POSTURE AND MOBILITY

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Training, E-Learning and Tele-Rehab

Earlier this year, PMG and NWMF were contacted by Ealing Studios, who were attempting to source wheelchairs for the biopic *The Theory of Everything*. The film focuses on Stephen Hawking's student years and his first marriage, so to find exact replica wheelchairs from such an early period of Hawking's life was proving quite a challenge for the set designers. With help from PMG members James Foy, Krys Jarvis and Monica Young, plus a pinch or two of serendipity, an 8BL and BEC were eventually despatched to the studios. Both wheelchairs are now in continuous use on the film sets.

The Theory of Everything is due for release in 2015.

POSTURE AND MOBILITY

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PMG POSTURE & MOBILITY GROUP

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Front Cover:
WSTP Basic training Uganda, 2013
see article on page 6

Back Cover:
Young wheelchair user training with Ade Adepitan
see article on page 21

FEATURE ARTICLES

GENERAL ARTICLES

EDITORIAL

In a recent article (31/08/2013 www.independentliving.co.uk) Independent Living highlights problems caused to users and carers by the fragmentation of services. In the same issue, Amy Edwards from the College of Occupational Therapists, describes the following barriers to integration of services often cited by OTs:

- Difficulty in communication, often due to incompatibility of electronic information systems
- Insufficient clinical involvement in decision-making at the point of entry into the service
- Excessive time spent on paperwork for actioning interventions/referrals, leading to less time for client contact; at the same time, an expectation that therapists see more clients, thus less time for joint or integrated working.

Some of the information presented in this edition could, if developed and disseminated further, be used to partially address these issues. As well as descriptions of training in core skills in the UK and less developed countries, there is information on managing equipment, e-learning, and tele-rehab.

With so much interest in the topic, we are inviting more submissions on training for the next issue, as well as on outcome measures. Thank you to all our contributors, our proof readers and especially to Olwen (as always!)

Carolyn

Carolyn Nichols
Editor

NEWS

NWMF COMPETENCIES

The National Wheelchair Managers Forum (NWMF) recently published the final draft of their Foundation Competencies for Wheelchair Therapists, which can be downloaded from their website: http://goo.gl/owtUd6; NWMF is also working on producing Intermediate and Advanced competencies, plus competencies for Therapy Assistant Band 3.

NWMF AND PMG COLLABORATION

Further to the above announcement, we are delighted to report that Krys Jarvis, chair of NWMF, and Gail Russell, chair of PMG's Education & Training committee, are due to meet to discuss possible future collaboration between the two groups to provide training packages around the NWMF competencies. Watch this space!

PMG COMMISSIONS RESEARCH INTO CONSUMER CHOICE

Recent work with the Department of Health (DH) has highlighted a dearth of information on consumer views in relation to wheelchair services. In light of the current plans to transform and modernise these services, there would appear to be a degree of urgency to collect some robust data about consumer opinion – apparently, most critically, on what consumers understand by the concept of choice. DH has stated they have been unsuccessful in their attempts to collect such information, hence PMG have decided to commission a piece of research on this subject.

CALL FOR PAPERS 2014

Please post the enclosed NTE Call for Papers 2014 on a prominent notice board at work. Thank you!

CAR MEASUREMENTS DATABASE

The independent consumer research charity, RICA (Research Institute for Consumer Affairs), hold a car measurements database for people who load wheelchairs/mobility scooters in/out of vehicles, or anyone looking for cars if they are tall, short or have a specific need/disability: http://goo.gl/2AQ115

LETTER FROM THE CHAIR

As 2013 draws to a close, the end of a year allows us to reflect on our key achievements and focus on what's ahead in 2014.

PMG continues to grow, with a hugely successful NTE in July, and plans now under way for Cardiff next year. Our Mary Massery tour, organised by Ffion Lane, has proved a very popular series of events, despite the storms!

Looking ahead, PMG has commissioned a piece of research to look at consumer views on 'choice' in WCS. We will recruit an events & marketing coordinator, with interviews scheduled for early February. One of the biggest strategic aims for 2014 is to change PMG's status of 'Charity' to 'Charitable Incorporated Organisation' – something which will allow PMG to move forward in a more business-like way. More information and consultation will follow in the New Year.

As always, none of our achievements would be possible without the dedication and commitment of everyone involved on PMG's committees, together with Olwen's day-to-day management. There are too many people to mention individually, but my deepest gratitude extends to you all.

With warmest Season's Greetings,

Clare

Clare Canale, PMG Chair

PS. I am using my maiden name now, but nothing else has changed!

NEWS

BEST PRACTICE GUIDELINES

Following the 2010 International Conference on Best Practice, the first of the guideline documents, Transportation of People in Wheelchairs, is now available to read and comment on via the PMG website: www.pmguk.co.uk/best-practice-guidelines.html; the rest of the guidelines will be posted there as soon as they have been edited.

WAR VETERANS

A number of people have already recognised the need to access extra funding streams to support the on-going mobility requirements of war veterans. Following representation by the NWMF and PMG, it was suggested that the Veterans Prosthetic Panel, which manages identified funding to support enhanced prosthetic hardware for war veterans, should have its remit extended to include support for complex wheelchairs.

This proposal has gathered momentum under the guidance of Sam Gallop of the Associate Parliamentary Limb Loss Group. PMG and NWMF have supported the initiative by making direct representation to Dr Andrew Murrison MP, who reported initially on the prosthetics service for war veterans: A better deal for military amputees http://goo.gl/VjS78u. Dr Murrison, in turn, has now raised this as a recommendation to the Secretary of State for Health, Jeremy Hunt. We await the outcome with interest.

FREEDOM TO MOVE

Julianna Arva's article Freedom to Move was published in SEN magazine in early 2013. It is now available to download from http://goo.gl/Rau47b

RECENT ADVANCES IN MANAGEMENT OF PEOPLE WITH DISORDERS OF CONSCIOUSNESS

June 12 – 13, 2014 at Old Thorns Manor Hotel, Liphook, Hamphire. Contact: conference@holycross.org.uk

POWER MOBILITY FOR CHILDREN

Roslyn Livingstone & Ginny Paleg's article, Practice Considerations for the Introduction and Use of Power Mobility for Children, is published in Developmental Medicine and Child Neurology Sept 2013.

WHO WHEELCHAIR SERVICE TRAINING PACKAGE: PROPELLING FORWARD A UNIVERSAL STANDARD?

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ABSTRACT

To improve wheelchair service provision, the World Health Organization (WHO), in partnership with the United States Agency for International Development (USAID), has developed a comprehensive Wheelchair Service Training Package. The training package is designed to develop the knowledge and skills of personnel working in wheelchair service delivery within less resourced settings; however the broader application of these materials is now being discussed globally in the field. As a key contributor, Motivation would like to introduce the package, and allow the reader to reflect whether it could provide a universal standard for core knowledge, either at an undergraduate or postgraduate level.

THE WHO AND THE UNITED NATIONS CONVENTION ON RIGHTS OF PERSONS WITH DISABILITIES (UNCRPD)

In October 2006 a consensus conference on the provision of wheelchairs in less resourced settings was held in India. This was hosted by the WHO, International Society of Prosthetics and Orthotics (ISPO), and United States Agency for International Development (USAID). The result of the conference was the development of WHO 'Guidelines on the provision of Manual Wheelchairs in less resourced settings' (WHO2008). The guidelines recommend standards for the design and production of appropriate products, service delivery, policy and planning, and training: a milestone in setting standards for wheelchair provision in this context. The WHO training package directly supports the implementation of recommendations set out in these guidelines, and provides a tool to turn this document into practical reality.

The right to mobility is laid down in Article 20 of the United Nations Convention on Rights of Persons with Disabilities (UNCRPD) (United Nations 2008). Article 4 of the UNCRPD highlights the responsibilities of countries to promote the training of professionals and staff working with persons with disabilities (United Nations 2008). The WHO training package will assist governments and organisations to implement training in wheelchair service delivery, and this should impact on the systems and provision seen at a local level.

THE WHEELCHAIR SERVICE TRAINING PACKAGE (WSTP)

The current wheelchair service models that exist in well-resourced settings – comprising a team of allied health professionals linked with commercial wheelchair manufacturers – are not often replicated in less resourced countries. These countries generally have a lack of professionals, lack of trained staff and lack of service infrastructure. These factors had to be taken into account when designing the training package.

The WHO training package aims to achieve the following:

- Increase the number of wheelchair users who receive a wheelchair which meets their needs
- Increase the number of wheelchair users who receive training in the use and maintenance of wheelchairs, and how to stay healthy in a wheelchair
- Increase the number of personnel trained in wheelchair service delivery
- Improve the competencies of wheelchair providers
- Achieve greater integration of wheelchair provision within rehabilitation services

The WSTP package is made up of three modules.

The first two modules work in parallel with the basic and intermediate service levels identified

Basic Service: Users' needs can be met by provision of manual wheelchairs without modifications. Mobility and postural support provided through a well-fitted wheelchair and seat cushion.

Intermediate Service: Users' needs can be met by provision of manual wheelchairs with supportive seating. Supportive seating provided either through individual modifications to a basic wheelchair, or a specialised seating system.

Advanced: Users' needs can be met by provision of complex supportive seating and mobility equipment. Individually prescribed and customized wheelchairs to provide postural support and accommodate fixed deformities.

World Health Organization (2008) Guidelines on the provision of Manual Wheelchairs in less resourced settings, Ch.3, P.77

Table 1. WHO Service Levels

in the WHO Guidelines; the service levels are defined by the user's mobility and postural support needs (Table 1), and each successive training would enable personnel to provide wheelchairs for users with increasingly complex needs. There are currently no plans to develop an advanced module at this stage, the focus being on consolidating practical and tangible results at basic and intermediate level before progressing to the advanced level.

The third training module is directed towards those managing wheelchair services. The basic and intermediate packages were piloted in Africa, Asia, Eastern Europe and the Pacific, and the manager's module in Asia and Africa, to ensure their global application.

MODULE 1: BASIC WHEELCHAIR PROVISION FOR PRACTITIONERS (35-40HRS)

This module was launched at a meeting of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) in the United States, July 2012. This was immediately followed by a Training of Experts (TOE) for participants from 16 countries, in Washington (Fig 1).

Fig 1. Training of Experts, Washington, USA, July 2012.

The materials can now be downloaded from the WHO website: http://goo.gl/nYBfXB

MODULE 2: INTERMEDIATE WHEELCHAIR SERVICE PROVISION FOR PRACTITIONERS (35-40HRS)

This module was launched with a TOE in Cape Town, August 2013.

MODULE 3: WHEELCHAIR SERVICE PROVISION FOR MANAGERS (15 HRS)

The third module for managers will be available in 2014.

COURSE CONTENT

The content of the basic and intermediate courses includes:

- Core background knowledge sessions
- Practical knowledge and skills to carry out the eight defined service steps
- Practical sessions with real clients
- Cushion fabrication: this essential piece of equipment is frequently not available locally
- Fabrication of some of the common posture support devices and wheelchair modifications

The content of the management module will include advocacy for national policy on wheelchair provision, as well as practical skills for effective management of a wheelchair service. 'A national policy on wheelchair provision can ensure that users receive wheelchairs that meet minimum requirements for safety, strength and durability that are appropriate for their individual needs' (WHO 2008 Guidelines on the provision of Manual Wheelchairs in less resourced settings, Ch.5, p113).

The wheelchair service delivery packages are designed to be delivered as a whole, or integrated into existing rehabilitation programmes. Resources

include a trainer manual which contains detailed session plans, supporting PowerPoint presentations and videos, interactive training activities, reference and support materials including service forms, worksheets and posters.

THE WHO TRAINING PACKAGE: A RELEVANT TRAINING RESOURCE

The WHO training package offers an accessible and invaluable resource for organisations involved in wheelchair provision. Used successfully, this will transform the way in which wheelchair users in less resourced settings receive wheelchairs to meet their physical, lifestyle and environmental needs. This package will provide a structured framework to plan and deliver appropriate training into an environment where there is an urgent need to improve the quality, quantity and sustainability of appropriate wheelchair services.

At the International Seating Symposium in March 2013 a group of experienced practitioners, predominately from the USA and Canada, met to brainstorm what role therapists should have in seating and mobility services. They considered what knowledge and skill was required to fulfil that role, and discussed the potential of the WHO training package to meet a need at undergraduate and postgraduate level in this field. As the final module of this training package reaches completion, should we also discuss whether it has a parallel application in the UK and Republic of Ireland? Could it provide a universal standard for core knowledge in this field?

DEFINITIONS

• 'An Appropriate Wheelchair': one that meets the user's needs and environmental conditions; provides proper fit and postural support; is safe and durable; is available in the country; can be obtained and maintained, with services sustained, in the country at the most economical and affordable price.
• 'Less resourced settings': a geographical area with limited financial, human and infrastructural resources to provide wheelchairs (a common situation in low/middle-income countries, but also in some areas of high-income countries).
• 'Wheelchair provision': an overall term for wheelchair design, production, supply and service deliver.

WSTP Basic, India, May 2011.


WSTP Intermediate, India, October 2013.

REFERENCES

United Nations (2008). *Convention on the Rights of Persons with Disabilities and Optional Protocol.* Accessed from www.un.org/disabilities
World Health Organisation (WHO) (2008) *Guidelines on the provision of manual wheelchairs in less-resourced settings.* WHO Press, Geneva. Accessed from: http://goo.gl/9a91KA

THE SCOTTISH MODERNISATION PROGRAMME'S EDUCATION & TRAINING WORKSTREAM

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ABSTRACT

During the Scottish wheelchair & seating services' modernisation programme, Education & Training was one of the four major workstreams. Five of the original independent report's recommendations related to this workstream, and these were translated into six actions in the Scottish government's action plan. Service-led developments relating to local skill mix reviews and training for referrers were completed. Nationally-led developments stalled after the information gathering and early implementation stages, and remain incomplete. Five lessons learnt are listed that may be of use to similar, future programmes.

BACKGROUND

A seven year long period of modernisation of the wheelchair & seating services (WSSs) in Scotland was kick-started by a petition presented to the Scottish parliament. The petition, which was considered by the petitions committee in January 2005, requested that the Scottish parliament:

- Resolve the current critical problems in the provision of wheelchairs and specialist seating services within the NHS by both an immediate increase in funding and through a review which, in consultation with users, will address minimum standards, the scope of equipment provided, and the delivery of services.
- Recommend a strategy for the integrated provision of all equipment for people with physical disabilities. (Scottish Parliament 2005)

The Scottish Executive Health Department (SEHD) responded by setting up a steering group, comprising a wide range of stakeholders. Management consultants were commissioned to conduct an independent review of 'user needs and current service provision and to provide recommendations for the future development of the service to meet future need and demand' (Scottish Executive 2006). Based in part on their findings, the steering group published its Moving Forward report in May 2006. In January 2007, the SEHD issued a detailed response to the report's recommendations. A project board was then established in June 2007 to oversee a national programme of modernisation focused solely on wheelchair and seating services with a headline budget of £16 million. In February 2009, it published its action plan that set out actions to be achieved by June 2011. The actions were grouped around the four workstreams as follows:

- Local service redesign
- Standards and eligibility
- Information management and technology
- Education and training

All action areas involved an overarching theme of user and carer involvement. A full account of the development of the clinical standards has already been published (Dolan 2013) and a copy of the standards is available on the PMG website. In December 2010 the board handed over responsibility for the programme to a delivery group that was to focus on the project exit and closure work plan, until it was also wrapped up in 2012. This article describes the education and training workstream of the modernisation programme, and points to some of the lessons that might be learnt from it. For the sake of brevity, the article is restricted to the education and training of staff, although there were also significant developments in relation to users and carers.

RECOMMENDATIONS AND ACTIONS

Five out of the 40 recommendations in the Moving Forward report directly addressed education and training (Table 1). One of them raised the need for training of referring professions, whilst the other four addressed the educational and training needs of service staff. In the SEHD response, the recommendations were grouped differently and, frustratingly, did not always specifically address the recommendation in question. Key points included:

• The need for training for non-service staff, including referrers
• A lack of prior and in-post accredited training
• Recognition of the importance of training and career opportunities to address recruitment and retention problems

Recommendation	Rationale	Response
8 – Self-referral for reassessment: Training will be established to improve communications between referring community-based staff and service staff.	None supporting the relevant part of the recommendation.	Appropriate training packages – including distance learning – should be designed to achieve the level of knowledge required to inform the decision to make a referral.
24 – Improvements to infrastructure: The infrastructure to provide training on wheelchair and seating needs to be established and accredited. All staff, including reception, administration and technical staff, will receive training in 'customer relations' with an emphasis on the specific requirements of people with disabilities and their carers.	Training often ad hoc, poorly resourced, infrequently accredited, neglected due to shortages, and not linked to responsibilities and roles. As a result, difficulties of recruitment and service quality are exacerbated. Training important in generating service culture and values, and due to rapid changes in technology. All staff must receive accredited training, supported by CPD.	NHS staff are required to undertake disability awareness training, although wider issues such as multi-complex needs and equality must also be addressed. There may be scope for addressing the skills/recruitment issues by training existing health/social care staff to undertake service work. This will increase people's skills and may offer a wider recruitment pool.
25 – Review career structure for service staff: A review should be undertaken by NHS Education for Scotland (NES) to ensure that an appropriate career structure exists for clinicians and technicians delivering wheelchair services.	Lack of career structures and progression fails to attract and retain the best staff into what is seen as a 'Cinderella' service, and demoralises those who join. For bioengineers there are limited training places, and considerable problems with the time taken to become registered.	Career paths should not be confined to WSSs. There needs to be flexibility and movement in and out of the service. Training and development needs to be in the wider health and social care context. Formal courses should include the opportunity for at least six months work experience within the service.
26 – Review staffing levels throughout the service: A review will be undertaken to determine whether current staffing levels are adequate, and whether the most appropriate skill-mixes are in place.	Many of the staff come from hard-to-recruit professions, or technicians with highly specialised skills. It will be necessary to increase staffing levels; however the skill mix required should not be assumed to be the same as that in place at present.	NHS Boards should consider staffing requirements, including the level and skills mix, as part of their ongoing workforce planning, and take steps to implement. There are considerable variations, and services should explore which models are most effective and adopt best practice.
27 – Appropriate training for service staff: Staff referring to the service should receive appropriate training.	Training is required to ensure that people who work outside the service, but have responsibilities to those who use it, understand how best to make referrals and avoid duplication.	Consideration should be given to web-based training and raising awareness. A mechanism to check understanding should be built in to such a process for referrers.

Table 1. The Moving Forward recommendations and rationales with SEHD responses. The recommendations are reproduced in full (apart from the non-applicable parts of number 8), but the rationales and responses are summarised.

• The need to optimise service staff skill mix, rather than simply increase levels to address the capacity shortfall

The action plan, which set out the programme of work to be achieved, did not clearly link to the Moving Forward recommendations. The 53 actions were grouped in tables, each table having a grouped list of recommendations that the actions were intended to address. It was not possible to precisely determine which recommendations were being taken forward and those which had, by implication, been overlooked or rejected. All but one of the 6 relevant actions (Table 2) had more than one person or group responsible for delivering the action but no lead person/group identified.

WORKSTREAM DEVELOPMENTS

This section outlines some of the overall developments undertaken as part of the education and training workstream without including local level detail.

SERVICE-LED DEVELOPMENTS

Two of the actions (1 & 6) were identified as requiring service-led development although the learning needs analysis was undertaken nationally, whilst the skills mix review (Action 4) was undertaken by services with central support (Table 2). Each WSS conducted their own internal skills mix review, mostly with an emphasis of how to maximise capacity by ensuring staff worked most effectively at their own skill level. These are, inevitably, very specific to each service's needs and are thus probably only of direct interest to the conducting service. On-line training was developed for referrers (Action 6) by at least two of the centres – NHS Highland based in Inverness and the SMART Centre in Edinburgh. The former produced a series of short instructional videos to deliver training efficiently across its remote region (Figure 1) and the latter produced a training DVD/podcast to assist referrers to take the correct measurements (Figure 2).

Action	Who	Actually led by
1. A learning needs analysis for staff development in improvement tools and techniques will be developed by each centre	WSS centre managers	Nationally: NES & SG Programme Team
2. The education and training needs of technical and scientific support staff in wheelchair services will be identified, and developments linked to support worker and assistant practitioners in healthcare science	Chief Health Professions Officer; NES; WSS centre managers	Nationally: NES & SG Programme Team
3. Training needs for registered clinical and scientific staff in WSS will be identified, and education and training programmes developed in line with the national agenda for developing healthcare scientist education and training	Chief Health Professions Officer; NES; NHS Board Clinical Leads; WSS centre managers	Nationally: NES & SG Programme Team
4. Each WSS centre will carry out a skill mix review that includes medical, technical, therapy, administrative and scientific staff, to identify training needs and skills maximisation	WSS centre managers; National Workforce Unit; NES	Service: WSS with health board support
5. Training and education to support the development of career paths for wheelchair and seating service and related staff within the NHS Scotland career framework will be identified	Chief Health Professions Officer; NES; WSS centre managers	Nationally: NES & SG Programme Team
6. Training for referrers to the WSS services will be developed in partnership with them	WSS centre managers; Community Health Partnership managers	Service: WSS with health board support

Table 2. Actions relating to education and training (Scottish Government 2009) and who actually leads on the developments. Note that actions have been numbered here for ease of referencing. SG = Scottish Government

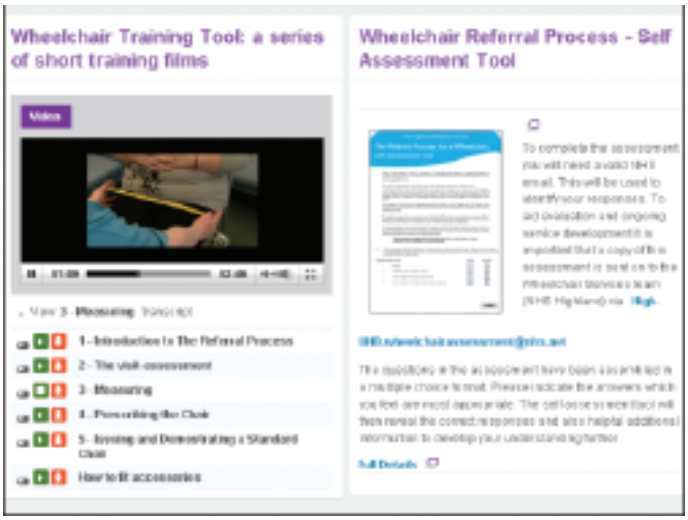

Fig 1. The NHS Highland on-line training resources for referrers (http://goo.gl/QyVldw).

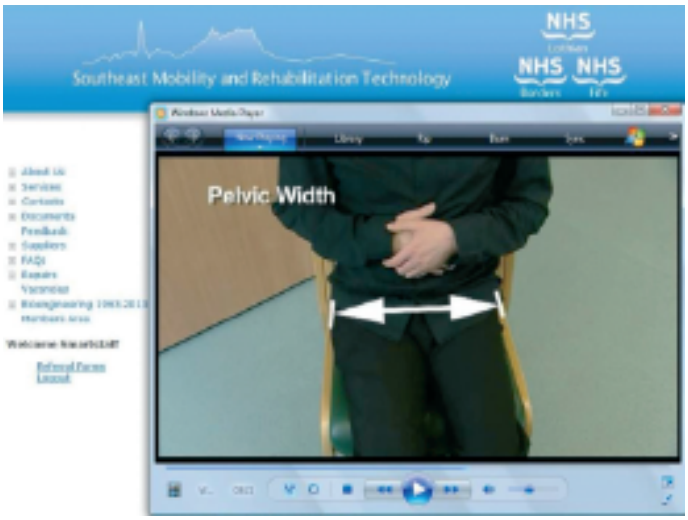

Fig 2. The SMART Centre's podcast for referrers (www.smart.scot.nhs.uk).

NATIONALLY-LED DEVELOPMENTS

Four of the actions (1, 2, 3 and 5) were nationally led by NHS Education for Scotland (NES) and the small Scottish government programme team (Table 2). NES is responsible for supporting NHS services by developing and delivering education and training for staff, and commissioned an external consultant to conduct a scoping exercise to identify the learning and development needs of staff. Information was gathered through a series of discussions and semi-structured interviews with service managers, staff, and stakeholders to gather quantitative and qualitative data. Wide diversity between services in their approaches to workforce development, education, and training was identified. The resulting report (NES 2010) presented 35 recommendations listed under 14 'emerging themes'. Some elements can be linked to the Moving Forward recommendations (e.g. customer service to be covered by induction training) and the action plan (e.g. an educational framework linked to the NHS career framework), but many of the recommendations were new, and not achievable within the overall time/cost constraints of the programme.

In July 2010, the project board decided that three recommendations from the NES report were to be taken forward by NES with a short life working group and a budget of £50k:

1. The collation of existing on-line induction-related resources for new or potentially new staff into the Ready4work website
2. The development of shared values and capabilities as preliminary work to underpin the development of an educational framework
3. The development of an on-line community of practice to support sharing of good practice across different settings.

The pre-existing Ready4work website (www.ready4work.scot.nhs.uk) is specifically intended to support allied health professionals (AHPs) who are seeking employment or considering a change of career direction, and is provided by NES. A section was added specifically on wheelchairs and this is still available. It mainly consists of links to other resources and does not appear to have been updated since it was created in 2011. Although the resources are quite generic, the website is advertised for use by AHPs only, and therefore is unlikely to be seen as relevant by the majority of service staff.

There is no evidence that the development of shared values and capabilities was taken further than outlined in the original NES report. Presumably it was ultimately too difficult to reconcile the needs of all the different staff groups at their different career stages in any meaningful way in the time available.

The Wheelchair Community of Practice website (uat.knowledge.scot.nhs.uk/wheelchair.aspx) is also hosted by NES. It is intended to be a central place for people working with individuals who use wheelchairs to share good practice, gather their resources, share information, and have discussions with colleagues. The wheelchair section was launched in February 2011 but only attracted 4 members, and has not been updated since April that year.

CONCLUDING REMARKS

As far as can be determined, the five services successfully completed all the aspects of workstream for which they were responsible. Although it is tempting to think that all the services should be the same, in Scotland at least, the geography and population concentrations are such that no two services will require the same mix of staff skill levels.

Smaller services will inevitably need their staff to be more versatile, and their training and educational requirements will therefore differ from those in the larger services.

Despite the programme, there remain a number of key areas that require further development. There is a need for up-to-date induction and in-post training resources that are pitched at a level suitable to each staff group. The training needs of administrative and technical staff remain a particularly neglected area. There is often too much reliance on equipment suppliers providing training updates that is inevitably skewed and partisan.

Now that the modernisation programme has finished, the responsibility for staff education and training needs has reverted to the local services. There are good links between the services, and so they are in a good position to self-coordinate future developments if required. The clinical standards contain one related criterion that states 'All staff should undergo wheelchair and seating specific induction training appropriate to their role' (Scottish Government 2012). At the time of the piloting of the draft standards in January 2011, two WSSs visited both relied on 'on-the-job' experiential learning. No one appears to be responsible for taking forward the education and training requirements for non-service staff, and it would be very difficult for services themselves to take on this significant and inevitably on-going role without additional, dedicated resources.

LESSONS LEARNT

A number of lessons can be taken from the Scottish experience of modernisation in relation to the education and training workstream:

1. From the outset, policy makers need to be realistic about the amount of real and lasting changes that are possible
2. Good project management is essential at all levels
3. External organisations must genuinely engage with services and, in particular, service staff
4. Outcomes need to be tangible and achievable, but also sustainable
5. Developments that are within the control of services are more likely to be successful

REFERENCES

Dolan MJ. 2013. Clinical standards for National Health Service wheelchair and seating services in Scotland. *Disability and Rehabilitation: Assistive Technology*. Vol 8, 363-372.

NHS Education for Scotland. 2010. *Scoping the learning and development needs of wheelchair and seating services staff in Scotland*. NES, Edinburgh.

Scottish Executive. 2006. *Moving forward: review of NHS wheelchair and seating services in Scotland*. Scottish Executive, Edinburgh.

Scottish Government. 2009. *Wheelchair and seating services modernisation action plan*. Scottish Government, Edinburgh.

Scottish Government. 2012. *Clinical healthcare quality standards for wheelchair and seating services*. Scottish Government, Edinburgh.

Scottish Parliament, 2005. *Public Petitions Committee Official Report 19 January 2005; NHS (Provision of Wheelchairs and Specialist Seating Services) (PE798)*. Column 1343. Scottish Parliament Archive, Edinburgh.

STUDY DAYS BY MANUFACTURERS/DISTRIBUTORS

Fiona Eldridge of PMG's Research committee recently attended a study day on static seating held by one of the static seating companies. More and more of these study days are being held by manufacturers/distributors around the country, some of which are found to be hard selling, and not truly interactive or valid for the health professional. Fiona found this particular study day relaxed and informative, as well as providing her with an opportunity to network with other health professionals working in a similar field. Study days such as these are extremely valid CPD sessions when organised as information-sharing and evidence-based practice sessions, rather than being solely product-focused. They are also useful for manufacturers and distributors, who will get valid feedback on their products, as well as the opportunity to network with professionals in the field.

TRAINING: A KEY FACTOR IN AN ENHANCED SERVICE PROVISION INITIATIVE

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ABSTRACT

In the current economic climate there is a relentless drive to 'do more with less'. This paper considers training as a facilitator in the transformation of a service delivery model and touches on the knock-on benefit that the development of internal training has when extended to the wider healthcare community.

Enable Ireland SeatTech provides a high level seating service from its base in south Dublin. The service is provided locally and, on an outreach basis, to services in the eastern region and in Co. Kerry. In an effort to maximise benefit to service users and to optimise the use of scarce resources, SeatTech changed its model of service delivery in recent times. This article plots the course of this change and considers the role that training played in ensuring the success of that initiative.

THE CASE FOR DOING BETTER

In the private sector, evidence of good service provision can generally be derived from the profitability of a firm. The public sector context is not so straightforward because of a more complex arrangement between the service funder, provider, and beneficiary (O'Shea, 1992). Good service provision in the public sector can be very difficult to quantify, but in some cases can be assessed by means of proxies such as economy, efficiency, effectiveness, and equity of service delivery, collectively termed 'Value for Money' (Mulreaney, 2005).

The Irish National Economic and Social Forum (NESF, 2006) report proposed a range of measures to improve the delivery of public services, while O'Shea (1992) proposed a range of measures to enhance customer care in the public sector, but queried whether high quality costs more.

It can be argued that enhanced service need not necessarily cost more and that, in fact, better outcomes can sometimes be achieved with less input. This is demonstrated in the case study below, whereby a significantly enhanced model of service delivery has proved to be more cost efficient than the older working model. Staff training was central to the success of this approach.

DOING BETTER AT LESS COST – A CASE STUDY

BACKGROUND

Enable Ireland is a government-funded national voluntary organisation providing services to people with disabilities, and to their families. For many service users their physical disability means that use of a wheelchair is essential to enable active participation in society. A significant minority of wheelchair users present with highly complex seating needs, and require bespoke, custom-made seating supports to enable them to sit safely and comfortably in, and function from, their wheelchair (Tiernan *et al.*, 2003).

Acknowledging this need, a special seating service evolved during the 1980s. This service is now called SeatTech. As the service grew, people were referred from throughout Ireland for assessment and provision of special seating supports. During the 1990s the workload increased steadily. With only a handful of staff and an ever-increasing workload from those service users already attending the services, the number of new referrals awaiting appointments grew exponentially. A crisis point was reached towards the end of the century.

In 2000 Enable Ireland (formerly CPI – Cerebral Palsy Ireland), rebranded itself so as to reflect a more inclusive, holistic approach to service delivery. This re-branding also reflected the expansion over time from the provision of services to just those presenting with cerebral

palsy to people presenting with a range of disabilities. At the same time, a strategic decision was made that the special seating service would cease to provide a national service and become a regional service, concentrating its service delivery on Dublin and the surrounding region. The intention at the time was to form similar regional services elsewhere in the country.

In line with the change of geographical focus, the service introduced two further changes:
1. The introduction of a New Model of Service Delivery (the New Model), and
2. A change in emphasis, through training, from the provision of seating to the provision of a holistic postural management service.

1. THE NEW MODEL

The concept of the New Model can be best illustrated by analogy with traditional manufacturing industry. In traditional manufacturing, a design department created new designs based upon the requirements of the marketing department. The design department then passed their designs to the manufacturing department – 'throwing them over the wall' so to speak. The manufacturing department then had to decide how to manufacture the components so that they conformed to the design department's requirements. This 'silo-mentality' resulted in inefficiencies, as the design department frequently would not take into account manufacturing processes and constraints when developing their design, thus potentially forcing the manufacturing department to devise new manufacturing processes rather than optimising the use of existing ones. A more contemporary manufacturing approach is termed Design for Manufacture (DFM), whereby the manufacturing departments are involved in the design process from the outset, and products are designed bearing in mind the manufacturing processes available at the time of design (O'Driscoll, 2002).

Similarly, the seating unit comprised a clinical (design) team and a technical (manufacturing) team. The manufacturing team comprised two senior grade technicians and two basic grade technicians. Typically, the clinical team would undertake a clinical assessment of a service user's seating needs, and design a clinical solution based upon that assessment. Towards the end of an assessment intervention, a senior grade technician would be invited into the assessment, where the clinician would outline their product requirements. The senior technician would then custom-manufacture devices as per the clinical prescription, delegating aspects of the manufacturing process to a basic grade technician. At times, a senior technician would not be present in the assessment at all, and would work off a worksheet produced by the clinician. The basic grade technicians were never involved in assessments and never met the end users of the products they were manufacturing. Design and manufacture were separate.

The New Model, in effect, constituted the introduction of a DFM culture. The capacity of the technical staff was developed through clinical training, specifically in relation to the assessment of service user need. Following training and a period of supervised interaction with service users, the technicians were promoted to the grade of clinical engineering technician, and subsequently introduced to service user interventions where they participate in clinical/technical team pairings. Their role expanded to include assistance in the clinical assessment and product solution specification process. The working relationship between clinician and technician changed to one of partnership.

While the New Model reduced the number of pure manufacturing hours available to a technician, it increased their level of interaction with service users, increased their understanding of service users' needs, and thus enhanced manufacturing efficiencies, as will be shown below. The end result is a more efficient method of service delivery, whereby the technician works as part of an interdisciplinary team in the design of the product solution, and sees the product through from design specification to handover to the service user. The technician is therefore in a position to discuss with the service user and the other team members any manufacturing constraints which may affect the device design, and has a greater understanding at the outset of the intended purpose of the device.

The NESF (2006) recommends more involvement of service users in the 'shaping-up of services given'. Enable Ireland advocates the Social Model of Disability (Oliver, 1990), whereby service users are active participants in all aspects of their care, rather than their being 'referred to a specialist' for 'treatment'. The service user is the 'specialist' with respect to their own requirements, and Enable Ireland facilitates them in achieving their full potential.

Mindful of the fact that service user priorities are best articulated by the service user themselves, the New Model promotes greater service user involvement in the process of selection and design of their equipment solutions; the service user is the central figure in the development of product solutions to meet their needs. Information is provided to the service user in an

accessible manner, they are party to both clinical and technical reasoning in relation to the solution on offer, and they are actively encouraged to express their views and preferences with respect to product solutions being presented to them. This involvement of the service user helps in the management of 'the expectation gap' referred to by O'Shea (1992), leading to a higher level of service user satisfaction and efficiency (O'Sullivan, 1998).

2. TRAINING ON 24-HOUR POSTURAL MANAGEMENT (24HRPM)

The second aspect of the New Model was the greater emphasis on 24HrPM – a holistic view of the management of a person's posture, acknowledging that the positioning in a wheelchair during daytime activities is only one aspect of a person's daily postural requirements. These also include night positioning, standing positioning, periods of rest, and active exercise. This approach is possible only through a co-ordinated, multi-disciplinary approach for which there was an identified training requirement.

A 24HrPM training programme was developed under the New Model, and deployed initially to staff within Enable Ireland and to staff from other agencies who had a direct working relationship with SeatTech. Over time, it became evident that this training had a wider reach, and over the years it has been extended to families, students, and practitioners with a general interest in the area, not specifically just those who work with SeatTech. In 2011 a joint submission by the Association of Occupational Therapists in Ireland (AOTI) and the Irish Society of Chartered Physiotherapists (ISCP) secured funding to subcontract SeatTech to deliver five such training courses over a 12-month period. To date, almost 950 people have undertaken various aspects of this training which includes:

- *Level One training* on the fundamentals of postural management, the undertaking of assessments, and the translation of assessment findings into equipment solutions for those **involved in** the selection and prescription of postural management equipment solutions
- *Level Two training* on the undertaking of more detailed assessments and the translation of assessment findings into equipment solutions for those **responsible for** the prescription of postural management equipment solutions
- *Training on night positioning*. This is generally done in the context of a postural care pathway training programme
- *Training on transport safety for wheelchair users*. As increasing numbers of service users are being transported while remaining seated in their wheelchairs, there is a constant demand for training on matters relating to transport safety
- *Equipment evaluation days*, where several equipment categories are selected each year, and suppliers bring relevant equipment for a day which comprises a trade show in the morning and evaluation sessions in the afternoon. In the afternoon sessions, essentially all the equipment available on the Irish market is brought into a room for a comparative evaluation workshop.

The primary benefits of this training have been twofold. First, those working at primary service level have an enhanced understanding of the holistic postural management requirements of their service users. They have been taught the importance of multi-disciplinary teamwork. In addition to being imparted with new skills, course participants learn how to recognise the limitation of their own skill-base, when to refer a service user on for specialist assessment, and what information should be gathered in advance of a specialist assessment. Primary care clinicians now attend special seating clinics prepared with straightforward questions rather than complex problems.

A second benefit has been the up-skilling of the primary care staff to a level where they can work directly with the clinical engineering technicians from the postural management service, in the absence of a specialist clinician. This approach to service delivery has also increased access to the specialist service by facilitating the establishment of a number of outreach clinics, whereby the service is brought closer to the service user in the community rather than delivering a purely centralised service from the Sandymount base in Dublin.

The dissemination, through training, of the knowledge and experience built up over many years in a specialist centre has the following effects:

- It optimises the specialist clinical resources
- It greatly increases the number of service users receiving appropriate attention for their seating needs
- It enhances the follow-up support at local level for these service users
- Only the most complex cases are referred to the specialist clinicians, thus affording them adequate time to devote to these cases.

Initiatives are currently underway at Enable Ireland to further extend training in postural management, formerly directed towards clinical practitioners, to service users and parents of children who attend our services, so as to further enhance the effectiveness of postural management interventions, and to empower service users and parents to advocate for this.

It is not possible within the scope of this article to provide a comprehensive analysis of the measures used to show improved services, but improved level of service delivery in the years 2000 to 2013 are borne out in the annual statistics as shown in Figures 1 & 2. The general patterns of increased numbers in this period correlate to improved service delivery.

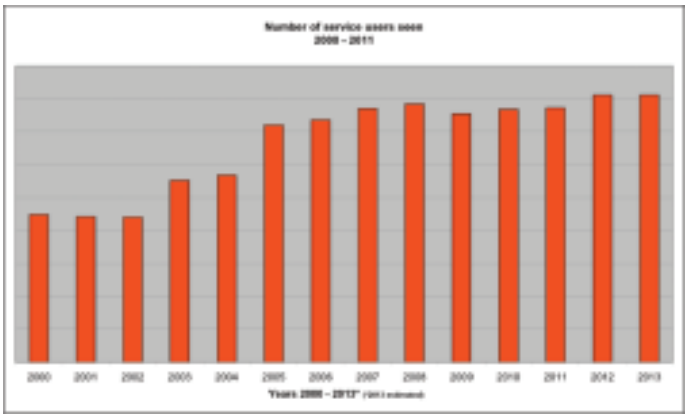

Fig 1. The number of service users seen at SeatTech each year from 2000 to 2013.

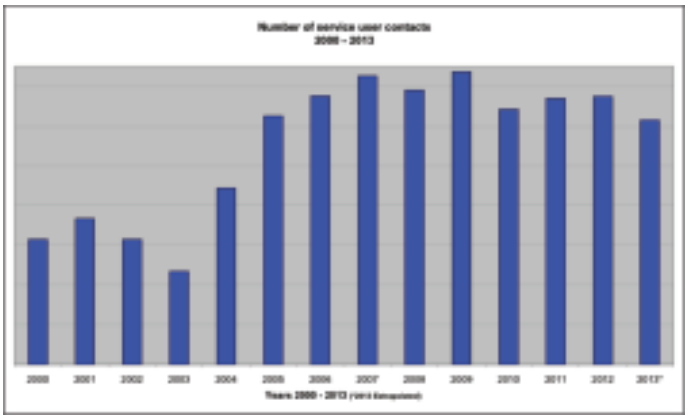

Fig 2. The number of service user contacts at SeatTech each year from 2000 to 2013.

Staff fluctuations have occurred throughout the time period under review, and these are shown in Figure 3. The greatest increase in service delivery levels can be seen in the years 2002-05 at a time when the New Model was being rolled out, and a new contract permitted the service to recruit 1.5 whole-time-equivalent clinical staff members. This came about as a result of a partnership contract negotiated with a specific HSE service region, and for the first time in over five years the service was in a position to open its books to new referrals. This was sustained without any increase in the technical complement at the time. Service levels have remained reasonably steady in the years since 2006, with the number of service users seen at approximately 185% pre-2003 levels, and the number of service user contacts in excess of 200% higher over the same period. These levels of service delivery are being sustained, despite a reduction of over one-third in direct service provision staffing levels incurred as a result of the economic downturn of 2008.

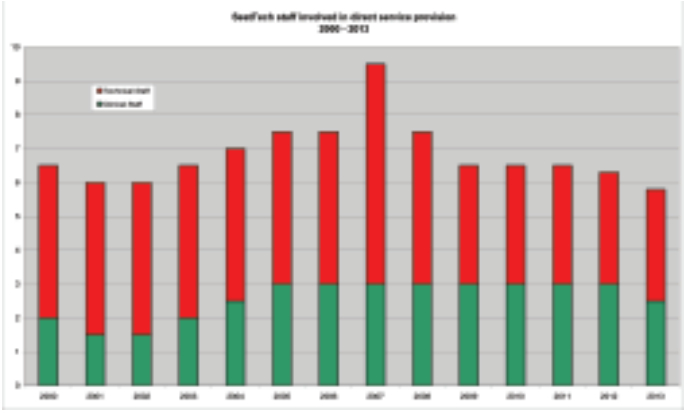

Fig 3. The number of staff employed in direct service provision each year from 2000 to 2013.

A survey of service user satisfaction carried out in 2009 has returned some positive feedback, together with suggestions for improvement (n=142, response rate n=58, or 41%). On a four-point ordinal scale, 74% of respondents were 'Satisfied' or 'Very Satisfied' with their wheelchair selection, with 62% stating they were 'Satisfied' or 'Very Satisfied' with their seating supports. When asked about their level of satisfaction with the manner in which they were treated during visits to the clinic, 93% of service users were 'Satisfied' or 'Very Satisfied'. It is now intended to re-issue the survey to assess whether further improvements have been made since 2009.

CONCLUSION

The service was transformed through a change in working practice. Such a change would not have been possible had it not been for the comprehensive training programme which was developed to enhance the participation of primary clinicians and technical staff, and to reduce the reliance on direct intervention by specialist clinicians. The development of training for this purpose has resulted in a training package of relevance and interest to clinicians far beyond those who have a direct working relationship with SeatTech. This training is now rolled out several times a year.

SeatTech staff have developed the following mission statement for the service:

'Our mission is to work together with service users, to provide the best possible seating, wheelchair and positioning aids, designed to meet their individual needs.'

Effective training of staff and service users alike has been core to the success of the service, and is absolutely essential in order to ensure that a quality

service and the best possible solutions are provided to service users, both now and into the future.

REFERENCES

Mulreaney, M. (2005) Evaluation and Value for Money, in M. Mulreaney (ed.), *Economic and Financial Evaluation – Measurement, Meaning and Management*, Dublin: Institute of Public Administration pp. 1-32.
NESF (2006) Improving the Delivery of Quality Public Services, *NESF Report 34*, National Economic and Social Council, 16 Parnell Square, Dublin 1, Ireland.
O'Driscoll, M. (2002) Design for Manufacture, *Journal of Materials Processing Technology*, Volume 122, Issues 2–3, pp. 318–321.
Oliver, M. (1990), The individual and social models of disability, accessed 15th February 2012 at: http://goo.gl/En59H8
O'Shea, D. (1992) Customer Care in the Public Sector, *Administration*, Vol. 40, No. 3 (Autumn 1992), pp. 234-47.
O'Sullivan, T. (1998) Consumerism in the Health Services, *Administration*, Vol. 46, no.1 (Spring 1998), pp. 14-28.
Tiernan, J., Leonard, C., dePaor, A. M., Gilchrist, M. D. (2003) A survey of the wheelchair and seating market in Ireland, in G. Craddock et al. (Eds.), *Assistive Technology – Shaping the Future*, IOS Press, pp. 105-111.

NATIONALLY RECOGNISED AND ACCREDITED TRAINING PROVISION IN POSTURAL CARE

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ABSTRACT

Recent Department of Health guidance highlights the issues of both training provision and quality assurance as areas that must be considered carefully by registered healthcare practitioners when delegating tasks to personal assistants (PAs), support workers, or carers. This article describes the process of obtaining accreditation for training courses for those working with people with complex disability. Consideration is also given to some of the associated risks and benefits of such training.

BACKGROUND

It has been recognised for some time that the numbers of people with complex disabilities are rising (Emerson 2009). This group of children, young people, and adults is stretching traditional service models in terms of our technical competence, and also in relation to our value base, creativity, and imaginations – it is only when we truly believe that every person has a right to live as citizens within their community with equal access to healthcare services that we see creative and person-centred solutions to the myriad of challenges faced by these individuals, their families, and supporters. The current shift from service-centred to person-centred outcomes is driving accountability and raising expectations. However the recent Confidential Inquiry into Premature Death of People with Learning Disabilities (CIPOLD) provides evidence that, as yet, equal access to healthcare services is some way off (Heslop 2013). CIPOLD recommended that people with learning disabilities should be recognised as being at risk from respiratory illness. Recommendation 9 includes the following statement: 'CCGs must ensure they are commissioning sufficient, and sufficiently expert, preventative services for people with learning disabilities regarding their high risk of respiratory illness. This would include expert, proactive postural care support…' Accredited postural care training forms part of the solution to a far larger puzzle – one that we are a long way from solving.

Recent guidance from the Department of Health (DH) also highlights the issue of both training provision and quality assurance as areas that must be considered carefully by registered healthcare practitioners (Simpson 2012). When considering delegation of a task, for example using therapeutic night time positioning equipment, the registered healthcare

practitioner (HCP) should consider, amongst other things, whether the personal assistant or PA has been suitably trained and assessed as competent to perform the task, whether the HCP views the PA as competent to carry out the task, whether the PA considers themselves competent to carry out the task and, importantly, whether the person themselves considers the PA competent.

For the purposes of this article we shall consider the training needs of PAs, or support workers and carers, whilst noting that the term carer specifically refers to a person who is unpaid to provide care to a friend or relative. It is recognised that carers and PAs are two distinct groups who have distinct, although sometimes similar, training needs.

BENEFITS OF ACCREDITATION

Accreditation of courses and trainers allows both learners and providers to be confident that the person being awarded the qualification has demonstrated the required level of knowledge, understanding, or application of the course content, rather than having simply been in the right room at the right time with the training provider. In order to achieve an accredited qualification, learners must produce an evidence portfolio that meets the required standard for that qualification.

Accreditation and national recognition also provide a recognisable and easily defendable product that can be delivered with confidence. If people in Cardiff achieve an accredited award, everyone can be assured that they have studied the same course content, having produced an acceptable standard of evidence, as people in London, New York, Quebec or Perth studying the same course. This provides employers and HCPs with confidence that the person they are delegating responsibility to for an individual's care has met a recognised standard.

Additionally, regulated training provides PAs with a portable, recognised qualification that can aid career progression and support accountability for both the PA and the training provider or HCP.

'RISKS' ASSOCIATED WITH ACCREDITED TRAINING

For health and social care practitioners, the most unnerving result of the provision of accredited training may be that PAs or carers they come into contact with are in possession of greater specialist knowledge than the practitioners themselves. This may be particularly true of newly qualified practitioners, but can also be a challenge to those who have practised for a long time without the opportunity to update their knowledge and skills. Suggestions of different ways of doing things may be regarded as criticism of the practitioner's practice, and it takes generous and open concern on the part of the practitioner to acknowledge the value of new approaches.

Another identified 'risk' is that a PA in possession of an accredited qualification may, quite reasonably, seek pay in line with their qualification. This raises uncomfortable questions around the levels of pay deemed acceptable for those facing the immense responsibility and challenge of supporting people with complex disabilities, and may lead to difficult decisions for personal budget holders about which PAs to employ. It would seem reasonable to ensure that budgets calculated to provide sufficiently expert and safe care for any individual would also take into account the experience and qualifications of the PAs needed, and remunerate them accordingly.

THE PROCESS OF ACHIEVING AND MAINTAINING ACCREDITATION FOR TRAINING

DH guidance (Simpson 2012) states that 'Training should be provided by a competent person and should be of a standard recognised as adequate for the task… there should be written evidence of competence assessment, where possible against recognised standards such as the National Occupational Standards (NOS), or the standards being developed by Skills for Health and Skills for Care.' Qualifications regulated by the Qualifications and Credit Framework (QCF) are mapped to the NOS, and therefore provide the registered healthcare practitioner with clear evidence of competence assessment against recognised standards.

The QCF is a national framework used by learners and training providers to compile qualifications. It is made up of discreet units that are given a credit value and a level. Learners are able to accumulate credits from different courses and work towards larger qualifications, a process sometimes referred to as credit transfer. This is ideal for part-time learners, and for those with extensive commitments in their personal lives. Units are given a level based on the type of academic standard that the learner is expected to achieve, and run from Entry Level through to Level 8.

We began working with our awarding body, Open College Network West Midlands Region (OCNWMR), in 2004. As an organisation we were looking to work with people who shared our value base, and who understood the needs of the people on whose behalf we were developing training. OCNWMR includes within its aims a commitment 'to providing a high quality and responsive accreditation service that

promotes widening participation, social inclusion and lifetime learning for all'. Like us, they are also a not-for-profit organisation.

Becoming a nationally approved centre for accredited learning involves an agreement – between the training provider and the awarding body – that the provider meets their minimum requirements in relation to curriculum, quality, and administrative procedures. Once an organisation has met the requirements of the particular awarding body with which it has chosen to work, they are then able to collaborate to develop new courses and qualifications.

The process of gaining approval from the Office of Qualifications and Examinations Regulation (Ofqual) for a qualification to be included on the QCF is led by the awarding body. The next step is to secure sponsorship or support for the course from credible organisations or individuals within the given field. We were in a privileged position having worked for many years in this area, so that gaining support was relatively straightforward. Our sponsors included representatives from the DH, the Valuing People Support Team, and the UK Health and Learning Disability Network hosted by the Foundation for People with Learning Disabilities. Gaining support from Skills for Health was also straightforward because we had worked with their children's lead on a large project in 2010.

IN CONCLUSION

With well-disseminated, accredited training, the network of trainers and course participants grows, and we are seeing positive results. For example, the number of children and young adults with hip dislocation in Wakefield has been dramatically reduced (Carter 2013). This gives everyone a beacon to work towards, and a method by which to demonstrate their efficacy.

Henry Ford once stated that 'Quality means doing it right when no-one is looking.' If we want to improve physical health outcomes for people with complex disabilities we must ensure that PAs and carers are both competent and confident to deliver high quality care at 2am, when no-one is looking. This involves trust, supportive relationships, provision of the necessary training and equipment in a timely manner and, above all, a sea change in the levels of investment that we currently offer to family carers and the PA workforce.

RESPONSES TO QUERIES FROM THE EDITOR

How do OCNWMR and QCF fit together?

The QCF is the framework; the accreditation is led by awarding bodies of which OCNWMR is one. Ofqual regulates both the QCF and the awarding bodies, which, in turn, regulate their approved centres.

What does the term 'nationally approved centre for accredited learning' mean?

It means that you are regularly inspected (twice a year) to ensure that you meet minimum standards in terms of policy, procedure and accountability. It also means that there are two levels of quality assurance that we and our learners are subjected to – one internal quality assurance system and one external system.

Postural Care CIC currently has 2 QCF regulated qualifications, the Level 2 Postural Care Award and the Level 3 Measurement of Body Symmetry Award. What is the difference between a level 2 award and a level 3 award?

Level 2 is equivalent to GCSE Grades A – C in schools, or a Level 2 Diploma in Further Education colleges. Level 3 is equivalent to A Level, or a Level 3 Diploma/Extended Diploma. The levels relate to what the learner is expected to be able to do with the learning: Level 2 is about basic learning and recall, whilst Level 3 is about being able to apply that knowledge to novel situations.

FURTHER INFORMATION

Since 2004 Postural Care CIC have developed and delivered both regionally and nationally accredited qualifications in postural care, measurement of body symmetry, and train the trainer courses. The Postural Care Award has been written in such a way as to ensure that PAs and carers are able to combine specialist knowledge with person-centred approaches that recognise and respect pain related responses, and the involvement of the person and their family in all aspects of provision. As well as accredited training provision, Postural Care CIC has worked with Debra Moore Associates to develop cost effective e-learning modules in postural care.

Postural Care CIC is a registered Positive Deviance Initiative and has established a living university – an online community of individuals and organisations passionate about improving outcomes for people who have complex disabilities. To download success stories, including the Wakefield Story and its associated business case, please visit www.posturalcareskills.com/living-university

Similarly if you are developing improved person-centred outcomes and/or service delivery, we would be delighted to hear from you; we are happy to work with organisations and individuals, who do not have approval, to develop new courses. Application forms for our 2014 intake of Train the Trainer candidates are available now, with the 12-month course starting in March 2014. Please contact Sarah@posturalcareskills.com for further information.

REFERENCES

Carter S. (2013) Why does postural care work in Wakefield? (online) Available at: http://goo.gl/q9Yggx 5th November 2013

Donnelly B. (2011) *Code of Practice for Community Equipment*. Community Equipment Solutions Limited, UK. Available at: www.cecops.org.uk

Emerson E. (June 2009) *Estimating Future Numbers of Adults with Profound Multiple Learning Disabilities in England*. Centre for Disability Research, Lancaster University, UK.

Heslop P et al. (March 2013) *Confidential inquiry into premature deaths of people with learning disabilities (CIPOLD)*. Norah Fry Research Centre, UK. (online) Available at: http://goo.gl/rGB262

Simpson B. (November 2012) *Personal Health Budgets Guide; Personal assistants – delegation, training and accountability*. Department of Health, UK. Available at: http://goo.gl/ERYj0m

GO KIDS GO NATIONAL WHEELCHAIR SKILLS TRAINING PROGRAMME

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ABSTRACT

Go Kids Go is a registered children's charity, and has been running a national programme of free wheelchair skills workshops for young wheelchair users since 1990.The specialised training is designed to enable independence, and to ensure that the young people are able to reach their full potential. Go Kids Go also run practical wheelchair skills workshops for healthcare professionals, and training in universities for physiotherapy & occupational therapy students, and have set up a very successful programme of disability awareness courses in mainstream schools.

WHEELCHAIR SKILLS TRAINING

Go Kids Go provide the opportunity for instruction, practice and development of wheelchair skills which can transform young people's lives. In the workshops Go Kids Go teach essential skills such as back wheel balancing, road safety, route planning and emergency evacuation techniques. In addition, skills are also developed through games and challenges specifically designed to encourage independent mobility. Participants are introduced to wheelchair sports and dance, and encouraged to attend local clubs. In some regions parents have set up their own disability sports clubs after a workshop. Workshops are available for manual or powered wheelchair users, with the powered wheelchair workshops focusing on manoeuvring skills and spatial awareness. Wheelchair users who have learnt skills with the charity are encouraged to return as volunteers when they are older, to assist and inspire younger participants.

For a child without a disability, the ability to move independently enables the development of many key skills that contribute to holistic development, mental and physical wellbeing. It has been shown that children who have restricted mobility can begin to display passive and dependent behaviour (Livingstone, 2011). The charity works with children from the age of 18 months with the belief that it is vital that wheelchair skills training starts as early as possible. The Go Kids Go trainers are able to grade and adapt activities to ensure that the training is accessible to all ages and abilities.

Keeping the needs of the young wheelchair user and their family at the centre of the training, the workshops are delivered using an inclusive approach by providing a stock of active user

wheelchairs at each workshop so that parents and siblings can get involved and join in the games. Families often find the workshops are a good opportunity to share experiences and receive practical advice.

Physiotherapy students – UCLAN.

The TV presenter Ade Adepitan MBE is a patron of the charity and he knows first-hand the value of the workshops. When Ade was a young man he benefited from the charity's work and was encouraged to take up wheelchair basketball. "This charity is part of me, you make friends for life; the skills young wheelchair-users learn here will change their lives." *(See back cover).*

Baroness Tanni Grey-Thompson says "I have attended quite a few Go Kids Go training courses over the past few years, and I am always impressed by the attitude of the therapists and their affinity with the children. The courses not only address the needs of the disabled child, but are also directed at their parents and siblings. The courses encourage parents not to wrap their children in cotton wool, something I really believe is essential in coping with life today. There will be times in life when a wheelchair user is faced with a high kerb, a flight of stairs or an escalator, and the skills and confidence learned at a young age to cope with these difficulties is invaluable. It's not just about assessment and making sure that the child is provided with a suitable wheelchair – it's about ensuring that every child who uses a wheelchair has the means to fulfill their potential, and the ongoing support and understanding of Go Kids Go is particularly helpful to many families."

AWARENESS TRAINING

Since 2009, in addition to the core workshops, the charity has been running a very successful programme of disability awareness courses in mainstream schools. A shocking statistic suggests that there are 180 disability hate crimes carried out every day in the UK (Office for Disability Issues, 2013). Our aim is to raise awareness and promote a positive image of young wheelchair users.

Training can start at an early age.

The workshop involves taking the rest of the class, including teachers, out of their comfort zone and putting them into a wheelchair, thus giving them an insight into the challenges faced by young wheelchair users in their school environment. In addition to wheelchair skills and games, topics such as personal space and how and when to offer assistance to wheelchair users, are covered. The young wheelchair users themselves often find it amusing watching their teachers and friends struggle with challenges they face every day. The training fits into the national curriculum (PHSE/PE), and Go Kids Go work with a range of year groups and adapt training sessions to suit each key stage.

PROFESSIONAL WORKSHOPS

Go Kids Go also run practical wheelchair skills workshops for healthcare and educational professionals, as well as training in universities for physiotherapy and occupational therapy students. Wheelchair service staff have said that they find the practical workshops offer a new perspective on their work.

In the workshops therapists learn practical wheelchair skills such as propulsion techniques, back-wheel balancing and coping with kerbs and slopes. The workshops provide good opportunities for team

Roy Wild guarding a young wheelchair user assisted by volunteer Simon Thompson.

building, such as therapists guarding each other when practicing back wheel balancing with the anti-tip bars removed.

Typically a professional workshop would cover:
• A review of types of wheelchair and their handling characteristics.
• Warm up activities
• Handling different chairs and propulsion techniques
• Wheelchair games
• Advanced skills, i.e. back wheel balancing
• Road safety for wheelchair users
• Outdoor mobility , managing slopes and rough ground
• Wheelchair dance and wheelchair sports
• Emergency evacuation

Mandy Dunbar, senior lecturer in physiotherapy at the University of Central Lancashire (UCLAN), stated that "The course was a fantastic opportunity because it enabled students to tailor physiotherapy treatments around the needs of the patients."

Wrexham Posture & Mobility service staff.

OUTCOMES

For young wheelchair users, the Go Kids Go training provides the opportunity to learn and develop key skills which will enable independent mobility. Participants are taught to assess risk and develop road safety awareness which will help give them functional parity with their peer group, allowing them to go out independently in their communities.

On a social level the workshops provide an opportunity to interact with other young wheelchair users and, for families facing common issues, there is the opportunity to share experiences. One young wheelchair user who has benefitted from Go Kids Go training says, "This charity has been my second family for the past seven years. Their motto 'Independence through Mobility' is exactly what they gave me, independence. That one motto changed me as a person. When I first started attending workshops and classes with Go Kids Go I didn't even know where the push-rims were. Seven years later I am a college student, much more independent and confident. Through the courses that Go Kids Go offer, I now view my wheelchair as a tool to help me achieve things."

Working in collaboration with wheelchair services, the charity is able to reach out to more and more children each year. A number of wheelchair services across the UK work in partnership with Go Kids Go, supporting the charity by organising venues and promoting the workshops to their service users.The charity receives most of its funding from charitable trusts and donations, although in Northern Ireland and Wales, therapists have been able to secure funding from the local health authorities to finance the workshops. By working together we can ensure that young wheelchair users and their families have access to the support and training they need.

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REFERENCES

Livingstone R. (2011). *Power mobility for infants and preschool children*. Available: http://goo.gl/lhdIOZ
Office for Disability Issues. (2013). *Learning about disability in the UK*. Available: http://goo.gl/QBVwT0

WEBINARS – A DIFFERENT WAY TO DELIVER TRAINING

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ABSTRACT

A webinar is a seminar transmitted over the internet which is also interactive, so that questions and discussion points can be raised by the live audience. The event can be recorded for future viewing, and presenters and participants can be located anywhere in the world. Webinars are not new, but the costs of hosting them and of the associated technology have tumbled. This article describes the recent testing out of the technology by the Health Design & Technology Institute (HDTI) in Coventry, in association with the Rehabilitation Engineering Services Management Group (RESMaG).

The Health Design & Technology Institute (HDTI) delivers a regular programme of face to face CPD events and, whilst these are both well attended and well received, it is clear that, with the financial and capacity constraints that many services now face, we need to find new ways to deliver CPD.

Thus HDTI, in association with the Rehabilitation Engineering Services Management Group (RESMaG), decided to test webinar technology for a recent CPD event. A broad range of speakers and topics was selected, reflecting the need for rehabilitation engineers to keep up-to-date with developments across the profession. I was keen to assemble the speakers in one place to deliver the event but in practice this was impossible: we had 4 speakers in three locations in the UK, in addition to the webinar hosting taking place in Coventry! My colleague, Liz Aston, and I were rather nervous about delivering our first webinar but, despite some nerve-wracking moments, the event ran smoothly.

I would like to thank our speakers:

James Currell & Paul Moodey (Thinking Outside the Box – a complex seating solution case study)

Simon Judge (Integrated Access)

Lorna Tasker (Digital Seating – service development and research)

This was a new experience for them all and they coped fantastically.

Each presentation was followed by a Q&A session. Participants were invited to type questions, Liz collated these, and I presented the questions to the speakers. We were inundated!

The webinar system allows feedback to be collated immediately after the event, using an on line form. The feedback received was overwhelmingly in support of this approach to delivering CPD (not replacing face to face events, but supplementing them). Here is a selection of comments received:

"I found everything useful"

"Integrating services and consulting with communications team is very useful. We may have to investigate bridging that gap between social service providing assistive technology and local wheelchair services supplying controls"

"AT is not really my field in Rehab Engineering (I mostly work in prosthetics & orthotics) but it's always interesting to keep in touch with other disciplines, and you never know when an idea may be sparked by seeing something in one field which might be transferrable into another"

"Yes. I took notes from all three presentations and will reflect upon them as part of my Trainee Clinical Scientist position"

Overall the event received a 73% *Very Good* rating. There were one or two glitches with the technology, which is to be expected with this type of event. Some participants needed help from their IT departments to overcome firewall issues, but the general feedback demonstrated the ease of use of webinar technology. I received some positive feedback from a practitioner working for the Red Cross in Israel, indicating the global reach of a webinar; there is no limit on audience size.

The event was free and 40 delegates took part,

with another 40 watching on large screens in two locations. The recording of the event is still available http://goo.gl/nkwFTS but please note that the speaker images are not available, only the PowerPoint slides and the speaker commentary.

Following the success of the event, HDTI and RESMaG are developing a full CPD programme which will be announced shortly. The aim is to offer free events, using sponsorship to cover the costs. Positive initial discussions have taken place with a number of potential sponsors, but I would be pleased to hear from any organisation that would like to sponsor a single event.

THE DEVELOPMENT AND USE OF E-LEARNING IN HEALTHCARE

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ABSTRACT

Mara Derrett's healthcare career began as a medical secretary and pharmacy dispenser. She became an occupational therapy technical instructor and served for 10 years in wheeled mobility. Mara identified a need for electrically powered mobility in Latvia, sourcing and supplying equipment and training. She became training lead within her NHS Trust and implemented Oracle Learning Management, the National Learning Management System, and became its regional group chair. After obtaining a degree in leadership and management, she became development manager of the Hazard House multiagency social enterprise. Her strong passion for wheeled mobility continues in a voluntary capacity.

E-learning has rapidly become a frequently used method of delivering statutory/mandatory training in the NHS and other public and private sector organisations. Although not all the reasons for this are austerity-related, this has been a significant driver in many areas. In June 2013, Derbyshire Healthcare NHS Foundation Trust reported that 'Deployment of e-learning has seen a 75% reduction in classroom based courses, delivering additional efficiency savings on training venues, travel expenses and course tutors, and with the majority of e-learning courses having the competency attached to the course, employee training records are updated automatically, removing the need to manually update training completion dates.' (NHS Electronic Staff Record, 2013)

E-LEARNING PROVIDERS AND THE NATIONAL LEARNING MANAGEMENT SYSTEM (NLMS)

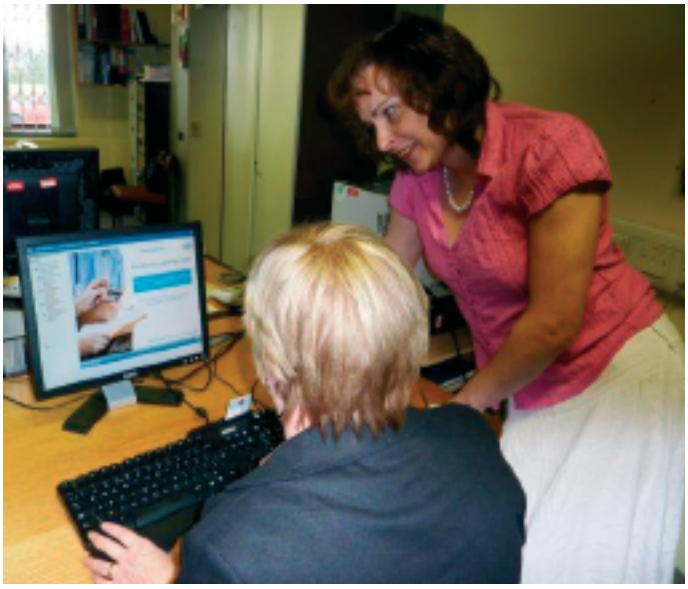
There is huge benefit to be gained from good, joined-up e-learning procurement. Within the NHS this is achieved through the deployment of the NLMS, which currently has hundreds of e-learning courses that are freely available to every organisation that has implemented it. The NLMS project was initiated to define the requirements and deliver e-learning functionality for the NHS.

The development of the NLMS is a joint initiative between the following five organisations: NHS Electronic Staff Record (ESR), the Department of Health, NHS Connecting for Health, Skills for Health Core Learning Unit, and e-learning for Healthcare. The latter two are the main e-learning content providers to the NLMS and they also provide alternative web access to their e-learning content for the benefit of organisations that do not have NLMS access through ESR.

Training teams within organisations using NLMS take care of their own NLMS administration and can easily add local e-learning content for their staff to access, alongside the vast amount of national e-learning content. Locally produced content should be SCORM-compliant (SCORM = Sharable Content Object Reference Model – a set of technical standards for e-learning software products) for it to operate with the same functionality as the national content. However, open source e-learning content, e.g. that which is available to

play on a website, can simply have its URL entered into NLMS so that an organisation's learners can access the e-learning content through NLMS without being aware of its actual location on the internet.

Commercially there are numerous e-learning providers out there who are all clamouring for our business. However, the following points should be considered when selecting an e-learning platform and content provider. The real advantage of implementing a platform like NLMS is that national content is reviewed and updated centrally as and when necessary, to maintain compliance with current legislation and best practice. By contrast, even those standalone systems which are equipped with expensive maintenance contracts may become worthless and, in the event of a standalone provider facing liquidation, clients may lose their e-learning content, training compliance reports, and administration records. Organisations that choose to purchase client software, e-learning content files, and editorial content access in order to take on responsibility for reviewing and updating their own e-learning content can find that it places an unmanageable strain on their training resources.



Mara Derrett (right) delivering e-learning tuition

Subject Matter Experts (SMEs) within local healthcare trusts are able to make valuable contributions to the production of new national content, or to update and make existing content comply with new legislation. In the case of the large NLMS platform, learning administrators access the system via chip and pin Smartcards. Where possible, this is the best form of access for all learners too. However, it does require learners to use their employers' computers equipped with the relevant Smartcard readers and secure NHS N3 network to access the live system.

A strong point in favour of using workplace computers for e-learning is that they are usually maintained by IT teams who can ensure that the essential software is installed, e.g. the correct version of Java, Adobe Flash Player, Shockwave Player, and Acrobat Reader. On those rare occasions that such work has been neglected, the learner could be forgiven for thinking that computer suites have barred windows to prevent them from leaving, as well as to prevent thieves from entering!

An alternative method of access for the learner is remote access. This enables the learner to access from outside of their NHS organisation, e.g. from home. If a learner does choose to use remote access, they should be made aware of the technical requirements needed for their PC to ensure a successful learning experience. In cases where a username or password is forgotten by the learner they can, when back at work, utilise the 'Forgotten Username/Password' functionality to request a reminder or reset their password, and therefore do not have to rely on intervention by the learning administrator.

COST SAVINGS

To provide a general idea of the financial incentive for implementing e-learning, consider an organisation with 1,000 staff, all of whom have to complete 12 courses per year, making a total of 12,000 courses. At £30 per instructor led course, this equals £360,000. By delivering two-thirds of these by e-learning, a £240,000 saving is achieved per annum! In many subject areas it's possible to exclusively use e-learning and thereby reduce training costs still further.

An important factor to take into account is that training delivered by e-learning is still training, and must therefore be undertaken in an environment conducive to learning (such as an IT suite), and generally be allocated the same amount of time to complete as a classroom based instructor-led course. On average, a statutory/mandatory e-learning course may take 1.5 hours to complete. Some basic courses take 30 minutes to complete, whereas some advanced courses take 3 hours to complete.

OTHER BENEFITS

There are many other benefits to using well-administered e-learning. Learning administrators can see and report on how long each learner has spent on each module of each course; therefore, learners should be aware that attempting to skip to the end is not advisable, especially as most assessments come with a moderately high minimum pass/fail threshold! Once passed, many NLMS courses trigger a national competency with an appropriate renewal period that

is entered in the learner's electronic staff record (ESR). ESRs are portable, meaning they transfer to another NHS organisation when changing employer. This prevents the unnecessary duplication of training, and saves precious time and money – not to mention losing the will to live after having to complete fire training for the third time in 12 months!

After completing their e-learning, delegates can log-in again for a quick refresher whenever they need to, without the need for forests to be stripped of their trees to produce masses of hand-outs that so quickly become obsolete.

As e-learning platforms have been developed to become more stable and with increased functionality, the learning experience has likewise been enhanced. People have differing learning styles; therefore, in addition to alternating e-learning with instructor-led training, it's useful to include a range of multimedia content when producing e-learning courses. For this reason, it's helpful if the computers used for e-learning are equipped with sound cards and headphones for learners to use.

In terms of inclusive learning, e-learning can be an excellent alternative for people with a specific learning difficulty, such as dyslexia, where additional study time may be required to process the information presented. Learners who have been assessed and diagnosed with dyslexia can access specialist accessibility software through Access to Work. The software can be loaded onto workplace computers used for e-learning and enables the learner to customise the appearance of the screen, e.g. with a specific coloured overlay for readability. Some NLMS e-learning content, e.g. equality and diversity, has an accessible version which is essentially a PDF document that can be read aloud to the learner by the computer software.

Love it or loathe it, all things considered, e-learning certainly has much to offer, and can deliver more learning to large workforces at a fraction of the cost of traditional teaching methods.

REFERENCE

NHS Electronic Staff Record. (2013) *A Case Study from Derbyshire Healthcare NHS Foundation Trust.* [online] Available at: www.electronicstaffrecord.nhs.uk, accessed 12/09/2013.

DEVELOPING AN E-LEARNING MODULE FOR ALLIED HEALTH PROFESSIONALS

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ABSTRACT

New media and electronic-based learning provide significant opportunities for more flexible learning. The social web provides opportunities to reinforce existing professional networks and create new ones. This article aims to summarise how we developed an electronic learning (e-learning) module, and how social media could be incorporated in the future.

We have delivered postural management courses in the UK for many years and have trained over 2000 allied health professionals (AHP) in this time. We have focussed on twenty-four hour postural management to promote effective positioning and improved function for young people with neurological impairment. The course materials and activities relate particularly to the International Classification of Functioning, Disability and Health (WHO, 2001), national guidance (Gericke, 2006), and research carried out by Terry Pountney and her colleagues at Chailey Heritage Clinical Services in the UK (Pountney, et al., 2009).

E-LEARNING BENEFITS

The delivery of health care is concerned with quality and accountability. There is a demand on healthcare professionals to critically review their skills and knowledge and to keep up to date with changes in practice. Continuing Professional Development (CPD) is central to this process.

In recent years, training budgets in the UK have become more tightly constrained, and professionals have found it increasingly difficult to incorporate the growing number of relevant courses and conferences into a hectic clinical schedule. It can also be difficult to put into practice new skills developed at conference or at a specific training event.

E-learning can help to address some of these issues because it offers unique opportunities to:

- Study at a suitable time
- Vary length of study time depending on personal circumstances
- Reinforce study as part of an on-going learning programme
- Provide training which would otherwise not have been accessible (in terms of cost or location)
- Implement changes to the material with immediate effect.

Significant work on this project was started in 2008, with support from City University in Birmingham who provided some project management and technical support. We were able to obtain a grant as part of a local 'Business by Design' programme, funded by the European Regional Development Fund.

Firstly, we decided the scope of the first e-learning module would be the use of of an outcome measure that can be used to analyse and record postural ability. This forms an important part of our two-day course on postural management, but delegates often find it helpful to have a follow-up session once they have used the measure in practice.

Our second key decision was the platform that would be best suited to deliver the content. We felt that a web page (html) based tool would be the most appropriate for the following reasons:

- Content could be used online and offline
- Easy to update
- Consultants easily available if required
- Supports multi-media
- Can be used on many devices
- Easy to link to other content and modules in the future.

Using a format that the learner accesses through the web-browser on their device means that:

- It is naturally suited to distance learning
- Users can bookmark key parts with their browser

• They can start and stop as required.

The e-learning module was presented in a linear fashion, similar to the chapters of a book, so that, as knowledge is absorbed, new skills can be practised. A core element of the module was the use of assessment videos that were viewed by the user and then analysed.

To begin with the student was able to observe the process, and then gradually become more actively involved as the sessions progressed. They were finally able to complete an assessment online, without prompts or direction and, providing a certain standard was met, a certificate of competency could be downloaded as a record of achievement.

PROBLEMS

As an independent provider of learning in clinical practice, we were not affiliated with a university, and therefore had to develop this e-learning module on our own. As we had not done so before, we outsourced support for specific technical aspects of the process.

The key challenges were:
• Keeping the number of stakeholders to a minimum
• Appointing a content editor to take final decisions on the material content
• Controlling the changes and updates of the material, as in editing a book
• Having a clear vision and focus on the content
• Planning, planning and more planning
• Finding an external developer or consultant who can meet your expectations. A word of advice – be very careful in the selection process.

And some further, important considerations:
• Choosing the platform or device that will be used to access the material
• Choosing the delivery mechanism
• Permissions, possibly even ethical approval, for any confidential or sensitive material to be used
• Start simple.

The tool was piloted with the help of a small number of clinicians to help us identify and then reduce the snags in the programme, and the tool was then made available as an additional learning opportunity to any course participant.

One of our key constraints was that the IT policy of many National Health Service Trusts, where the vast majority of our audience worked, is often significantly restricted (often for good reason). Our alternative, delivery by CD, was also problematic as the encryption software we used to protect the data often required administrator privileges on the computer where it was to be used.

REFLECTIONS

It is always easier to develop this type of technology the second time around. The process is not difficult and the result provides significant benefits for learners. Technology has changed significantly since we developed this module. There are now many more platforms for e-learning material, including: web-based applications, static websites, e-books, podcasts, YouTube, blogs, and platform-specific apps (smart phones etc.). These systems are easy to use, and often have a Word-like interface to use on the desktop.

The key development that could have a benefit in this mode of learning is the use of social media, which enables users to share practice and learn from each other. This could now be embraced to develop learner and professional networks.

CONCLUSION

Modules are not difficult to develop, though their success depends upon careful planning and decision-making, with a clear vision of the scope of the project.

Although the opportunities offered in this e-learning format are obvious and are sympathetic to the principles of CPD, we were surprised to find few e-learning options currently available from professional organisations.

E-learning can provide significant flexibility to AHPs, and increased availability of these resources offers clear benefits for clients, professionals, and the organisations to which they belong.

REFERENCES

Gericke, T., 2006. Postural management for children with cerebral palsy: consensus statement. *Developmental Medicine and Child Neurology*, Volume 48, p. 244.
Pountney, T. E., Mandy, A., Green, E. & Gard, P.R., 2009. Hip subluxation and dislocation in cerebral palsy – a prospective study on the effectiveness of postural management programmes. *Physiotherapy Research International*, 14(2), pp. 116-127. doi: 10.1002/pri.434
WHO, 2001. *International Classification of Functioning, Disability and Health*, Geneva: World Health Organisation.

MANAGING CHILDREN'S EQUIPMENT: NO LONGER A MYSTERY

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ABSTRACT

When dealing with children's posture management and mobility equipment there tends to be confusion and lack of understanding regarding what is involved and where responsibility lies. The application of a systematic approach, recognising who is responsible for what, and based on the frameworks and parameters laid down in existing legislation, ensures this equipment will continue to perform safely and to the best of its potential. This article describes a training programme that has been developed, that outlines where responsibilities lie throughout the process of device management, and where further information on specific products and processes can be found.

There is a very great deal of posture management, mobility, and other equipment in the community being used by children with specific clinical needs as a result of an underlying condition and, sadly, we can only expect the numbers to increase. It is vital that this equipment is correctly managed if it is to perform safely to its best potential, and contribute to the best possible quality of life.

All such pieces of equipment carry a CE Mark (CE stands for Conformité Européenne) that, amongst other things, identifies them as Class 1 Medical Devices. The Medicines and Healthcare products Regulatory Agency (MHRA) provides guidelines on how this equipment should be treated, looked after, and – importantly – who is responsible for this care.

We have recognised that a great deal of poorly used time is delaying the proper care and maintenance of paediatric equipment, often at the expense of its efficacy. It is worth considering that the 'simple' fix – i.e. calling a manufacturer's representative to deal with an issue when it arises – is often neither the most efficient resolution nor indeed the 'correct' path. Whilst it's true that the representative may indeed be able to resolve the issue, the responsibility for it often lies elsewhere, as identified by the MHRA. Further, many problems could be prevented if only there were a greater understanding of who should be doing what when it comes to care and maintenance of these devices. This is not to say that manufacturers want to distance themselves from their community based equipment, just that they would like the equipment to be used as efficiently and appropriately as possible.

Perhaps the most common result of ad-hoc approaches to equipment is that small discrepancies creep in, inevitably leading to compromises in how well and safely the equipment can function. For example, small adjustments or maintenance issues that can and should be dealt with by carers may be put off until a company representative can visit. Diary and geographical constraints mean that this visit may not take place for many weeks! Is it acceptable that a piece of equipment is removed from use – or worse, remains in service – when, with a little training and empowerment, the carer can identify and correct an issue as soon as the problem is noticed?

ROLES AND RESPONSIBILITIES

The MHRA outlines clear and precise steps and measures which are specifically aimed at Class 1 Medical Devices. They detail what should be done and by whom, clearly defining the responsibilities of manufacturers, healthcare professionals, and carers. Adoption of these policies will inevitably lead to a redistribution of workload in order to appropriately assign responsibilities, and to address the fact that liability rests with whomever fails to uphold their responsibilities. The point to be considered above and beyond that is that the equipment will do its job to a higher standard, more safely, and for longer!

The pertinent information is available on the MHRA website, with the most relevant documents being: Managing Medical Devices

(2006) and Devices in Practice (2008, 2011). These deal with all aspects of managing the devices including prescription advice, record keeping, acceptance checks, training for end users/carers, routine maintenance by users/carers, planned preventative maintenance, and legal liabilities.

TRAINING IN THE MANAGEMENT OF MEDICAL DEVICES

A systematic approach to the management of this type of equipment would dramatically improve its ongoing safety, functionality, and performance – and there are recommended systems to do just this. However, the MHRA documents are lengthy, and the relevant information is not contained within a single chapter aimed specifically at individual needs.

A training programme has therefore been developed in which only the relevant information from the MHRA documents is included, outlining where responsibilities lie throughout the process of device management, and showing where further information on specific products and processes can be found. Although this training programme – Structured Training in the Management of Medical Devices – Posturally Supportive Equipment for Children – has been developed by one manufacturer of equipment, it is NOT a training programme on how to work with only their equipment. The information contained within the programme can be applied to any manufacturer's equipment.

The programme is endorsed by the College of Occupational Therapists and has received accreditation from The City & Guilds of London Institute. The former ensures that the 'course content is of value and interest to occupational therapists working in paediatrics, or responsible for the provision of specialist paediatric equipment in the community', and contributes towards CPD. The latter affords successful delegates with formally recognised certification from a world leading vocational training organisation.

The course itself is broken into three stand-alone blocks: Mechanical, Technical, and Clinical. Each block comes with CPD and certification upon successful completion. The blocks can be taken in any order and, indeed, you may attend as many or as few as necessary. Each block is comprised of four units, with each unit containing presentation, practical, discussion, and assessment components.

As an example, the four units of Block 1 Mechanical are: Cleaning, Care & Maintenance, Servicing, and Assembly.

i. The Cleaning unit deals with how the equipment – as a medical device – should be cleaned before any major work such as servicing or re-issuing is undertaken. Indeed, there are implications to be considered with regard to cleaning well before that: 'The ability of any reusable medical device to be readily decontaminated should be considered prior to the purchase of that device.' (MHRA, 2006) So, does this have an impact on whether we select devices with fixed or removable soft furnishings?

ii. The Care & Maintenance unit discusses the importance of the creation of a schedule to deal with daily, weekly and monthly considerations such as cleaning, checking, and maintenance of the device. Although this work, according to the MHRA, is the responsibility of the user/carer, the creation of this schedule is the responsibility of the healthcare professional/prescribing therapist, and the manufacturer is responsible for providing clear instructions for use (IFUs) that provide the baseline information for this schedule. The MHRA states that, 'Health and social care professionals are personally accountable for ensuring that service users and carers have appropriate training in the use and maintenance of the device provided.' (MHRA, 2008 [2011 web version])

iii. The Service unit covers what is involved in servicing, and the importance of following manufacturers' recommendations. 'The frequency of servicing should be based on the manufacturer's recommendations: otherwise the provider will carry increased liability in any subsequent litigation.' (MHRA, 2006)

iv. Assembly deals with identification of parts and accessories when equipment is, for example, prepared for re-issue.

EDITOR'S COMMENT:

In addition to the paediatric population referred to in this article, there are many adults with complex disabilities who have medical devices (standing frames, lying supports, and some seating and wheelchairs). Although adjustments to their equipment may not be needed due to growth (except for changes in weight), there are still changes in presentation that need to be accommodated, and the responsibilities of the relevant people need to be recognised. Therefore, similar courses related to working with adults would be welcomed.

Block 2 – Technical: Measurement, Adjustment, Problem Solving, and Recycling & Re-issue
Block 3 – Clinical: Posture – Seating, Posture – Standing, Assessment, and Review

The aim of the programme is to demonstrate that, by knowing where to look for information and advice, by knowing how to implement it, and by adopting the use of standardised processes and protocols, all equipment, regardless of source, can be more effectively and safely managed in line with the recommendations and guidelines of the MHRA.

REFERENCES

MHRA, 2006. *Managing Medical Devices* – DB 2006 (05). [Online] Available at: http://goo.gl/MyKB06 [Accessed October 2013].
MHRA, 2008 (2011 web version). *Devices in practice – a guide for health and social care professionals.* [Online] Available at: http://goo.gl/dsw6nT [Accessed October 2013].

GRADUATE DIPLOMA IN REHABILITATION ENGINEERING AT COVENTRY UNIVERSITY – DECEMBER 2010 INTAKE

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The Graduate Diploma in Rehabilitation Engineering at Coventry University was a two year part-time course to support participants to gain entry onto the Voluntary Register of Clinical Technologists (VRCT). Each participant needed to be in full-time employment and be registered with the Institute of Physics and Engineering in Medicine (IPEM) clinical technologists training scheme.

In the first year, the students attended lectures at Coventry University in five one-week teaching blocks. All the coursework and studying were conducted from home or work (each student agreed a plan with his/her line manager). In the second year, each student pursued a main project, much like a dissertation, which was then presented at Coventry University in April 2012.

Students also had to maintain a portfolio of training and experience during the two years; this was submitted for marking to Coventry University in December 2012. Each student then participated in a viva with an IPEM external moderator and independent assessor and, provided a pass grade was obtained, the student could then be recommended to the Clinical Technologists Education and Training Panel (CTETP) board of IPEM. Once the student was approved by CTETP, it was then possible to register with the VRCT.

Of the seven who started, five completed the course in December 2012: Scott Baker, Craig Egglestone, Nicola Haines, Paul Harrington, and me. Paul and I attended the graduation ceremony at Coventry Cathedral in April 2013, with Craig and Scott recently attending the November ceremony.

Graduates Paul Harrington and Kate Jones; centre is Simon Fielden (Director, HDTI, Coventry University).

The graduate diploma is no longer running. However a graduate certificate is running for the academic year 2013/14 aimed at those currently working in assistive technology and rehabilitation engineering services and who require registration with the VRCT. It meets the academic requirements of the VRCT, and students who successfully complete the course will then need to demonstrate that they have met the practical competencies for VRCT registration through a work based training programme. This will be the last year of the graduate certificate.

There is also a BSc in rehabilitation engineering with Coventry University, and it currently has third and fourth year cohorts. The fourth year students have just started one-year placements at a range of services.

I thoroughly enjoyed working on the graduate diploma. It gave me the necessary tools to become confident in my area of expertise; through it I also met professionals in rehabilitation engineering from across the country learning about different types of service structure and delivery. I am now registered on the VRCT and am proud to have completed an intensive and challenging training programme to become a registered rehabilitation engineering professional.

Graduates Craig Egglestone and Scott Baker.

TRAINEE TO TRAINER

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ABSTRACT

This article describes the author's journey from trainee to trainer whilst working within the field of posture management. It discusses the approach used within her clinical setting and taught on the postgraduate courses run by the same department.

It is clear from working in the field of posture management that there are a number of different approaches to working with individuals within this area of expertise. It is not suggested that one approach is better than another but my aim is simply to share the approach taught in Oxford. I thought it best to start by sharing my journey so far.

At the age of 15 my mind was opened to the world of disability when my sister sustained a spinal cord injury. Occupational Therapy to me was a natural career path. At university my interests lay in physical disability placements, perhaps influenced by my earlier experiences. It is little surprise to me, 10 years after leaving university, to find that I have specialised and work in the field of posture management for the most complex, physically disabled individuals. So how did I get here?

After graduating, I had a variety of jobs which, regardless of specialism, involved working with physically disabled children and adults. As I gained experience, I became increasingly interested in furthering my knowledge and experience of posture management, with little awareness of what this actually meant in practice.

In 2008 I attended the short course in Posture Management for Adults and Children with Complex Disabilities in Oxford. With my appetite for the subject whetted by the inspiring tutors, 18 months on I started the postgraduate certificate in the same subject. On completion of the course I was well and truly hooked. The

approach made sense to me, and I began to use it in everyday practice; a posture geek!

In 2012 I joined the Specialist Disability Service clinical staff in Oxford, within which members of the teaching team work. I joined as a clinician, but then started to support small parts of the course alongside my clinical role, e.g. helping with the client assessments: to find myself working with the tutors who had inspired me was daunting! Two years after starting in the clinical team, I am now part of the teaching team delivering the posture management courses, and also studying for a postgraduate certificate in higher professional education.

There are two courses on posture management taught in Oxford: the short course is a four-day introduction; the long course lasts a year, successful completion of which achieves 60 CATS points at Oxford Brookes University. This is equivalent to a postgraduate certificate, and can be used towards completion of an MSc.

The field of 24-hour posture management is vast , and the courses are not designed to teach you everything you need to know; rather they teach a methodology which can be applied to any given clinical situation. It was originally developed by Pauline Pope in her work as a physiotherapist at the Royal Hospital for Neuro-disability, and was developed further during her time in Oxford at the Specialist Disability Service. The approach of the courses is to explore the relevant background theory of posture, movement and biomechanics, to practise the assessment techniques, and to share the in-depth assessment form used to inform decision-making. The aim is to enable students to start carrying out the assessments in their places of work and to develop their clinical reasoning around the subject. The long course allows students to explore the key concepts in significantly more detail but with the expectation that they will be using the approach routinely in their daily clinical practice. The long course also contains extended learning in neuro-anatomy, evidence-based healthcare, critical appraisal, and custom contoured seating.

In the main, the courses are very practical. The aim is to share clinically relevant skills of assessment and clinical reasoning, enabling the students to assess and provide appropriate 24-hour posture management solutions. The assessment used and taught by the team in Oxford encompasses sitting, lying, standing, and any other position adopted over 24 hours. It does not consider any one area in isolation. This approach enables the identification of 'critical measures' which, if not accommodated, will have an impact on the individual's position in any piece of equipment. The assessment considers the whole person, taking into account medical, functional, social, environmental, and physical needs. It provides clinicians with the tools to question their practice, improve services, and meet the needs of this complex client group holistically.

Adopting this assessment approach can be overwhelming: there is a lot of new learning involved. For some students this sparks the flame, stimulating enthusiasm to implement the approach. The courses cannot teach you everything you need to know, and cannot impart all the knowledge and experience required to become an expert. However, regular use of the assessment, and motivation to develop clinical skills and services, will start the journey.

When thinking about the development of my role from 'trainee to trainer' I considered what attributes may be required:

- Enthusiasm
- Desire to learn more
- Motivation to put new theory into practice
- Not scared to try new things
- Learn by doing – from what worked and what didn't
- Hard work!

All these attributes are applicable to both the trainee and trainer. As a trainer, in my clinical role I see many different complex patients and learn new or different things, developing my skills and broadening my experiences. With this in mind, it could be argued that we are all trainees throughout our clinical journeys; some are further along the road than others and can therefore share more experiences to develop and improve clinical skills and services.

Posture Management for People with Complex Disability

The Oxford Centre for Enablement has been running courses on posture management for fifteen years. These have been developed from the clinical practice of the tertiary level Specialist Disability Service which, together with an in-house rehabilitation engineering team, delivers a range of clinical services to people with complex disability.

4-day course

This is an introduction to the field of posture management and teaches students how to use the assessment form, MPD-24/7. Students will learn about the principles of posture, the application of these to the person with physical disability, basic biomechanics, conducting a physical assessment and making preliminary recommendations for the management of posture in sitting, lying and standing.

Cost £410

Credit rated course

This in-depth course is formally assessed at M-level, attracting 60 CATS points from Oxford Brookes University which may be used towards completion of an MSc. Prior completion of the 4-day course is not required.

There are four blocks of teaching, three of 5 days duration and one of 2 days, spread over a 12 month period starting in July. Assignments are set and marked between blocks. The content of the 4-day course is covered in more depth and students will also learn about neuro-anatomy, evidence based healthcare, critical appraisal skills and custom contoured seating.

Cost £2,265

Application forms and enquiries:

coursecoordinator@ouh.nhs.uk +44(0)1865 227 879

Further details about courses / clinical services:

dave.long@ouh.nhs.uk +44(0)1865 737 430

Oxford University Hospitals NHS
NHS Trust

Custom Contoured Seating (one day)

Suitable for past participants of either of the posture courses, this course focusses on the provision of custom contoured seating, not only for wheelchairs, but also for armchairs and toilet seats / shower chairs. The theory of custom seating is presented, followed by hands-on practise with casting bags, finishing with a live cast of a patient and the clinical reasoning associated with the provision of equipment.

Cost £130

Extended Practice (one day)

Suitable for past participants of either of the posture courses, this one day course is provided to allow practitioners to refresh their knowledge and use of the assessment form, and to develop their clinical reasoning skills further in posture management. A live assessment is carried out with a patient to facilitate student learning.

Cost £130

All courses are suitable for occupational therapists, physiotherapists, nurses, rehabilitation engineers, clinical scientists, manufacturers and company representatives. The 4-day course is also suitable for therapy assistants.

TELEREHAB – USING VIDEO CONFERENCING TECHNOLOGY TO LINK PATIENTS IN REMOTE AREAS WITH HEALTHCARE PROFESSIONALS

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ABSTRACT

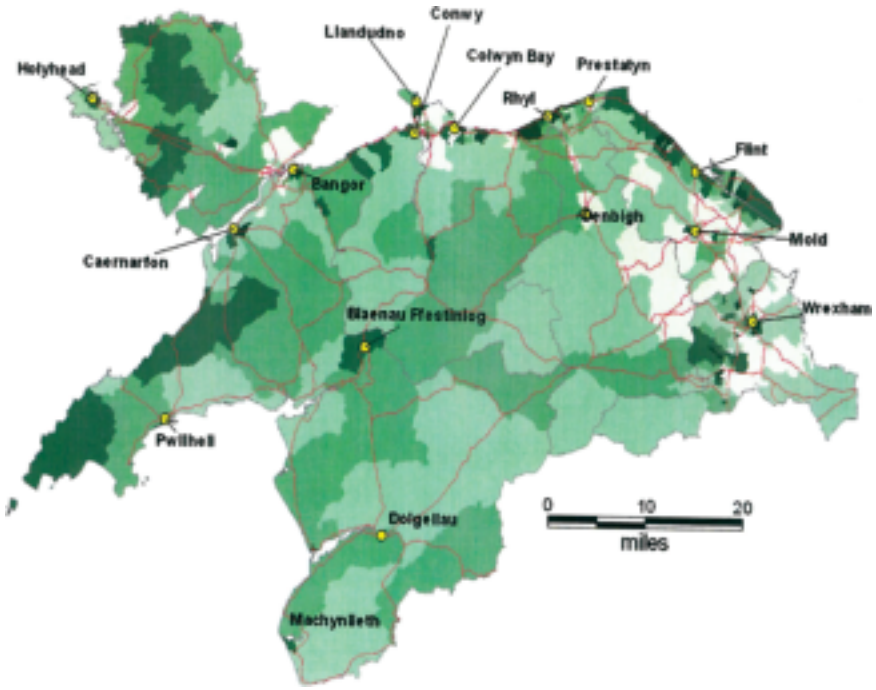
Betsi Cadwaladr University Health Board serves the whole of North Wales. Whilst there are some larger towns with good transport links, other areas are extremely remote, with patients facing journeys of hours to reach their nearest district general hospital. Telerehab offers an opportunity for patients to avoid making some of those journeys. It uses encrypted, secure video conferencing technology to link patients either from their own home, school, GP practice, or local hospital with their healthcare professional. This is a pilot project working with different clinical specialities including wheelchair services, palliative care, multiple sclerosis services, minor injuries units, and various medical specialities.

BACKGROUND

The Welsh Government funded this project through a rural health initiative grant in recognition of the need to support patients in some of the remotest parts of the UK to access healthcare in a timely and appropriate manner. Further funding was supplied by the health board's charitable fund, and the clinical programme group has provided project management support. In North Wales there are three district general hospitals. The map below shows their location and also gives an indication of the significant distance a patient may have to travel to attend one of the hospitals. There are no motorways in North Wales and the only dual carriageway runs across the North Wales coast; journey times are therefore significant.

Video conferencing in the health board is not new, and is widely used to avoid travel and the associated costs of fuel and time. It has long been used in health care settings in the developed and developing world to reduce the need for travel. Whilst the distances in North Wales do not compare to the Australian outback, the impact for patients is still considered to be significant. Telerehab offers similar benefits for patients and the healthcare professionals working with them.

The project was implemented by identifying a lead individual to coordinate the installation and training in the use of equipment. All associate chiefs of staff and clinical leads were approached for expressions of interest and initial project plans. As this is a pilot project, each service taking receipt of equipment was required to supply information regarding its use.



Betsi Cadwaladr University Health Board (BCUHB) geographical area.

AIMS

The aims of the project were to:
• Create a secure link between a patient at home, school or local health setting and a healthcare professional, allowing face to face contact
• Reduce the need for travel for healthcare professionals (resulting in savings in terms of cost and time)
• Reduce travel for patients (facilitating attendance at a clinic and resulting in a reduction in non-emergency patient transport requirements)
• Demonstrate that telerehab is a cost-effective and user-friendly solution to the problems of long journeys for sometimes very unwell patients to see healthcare professionals, plus the loss of capacity incurred by healthcare professionals as a result of the time taken driving long distances to see patients and attend meetings.

PROCESS

The clinical director of medical physics, Nigel Shapcott, worked with the rural health initiative grant board to secure the investment in hardware. A project manager was appointed, links were secured with IT, and technical representation was identified to assist with installation. Members of senior management were informed and the project manager travelled extensively to demonstrate the technology in a variety of settings including community hospitals, patients' homes, and GP practices. Recipients of telerehab committed to collecting and sharing data regarding its use and impact, and agreed that unused equipment would be returned.

47 telerehab installations have been completed with training and post-installation checks put in place. The Codian – a secure server sited in NHS Wales Informatics Service (NWIS) which acts as a gateway allowing encrypted transmission between the intranet and the internet – has 20 channels, 10 of which are allocated to specific services, for example, palliative care, MS, and posture and mobility services.

GP practices use a network which is different from that used by the health boards in Wales and, therefore, installation in these settings required a specific IP address. GP practices cannot receive calls due to the structure of the firewalls, but this can be overcome through clear communication, and by the GP initiating the conference.

The IT support from NWIS has been invaluable, offering technical guidance to adjust band width and other settings as required.

Data is requested on a monthly basis for collation in an overarching spreadsheet. Some services are still in the trial phase of ensuring confidence in the use of the equipment before using it with patients.

Three different set up configurations are available:
• a trolley based system, useful for a ward or clinic setting
• a shoulder bag system allowing portability between homes, offices, etc.
• a 'lite' version where the software is uploaded onto an existing health board laptop and the necessary hardware (headset, speaker, and webcam) is supplied.

TeleRehab configurations.

OUTCOMES

• **Impact upon patients –** A palliative care patient has been loaned equipment to use from home to contact her Macmillan nurse; telerehab allows the nurse to see the patient and her wounds, and offer face to face support without the 96 mile journey. A bed bound patient with MS interacted with his consultant in the district general hospital without the stress of an ambulance journey. This saved the patient pain and discomfort, and saved time and money for the health board.
• **Travel for staff –** The community mental health

team saved 12 hours of travel time in their first month of using telerehab. The Macmillan nurses saved over 10 hours of travel time in a month by being able to remotely access patients in their homes and also by attending meetings remotely.

• **Travel for patients –** A gastroenterologist trialled a remote clinic which would have required patients to travel over 50 miles each way. The success of the clinic has resulted in future clinics being planned. Linking emergency departments and minor injuries units (MIUs) cuts down the need for patients to travel, but also allows for patients to travel when the local MIU staff have been unsure.

• **Organisation –** An MIU in North Wales has been kept open partly as a result of a consultant being able to offer support to more junior members of staff via telerehab. Using telerehab not only allows patients to see their professionals but also allows professionals to interact with each other. The renal service covers the whole of North Wales and part of mid Wales – a vast area. The lead renal nurse now has telerehab on her laptop, which links her with staff in 4 different renal units without wasting time on the road.

• **Facilitation of joint working –** Telerehab facilitates multidisciplinary working by allowing clinicians on different sites to be present at an assessment. The posture and mobility service (P&MS) is trialling its use to allow children and clinicians in a school to link up remotely to the P&MS wheelchair specialists in Wrexham or Llanfairfechan.

SUMMARY

The aim of telerehab is to link patients and professionals in an encrypted, secure, face to face interaction without the need for travel. We have achieved this through the installation of video conferencing technology onto laptops and distributing them to key locations and services within the health board. By using a Codian, we have enabled secure and encrypted video conferencing between patients' homes and hospital settings (i.e. a secure link between the intranet and the internet).

Still in our pilot phase, we have installed 42 laptops and further software installations on individual laptops. Although the technology is simple, technical support has been at hand to assist as required.

The outcomes have included a reduction in travel time and expense for both patients and staff; the convenience for patients of having face to face contact with clinicians from their homes; the convenience for professionals to liaise and to attend professional meetings without travelling the vast distances between locations within the health board.

DEVELOPING A PROTOCOL FOR STRAPS AND HARNESSES

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ABSTRACT

The need to develop a best practice framework for the provision of straps and harnesses arose from an increasing number of referrals to our service specifically requesting such equipment. The dilemma of restraint versus postural support led to a literature review being undertaken to help the team understand relevant law. This then informed our decision to develop a questionnaire and guidance document to ensure an assessment process and a service delivery which were systematic, transparent and consistent.

Belts, straps and harnesses, as we all know, can be invaluable devices to assist in the management of posture in wheelchairs, and the use of such devices is frequently welcomed by both wheelchair users and their support teams. This equipment, which helps provide stability and can limit slipping and tipping in people with poor independent postural control, may, however, also limit active movement.

The need to review and clarify our practice in relation to provision of belts, straps and harnesses arose from the growing number of referrals to our postural management service which included a request specifically for this type of equipment. Often the referral centred on managing the risks associated with active movement rather than the management of posture, and gave rise to concern regarding the question of restraint. A retrospective review of referrals suggested that this was particularly relevant in relation to individuals with dementia, learning disability and/or challenging behaviour, and this prompted a small group of therapists and bioengineers at the Southeast Mobility and Rehabilitation Technology (SMART) Centre in Edinburgh to formulate a protocol for the provision of straps and harnesses to wheelchair occupants.

Often forceful or vigorous movements, or more subtle behaviour such as removal of feet from footplates, can give rise to serious concerns about the occupant's safety, or that of someone else, and direct intervention may be justified. However these individuals often have cognitive or/and communicative impairment and so are not able to give informed consent to the use of such equipment. Our aim in developing a more formal procedure was to ensure that we were always delivering our service ethically and in accordance with the law. The goal was to provide a practice framework which was systematic, transparent and consistent.

LEGAL BACKGROUND

Our first task was to try to understand the law a little better, and a literature review was undertaken.

The fundamental legal basis relevant to the use of physical restraint is the European Convention on Human Rights (ECHR) which impacts on all law and legislation in Council of Europe member states. The Human Rights Act 1998 formalises this by requiring all UK courts to interpret the law in accordance with the ECHR. In Scotland we are also subject to legislation passed by the Scottish Parliament, including the Adults with Incapacity (Scotland) Act 2000.

The ECHR comprises a number of Articles and a number of Protocols. Articles 2 to 18 set out the main rights and freedoms required under the convention. The following is a summary of the articles that could be considered by the courts as relevant to the issue of restraint, with some commentary and guidance from other sources. Even though most of this guidance was written for Scotland, we hope that readers across the UK and beyond will find it helps interpretation.

ARTICLE 3
'No one shall be subjected to torture or to inhuman or degrading treatment or punishment.'

The Mental Welfare Commission for Scotland

(2006) advises that 'poor practice on restraint' could fall into the categories of inhumane or degrading treatment.

ARTICLE 5
'Everyone has the right to liberty and security of person.'

The article, however, qualifies this by setting out the circumstances in which a person can lawfully be deprived of liberty, and these include reasons such as lawful imprisonment, and detention for the purposes of preventing the spread of infectious diseases. Lawful detention of 'persons of unsound mind' is also listed as an exception. It is interesting to consider the difference between the word 'detention', which is used in the article, and 'restraint' which is not. The Mental Welfare Commission for Scotland (2006) helps out with this by saying that 'The difference between restraint and detention is a matter of degree. There is no difference in the nature or substance of the controls. The law says restraint is a restriction on someone's liberty and detention is deprivation of liberty. Regular and consistent restraint may amount to detention.'

The exception for persons of unsound mind in Article 5, however, does not automatically permit the use of restraint on individuals with incapacity. The Mental Welfare Commission for Scotland (2006) advises that, 'If restraint could constitute 'detention', those involved should seek legal authority for the detention, under either the Mental Health (Care and Treatment) Act or the Adults with Incapacity Act. Reliance on common law powers is unlikely to satisfy the ECHR requirements of due process.'

Article 5 is also considered by the Scottish Government in its Code of Practice (CoP) on the Adults with Incapacity Act (Scottish Government, 2000).This document is intended for local authorities providing community care services, and advises that whether an intervention amounts to a deprivation of liberty or not 'will depend on the circumstances of each individual case.' Furthermore, it goes on to say, 'What amounts to deprivation of liberty depends on the interaction and accumulation of factors, as well as degree and intensity, in relation to the specific circumstances of the individual.' It therefore appears that it is the combination of factors which should be considered when assessing whether an individual may be deprived of his/her liberty. The CoP presents an illustrative list of such factors later in the document. They comprise:
- the person's past and present wishes
- access to resources
- the extent/nature of limitations on contact
- internal design of physical environment and accessibility
- external physical environment and access
- use of restraints
- skill and abilities of staff
- effect of change in care regime

From the wheelchair and seating services perspective, therefore, the most relevant of these is the use of restraints. In considering restraints the CoP cites 'limitations on movement such as placing the person in seating or situations from which they do not have the physical ability to remove themselves/duration of any limitations' could be a factor contributing to a deprivation of liberty. The CoP gives an example of the use of restraint to administer treatment or care, and notes that such occurrences 'should be seen as an indicator that a person's wishes may be being over-ridden, and careful consideration should be given as to whether they are deprived of their liberty.' It would therefore appear that the provision of equipment for the purposes of limiting or preventing movement could be considered as a deprivation of liberty on its own, or in combination with other factors in the individual's life which wheelchair and seating services may not be aware of.

ARTICLE 8
This article states that 'Everyone has the right to respect for his private and family life, his home and his correspondence', and then goes on to detail the circumstance under which a public authority may interfere with this right which includes when it is in the interests of public safety. The Mental Welfare Commission for Scotland (2006) suggests that the use of restraint could be challenged under the 'respect for private life' clause, but also says 'Article 8 permits interference with someone's autonomy if this is lawful and necessary for public safety, the protection of health or the protection of others. Any of these might be a justification for the use of restraint. Staff should tell the person why he or she is being restrained, if possible.'

BEST PRACTICE

It was therefore clear to us that people should not be deprived of their liberty, that they should not be subjected to inhuman or degrading treatment, and that their private lives should be respected. The use of postural management equipment which limits volitional movement might be considered to interfere with any of these rights. However, most of the guidance and commentary on the law also concedes that circumstances do exist where such equipment can be employed lawfully. Our next task therefore was to try to identify current best practice to ensure, to the

best of our abilities, that equipment would always be supplied and used lawfully.

There are a number of bodies and organisations that publish advice concerning this. Amongst these we found the following advice in an Information Sheet on Physical Interventions for Challenging Behaviour published by the Challenging Behaviour Foundation (2008), which is itself derived from the policy guidelines of the British Institute for Learning Disabilities:

- Restrictive physical interventions should only be used in the best interests of the person with learning disabilities
- They should only be used in conjunction with other strategies to help people learn to behave in non-challenging ways
- They should be individualised and subject to regular review
- They should employ minimal force and not cause pain

Implicit in this is the acknowledgement that such measures may be necessary in some circumstances. We therefore decided that when we receive requests for equipment which we consider could be construed as restraint, we should go through a process which tries to ensure that the above best practice is being followed.

STRAPS AND HARNESSES INFORMATION RECORD

In order to make an informed decision about provision, detailed information is required and is often not available at the point of assessment. To ensure this information is available we developed a form to be signed by a registered health professional, and completed in consultation with as many other parties involved with the support, care and welfare of the wheelchair user as possible and reasonable. Our aim seeks to achieve good consultation and consensus that all other avenues to managing the problem have been explored. However the responses form an integral part of the assessment with the ultimate decision on provision being the responsibility of the seating team.

The form comprises the following 10 questions and adopts a standard approach to risk assessment to evaluate the need for the intervention being considered. This approach involves estimating both likelihood and severity of potential injury arising from not providing the intervention, on a scale of 1 to 5. The form is also accompanied by guidance notes explaining some of the legal background, as well as notes on completing the form.

Question 1 It is important that the wheelchair user, and all parties involved with their care, is able to contribute to this assessment. Please ensure that the people listed below are consulted and give their names. If they were not consulted in this process, please state why.

- Wheelchair user
- Proxy
- Principal carer
- Key worker

Question 2 (see para 4 below) Give the names of any other people who have contributed to this document, and state their position or relationship to the wheelchair user.

Question 3 Describe the movement/behaviour which presents risk.

Question 4 Describe the potential injuries to the wheelchair user and others which may arise from the movement/behaviour.

Question 5 For each injury listed in the answer to question 4, state who could be injured, e.g. wheelchair user, wheelchair attendant, other. State also under what circumstances/environment the injury could occur, and estimate the likelihood of the injury occurring, and the potential severity of the injury. Use the scores in the Table 1 below.

Question 6 For each injury rated with likelihood of 3 or more above, state how many times this has occurred in the past six months.

Question 7 Confirm that you have considered the following approaches in the management of the risks identified in 4 and 5.

- Alterations to the wheelchair user's environment
- Changes to the wheelchair user's routine/activities
- Training, education and/or therapy for the wheelchair user

Likelihood	1 Very unlikely	2 Unlikely	3 Likely	4 Very likely	5 Certain
Severity	Insignificant injury (no treatment)	Minor injury (first aid at home)	Significant injury (hospital/doctor)	Major injury/ disability	Death

Table 1

Question 8 Describe your proposed solution to the management of this risk. Include a description of supportive strategies as well as details of straps and/or harnesses.

Question 9 Describe how the wheelchair user will benefit from the implementation of the proposed strap(s) and/or harness(es).

Question 10 Describe the system that will be used for monitoring and reviewing the use of the proposed strap(s) and/or harness(es).

INITIAL EXPERIENCES

The form was introduced through a series of training events largely aimed at occupational therapists, physiotherapists and clinical scientists and has been in use for about one year now. The quality of responses varies significantly, and lack of clarity often highlights a situation where restraint is considered acceptable and would lead our team to take a very cautious approach to intervention. Comprehensive and well considered responses tend to demonstrate a situation in which provision of equipment forms a small part of a total strategy.

In addition to providing a record to be retained for legal purposes it has provided the following benefits:

1. It has helped to promote inclusion of all the parties involved with an individual's care
2. It has facilitated discussion about more comprehensive approaches to the management of challenging behaviour
3. It has facilitated problem solving amongst the care 'team'
4. It has, on occasion, enabled caregivers to consider behaviour as a means of communicating
5. It has helped health care professionals to clarify their responsibility in making referrals to our service where previously they may have acted as gatekeepers without committing to the referral aim
6. It has enabled professional service users (referrers) to clarify best interest for their clients, form a basis for their own intervention, and provide clear documentation of the decision making process

REFERENCES

Challenging Behaviour Foundation, 2008. *Physical Interventions for Challenging Behaviour*. [online] Available at http://goo.gl/5eOXmO [Accessed 24 January 2013]

Mental Welfare Commission for Scotland, 2006. Rights, risks and limits to freedom

Scottish Government, 2000. *Adults with Incapacity (Scotland) Act 2000: Code of Practice: For Local Authorities Exercising Functions under the 2000 Act*

WINNERS AT NATIONAL TRAINING EVENT 2013

The winners of the Best Free Paper at NTE 2013 were Rosaria E. Caforio & Ian Deumayne Jones for their presentation:

Posture Management in Movement Disorders: A Case Study

Winner of Best Poster was Kate Parker for her poster:

Reliability of Visual Estimation of Angles Relating to Joint Ranges of Motion in Rehabilitation

Congratulations to you all and many thanks to everyone who presented at the event and helped make it such a success.

BURSAR REPORT: DYNAMIC SEATING FOR PEOPLE WITH SEVERE EXTENSOR SPASMS

Presenter: Tim Adlam
Head of Mechanical Engineering, Bath Institute of Medical Engineering
Reporting Bursar: Alisha Ramkhelawan
Trainee Rehabilitation Engineer, West Midlands Rehabilitation Centre
Email: Alisha.Ramkhelawan@bhamcommunity.nhs.uk

At PMG's 2013 National Training Event I chose to attend the parallel session presented by Dr Tim Adlam from the Bath Institute of Medical Engineering (BIME).

As a trainee rehabilitation engineer at West Midlands Rehabilitation Centre (WMRC), I have seen various clients with extensor spasms, but have not been greatly involved with the use of dynamic seating. My prior experience is of an eight year old female who kept breaking the footplates on her seating system, due to high extensor spasms. The footplates had been reinforced many times with double steel stems, but the problem persisted. We trialled a dynamic seating system but, after a week of providing the new seat, the backrest was bent and the footplates had broken; the case is ongoing. I was uncertain of the prescription guidelines and application of dynamic seating systems; therefore I felt it would be very useful to attend this particular parallel session.

From the presentation, I feel that I have broadened my knowledge of an additional dynamic seating system with a different seating principle. Unlike conventional dynamic seating systems, the presented device allows independent movement of the lower limbs and back, whilst stabilising the pelvis. The main difference is that the torques and maximum angles are set to match that of the client's extensor spasms which, in this case, reduced their intensity and frequency.

A case study was presented, based around a dynamic seating system on a static base, rather than a seating system used for mobility. Even though the client was functional, it was inconclusive from this study whether a dynamic seating system can be beneficial to a client's mobility (Cooper et al 2001). Providing a seating system for passive mobility v independent mobility requires a different assessment approach, and different equipment. In addition, environmental conditions, such as the use of the wheelchair outdoors or indoors, could require different amounts of support from the seating system because functional capabilities may alter.

One of the main learning outcomes highlighted to me was the importance of a multi-disciplinary team to help achieve the optimum solution for the client. At WMRC I am familiar with working alongside other relevant professionals in the service, such as consultants in rehabilitation medicine and occupational therapists. It was evident that a major component for the success of this case study was the inclusion and participation of school staff when making clinical decisions. The study demonstrates that, with persistence, time, plus specified and established goals generated from a multi-disciplinary team/case conference, an optimum solution can be achieved. From my prior experience of prescribing a dynamic seating system, I feel that a holistic approach to include more local professionals in the initial assessment would help acquire important information, such as the client's triggers, capabilities, and behavioural patterns. As a consequence, this valuable input could help

ABSTRACT

Dynamic seating has been a revolutionary approach to the management of extensor spasms, but has had controversial results. The principle of dynamic seating is to allow the client to fully extend which is thought to reduce shear forces on the cushion and reduce the frequency and intensity of the spasms.
As a Trainee Rehabilitation Engineer, I have seen various clients with extensor spasms, but have not been greatly involved with the use of dynamic seating.

attain better goals and, therefore, a successful seating system (Collins 2008). As a consequence of this presentation, I feel more confident about organising case conferences in future.

One of the successful outcomes of this case study was that the equipment enabled the client to surpass the original goal (to provide a comfortable seating system), by enabling them to operate a switch, and to allow access to functional movements. During my training I have found that, on occasion, either function or comfort has to be compromised when providing mobility equipment; however this particular case has shown that a combination of both is possible.

CONCLUSION

The case study was part of a dedicated research and development programme at BIME, with a lot of time, effort and resources (including funding and personnel) provided to achieve the successful solution. For a local wheelchair service in the current financial climate such resources are impossible to dedicate to an individual client. The study required the torques and angles of the client's joints to be calculated, as well as the patterns of the extensor movements being recorded, in order to set the seating system. If a simpler and more commercial method of determining the required settings can be found, I think this could be a breakthrough in the use of dynamic seating.

Results found in this case study were comparable to those previously found (Cooper et al 2001 and Piccinini 2008), but it is also noted that functional movements for mobility would require a higher level of postural support to provide stability for the client (Lacoste et al 2006). Feedback from the delegates at the presentation, and those I work with, agreed that the benefits of dynamic seating systems are questionable. The reasons for the reduced intensity and torque of the client's spasms, as well as the redirection of the client's movement to become more functional, were thought to be due to learnt behaviour in postural control. When faced with a client with extensor spasms, I feel that I will be more open to trial and utilise equipment which would provide adequate postural guides, rather than being aggressive, which may enable postural control, with the hope of becoming more functional.

The reported benefits of dynamic seating are controversial, therefore it is difficult to formalise pathways when prescribing equipment for clients with extensor spasms. Informal feedback from the delegates showed that the success of dynamic seating systems varied, as they were used when rigid equipment consistently broke. I have therefore concluded that the use of a dynamic seating system has to be trialled on a case by case basis. I feel that each local wheelchair service should record their clinical outcomes, and submit these on a nationwide database to help gain a better understanding of the clinical application of dynamic seating.

REFERENCES

Collins, F. (2008). An Essential Guide to Managing Seated Patients in the Community. *British Journal of Community Nursing*, Vol. 13 Issue 3, 45-46

Cooper, D. et al (2001). Dynamic Seating Components for the Reduction of Spastic Activity and Enhancement of Function. *Seventeenth International Seating Symposium Seating & Mobility for People with Disabilities*. 1 (1), 22-24.

Lacoste, M. Therrien, M et al. (2006). Assessment of Seated Postural Control in Children: Comparison of a Force Platform versus a Pressure Mapping System. *Archives of Physical Medicine in Rehabilitation*. 87 (1), 1623-1629.

Piccinini, L. Cimolin, V, et al. (2008). Dynamic vs Rigid Seat System in Cerebral Palsy: Quantitative Comparison. *Daaam International Scientific Book*. 2 (1), 15-26.

BURSAR REPORT: BACK SUPPORT – KEYSTONE TO SEATED FUNCTION AND PHYSIOLOGY

Presenter: Rhona Fisken*; Author: Stephanie Tanguay
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Reporting Bursar: Rebecca Hindle
Specialist Physiotherapist, Guy's and St. Thomas' Wheelchair Service
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When I was considering the parallel sessions that I wanted to attend, the words 'back support' and 'keystone' immediately leapt off the page. When clinicians talk about achieving a good sitting position, stabilising the pelvis frequently becomes the primary focus of the assessment, with other aspects becoming slightly overlooked.

This interesting and thought-provoking presentation reviewed the relationship between the pelvis and the spine from a different viewpoint. The presenter highlighted the benefits that good seated posture can have for a client in terms of functional ability (ability to self propel in the most efficient manner), good weight distribution to help reduce the risk of pressure sores, and the positive impact on physiological systems leading to improved comfort and quality of life for the client. Goals that I am sure every clinician aspires to achieve for their clients.

The presentation provided sensible, logical reasoning for focusing on the back support, as without adequate back support the client has no seating support and therefore no pelvic stability; common sense really, but something that I personally have never really thought of in this way before.

By continuously referring to the pelvic position, in conjunction with the back support, the presenter did not dismiss current practice, but provided a different viewpoint of looking at the equipment that the clinician is using to achieve optimum postural mobility for the client.

The use of case studies further illustrated the importance of providing the correct back support, in terms of height, width, depth, and hip angle, emphasising the benefits that good back support has on seating and posture. It was refreshing to know that sometimes people get things wrong with regards to the seating position for a client. Admitting this, and going back to the start, can be the best long-term solution rather than making do.

Possibly for me the most controversial point of the presentation was dismissing canvas back supports in favour of a solid backrest. The reasoning behind this was clear enough, because canvas backrests are known to sag over time. This then alters the pelvic position, which in turn impacts the position of the spine. The consequence of this has a direct impact on functional ability, pressure distribution, and the physiological systems of the body, in essence undoing everything the clinician initially set out to achieve.

This left me to wonder two things:

Firstly, if canvas supports are not recommended for achieving the optimal seating position, why are they standard provision on the majority, if not all, manual wheelchairs?

ABSTRACT

This presentation looked at focusing on the back support in order to achieve good seated posture and functional ability. This was discussed using the relationship between the spine and the pelvis. Sensible, logical reasoning was presented with the use of case studies to support the use of solid back rests, rather than canvas to maintain optimal seated posture.

Secondly, although in an ideal world cost should not dictate provision, unfortunately in this current financial climate cost is always a factor. I wonder what the cost implication would be for each wheelchair service if clinicians used solid backrests when they wanted to achieve optimal seated function for clients, as opposed to a canvas back support? Looking at a cost comparison between solid and canvas backrests

would be interesting because, although a solid back is more expensive, frequent replacement of a canvas back support has potentially higher cost implications in terms of not only re-ordering but of fitting the parts as well.

The take away message from the presentation was that the pelvis is the keystone to seating, but the back support is the key element to 'seated function'. An archway depicted this with the top stone being the back support and all the other aspects holding this in place.

BURSAR REPORT: IMPACT OF THE LOWER EXTREMITIES ON THE POSTURE OF WHEELCHAIR USERS

Presenter: Bart Van der Heyden
Independent Physical Therapist, Clinical Consultant for Bodypoint,
Director of Training and Education for the ROHO Group
Reporting Bursar: Mary Foulerton BSc (Hons)
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ABSTRACT

Using case studies and clinical experience, Bart Van der Heyden discussed the impact of poor lower limb positioning in wheelchair users. He identified some key principles for consideration during assessment and setup, and raised some interesting points regarding the current standards of provision through the NHS.

Bart Van der Heyden's seminar examined the effects of the lower extremities on the posture of wheelchair users, and looked at how we as clinicians could promote optimal positioning by paying particular attention to this region of the body.

Coming from a physiotherapy background, the material presented was familiar to me with regard to the impact of muscle length, range of movement, and pelvis positioning when assessing posture prior to choosing equipment. However, the emphasis placed on viewing the body as a series of linked segments was a refreshing concept. All too often we tend to consider the segments of the body quite separately, and deal with each one in turn, rather than considering the effect of implementing a change to one segment and evaluating what the impact is on the rest. Bart emphasised closer examination of the relationship between the pelvis and the trunk, and also the lower limbs, and the importance of using this information as a guide to more effective treatment.

The key points of the seminar focused around the assessment of the pelvis in relation to the spine and lower extremities. Bart discussed the importance of measuring the thigh-to-calf angle and the thigh-to-trunk angle, and ensuring the setup of the seating (the back angle and leg support angles) reflected these measurements.

He also emphasised the close bi-directional relationship that the pelvis has with the spine and that we should never consider one without regard to the other. For example, scoliosis of the spine will lead to obliquity and rotation of the pelvis, increasing pressure loading and vice versa. These asymmetries co-exist and should be considered as one problem, rather than addressing them as two problems independent of each other.

A continual feature of the seminar was the application of the principles of open and closed chain kinetics to seating. For example using an open kinetic chain by stabilising a proximal point such as the pelvis, but leaving feet free to move, will establish good core positioning, and leaves the client free to be expressive with their distal extremities. However, fixing the position of the feet of the same client, therein using closed chain kinetics, will have the opposite effect, initiating movement of the pelvis and leading to an unstable posture.

We were reminded that the isometric contractions used by postural muscles are the

most fatiguing type of muscle contraction. This emphasises how tiring it is to hold the body, in what we would consider to be 'good postural alignment' 100% of the time. Taking this into account, just as non-wheelchair users find positions of relaxation when sitting down, our clients need to find positions of relaxation within their seating. We must take into account what effect this might have on their posture, and how we can facilitate the client's optimum positioning both during activity and relaxation.

The seminar will certainly make me consider the importance of thorough physical assessment and analysis of my findings before considering my choice of equipment. I think it is all too easy to be influenced by what equipment is in stock, restricted budgets, and the familiarity of equipment, during the assessment and decision-making process. Bart rightly reminds us that we should ensure the assessment strongly drives equipment choices and modifications of setup, providing the best outcome for the client.

He also emphasised the importance of multi-disciplinary working in order to share knowledge and inform the practice of all clinicians for the benefit of the client. This is something I have encouraged within my team, having come from a multi-disciplinary background, and will strive to improve. There can only be positive outcomes from working more closely with other professionals involved with our clients.

The most controversial topic raised was the notion that it would be best if more elderly users were seated in active wheelchairs. This would improve their ability to self-propel by making use of the more ergonomic design of these types of wheelchairs, in particular their knees being positioned at 90 degrees. In my experience, highly active user chairs are considered a precious commodity in wheelchair services, allocated sparingly and according to very strict criteria, largely dictated by their price. This approach to active wheelchairs means we do not maximise our clients' abilities, but offer equipment that fulfils their most basic needs. There are so many wheelchair users who might benefit enormously from having a more lightweight wheelchair to improve their function, reduce physical effort and fatigue, and improve quality of life; often they must make do instead with something that falls short of the optimum solution. This tension is a common experience within our practice, but raises the question of who has greater importance – the client or the budget holder?

Bart also highlighted the poor design of our most regularly used equipment: chairs with 70 or 80 degree foot hangers put strain on short hamstrings and pull the pelvis out of position; one inch increments on foot stems often lead to feet being positioned too low or too high; chairs without the option of tension adjustable backrests lead to sagged canvas and spinal discomfort or deformity. Some of these problems are unavoidable if we solely use the current list of equipment that conforms to the criteria of provision. Changes can be made to alleviate the impact on the client, but these have cost implications which place extra strain on our resources.

Bart Van der Heyden was a very engaging speaker, and, rather than overwhelming the audience with complex information, actively demonstrated how simple adjustments and interventions can make a profound difference for clients. He presented an interesting seminar full of salient points, which made me reconsider some of the practices I have been taking for granted. These pieces of wisdom will remain with me, and will be something that can certainly be incorporated into my daily practice.

BURSAR REPORT: WHEELCHAIR TUNING

Presenters: John Colvin, Consultant Clinical Scientist; **Owen Mills,**Trainee Clinical Scientist; **Colin Mair,** Trainee Clinical Scientist; **Martin Cox,** Trainee Clinical Scientist, WestMARC, Glasgow
Reporting Bursar: Kate Jones
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ABSTRACT

It is the intention of this report to describe the key learning points that I gained from this parallel session and to elaborate on how this has influenced my current practice; furthermore what learning needs I have identified from this session.

I particularly wanted to attend this session in order to build on the knowledge of wheelchair configuration ('tuning') that I had gained during my training as a rehabilitation engineer.

I found that the emphasis placed by these presentations on the importance of the configuration process, and how it can be used to reduce the risk of secondary injuries, echoed a previous lecture that I had attended which highlighted that the client does not need to constantly put in maximum effort in order to maintain their level of ability (Minkel, J. 2011). Prior to this lecture, and based on my professional training, I had always understood that wheelchair configuration was an important factor, and was pleased to have this reinforced through the findings from the session.

The session suggested the importance of the Combined Test Report which, as the name implies, is an integrated report utilising a traffic light system, whereby the wheelchair user can view their efficiency before and after the wheelchair configuration process. When researching wheelchair efficiency, I had not considered how effective a traffic light system could be for representing the data. Now, I can see that this provides a very practical and clear explanation for the client, and their wider circle, to understand the balancing act of several needs. Additionally, it was emphasised that absolute measures (such as 12° and 16° for passing static wheelchair stability tests) are not that informative for the client. I realised that up until this point, I had personally placed particular emphasis on using absolute figures when conducting stability tests, and can now see the value of providing the client with information through real-life examples.

This parallel session has reminded me of the small changes that can be made at the wheelchair handover which can have a big impact on a client and the client's extended support network over a number of years, and affecting several areas of daily life. I feel that there is a great deal of scope for future collaboration between different centres for wheelchair configuration research.

The key learning points from the session included:
• A personalised wheelchair configuration ensures safety and efficiency for the client and the attendant (as applicable)
• It is important to remember that there is no perfect wheelchair solution; hence there is always a degree of compromise in wheelchair configuration (such as the level of stability versus performance/efficiency)
• It is better to have objective measures for client stability and efficiency than simply to rely on what the client feels is easiest, or on testing the wheelchair at a pre-set angle

Finally, and on a purely practical note, having the presentation split to cover three sections contributing to one larger theme, with four presenters helped maintain my attention, and managed to keep the room full and interested. Our session overran, which was no bad thing as it was followed by a lively debate at the end of the presentation, and hopefully shows that all attending managed to take away something useful for their own services and businesses.

REFERENCE

Minkel, J. (2011) Use It or Lose It v Conserve to Preserve. *Plenary Session at the European Seating Symposium Incorporating Assistive Technology*. Dublin, 8- 10 November, 2011.

BURSAR REPORT: TECHNOLOGIES TO ASSESS AND PREVENT SEATING ACQUIRED PRESSURE ULCERS

Presenters: Peter Worsley, Senior research fellow (physiotherapist), Southampton General Hospital
and Dan Bader, Professor of Bio-engineering and Tissue Health, Southampton General Hospital
Reporting Bursar: Jenny Henry
Occupational therapist, Wirral Wheelchair Service
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ABSTRACT

The aim of this session was to discuss current technology for the prevention and management of pressure ulcers, with particular reference to seated posture. The speakers are involved in development of technologies for the prevention and early detection of seating acquired pressure ulcers, and are keen to develop objective measures to inform assessment. Pressure mapping was also discussed as a useful tool in patient education, but it was felt its use in clinical assessment is very limited.

Following four years' experience as an occupational therapist in an acute setting, I felt the need to specialise in one particular area. I chose the wheelchair service because I liked the variety of conditions and age groups, and I have now completed my first year in the wheelchair service.

I chose to attend this session as I felt it was very relevant to my current level of practice: I complete assessments with many clients who have, or are at high risk of developing, pressure ulcers. My previous training consisted of awareness of the forces of gravity and extrinsic factors which can contribute to pressure ulcers. If, during assessment, a client reports pain related to sitting or any red areas, I would always discuss the need to see their GP, and advise them not to sit in the wheelchair for long periods, but to transfer to a suitable static chair as a change of sitting position every two hours is recommended in the National Institute for Care and Excellence (NICE) guidelines (NICE, 2005). I have also received training on different types of pressure cushions and the use of tilt in space seating to reduce the risk of pressure ulcers.

A key learning point from this session was the critique of the use of pressure mapping as a tool for assessment. As I have reviewed pressure mapping previously and felt it was useful, I was very interested in hearing of the limitations of a pressure map.

An excellent explanation of the aetiology of pressure ulcers was presented, and this was helpful in increasing my understanding of the internal and external factors considered in the prevention of pressure ulcers. Pressure damage can occur at a cellular level, and may be caused by compression of soft tissue by loading that restricts the blood supply, or compression of the lymph glands to obstruct drainage. Ischemic reperfusion which can occur once tissue is off-loaded, and an increase in oxygen containing free radicals reaching the cells are other possible causes of cell damage. Deep tissue damage can also be caused by internal factors, and can originate from within the muscle.

The pressure mapping tool measures external pressure; how this pressure is translated down to capillary levels will depend on the condition of the supporting soft tissue and the curvature of the bony prominence. Other factors to consider are temperature, humidity, moisture, and friction.

A pressure map has poor repeatability and can map differently every 60 seconds. The large data set can be difficult to analyse, as trends may look the same after 60 seconds but peak values may differ. The pressure map is a good tool for patient and carer education, and is ideal for measurement of symmetry without physical deformity.

I still feel there is a place for pressure mapping during some assessments, but can also see how this tool could be misleading, because, although it appears to be an objective assessment, the information gained should be used subjectively.

Other useful take home points from the presentation were:

• A client will usually be seated in their optimum sitting position for assessment of pressure, and this may not be the sitting position they adopt at home or during functional activity
• It takes two minutes of lifting to enable ischaemic reperfusion of soft tissue. Leaning within the seat may be more effective, as the position can be held for longer
• Research has shown that tissue damage can occur after just two minutes of compression of soft tissue. This brings into question the guidelines that recommend repositioning every two hours

Following this session I now have greater knowledge regarding the assessment of pressure areas, and this will enable me to take more factors into account when prescribing equipment and giving advice to service users. I have an increased interest in the development of new technologies for the early detection of pressure ulcers, and I am aware of research into some objective measures for early detection, such as transcutaneous blood monitoring and sweat analysis.

I would like to thank PMG for providing the opportunity for me to attend the conference, which was very informative and motivating for my future practice.

REFERENCE

NICE, 2005. *Pressure ulcer management* (CG29). [Online] Available at: http://guidance.nice.org.uk/CG29 [Accessed August 2013].

ERRATUM

It has come to our attention that our recent paper (Daly O, Casey J, Martin S, Tierney M, 2013) contained a portion of text of literature review from an earlier paper by Wright C, Casey J, Porter-Armstrong A (2010). The original paper was not cited in the main body of the text or included in the reference list. We apologise to the authors of the original paper for this omission, and assure them this oversight occurred without malice: there was no intent to mislead.
O Daly, J Casey, S Martin, M Tierney (1 August 2013)

REFERENCES

Daly O, Casey J, Martin S, Tierney M (2013) Seating provision for nursing home residents. *Posture and Mobility*, 30:1, 8.
Wright C, Casey J, Porter-Armstrong A (2010) Establishing best practice in seating assessment for children with physical disabilities using qualitative methodologies. *Disability & Rehabilitation: Assistive Technology*, 5, 1, 34-47.

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Course Date:	4th & 5th June 2014
Venue:	Coventry University Technocentre, Coventry

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