding and education (see Section 6). *(BHTA, PMG)*

3. *Role of Standards – National and EU Regulation.*

A review of current standards and regulations, at whatever level or of whatever nature, should be conducted with consideration of their ability to provide a framework for changes in societal needs as outlined. It is recognised that Standards Regulation can play an important part in paving the way for, and therefore facilitating, future realisation of facilities be they physical or establishment of convention.

Action: Standards developers may be the wisest collective group to devise a Wheelchair Passport System. *(BSI, ?BHTA, ?PMG)*

4. *Approach to Standards and Regulation*

It was noted that the philosophy of a standard in the mobility sector needs to be carefully considered at the time of preparation. Too much control of the design of mobility or access aids can stifle innovation, whereas over-emphasis on a risk oriented approach can induce fear if not handled correctly. It would appear that misunderstanding or lack of knowledge are frequently at the source of anxieties regarding security of wheelchair-accessible transport facilities.

Action: Standards developers would be wise to examine means of ensuring greater participation of equipment manufacturers in their communication with users and their ability to make informed decisions with full account of risk consideration, without inducing fear. *(BSI, BHTA)*

5. *Communication between Stakeholders*

The importance of effective communication between all parties involved in the supply, manufacture, and usage of wheelchairs cannot be underestimated.

Knowledge and general information regarding the use of a wheelchair in transport needs to be made clearly available – in a palatable form – so that informed decisions regarding best practice in transport can be achieved.

Action: Examination of means to achieve improved levels of training in the use of Wheelchair Tiedown and Occupant Restraint Systems (WTORS), PLUS other safety aspects of passenger travel. *(BHTA, PMG)*

6. *Education – Awareness Training*

There is an urgent need for improved training of drivers and their assistants working in the transport sector in order to achieve a greater awareness of the requirements of wheelchair seated passenger transport. The requirement is not limited to any one sector of public transport (although the Driver and Passenger Conduct Regulations for the PSV environ is recognised as extremely valuable). Taxi, school transport, door-to-door type services and community transport sectors all require regular training and upgrading.

Action: Development of a ‘Wheelchair Passport System’, possibly a voluntary scheme laid out for wheelchair users who use transport facilities frequently. *(BHTA, PMG)*

D. The Work environment

1. *Access to Work*

The Access to Work (AtW) scheme offers a great opportunity for improvement, but the Department of Health (DoH) and Department of Work and Pensions (DWP) need to co-operate better. The combination of PMG and BHTA should meet with government to see how the structure should be improved for the benefit of users and providers.

The fact that you had to have a job (or job offer?) first puts potential users of AtW into a Catch 22 situation.

Action: PMG and BHTA to lobby Government to change the criteria for entry into the Access to Work scheme to those who are work able and willing to work (and not, as at present, only to those in employment which seems self-defeating). *(BHTA, PMG)*

2. *Disability Assessment Centres*

There is lack of consistency between wheelchair services across the country. While not necessarily recommending a National Wheelchair Service, there should be more equality of funding. Lifestyles should be taken into account when specifying a wheelchair (and not just clinical needs); and Codes of Practice should be universally adopted. Limiting the service to wheelchairs is missing an opportunity, and a more general Disability Assessment Centre provision could have significant benefits. A combination of BHTA and PMG should be able to argue for this at the political level.

Action: PMG and BHTA to lobby Government to review the scope and operation of the Wheelchair Services, and to consider extending them to a broader-based disability assessment and facilitation provision. *(BHTA, PMG)*

The Group also considered

- The will to work?
- Technological developments, both in equipment, and in bionic developments.
- The limitations of the NHS (what share of the wheelchair market is within the NHS?).
- Expert patient groups.
- Partnerships.

Further Action Points

1. PMG and BHTA to develop joint initiatives, at both the technical and the political levels *(BHTA, PMG)*
2. A letter to be sent / a meeting to be arranged with Dame Carol Black, National Director for Health and Work, to bring together:
    Wheelchair services,
    PMG and BHTA,
    Access to Work,
   to create the best wheelchair service to facilitate employment for disabled people. *(BHTA, PMG)*

E. Social versus Medical Model

The group considered general aspects of wheelchair services and provision including issues brought up by users, NHS service providers, and charitable suppliers. Three main areas were identified in which development could vastly improve users receiving the services and equipment to meet their needs best.

1. *Consistency of provision*

There is a need to provide a consistent service throughout the country.

Actions:

- Budgets allocated to a Trust should be ringfenced to be used for the correct service. This would reduce the varied budgets between areas resulting from Trusts reallocating funds to other departments. This would give services across the country equivalent funds. *(BHTA, PMG)*

- VAT exemption for wheelchair services would reduce equipment costs and improve the tight financial situation. *(BHTA, PMG)*
- Nationally agreed criteria for equipment provision would provide a framework to ensure that provision is equitable across the country. *(BHTA, PMG)*

2. Joined up working

Action: There would be benefits in facilitating all agents involved with the user to work together. By considering the costs in all aspects of the client's life, money could be used more efficiently. For example, if equipment were supplied to meet all aspects of daily life these costs may be offset against savings from reduced care needs. This may allow focus on the best long-term solution and not initial cost. *(BHTA, PMG)*

3. Risk Assessment

Action: Turn the process of risk assessment on its head and to focus on the situation not the person. An example was given of a wheelchair service refusing to supply custom seating onto a privately funded wheelbase since difficulties could not be overcome in responsibilities of insurance and maintenance. Considering risk on an individual basis and based on the situation involved rather than the broad refusal to a solution that would best meet the users' needs. This is reinforced by the view that decision makers require a greater understanding of users' needs. *(BHTA, PMG*)

Conclusion

For a one day conference with 48 participants, an amazing number of action points were created. The most common theme was that we really should be looking to the beneficiary's viewpoint for what is provided, rather than taking a patronising approach to what might be needed and what might be provided. In the end, with a major shift in approach, a lot of money could be saved and many more needs actually met.

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From the participant feedback

"The numbers were just right, the people were just right, Ann Frye was just spot on for that job, the speakers were all very good….. Kevin Fitzpatrick was tremendous."

"I found it very informative to meet a diverse group of people from different disciplines."

"Thank you for your great effort in making the event a successful one and a joy to attend."

"I measure these events by the amount of "buzz" I am feeling after them and this one was on par with the PMG NTE. Fantastic."

" Thoroughly enjoyed conference. This is the sort of meeting that can actually solve problems and enhance the quality of life for the users. Thanks for the opportunity to participate"

PMG Training Bursaries

If you would like to attend events like "Achieving Moblilty For Life" or other training which will enhance your professional development, and have been refused funding by your employer, remember that PMG has a rolling bursary fund to support its members' education. For information about the criteria and rules for applications to the fund, go to www.pmguk.co.uk/Education+and+Training/Bursary+Fund

Annual General Meeting 2008

Report from the Chair

Abstract: *The report below was presented to PMG members at the recent AGM in Nottingham, which was Dave Long's last as chair of the group. We felt that members who were not able to attend the NTE this year would value the chance to read Dave's report, as it provides so much information about the work of PMG at this time.*

As usual the executive and sub-committees have had a busy year. Outlined below is a summary of their activities.

Website

Membership: James Hollington (chair), James Foy (co-opted), Carolien Uddin (co-opted), Fiona Walker (co-opted)

A new sub-committee has been formed to support development of the PMG website. James Hollington is the chair and he has managed to recruit three co-opted members. This new sub-committee will have the brief of pulling together all the many and varied strands that have grown to become the present website. They will also make new developments to meet the needs of the membership.

Our website manger Ben Lumley has been working hard with James and Olwen to develop the web-based membership database as a cost-saving communication resource for PMG. You will have seen the first results with the arrival of e-bulletins, as well as last year's online Research questionnaire and, more recently, the online ballot to elect the 2008/9 committee. My thanks to Ben for his help and flexibility in meeting our needs, often within short timescales.

Also being investigated is the use of webcasting as a means of archiving material to meet the needs of present and future members (see also "Education" below).

It is great to see this sub-committee emerge and I hope you will soon see further improvements to our site.

National Training Event (NTE)

Membership: Dave Calder (chair), Kirsty-Ann Cutler, Helen Hislop, Linda Marks, Martin Moore, Nigel Shapcott (webcasting), Craig Egglestone (co-opted), Nicola Brain (co-opted).

The process of running the NTE is now well documented thanks to the efforts of Dave Calder and Patricia Marks (NTE Administrator). This is a safeguard for the group and a tool for future committees to enable any sub-committee to pick up and run a NTE. While this does not make it a simple process it nonetheless provides a template from which to work.

The 2008 event has provided another great spread of educational and professional development opportunities. My thanks to Dave, Patricia and team for another successful conference. Dave stands down from main committee at this AGM but has very kindly agreed to remain on the sub-committee for a further year to see the 2009 event into fruition and to pass on his experience. This continuity will be very much appreciated by all concerned.

Research and Development

Membership: David Porter (chair), Nigel Shapcott; all the following co-opted – Donna Cowan, Alison Johnston, Sally Kyle, David Punt, Steven Rolfe, Clare Wright, Helen Yarrow.

It is great to see the first batch of funded studies either complete or close to completion. This is a major step forward for the group in terms of participating in the strengthening of the science within the field. Further studies are in the process of being evaluated and funded.

At the AGM in 2007 it was agreed that a more substantial sum of money be set aside to support a larger project. Financially, it has been a more challenging year for the group than in the past and the financial sub-committee has therefore needed to make the recommendation that such a project be reconsidered for a future year. This is unfortunate but necessary due to the changing financial climate in which we operate. The treasurer's report will provide further detail in this regard.

My thanks to David, Olwen and sub-committee members for all their hard work, and also to the army of anonymous peer-reviewers who have given their time so generously to the PMG research funding scheme. You know who you are!

Political activity

Following the recommendation from the 2007 AGM to investigate means for raising the profile of the PMG in the political arena, I met with Mark Oaten, MP last summer, together with Barend ter Haar. Mark came recommended from the British Healthcare Trades Association (BHTA) and has showed himself to be both very sharp and interested in our field. I reported back to the executive committee who requested I meet with Mark again to agree terms and to raise our first and primary concern: the Transforming Community Equipment and Wheelchair Services (TCEWS) programme. Henry Lumley and I met with Mark and together developed a set of questions to be put to the House of Commons. The details of these questions and their responses from the Minister are detailed in the fortnightly bulletin we receive from Mark's office which are, or shortly will be, available on the PMG website. At the time of writing we are still awaiting the Minister's response to the business case written by the TCEWS team which will give details on the proposed new models of service delivery for wheelchair services.

Mark joined us for the January committee meeting in London where he introduced himself to the whole committee and where we informed him further about the work we do and the concerns we have. We have learnt that there are many more avenues to explore than simply asking questions in Parliament. The executive committee have decided to form a sub-committee for political activity and will meet regularly with Mark to take this important work further.

Education

Membership: Martin Moore (chair), Monica Young

Two events were held this year. Firstly, there was a one day seminar exploring use of standards in the field which was run jointly with the BHTA. The event attracted a number of interested parties including wheelchair users. There seemed to be a number of positive outcomes which have been summarised by Barend ter Haar in his report from the day.

Secondly, two consecutive one-day seating training events were held in Birmingham in conjunction with Jill Monger from the USA. These proved very popular and it is likely that the group will run similar courses again.

At the standards meeting an exploration was made of recording the presented material using simple video recording equipment. Nigel Shapcott provided the technical specifications while Monica Young operated the camera on the day. This material is to be made available on the website as a webcast and the experience will help develop future ventures of this kind.

My thanks to Martin, Monica and Olwen for making these events happen.

Publications & Marketing

Membership: Joanne McConnell (chair),
Jane Harding, Helen Hislop, Barend ter Haar,
Geoff Harbach (co-opted), Carolyn Nichols (co-opted)

This year has seen the introduction of an intermediary paper bulletin with the aim of keeping the membership up to date with the work of the group between journal publications. Jane Harding has edited this new publication and has done a great job at getting it up and running – thanks Jane.

Joanne McConnell has chaired this sub-committee but will be standing down at the AGM. My sincere thanks to Jo for all that she has accomplished over the past few years both within this sub-committee and on the executive committee. Thankfully, Jo has agreed to remain on the sub-committee as a co-opted member and will remain as editor for a further year, with Jane Harding taking over as chair of the sub-committee after the AGM. My thanks to the other sub-committee members for their significant contributions.

Administration

Olwen Ellis – Oli has done yet another year of sterling work for the group. She has her finger truly on the pulse of all that is happening and keeps all the committees in check. For the record she handles general administration for the group, executive committee, publications and marketing sub-committee, research and development sub-committee, website admin liaison and membership renewals/administration. My thanks to Oli once again.

Patricia Marks – Patricia is now administering her second NTE for the group under the banner of her business "Perception Matters Ltd". Together with Dave Calder she has developed the NTE 'blue print' mentioned above which will be of great use to future committees. Having witnessed first hand the stress and trauma of NTE administration (my wife, Fran, did this job for the 2003 event) I would like to thank Patricia for her patience in bringing this event into being. I can also report that Patricia has agreed, for Perception Matters

Ltd, to undertake the administration for the 2009 NTE which is great news.

Liz Lumley – When Henry Lumley took over as treasurer for the group he did so on the understanding that he would be supplied with paid book-keeping support. It is important to understand that membership renewals and particularly NTE financial administration are two extremely large pieces of work. Henry's wife, Liz, agreed to take on the task of book-keeper and is currently in the process of trying to assimilate payments received with delegates booked for NTE – you might be surprised just how little information NHS Trust finance departments pass on and no, delegate names do not always appear! Thanks to Liz for taking on this complex role.

N.B. All three administrators now have fixed fee contracts which allows the financial planning sub-committee to have a much better idea about forecast spending for the group.

Financial planning

Membership: Henry Lumley, Barend ter Haar,
David Long, Nigel Shapcott

This sub-committee meets around 3-4 times per year to take a strategic view of the financial situation of the group, to resolve any current problems and to budget for the year ahead. The treasurer's report contained all the relevant detail so I will not repeat this here.

International Conference 2010

Barend ter Haar has been spearheading this venture which is still in the early stages of planning. Some of the steering group met at the European Seating Symposium in Dublin last May and will meet again with additional members at the NTE in Warwick. There are a number of different work streams, the most pressing of which are venue (likely to be Glasgow), administrative support and website development. It is likely that the conference will focus on the development of best practice statements which will serve both as a reference point for the future and to assist with the training of those new into the field.

Scottish Posture and Mobility Network

The Chair of SPMN, Catherine Mathieson, has attended two PMG executive committee meetings this year which has been helpful in maintaining links with the group and also in relation to the political advancement of PMG. There have been (at least partially) successful moves within Scotland to raise the profile of the field which have resulted in additional funding being made available.

We hope to maintain and develop these links further in the coming year.

Executive committee

The committee met five times this year at venues in London and Bristol. My thanks to Emma Southworth, PA to Henry Lumley, for organising the room bookings at Southmead Hospital and to Whizz Kidz for the loan of their meeting rooms. The committee decided to make a monetary donation to Whizz-Kidz in acknowledgement of this provision, especially as London meeting venues can be very expensive. Thanks too to BES Rehab for the loan of their meeting room for one meeting this year.

We have made increasing use of teleconference facilities this year both to offset the cost of travel to meetings and the time taken to travel. It is likely that use of this technology will increase as we seek to make the committees more efficient in the coming year.

Jo McConnell, Linda Marks, Dave Calder and Martin Moore all stand down from committee by rotation at this AGM. My sincere thanks to them all for the hard work they have put into the committee and sub-committees over recent years. Each has made a significant contribution to the group.

New Chair of the group

Having served as chair of the group for five years it is time for me to stand down. I have learnt a huge amount which would be impossible to record in this short report. There are many people to be thanked. Firstly my thanks to Roy Nelham for proposing me for the position of chair and then in persuading me that it was something I could do, despite my protests! It has been a time of learning and great fun all rolled into one. It is a cliché but true nonetheless that the committee works only because it is a team and operates as such. Everyone I have worked with on committee over the past five years has been very willing to get stuck in and work on things, usually in their own time, so I would like to express many thanks to all the members of the last five committees. I would like to thank King's College Hospital and the Special Seating Service in Stanmore, North London followed by the Nuffield Orthopaedic Centre in Oxford, all of whom have been extremely supportive in allowing me to carry out my duties as chair of the group alongside the 'day job'. I also need to thank Martin Moore who has been Vice-Chair during my time in office. He has been a great support and someone to bounce ideas off – thanks Martin.

Finally, my thanks to Olwen and more latterly to Patricia who have been a pleasure to work with. They have brought great skill, integrity, patience, tolerance, kindness and many other virtues in looking after both the committees and the wider membership.

I shall greatly miss being chair but thankfully still have two years until I must stand down from committee by rotation. I hope to be of assistance during that time, especially to the incoming chair….

In January this year two people made representations to the committee in their bid to become the next chair. There followed a ballot which was won by Nigel Shapcott. Nigel is Head of Rehabilitation Engineering at the Morriston Hospital in Swansea. He spent many years in the USA working with disabled people in a rehabilitation engineering role prior to returning to the UK earlier this decade. He has great enthusiasm for his job and for this role. He is always full of ideas and finds it remarkably easy to delegate – watch out! I would like to wish Nigel every success in his new position and I will be offering him my full support while I remain on committee.

Signing off...
David Long, Clinical Scientist & PMG Chair 2003-08

National Training Event 2008

Dave Calder

Abstract: *With circa 540 delegates flocking to Warwick in April, NTE 2008 had one of the largest attendances to date, and the feedback has already been extremely positive.*

The exhibition opened on the Wednesday afternoon, which allowed those who had travelled up early a relaxed first look at all of the latest equipment. This was followed by the evening NTE icebreaker, sponsored by Days Healthcare, in the form of a Casino night which provided a relaxed atmosphere for first-time and seasoned delegates to start to network, a feature that the NTE is renowned for. Again it was great to see so many delegates there.

One of the exhibits at the NTE.

The strong presentations over the next 2 days led to much debate and there was a real spark in the air throughout the conference. I cannot impress on you how hard the NTE organisers work to bring you the annual meeting (the analogy of the serene duck floating on the water's surface while its feet are paddling like mad below springs to mind) and, although very tiring, one gets so much satisfaction from being part of it.

I stood down from the PMG Committee this year and have relinquished the NTE sub-committee Chair. My aim over the last two years was to try to establish a documented process for the construction and delivery of the NTE which, with the help of the rest of the sub group, I feel I have achieved. Kirsty-Ann Cutler has accepted the position of NTE Chair and I am sure that you will join me in welcoming her. To aid Kirsty-Ann I shall continue with the sub-group as a co-opted member helping to provide continuity during this change of office.

May I take this opportunity to thank my team for all their hard work in planning the NTE, the NTE sponsors and exhibitors, all of the presenters for good strong subject matter, Warwick Conferences for their professionalism and a special thanks to Patricia Marks and her team from Perception Matters for taking care of all of the administration of the NTE. Without her the NTE would not have been possible.

p.s. Thanks for the Champagne and flowers which helped to ease the issue around me taking my wife Kay (worked on reception desk throughout the NTE) to the NTE2008 for our 25th Wedding Anniversary!

See you all next year!
Dave Calder, NTE2008 Chair

Bike Ride for Lucy: In Memory of Andy Gudgeon

I had an e-mail just before I went on holiday last September asking for volunteers and sponsors for a bike ride to raise money for Lucy Gudgeon, daughter of Andy Gudgeon who I had known for many years. In my pre-holiday desire to keep my inbox empty I quickly sent a reply saying "Count me in; I'll ride if you'll ride too". "Fine", came the reply from Andy and off I went on my holidays, never once suspecting that my enthusiastic friend would find some half baked reason why he couldn't join us!

I met Andy round about 1994 when I began attending the old National Wheelchair Computer User Group meetings which Michelle McCreadie used to chair. When I took over the chairmanship of the group Andy was elected vice chair and we worked closely together for a number of years, overseeing the development and improvement of the computer system that was used widely by wheelchair services around the country.

Andy moved to NHS Supplies and the NHS Purchasing and Supplies Agency and added considerably to the knowledge base that ensured they worked so closely and effectively with wheelchair services. Many members of PMG will no doubt recall him at annual conferences as well as working hard behind the scenes through sub-groups.

I thought Andy had been caught up in another of those "restructurings" when he seemed to drop out of circulation early in 2007. I was amazed to learn, from the pre-bike ride briefings, that he had been diagnosed with cancer and was so ill. When I then read of his daughter's problems as well I was determined to try to do my bit on the bike ride. I am so pleased I did.

The ride was organised by Andy's colleagues at P&SA. The plan was to ride from Southampton's ground to Fratton Park, the home ground of Portsmouth football club, a distance of some 30 miles. We all trained hard for the event, mostly ensuring we were in absolutely no danger of dehydrating (if you get my drift) so that when the day dawned, 1st November 2007, we all arrived fit and raring to go.

In fairness, the start was not all it could have been. Sadly Andy had succumbed to his cancer on the Saturday before. It did, however, bring an increased sense of purpose to the whole day.

So we set off from Southampton's training ground to cycle the 2 or 3 miles to the Hythe ferry. "Follow me" said our leader. Well that was the day's first big blunder. Imagine our surprise when, some 15 minuets later, we see familiar cars parked on the side of the road and the reality dawns on us that we had merely managed to return to our starting point!

Off we set again and this time, due to improved leadership, we made it to the ferry point in Hythe where the second blunder quickly emerged. Some procurement 'expert' (no names Scott) had arranged tickets from Southampton to Hythe and here we were in Hythe looking longingly at Southampton! It was soon rectified; we got across the river and were shortly standing outside St Mary's pretending we were fit athletes totally unfazed by the sight of the Itchen Bridge rising like a colossus in front of us. Some even managed to make an early break for refreshments!

The route took us through villages, pubs, commons, pubs, small towns, pubs and on to the Rainbow Centre, the special conductive education centre that Lucy attends. We met some of the staff and children and I'm sure got the energy to finish what we had started by getting a sense of what the money was being used for.

We headed in to Gosport and had a short wait on the front for the ferry and for some to catch up. There was a convenient off licence (we were in danger of dehydrating you'll understand) and a café (for the drivers). Then it was off again. Over the water to Portsmouth and the final push to Fratton Park. "It's only round the corner" said the ref! Never, ever believe a football referee! What should have been a 10 minute coast down the road turned into a half hour race round the sea front endlessly being told "Almost there, almost there, not far now". You know what they say about the guy dressed in black???

When we finally arrived at Fratton Park I had clocked in excess of 36 miles. I suggested we should ride back and was grateful no one accepted the challenge!

Andy's wife Kay and the children were there to greet us. It was wonderful to see her and I'll never know how she managed to be so welcoming just days after Andy had died. The sense of achievement, of having completed something so worthwhile, was enormous. I would of course like to add a huge thank you to all my sponsors who helped us raise this valuable contribution to Lucy's future education.

All in all we managed to raise £20,050 from the day. There were about 20 riders with their many helpers. Many PMG members and numerous suppliers sponsored me very generously and I'm delighted to have been part of the day. It will no doubt be a huge help to Kay as she takes care of Lucy in the years ahead.

Now that's what you'd call a grand day out!!!

Henry Lumley

PMG Sub-committee News

If you wish to contact any of the sub-committee chairs or members,
please do so in the first instance via the PMG administration offices:
For NTE enquiries: patricia.marks@pmguk.co.uk
For all other sub-committees: olwen.ellis@pmguk.co.uk

Education and Training Sub-committee

Martin Moore, Chair

As I write this report, my time on the main committee is coming to an end at the 2008 AGM. I have stood for re-election in the hope that I can carry on the work on the sub-committee with Monica Young.

I would like to take this opportunity to thank Monica for her support and enthusiasm on the sub-committee over the past couple of years. I would also like to thank Olwen for her help in the administration of the courses we have run.

We have not run as many courses as we would have liked but, with ever increasing work loads at the day job, the task of sourcing and coercing speakers and setting up these courses is becoming ever more difficult.

I would like to thank all the speakers who have presented for us in my time on the committee, and I hope those of you who have attended have enjoyed the courses and benefited in your education and practice.

At the time of going to print there are no courses planned; however the sub-committee is looking into some very exciting possibilities with some courses that could become a rolling programme. We are in discussions with another organisation which has potential to provide training courses that will suit PMG's intentions well. We'll keep you posted on any developments.

Continues overleaf...

Adaptability makes the Days ***Viper*** stand out as one of the market leaders for power chair users who insist upon the utmost mobility. The Days ***Viper*** chairs utilise easily controlled flexible movement with a wide range of options, making it the ultimate choice for any user and environment.

We have introduced 2 new models to the ***Viper*** power chair range; the ***Viper Plus*** and the ***Viper S***.

Days Healthcare Auk Ltd, North Road, Bridgend Industrial Estate, Bridgend CF31 3TP
Tel: 01656 664700 www.dayshealthcare.com

Bursaries

Don't forget that there are PMG bursaries available to attend training courses and you will find the rules for applying on the PMG website:

www.pmguk.co.uk/Education+and+Training/Bursary+Fund

Earlier in the journal (page 38) you can read Chiara Pasqualetti's report about her time doing work experience at Oxford Centre of Enablement, which was supported by a PMG bursary.

Signing off for now, best wishes.
Martin Moore, March 2008

Best Clinical Practice 2010

Barend ter Haar, International Conference Sub-committee Chair

Abstract: *Following the success of the Dundee and Exeter International Conferences, plans are in place for the next conference in this series, to be held in early summer 2010, with a theme of looking at best practice in the clinical world as exercised currently in and around posture and wheeled mobility.*

The TORT centre in Dundee started a tradition of holding International Conferences on Posture and Wheeled Mobility with a didactic nature, hosting two conferences. This was followed up by the conference held in Exeter in 2005, where experts from around the world met up to discuss the state of the art in this area. The organisers and attendees of that conference agreed that it would be valuable to continue this tradition, but with a slightly increased frequency.

2010 has been chosen for the next conference since it avoids clashes with the Nordic Seating Symposium, which has built up its own tradition of meeting every 18 months, and will be meeting in May 2009 in Iceland, and then again in October 2011. It should also avoid clashing with the new European Seating Symposium which first met in 2007, and is next scheduled for 2009.

The theme for the 2010 conference is Best Clinical Practice. For this we are in the process of selecting topics. A convenor for each topic is being chosen, and that convenor will put together a small team to produce a proposal for Best Practice. For any topic there may be more than one best practice, of course.

At the conference the convenor will present the results of the Working Group's deliberations in a workshop at which it will be possible for others to adapt and/or adopt the proposals, which can then be published to help newcomers and the less experienced improve their practice. Best practice does change with time, and we will need to see how we can set up a review process over time.

We would welcome suggestions for topics, and also volunteers to work on the best practice working groups. Suggestions for topics that the committee is working on at present are:

- Assessment
- Research design
- User empowerment
- Risk vs choice
- Dynamic Seating
- 24-hour postural management (subtopics – night time; paediatric; institutional care; cared for vs self-managed; room organisation; social environment)
- Pressure mapping
- Knee block usage
- Early paediatric mobility
- Avoiding shoulder injury in manual wheelchair users
- Standing positioning
- Drug treatments (e.g. Botox guidelines)
- Handling the impact of visual/spatial/tactile impairment on an individual's posture
- Head support systems

Please do let me know of topics that you would like to see added, and ones that you would like to work on. The next two years should provide some interesting consolidation of the knowledge that people have accumulated over the years, and anything that encourages people to think more deeply about what they are doing must be of benefit to the discipline, and to the individuals who hope to benefit from best practice.

Barend ter Haar, April 2008

National Training Event

Kirsty-Ann Cutler, Chair

We are going to press only a week after another great National Training Event. My sincere thanks to Dave Calder and Patricia Marks and all the NTE sub-committee for co-ordinating such a successful conference for a second year running. We will be back in Warwick again in 2009, so don't miss out. We have already had really positive feedback on the venue and conference as a whole.

Dave Calder's term of office on the PMG committee ended at the AGM 2008, but he has kindly agreed to remain as a co-opted member of the sub-committee to oversee the 2009 NTE, whilst I learn the ropes as the new chair of this group.

I will be focussing on finding a venue for the 2011 NTE, as well as learning about the process of organising the event from Dave before he finally takes a break from PMG duties.

The sub-committee will have some breathing space in 2010, with the International Conference taking place in Scotland, but we need to find a home for the 2011 NTE as soon as possible. If any of you know of a suitable venue in England or Wales to provide the entire requirements specific to a PMG event, please get in touch with me.

Pease remember this is YOUR conference. We welcome all feedback from this latest NTE plus your ideas for future conferences. Please email me or Patricia, or any of the PMG committee with your ideas.

We had some excellent free papers at this year's NTE. We know you are all doing lots of interesting and innovative work out there. Use the conference to share this work with others via a free paper or poster.

I look forward to hearing from you.

Kirsty-Ann Cutler
Email: kirsty-ann.cutler@sbpct.nhs.uk

Publications & Marketing Sub-committee

Jane Harding, Chair

I just wanted to take this opportunity to say a few words as the new chair of the PMG Publications & Marketing Sub- Committee.

Predominantly I want to say a huge thank you to Jo McConnell for so kindly agreeing to stay on as editor of the journal for the next two editions (I am secretly hoping we may be able to persuade her to stay longer!!!). This will be an incredible help to me as chair as I think, what with planning a wedding and trying to finish my masters this year, taking on the editorial role may have been too much for me!

I am sure that you all join me in my thanks and also in congratulating Jo on the recent really high quality editions of the Journal that she has produced whilst being Editor. I know that as a committee we are really proud of them and the quality of articles that are coming through, so well done for all that hard work.

Please, please continue to help us maintain this high quality Journal by providing us with either articles to contribute or feedback on how we could improve – we are always willing to listen and develop new ideas.

I hope that as chair I can rise to the challenge of continuing with the high standards that Jo has set for this group and would like to thank in advance the rest of the subcommittee for their continued support!

Jane Harding

There will be updates from the Research & Development and Website sub-committees in the Summer Bulletin when they will have more to report.

THE POSTURE AND MOBILITY GROUP

STATEMENT OF FINANCIAL ACTIVITIES YEAR ENDED 31 DECEMBER 2007

	Total Funds 2007 £	Total Funds 2006 £
INCOMING RESOURCES		
Incoming resources from generating funds:		
Voluntary income	**14,623**	9,848
Investment income	**5,840**	4,505
Incoming resources from charitable activities	**140,760**	143,164
Other incoming resources	**2,561**	2,163
TOTAL INCOMING RESOURCES	**163,784**	159,680
RESOURCES EXPENDED		
Charitable activities	**(200,935)**	(135,955)
Governance costs	**(6,050)**	(5,949)
TOTAL RESOURCES EXPENDED	**(206,985)**	(141,904)
NET INCOMING RESOURCES FOR THE YEAR	**(43,201)**	17,776
RECONCILIATION OF FUNDS		
Total funds brought forward	**161,518**	143,742
TOTAL FUNDS CARRIED FORWARD	**118,317**	161,518

The Statement of Financial Activities includes all gains and losses in the year and therefore
A statement of total recognised gains and losses has not been prepared.

All of the above amounts relate to continuing activities.

BALANCE SHEET 31 DECEMBER 2007

		2007		2006
	£	**£**	£	£
FIXED ASSETS				
Tangible assets		**785**		1,569
CURRENT ASSETS				
Debtors	**6,165**		32,064	
Cash at bank	**181,140**		169,556	
	187,305		201,620	
CREDITORS: Amounts falling due within one year	**(69,773)**		(41,671)	
NET CURRENT ASSETS		**117,532**		159,949
TOTAL ASSETS LESS CURRENT LIABILITIES		**118,317**		161,518
NET ASSETS		**118,317**		161,518
FUNDS				
Unrestricted income funds		**118,317**		161,518
TOTAL FUNDS		**118,317**		161,518

These financial statements were approved by the members of the committee on the 11th March 2008 and are signed on their behalf by:

Mr Henry Lumley

4th Nordic
Seating Symposium

Seating, Mobility and Participation

May 7-9, 2009 Reykjavík, Iceland

Call for papers - invitation to give a lecture

At the 4th Nordic Seating Symposium

All papers on Methods, Experiences and Results
concerning Seating, Mobility and Participation are very welcome.
Papers based upon research or practical experiences.

Abstracts can be submitted online via www.sitsite.net or ingaj@tr.is no later than September 1st. 2008. If your lecture is accepted you will receive a confirmation before January 2009. Speakers will have the conference fees and two hotel nights for free.

The abstract should be a maximum of 800 characters in English or Scandinavian language.
All abstracts will be printed in the program with a picture of the speakers (remember to include a picture with the abstract).
Please rate whom the lecture suites best, beginner, intermediate, advanced or all.
Before the Symposium you will be asked to produce a longer description of your lecture for the conference book.
Presentations on posters are also welcome (see further details on www.sitsite.net)
There will also be an assistive devices exhibition connected to the event.

National contacts:
Inga Jonsdottir, The Assistive Technology Centre, Iceland, tel: (+354) 560 4608, ingaj@tr.is
Bengt Andersson, The Swedish Handicap Institute, tel: (+46) 86 20 17 00, bengt.andersson@hi.se
Ragna Flø, NAV, Norway, tel: (+47) 21 07 03 32 ragna.flo@nav.no
Else Marie Hansen, The Danish Centre for Assistive Technology, tel: (+45) 43 99 33 22, emh@hmi.dk

The Symposium is a result of the cooperation between the Assistive Technology Centre in Iceland, Danish Centre for Assistive Technology, The Swedish Handicap Institute and The Labour and Welfare Organization (NAV) in Norway. Representatives from these institutions make the professional network responsible for the completion of the Symposium.

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HJÆLPEMIDDEL INSTITUTTET

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PMG Membership – DIY!

The new online membership system is almost one year old, and is proving a great success, with only a relatively small proportion of problems arising considering the size of the task undertaken. We would like to remind you all that your PMG membership account is your responsibility, and that if any details require updating, then you need to do this yourself.

If you move house or job, please make sure that the address we have for you on the membership database is correct; and, in particular, if you change email address it is vital that you update your account, as we are using the e-bulletins more and more to keep in touch with PMG members. To update your details go to:

www.pmguk.co.uk/members/login

If you have any questions about the process, please contact PMG administration at any time. Email olwen.ellis@pmguk.co.uk.

Dundee International Conference 1997

As you will read in Barend ter Haar's article on page 56, preparations are now under way for the next International Conference. It is very likely to be returning to Scotland in 2010, so we thought you might enjoy seeing this gathering of delegates and speakers from the last time the conference was there: in Dundee, 11 years ago. If you look hard enough, you may recognise a few familiar faces!

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