SPRING 2005

Syn'apse

JOURNAL AND NEWSLETTER OF THE **ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS INTERESTED IN NEUROLOGY**

- **Developing integrated stroke services – a whole system service user perspective**
- **Developing physiotherapy services for people with MS – lessons learned from four pilot studies**
- **Recovery within grasp? Investigating the short and medium term effects of the SaeboFlex (Functional Tone Management System) on chronic post stroke patients with residual upper limb deficit**
- **Changing self-efficacy following stroke – a single case approach**

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**ASSOCIATION OF CHARTERED
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ACPIN'S AIMS

1. To encourage, promote and facilitate the exchange of ideas between ACPIN members within clinical and educational areas.
2. To promote the educational development of ACPIN members by encouraging the use of evidence-based practice and continuing professional development.
3. To encourage members to participate in research activities and the dissemination of information.
4. To develop and maintain a reciprocal communication process with the Chartered Society of Physiotherapy on all issues related to neurology.
5. To promote networking with related organisations and professional groups and improve the public's perception of neurological physiotherapy.
6. To encourage and participate in the setting of guidelines within appropriate areas of practice.
7. To be financially accountable for all ACPIN funds via the Treasurer and the ACPIN committee.

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From the Chair

Nicola Hancock BSc (Hons) MCSP SRP
ACPIN Chairperson

Welcome to the Spring 2005 edition of *Synapse*.

I write this Chair's address just a couple of days after our 2005 AGM and Conference, 'Pain and Neurodisability' held once again in the very comfortable surroundings of the Hilton Hotel, Northampton. Over 120 of you joined the Committee for this extremely busy and challenging day and a first glance at the evaluations reveals some very positive feedback. This was a new topic to the ACPIN Conference agenda and although we have, of course, touched on the issue of pain during other programmes, we have not before dedicated a whole day to this important issue. Many of those who spoke are members of the Physiotherapy Pain Association and we received some hugely positive comments from them about our pro-active attitude to 'cross-CIG' working and developments. I am in no doubt that further opportunities for work with other CIG's will arise to the benefit of us all. Summaries of abstracts can be found from page 34 and details of the AGM can be found on pages 21 to 24.

Momentum is gaining towards CSP Congress as ACPIN prepares to host its two-day programme, 'Cognition and Behaviour: Complex Challenges to Rehabilitation' on the 7th and 8th of October this year, once again at the ICC in Birmingham. Early advertising should soon be in *Frontline* and our own website will be updated when the programme, currently in the final stages of development, is confirmed. The CSP have changed the format of Congress and there are likely to be further changes for 2006, but we have remained in constant liaison with them to ensure that ACPIN can have at least a two-day slot.

Whilst I am on the subject of events, we are delighted that three of our motions for the Annual Representatives Conference (ARC), have been accepted and detail of these can be found on page 25. It is very important that our voice is heard annually at this event. As one of the largest CIG's we potentially hold considerable influence at the CSP and ARC is a powerful way of bringing current issues of concern for neurological therapists to the forefront of the CSP agenda.

The interactive CSP project is moving towards a nationwide roll-out, provisionally set for May. We have confirmed our network categories – after much deliberation at ACPIN Executive meetings! I am delighted that a considerable number of our members have expressed initial interest in moderating the site. Once again, I must thank those members of Northern region who have so successfully and competently managed the pilot site. I have personally found this an invaluable resource and urge you to log on as soon as possible.

The *NSF – Long Term Conditions* has finally been published (www.doh.gov.uk) as has the document *Working Differently* which focuses on the AHP role in improving services to people living with a long term condition. As you know, ACPIN members played a key role in the consultation process and its implementation will bring some far-reaching implications to our work. The recommendations of the National Service Frameworks to improve care for specific patient groups and the broad multi-professional consultations before their completion are to be applauded but I continue to have concerns that their implementation is grossly under funded and misgivings that in many cases targets are achieved due only to a shift in existing resources and not new investment. We must continue to have a voice on such matters and if any of you have any specific points to make on the issue of funding for the implementation of NSF's and NICE guidelines, good or bad, I would love to hear from you.

This time of year always brings some goodbyes as Committee members resign and move on to other projects. The Executive Committee wishes Alison Baily Hallam all the very best as she returns to the USA, and regional representatives Caroline Brown and Sally de la Fontaine are leaving the National Committee. I thank them all for their commitment and wish them good luck for the future.

Of course, it is also time to bid farewell to Professor Ray Tallis, our President for the past three years and a fantastic supporter of, and contributor to, ACPIN. Ray has proved to be the most ardent flag-flyer for neurological physiotherapy, always flamboyant, more than occasionally controversial and steadfastly supportive. His presidential addresses and openings to *Synapse* have been constantly challenging and political, keeping at their heart the fundamental issues of healthcare as seen by a committed healthcare professional. In *Synapse* Autumn 2003, Ray described the enduring values of a healthcare professional as, 'compassion, commitment and knowledge based care' and these are certainly what he represents and strives for, for all of us.

Whilst we will miss Professor Tallis, I am delighted to welcome Dr Sue Mawson to the Presidency. Sue has an incredible CV of work in the field of neurological rehabilitation and research and we are honoured that she will be joining us. Sue has expressed a wish to be actively involved in the Committee and I know that her influence will be of great benefit to our organisation.

We also welcome Julia Williamson on to the Executive Committee, previously Northern regional representative.

I look forward to seeing as many of you as possible at Congress this Autumn and at our Silver Jubilee residential conference in March 2006. Don't forget that the Regional Committees are always looking out for new members as is ACPIN in general, so let's keep the interest and commitment at the incredible levels we have seen in this and previous years.

Best wishes

Nicola Hancock

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Developing integrated stroke services

– a whole system service user perspective

Debbie Neal, Leeds City wide Stroke Services coordinator & Senior Lecturer (Physiotherapy) Leeds Metropolitan University.

INTRODUCTION

This article outlines a whole systems approach to redesigning services using the ongoing development of integrated stroke services in Leeds as an example. In 2001, the Department of Health (DoH) commissioned a pilot project as part of the implementation of the National Service Framework (NSF) for Older People. Project workers were employed to work with commissioners in two pilot sites to implement a single standard of the NSF. Progress at the pilot sites was evaluated and reports made to the DoH. In Leeds, chosen as one of the pilot sites, the Older Peoples Modernisation Team who part funded the post, decided to focus on 'Standard 5 – Stroke'. The author, a neurophysiotherapist, was seconded to the role of Stroke Care Pathways Project Manager, with a remit to meet the milestones of the NSF Older People Standard 5, through the development of a stroke care pathway.

Leeds is a city with a population in excess of 750,000 located mostly in the city but also in some surrounding market towns and outlying rural areas. Health services are provided by the mental health trust, five primary care trusts and a single large teaching trust based at several sites produced from a relatively recent amalgamation of two hospitals trusts. In Leeds at least 1300 people a year have their first stroke and an estimated 8000 people are living with the effects of stroke. A substantial proportion of health and social care resources are devoted to the immediate and continuing care of people who have had a stroke. In 2001, although stroke specialist services were well established within the acute trust they were not available to all ages or in all locations, whereas stroke specialist services in the community were extremely limited.

SERVICE DEVELOPMENT

There are a number of well documented tools and techniques to support service improvement and delivery (NHS Modernisation Agency, 2002) for which the following list could provide a framework.

1. Identify a need – a local or national driver for change
2. Evaluate the evidence
3. Map the patient journey and identify any bottlenecks or blockages
4. Redesign the service, test out and implement change
5. Continue to monitor and improve services and if needed commission services to close the gaps

Although putting the theories into practice can present an enormous challenge there is increasing evidence to show the effectiveness of these methods (NHS Modernisation Agency, 2004).

1. Identify a need – a local or national driver for change

With stroke services there have been a number of drivers for change. In addition to the *NSF for Older People*, there have also been the *National Clinical Guidelines for stroke* and the National Sentinel Audits. National drivers to improve services are not exclusive to stroke. Neurophysiotherapists are also affected for instance by the recent *NICE MS guidelines* and the forthcoming *NSF Long Term conditions*.

Locally in Leeds the results of the National Sentinel Audit highlighted both pockets of good practice and deficiencies in the existing services.

2. Evaluate the evidence

Any change in clinical service delivery should be supported by evidence of effectiveness – either from primary research or systematic reviews of the literature, though in areas where insufficient evidence exists, expert opinion contained within national clinical guidelines or a local consensus, can help shape the service. Either way, the opinions of those regarded by many as the *real* experts – the patients and carers, who have experienced the current services, should be actively sought.

Before embarking on any change in service delivery it is vital that data is collected about existing service delivery in order that any improvements can be identified (NHS Modernisation Agency, 2002). In Leeds, there is routine data collection by the Leeds Stroke Database about lengths of stay, mortality, disability levels and patient satisfaction. Audits of other specific aspects of service were carried out prior to implementing any changes.

3. Map the journeys and identify any bottlenecks or blockages

There are a number of inter-related pathways that need to be mapped in order to understand the totality of stroke services including primary prevention of stroke, services for those with TIA, services for acute stroke and secondary prevention, rehabilitation and reintegration services for those living with the effects of stroke.

Pathways need to be mapped both at high level and at process level. High/service user level pathways should be a 'bird's eye' view of each pathway, with a focus on what happens to 80% of the people, 80% of the time, although an understanding of what happens to the other 20% can also be very helpful in improving journeys through the system. They should enable an understanding of the major flows through the service and the location of any bottlenecks and blockages to an improved experience overall for those with stroke.

For instance, as shown in the pathway below (*Figure 1*), however good the rehabilitation provided on a stroke rehabilitation ward, a subsequent four month wait for outpatient therapy after discharge is going to reduce the overall effectiveness of the rehabilitation process.

HIGH LEVEL PATHWAY

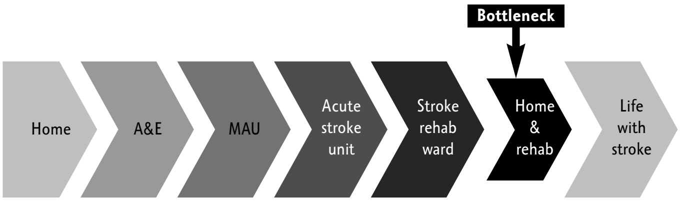


Figure 1

The high level pathways were mapped through information provided by the Leeds Stroke Database plus through a series of individual and group interviews with staff within the acute trust, intermediate care, community health services, social services and the voluntary sector. With each successive interview, information obtained from previous interviews was checked and clarified. It became clear that although there was a consensus that services could be improved, particularly through increased investment, there was a tendency to blame others for the existing poor service eg clinicians blamed managers, managers blamed clinicians, community based staff blamed hospital-based staff and vice versa and the statutory and voluntary sectors blamed each other.

Low/process level pathways provide an understanding of all the individual processes that enable each step in the pathways to happen. It is often at process level that cumulative small changes can make a big difference overall.

The process level pathways were mapped partly through the staff interviews but also through service users and carers (*Figure 2*). As many service users as possible that were in the system on a single day were identified and interviewed face to face. Some of those in the early stages after stroke were reinterviewed as they moved along the pathway. This provided enormous amounts of detail about the service people were actually receiving as opposed to the service that people thought they were providing.

Although very complex, there were three key findings from the mapping. Firstly, inequity in service provision dependent on age and location. Secondly, huge variability in pathways through the services in terms of co-ordination, quality and timing leading to some terrible and some very positive experiences. Finally, huge amounts of health and social care resources invested, albeit in a fragmented and disparate way, into providing services for those with stroke, eg through hospital bed days, nursing home places and primary care services. This lack of an integrated system meant that there was reliance on an informal network of contacts and the biggest problems were during transitions between different service providers. There were some positive findings however: there were many pockets of excellent practice, particularly in stroke specialist areas, many caring, committed staff motivated to improve services.

PROCESS LEVEL PATHWAY

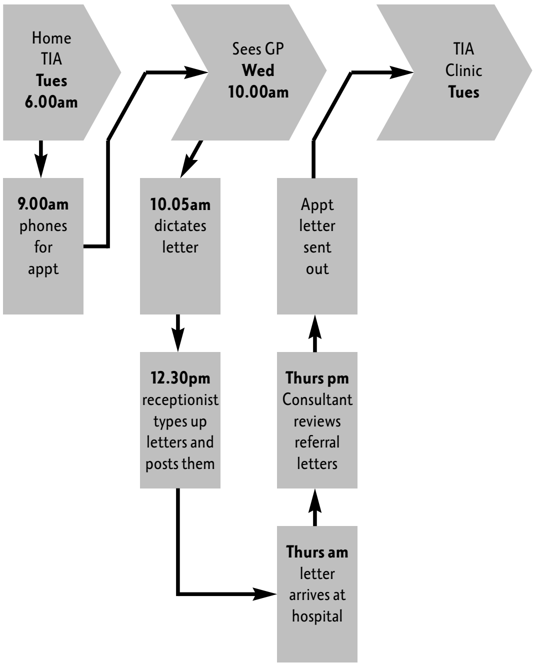


Figure 2

The mapping process was completed at a stakeholder day attended by service users and carers plus service providers from primary and secondary healthcare, social services and the voluntary sector. Participants at the stakeholder day also agreed a vision for stroke services, identified some of the helps and hindrances to an effective stroke services and used examples of patient pathways and experiences to produce and prioritise a list of suggestions for change.

Agreed vision

- An integrated stroke service for Leeds (irrespective of age or location).
- Stroke prevention for those at risk of first or further stroke.
- Specialist stroke services providing acute care and rehabilitation.
- Long-term support for stroke survivors and their carers.

Agreed priorities

- Improved primary prevention of stroke.
- Public education that stroke is a medical emergency.
- A protocol and structured assessment for paramedics.
- A system that allows someone, of any age, to go straight to a stroke specialist ward not via A&E.
- Quicker access to scanning facilities.
- No age barrier to stroke specialist services, care or rehabilitation.
- Stroke care pathway/care plan/check list to go with patient wherever they go – including record of previous input and advice/information.
- Stroke care co-ordinator appointed on diagnosis and to follow through pathway.
- Plan discharge from day of admission and involve family/carers and all community based services from outset, including assessment of carers' needs and involvement of voluntary sector.
- More community based provision of specialist and long term stroke services.
- More flexible working, expanded roles/sharing of skills/creative skill mix/use of assistants.
- Better, more consistent and more continuing access to sources of information provision about the stroke services that exist.
- Better, more consistent and more sources of information provision re lifestyle changes and secondary prevention following stroke.

4. Redesign the service, test out and implement change

Why a whole systems approach?

The aim of a whole systems approach is to smooth out the overall journey. Most of the blockages and bottlenecks in the journey occur when crossing organisational boundaries leading to a bumpy ride for service users. Often it is those parts of the pathway with specialist knowledge of stroke that have driven service improvements in the past, which although helpful, does nothing to improve the overall experience for the service user. For example, however efficient the referral processes to TIA clinics, if insufficient scanning facilities are available then appropriate management of the person with TIA cannot be instigated any sooner.

Lack of knowledge of the whole system could lead to inappropriate or ineffective investment. For instance, knowledge that many of those with stroke go to various medical wards due to a lack of acute stroke beds but subsequently have an increased length of stay or worse outcomes, could help justify an increase in acute stroke beds. Knowledge of the whole pathway might however show that increased provision of community based rehabilitation could have a much greater effect on overall services. Community based rehabilitation could not only increase outflow from the hospital, thereby increasing the proportion of people able to access the acute stroke wards, but also limit the numbers of people admitted with complications due to lack of available rehabilitation such as falls and respiratory infections. PCTs may well have a preference for commissioning increased community rehabilitation rather than acute hospital beds, as it is more likely to reduce their bills for numbers of inpatient admissions and may help with their star rating targets such as total time in A&E (less than four hours) and death rates from circulatory diseases (ages under 75 – change in rate).

Managing change

Although in a whole system redesign process many different approaches to managing change may be required, the most important aspect is communication to ensure all those involved are kept informed of progress. This has been managed through a combination of newsletters, emails, intranet and internet sites and staff and service user involvement in delivering change. A key technique for change management is the use of PDSA (Plan, Do, Study, Act) which allows a change to be tested out in a small way before changing the whole process. The overall aim of change is to make the pathway more efficient by reducing the number of steps in the pathway. This could be achieved by:

- doing all or some tasks simultaneously where possible ie introduce parallel processes,
- reducing or eliminating batching ie do today's work today,
- reducing blockages and bottlenecks by ensuring the right person with the right skills is delivering the right service in the right place and
- developing pull systems rather than push systems such as developing community rehabilitation services.

Beware some of the pitfalls with PDSA.

- Not getting all stakeholders on board – everyone thinks THEY will be swamped!
- Planning stagnation – getting stuck in the planning phase and failing to move onto action

- Dashing into 'doing' without proper planning
- Forgetting the evaluation phase and just rolling something out
- 'Pilotitis' – introducing a succession of new ideas without rolling any out
- Changing the most effective part of the system
- Working within existing organisations and roles rather than focusing on the impact on service users

What has changed?

There have been a number of changes in Leeds Stroke services over the last three years:

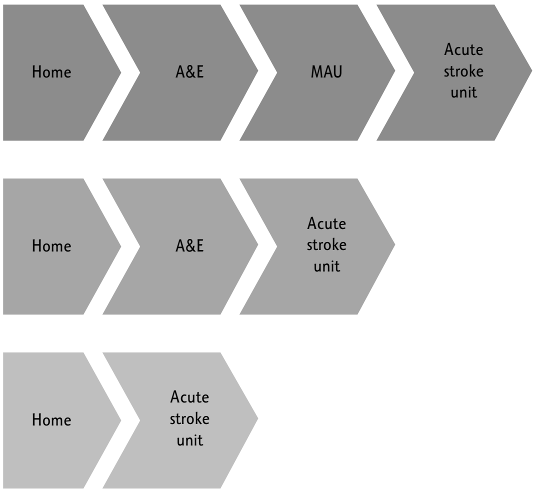
- A stroke service user and carer group 'Positive Strokes – changing outlooks' has been established. They have produced and disseminated an information pack for those with stroke, been involved in stroke training sessions for healthcare staff and participated in the interview process for stroke team staff.
- The acute trust stroke discharge summary has been streamlined to match the GP Stroke Template.
- Referral to the dysphasia support service can now be made by other healthcare professionals not just speech and language therapists.
- The process and timing of referrals between an acute stroke ward and the community rehabilitation unit has been improved.
- Nursing staff are undergoing training by speech and language therapists in assessment of swallow.
- A nutrition and dysphagia management policy has been developed and implemented.
- A patient held vascular risk factors booklet has been developed and is currently with acute trust and PCT clinical governance boards.
- A five day acute integrated care pathway currently in use is under review.
- Outpatient therapy waiting lists are being combined.
- Work is underway to simplify access to post-discharge neurorehabilitation services, including the development of a neuro-specialist assessment as part of the single assessment process.
- A community stroke team is being piloted in one PCT.
- The author is piloting the role of city-wide stroke services coordinator.

5. Continue to monitor and improve services

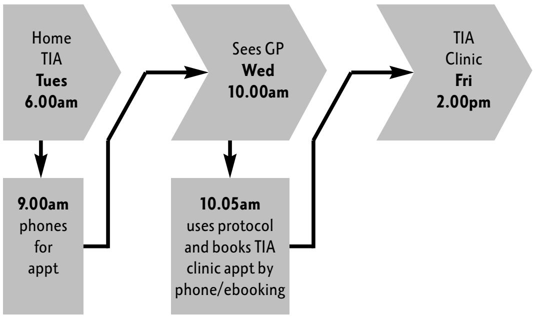
Although further work remains to be done to achieve the list of priorities identified at the stakeholder day, it is important to monitor and identify any remaining gaps in service. This is achieved through consultation with staff and service users, links with the Patient Advice and Liaison Service and the use of a 'comments, complaints and compliments' form by the service user group.

Work is underway to address the following issues:

- Develop a system that allows someone, of any age, to go straight to a stroke specialist ward not via A&E.



- Develop improved access to TIA clinics and quicker access to scanning facilities.



SUMMARY

A whole system approach to service improvement can either be achieved through a *service perspective* ie developing an integrated seamless stroke service that works across organisational boundaries with service user and carer consultation or through a *service user perspective* ie developing a stroke pathway that delivers the right service at the right time in the right place for all ages with stroke survivors and carers central to the process.

Although service improvement for those with stroke or other neurological conditions can be lengthy and complex, keeping the service user central to the process has been crucial in Leeds.

REFERENCES

NHS Modernisation Agency (2002) *Improvement Leaders' Guide to Process mapping, analysis and redesign*. Available at: www.modern.nhs.uk/improvementguides/reading/processmapping.pdf

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Developing physiotherapy services

for people with MS – lessons learned from four pilot physiotherapy services

Jacqueline Stevenson
Physiotherapy Programme Manager with the MS society

BACKGROUND

Research carried out by the Multiple Sclerosis Society with regard to the services most valued by people with Multiple Sclerosis (MS) has indicated that physiotherapy is very highly regarded. In fact physiotherapy is rated closely behind a 'cure' for MS.

With the publication of the NICE *MS Guidelines* in 2003, we can safely say physiotherapy service delivery is firmly embedded as part of the multidisciplinary approach to care and management of MS. However little evidence exists to date to support the specific physiotherapy clinical interventions that people with MS so value.

Overall, these pilot studies had two main aims. Firstly, and for the first time, to begin to unpack the 'black box' of physiotherapy approaches and techniques used to treat people with MS, by describing the clinical intervention of the physiotherapist. Secondly identifying effective models of service delivery that could be replicated elsewhere in the UK. Therefore two specific strands of investigation targeted clinical practice and service delivery.

In 2001 the MS Society and MS Research and Relief Fund launched a programme to pilot and evaluate four different models of physiotherapy services for people with MS in the north of England. The four innovative pilots were established as part of the *Developing Physiotherapy Services for People with MS Programme*. These were:

1. **Specialist physiotherapy as part of a multidisciplinary approach in the MS Relapse Clinic, Walton Centre for Neurology & Neurosurgery NHS Trust, Liverpool.**
2. **The ACTIVE Programme, a 14-week education, advice and exercise programme for people with minimal impairment, University Hospital of North Tees, Stockton.**
3. **A six-week fatigue management programme at the MS Society's Woodlands Respite Care Centre, York.**
4. **The establishment of an MS physiotherapy post to provide care in community and hospital settings, West Cumbria Primary Care Trust.**

EVALUATION

Researchers from the School of Health Community and Education Studies at Northumbria University have evaluated the effectiveness of the four services so lessons learned can be shared with health and social care professionals and people affected by MS.

The aims of the evaluation were to describe the four pilot physiotherapy services in terms of their models of service delivery, intervention components and characteristics of the people with MS using the service, and to assess each service's ability to:

- deliver effective interventions for people with MS, which includes offering timely and appropriate access to services and providing acceptable information, education and advice
- involve users in service development
- meet the MSS *Developing MS Healthcare Standards* and Chartered Society of Physiotherapy (CSP) *Standards of Physiotherapy Practice*.

1. MS RELAPSE CLINIC

Walton Centre for Neurology and Neurosurgery NHS Trust, Liverpool

The aim of the MS Relapse Clinic was to provide any patient experiencing a relapse a full multidisciplinary team assessment at one visit followed by a decision on optimal relapse management. Although undertaken within a multidisciplinary context, the major intervention was physiotherapy assessment and treatment.

The Clinic was established after research showed that patients in relapse who were treated with steroids combined with planned, comprehensive multidisciplinary care responded better than a control group who received standard neurology or day-ward care for relapse management.

Four appointment slots were available each week. The multidisciplinary team – consisting of a physiotherapist, an occupational therapist, an MS specialist nurse, an orthoptist, a registrar and a consultant neurologist – maintained close links with outside agencies in order to ensure appropriate monitoring and follow up of patients during steroid treatment.

Results of evaluation

The MS Relapse Clinic service was innovative, timely, responsive and valued highly by patients. Patients quickly settled into the multidisciplinary assessment though they initially felt anxious at the prospect of

Physiotherapy intervention: summary

Type of intervention
Strengthening (trunk most favoured)
Home exercises
Advice
Stretching
Gait re-education
Postural re-education

Nature/topic of advice given
Cardiovascular workout
Dizziness exercises
Fatigue management
Fitness/aerobic activities
Functional tasks
General activity
General fitness
General mobility
Pacing activity
Relaxation
Spasticity management
Work issues and fatigue

facing so many professionals at once. The multidisciplinary approach meant patients tended not to separate out individual professionals in describing their interaction. However, the physiotherapy interventions have been clearly defined in the evaluation and could be replicated in other relapse management clinics.

2. THE ACTIVE PROGRAMME

University Hospital of North Tees, Stockton

The ACTIVE Programme was targeted at people with MS who had minimal impairment. Its aims were to improve exercise tolerance, prevent deconditioning and secondary complications, and give access to mutual support and informed advice from a range of appropriate disciplines.

The underlying principle was to help people to understand their condition better, so they could develop effective self-management strategies.

The 14-week ACTIVE Programme – which stands for Advice, Coping mechanisms, Training, Information, Value your health, and Exercise – combined information and exercise sessions held over a three-hour period, once a week for six weeks in a hospital setting. Exercise sessions included stretching, cardiovascular, core stability, balance, upper-limb work and relaxation. Exercise sessions continued in a leisure centre under the instruction of a health and fitness adviser for a further eight weeks after the initial six-week session. Four groups of up to ten participants completed the programme over a two-year period.

Physiotherapy Intervention: summary

ACTIVE programme protocol

Assessment by Consultant

- Diagnosis of MS; meet inclusion criteria (walk 100m without aid; score of <6.0 on EDSS; no medical conditions that would preclude participation)
- Referral for ACTIVE programme

Discussion with MS Nurse

- Ensure patient is appropriate for programme and obtain informed consent

Neurological assessment by neurophysiotherapist

- Baseline assessment
- GP informed of inclusion in programme

Information (from a range of speakers) and supervised exercise programme

- Three hour session once a week for six weeks on a Wednesday afternoon in the hospital setting

Referral to health and fitness advisor

- To continue exercise programme for two months in leisure centre setting

Review and assessment by neurophysiotherapist

- Following two months of exercise on prescription, reassessment of outcome measures
- Placed on the Physiotherapy Register where PwMS can self refer if further advice/treatment is required
- Encouragement to continue own exercise programme

Results of evaluation

The ACTIVE Programme met a need for some people with minimal impairment from MS. Participants were positive about the benefits of the programme. Some participants felt empowered and more able to make lifestyle choices. However, if it were to be rolled out further, tighter selection criteria would be needed. In particular consideration of the time since diagnosis for the individual, how they have adapted to their condition, and the expectations of the referrer. Lessons were learned about the timing for giving information: individuals need to be at the right stage of their MS journey, as information can have an emotional dimension, which may provoke stress and depression.

3. FATIGUE MANAGEMENT PROGRAMME

MS Society's Woodlands Respite Care Centre, York

The Fatigue Management Programme based at the MS Society's Woodlands Respite Care Centre in York targeted those people with MS whose fatigue was primarily due to inactivity and deconditioning. The aim of the six-week exercise-based programme was to reduce the impact of fatigue on everyday life, and to challenge received wisdom that exercise can exacerbate fatigue.

People who were interested in taking part referred themselves to the Centre where they were screened for suitability. If they were eligible for the programme their GP was informed and asked to notify the Centre of any contraindications.

Once accepted, the participant's baseline fitness was assessed and a personalised exercise programme developed. People attended twice a week for six weeks, with one gym and one group exercise session each week. During gym sessions, everyone followed their own tailored proramme. Group exercise sessions were split into four parts: stretches, posture and strengthening exercises; Pilates; a basic circuit; and relaxation. Participants were carefully monitored throughout the programme to identify any adverse reactions. At the end of the programme the initial fitness assessment was repeated and participants encouraged to continue to participate in fitness activities, for example, at local leisure centres.

Physiotherapy Intervention: summary

Physiotherapy interventions provided to all participants as part of structured group sessions

Cardiovascular activities
Individualised multi-gym based programme in a group*
Group exercise programme in exercise studio
Strengthening (upper and lower limbs, trunk)
Mobilising (upper and lower limbs, trunk)
Stretching
Relaxation
Balance*
Postural re-education for sitting and standing
Pilates handouts for home exercise programme
Advice about exercise and fatigue
Gym ball*

* *Tailored to individual ability*

Fatigue management programme protocol

Screening

- Diagnosis of MS; 0-6 EDSS; >4 on Fatigue Severity Scale / fatigue present >50% of days for >six weeks; verbal permission of own PT/OT if appropriate
- Patients excluded: if acute onset of fatigue in prior six weeks; undergoing diagnosis of fatigue cause; medical condition which would preclude involvement; medication side effects involving fatigue; significant sleep disturbance; currently having a course of physiotherapy; or if unable to give informed consent.

Initial assessment

- Baseline assessment and consent
- GP informed of inclusion in programme

Gym induction

- Individual sessions to devise tailored programme

Fatigue Management Programme

- Attendance two times weekly for six weeks for a session lasting approximately 1 hour 45 minutes, including refreshments/discussion; 1 x gym session / 1 x exercise class

Reassessment and planning for the future

- Assessment battery rerun
- Exercise promotion using local facilities

Results of evaluation

Participants valued the programme and felt that it brought them identifiable physical, functional, psychological and social benefits. These benefits overall outweighed the disadvantages of the cost and effort of travelling to and from the centre, fatigue and disruption to their routine. The use of the gym was particularly popular and some participants felt confident to continue exercising after completing the programme.

Staffing the group sessions was problematic: reliance on volunteers was difficult and the staff/participant ratio required careful consideration. Tight selection criteria limited the number of participants, but produced homogeneous groups that worked well together. The drawback of this physiotherapy programme was that it was not linked to other local MS services. This would be needed if the programme were to be replicated to ensure long-term sustainability.

4. MS PHYSIOTHERAPY POST

West Cumbria Primary Care Trust

The aim of the service was to provide a dedicated MS physiotherapist for 18 hours a week to help overcome problems of geographical isolation and lack of transport that are common in predominantly rural areas. Serving 180 people with MS living in a 685-square-mile area of west Cumbria, the service was designed to be flexible, with physiotherapy offered in a range of community and health service settings and also out of normal hours where necessary. Links with the Young Disabled Unit at Whitehaven Hospital provided patients with a central point of contact, and enabled the involvement of the multidisciplinary team.

This service development used an action research approach. During the project patients completed feedback questionnaires and the results were used, together with insights from interviews and feedback from professionals referring into the service, to identify ways of developing the service in the future. These were considered by an expert panel and a decision-making steering group, which included people affected by MS, to adapt and improve the service.

Physiotherapy Intervention: summary

West Cumbria Primary Care Trust MS Physiotherapy post

Flexible working hours

Clear review and rereferral procedures

Awareness-raising of needs of client group through talks/presentations

Central point of contact with health service MDT via Young Disabled Unit

MS PHYSIOTHERAPY POST WEST CUMBRIA PRIMARY CARE TRUST

Links with community sports facilities and physiotherapists running MS Branch exercise groups

Satellite clinics one day per month – Maryport, Cockermouth, Egremont, Millom

Out patient neurophysiotherapy – Workington, Whitehaven

Community neurophysiotherapy – Workington, Whitehaven

Summary of advice given in the Cumbria rural service

Specific to current physiotherapy intervention
Balance work
Using activities at home
Control of tremor
Impact of physiotherapy
Breathing exercises
Self stretches for neck
Upper limb function
Standing work in kitchen

Overall physical management of MS
Exercise
Exercise levels
Maintenance of lifestyle
Posture
Incorporating challenges into lifestyle
Bilateral activities

Management of specific MS symptoms
Fatigue management
Effect of menopause on condition
Energy conservation
Managing sensory loss
Visual prompting for poor memory

Disease process
Disease progression
Diagnosis questions

Carer issues
Encouragement
Handling techniques/advice for carers
Positioning
Demonstrating stretching regime to carers
Transfers

Results of evaluation

The service responded flexibly and creatively to the needs of a variety of people with MS living in rural Cumbria. Before the introduction of the service, people with MS felt they were left to their own devices after being diagnosed, and they had to wait a long time before being referred for physiotherapy.

However, MS specific physiotherapy delivered by a knowledgeable practitioner with strong interpersonal skills was highly valued by patients. Patients liked having a choice of where they had their physiotherapy. They felt the service offered was sensitive and responsive, and they viewed the physiotherapist as being an expert in MS management generally.

Most patients waited less than two weeks for treatment after referral. The involvement of people affected by MS in service development was innovative and well developed. Patients also appreciated the continuity of service and having a single point of contact.

A serious gap in physiotherapy provision for people with MS has been left in the area since the service was withdrawn at the end of the pilot funding.

RECOMMENDATIONS FROM THE EVALUATION TEAM FOR FUTURE SERVICE DEVELOPMENT AND RESEARCH

All four physiotherapy models clearly offered benefits to patients. The multidisciplinary MS Relapse Clinic at the Walton Centre and the West Cumbria rural service are particularly strong service models that merit being sustained and replicated. The ACTIVE Programme in Stockton and the Fatigue Management Programme in York would require further refinement and evaluation before being replicated.

Developing effective physiotherapy services in the future would benefit from:

- an evaluation of outcome measures used in physiotherapy practice, and the development of more appropriate MS measures
- further research on the costs and benefits of fatigue management
- research on how the 'stage of adaptation' affects the dynamics of group programmes for people with MS, and how it influences the readiness for people with MS to receive information.

A further recommendation from the evaluation team was that, as service users, people with MS would benefit from training for their involvement in service development.

A copy of the full report, including an executive summary, is available on the MS Society's website: www.mssociety.org.uk. Additionally, the website provides details of how to obtain the individual pilot project site reports. . Alternatively, contact Leila Terry (Service Development Administrator at the MS society) for further advice, telephone 0208 438 0742.

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Recovery within grasp?

A report on a preliminary study investigating the short and medium term effects of the SaeboFlex (Functional Tone Management System) on chronic post stroke patients with residual upper limb deficit

The SaeboFlex (FTM Arm Training Programme) is a dynamic hand orthosis which assists subjects with upper limb deficit to grasp and release. Developed in the United States, it has recently been introduced into the United Kingdom and used primarily with chronic post stroke subjects. This paper aims to present a report based on the preliminary findings from pilot research being conducted in this country.

INTRODUCTION

Upper Limb Recovery

Literature on recovery post stroke supports clinical experience of many patients not achieving good outcomes in upper limb function (Wade et al 1983, Nakayama et al 1994, Broeks et al 1999). What treatment should be offered and at what intensity is still not clear. Evidence suggests that more treatment may be beneficial in the short term (Sunderland et al 1992, Feys et al 1998, Kwakkel et al 1999) although this has not been universally found with Lincoln et al (1999) suggesting that the type/severity of patient, the type of treatment offered and the amount of enhanced therapy may all potentially influence outcome.

Both Feys et al (1998) and Parry et al (1999), analysing a sub-group from the study by Lincoln et al (1999), commented on repetition of task as a feature of their enhanced input. Outcome being influenced by repetition of a simple functional task has been reported previously (Butefisch et al 1995), although similar results were not found for complex tasks (Woldag et al 2003). If treatment is to include repetition it is important to identify what activities need to be repeated.

Evidence suggests that the central nervous system is task dependent in its organisation (Flament et al 1993, Tinazzi et al 2003) and that movement patterns vary depending on the context and type of task being completed (Wu et al 2000). For upper limb rehabilitation to be functional and task orientated it is necessary to consider what role the upper limb plays. One of the main functions of the upper limb is to place the hand to achieve complex movements giving interaction with the environment (Carr and Shepherd 2003). This action of prehension consists of two temporally linked movement components: reach and grasp (Jeannerod 1984). Without activity in the hand, the rest of the upper limb has reduced functional use.

The SaeboFlex

The SaeboFlex orthosis is sprung loaded on the extensor aspect, allowing subjects to use active flexion to grasp objects and, if able to release flexion, the springs return the hand towards a position of extension. By adjusting the springs, subjects can either be assisted maximally or can be required to recruit active extension. The aim is for subjects to generate their own activity with less reliance on therapist facilitation, to reach, grasp and release objects, with multiple repetitions over a treatment period.

From anecdotal evidence and one published abstract (Farrell et al 2003), results have indicated increased range of movement (ROM), reduced tone and increased function from using the SaeboFlex orthosis. These results were achieved in subjects who followed a treatment paradigm similar to that used in constraint induced movement therapy (CIMT) (described in a review by Taub and Wolf 1997). In this review, minimum motor criteria was suggested as important in determining success of CIMT with success reported in subjects who had a minimum of 20° wrist extension and 10° finger extension (first quartile). The evidence for subjects in lower quartiles benefiting from CIMT was felt to be less clear, with a case of treatment failure reported. Bonifer and Anderson (2003) also described a case of a subject in the third quartile (without the active range above but able to pick up a rag from a table and release it) who did not progress the functional use of their upper limb following a CIMT programme. Increased severity of impairment resulting in poorer outcome has been reported by others (Parry et al 1999, Shelton et al 2001, Hendricks et al 2002). To use the SaeboFlex to grasp and release, subjects require only small range active shoulder and elbow movement, to initiate a quarter range of active finger flexion and to have passive wrist extension to 15° with passive digit extension. Therefore, for patients who may benefit less from current therapies, such as those in the third/forth quartile, the Saeboflex may offer them an alternative method of treatment.

Within the UK, research on the SaeboFlex has been ongoing since the end of 2003. The aim has been to investigate the short and medium term effects of the orthosis on chronic stroke subjects with severe (third/fourth quartile) upper limb deficit. Pilot data has been gathered from ten subjects pre- and post- intervention and at three months (full six months data is still work in progress).

For this paper the results are presented from two subjects in whom six month data is complete. They are not necessarily representative of the whole.

METHOD

Subjects attended a week-long clinic in response to an advertisement published in a self-help group magazine. Ethical approval was gained from the University of Hertfordshire Radiography and Physiotherapy Ethics Committee.

Intervention

Treatment consisted of subjects undertaking multiple repetitions of object grasp and release using the SaeboFlex in up to six daily sessions of 45 minutes over five days. Sessions involved subjects completing task-orientated activities of picking up and placing soft balls into or on to objects. More functionally related tasks were introduced as the subjects were able to manage with the substitution of balls with real-life objects such as fruit and water bottles. Each day, spread between the 'rest periods', subjects had one neuromuscular electrical stimulation session for 20 minutes (electrodes placed to achieve wrist and finger extension, 30Hz, five seconds on/five off) and 1-2 SaeboGlideTM sessions (a gliding sleeve/pole mechanism that facilitates gleno-humeral/ proximal activity).

Following completion of the weeks treatment, it was suggested to the subjects that they worked actively in the orthosis for one to two hours per day, until the three/six month follow-up.

Outcomes

Prior to treatment, screening for sensory (light touch and pin prick) and perceptual (line bisection and star cancellation) deficits were conducted. Outcome measures (upper limb range of movement (ROM), hand dynamometer, upper limb section of Motor Assessment Scale (MAS), patient set goals scored on a likert and VAS scale, grasp and release of different objects, ten metre walk) were conducted at the start and end of the week and at three and six months.

RESULTS

Mike was a 33 year old male who attended the clinic following his stroke which had occurred twelve months earlier. He presented with residual right sided weakness, increased tone (primarily distally) and associated soft tissue changes. He was independently mobile, indoor and outdoors, with a stick and lived alone. Prior to his stroke, he was right handed. His main presenting problems in his right upper limb were reduced ROM proximally, especially into glenohumeral flexion (active ROM 15°) and increased tone distally into flexion and pronation (hand held in fist posture). He had full active flexion/extension of his elbow. His main goal was to be able to open his right hand sufficiently to allow him to shake hands when greeting someone.

At three months, minimal change was recorded in the objective outcome measures, however, perceived change in subject set goals, as recorded on both the likert and VAS, had increased. In the period following the clinic week, active use of the orthosis was limited with a focus being given to both returning to work and driving.

Discussions with Mike relating to neuroplasticity increased his understanding of activity driven change. It was stressed that active work in the orthosis, rather than the orthosis alone, may result in change in function. At the six month follow-up use had increased to, on average, one hour per day. Although tonal changes remained into flexion, with associated soft tissue changes and altered joint alignment, without the splint on Mike was able to recruit active extension through thumb and fingers to allow hand opening to shake hands. Subjectively Mike rated an increase in his perceived ability to achieve his goals, however, there remained minimal change on the objective outcome measures.

The second subject, Susan, was a 52 year old female who had also had her stroke twelve months prior to the study. She presented with weakness in both the flexor and extensor components of her right wrist/hand resulting in flickers of activity in her index finger only (no other selective movement in other fingers or thumb). Proximally there was also weakness through both her shoulder girdle and elbow with reduced ROM. She was independently mobile indoor and outdoors with no aids. Her main goal was to hold an object, for example a saucepan, in her hand.

As with Mike, at the three month follow-up, other factors in Susan's life had resulted in use of the orthosis being limited. Between three and six months, however, she reported that she worked actively in the orthosis for 30 minutes, every other day. Objectively there was selective movement to allow finger/thumb opposition to each finger. Functionally, this allowed her to hold a pen and start to write. She remained with reduced range of finger extension, if combined with wrist extension, that limited functional use of the hand for some activities and reduced glenohumeral flexion/abduction. Her MAS score had changed from 0 to 8 with increase particularly in the hand movement section.

DISCUSSION

To draw definite conclusions at this stage is not possible or appropriate although several features did become apparent through this preliminary study that will inform further work. In the group of ten subjects, many were a year plus post stroke and all had severe upper limb deficit (third/fourth quartile). They presented with many of the secondary changes seen post neurological insult, for example weakness, soft tissue shortening and learnt non-use. Although some subjects changed in their ability to grasp and release objects within the week-long clinic, these results were maintained but generally not improved at three months. On follow-up, it became apparent that time spent using the orthosis was limited for most subjects. Explanation of activity driven change given at this stage (now introduced from the start) may have impacted on subsequent outcome and, at six months, for those subjects who engaged in a programme of use of the SaeboFlex, small objective and perceived changes were recorded.

The variance in intensity of use and lack of therapist guidance were two of the main differences between the clinic week and follow-up, and therefore may be important factors influencing outcomes seen at follow-up. It is important to consider the impact of integrating an 'exercise programme' using the SaeboFlex into an already established daily routine. Upper limb impairment has been shown to be less closely related to handicap than lower limb impairment (Desrosiers et al 2003). Broeks et al (1999) showed that at four year follow-up despite subjects reporting and demonstrating continuing upper limb dysfunction, 96% scored greater than 60/100 on the Barthel Index, indicating minimal disability and adaptive recovery. The sensitivity of the Barthel Index in assessing upper limb disability has, however, been questioned (Lai et al 2002).

Many of the findings from this subject population were ascertained in discussion and in the subjective markers rather than through the impairment/disability outcome measures chosen. For further research with chronic stroke subjects changes to the outcome measures used would be made. It would be of benefit to investigate both compliance and overall quality of life. This was highlighted by some subjects returning to work and/or driving again following the intervention which were not officially assessed by the measures chosen. With still relatively few subjects having used the SaeboFlex and research being so exploratory, it remains difficult to predict what changes may occur in the populations chosen and thus what outcomes measures would most accurately reflect changes made. For this reason the measures chosen for future research will be continually reassessed.

Future research is being planned to look at the use of the orthosis with acute stroke patients with the aim of increasing the use/repetition of early hand and upper limb movement before secondary complications become established.

SUMMARY

The SaeboFlex is a dynamic hand orthosis that assists subjects with upper limb deficit to grasp and release objects. Following a week of use of, on average, four 45 minute sessions per day it was possible for subjects with severe chronic stroke to make small gains in reaching and grasping, although this was minimally reflected in the outcome measures chosen. To continue to change and overcome the secondary changes seen in the subjects, it appears that a level of use greater than that adopted by many at follow-up would be needed. Subjects in this study had all adapted their lifestyles to being one handed and although by attending the clinic showed intention to regain more activity, the guidance at the end of the clinic of use per day was achieved by few. Thus far, the subject who made the greatest functional change was the one with weakness as the primary problem. The sample, however, remains small and very diverse and thus this paper is a preliminary report.

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Changing self-efficacy following stroke

– a single case approach. Summary of a study completed in August 2004 which was part funded by an ACPIN research bursary

The aims of the study were to test the effects of a self-management intervention on self-efficacy following stroke.

A series of ten single case studies using a Multiple AB Basic Design were carried out over a four month data collection period. Subjects were seven male and three female who were an average of 24.2 weeks (sd 18.29) post stroke, with a mean age of 61.5 years (sd 8.15) years. All subjects were living in their own home, three lived alone, the remainder lived with partners.

The intervention used to increase self-efficacy was a self-management workbook designed for stroke survivors based on sources of self-efficacy described by Bandura (1997). The workbook provided ten vignettes derived from stroke survivors with examples of strong levels of self-efficacy, also practical solutions to common problems and a diary section for a record of personal targets and mastery experiences. Further details about the development of the workbook can be found in Spring Synapse 2004.

Each of the ten subjects were assessed every five to seven days over a total of 14 weeks. After three training sessions, the workbook was randomly introduced at different times for each subject. This method allowed for statistical analysis of group effects and meant that some subjects started the workbook as early as week five, and some as late as week nine. The workbook was used for a total of four weeks by each subject. Self-efficacy was measured by the Stroke Self-efficacy Questionnaire (Jones, Partridge et al. 2004), and the General Self-efficacy Scale (Schwartzer and Jerusalem 1995).

Visual inspection of stroke self-efficacy scores showed an upward trend in data for all ten subjects. In addition the effect of the intervention was further evaluated with a randomisation test (Todman and Dugard 2001), and stroke self-efficacy scores demonstrated a significant change ($p=<0.01$).

Self-management interventions which are based on self-efficacy theory have been used extensively in other chronic disease but not with stroke survivors (Barlow, Wright et al. 2002). Changes in self-efficacy may also have a beneficial effect on other variables such as mood and self-esteem. Given the high incidence of mood disorders following stroke, it may be valuable to learn more about these methods. Further analysis of other variables used in this study also seem to support the relationship between self-efficacy, mood and activity. A fuller write up of these results is in preparation.

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■ STROKE

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- Bode et al *Relative Importance of Rehabilitation Therapy Characteristics on Functional Outcomes for Persons With Stroke* pp2537-2542.

Vol 35, No 11 (supplement 1)

- Grotta J et al *Constraint-Induced Movement Therapy* pp2699-2701.

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- Boter H *Multicenter Randomized Controlled Trial of an Outreach Nursing Support Program for Recently Discharged Stroke patients* pp2867-2872.
- Danells C et al *Poststroke 'Pushing' Natural History and Relationships to Motor and Functional Recovery* pp2873-2878.

FOCUS ON

Sue Mawson

our new President of ACPIN commences her 'term of office' in March 2005

Sue, could you tell us a little about your career background?
Yes this is difficult without giving my age away! Having known almost from day one that physiotherapy was the right choice for me it is perhaps interesting to identify the people who have had the most significant influences on my professional life and in a way resulted in me being where I am today. I qualified as a physiotherapist in the 1970s working initially in adult neurology and was lucky enough to get the opportunity to work under Mrs Bobath for a week at the Bobath Centre in London. This as you can imagine was inspirational and began my long passion for neurorehabilitation. She instilled in me, from this early stage in my career, the importance of the trunk and selective activity as a foundation for normal movement.

During the 1980s I worked both in the UK and South Africa again having the good fortune to undertake the eight week basic and the two week advanced paediatric Bobath courses taught by Joan Mohr NDT (USA) and Sheena Urwin-Caruthers (IBTA) SA. During this time I again began to understand how selective trunk activity develops and the relationship between core activity and limb control. (We neuro physiotherapists were using concepts of core stability long before the musculoskeletal and pilates crew hit the press!).

In the late 80s I began my research training having decided without a doubt that I didn't want to go down the management route. At this point I met Bunny Le Roux, mathematician and health care statistician, who has become my academic mentor and from whom I have learnt so much about the theory of measurement and the importance of quantifying the individual's response to treatment. Like many physiotherapists in the early 1990s I had observed changes in patients during physiotherapy but could not explain why the change was occurring until, in 1991, I went to my first Nigel Lawes lecture on neuroplasticity. I new I had to know more and approached Nigel asking him to became one of my PhD supervisors. In this role he helped me to identify potential mechanisms to explain how neuro-physiotherapists effect change within the Central Nervous System. Ever the questioning mind Nigel once said that he hated seeing me in the audience, as I was the one who always asked the difficult questions!

During the early part of my doctoral studies I was introduced to Mary Lynch-Ellerington without whom my work on trunk activity would not have progressed. Mary had the vision to see the uniqueness of the TELER method, giving my PhD her full support (with BBTA) as I sought to develop a measuring tool (the TELER Normal Movement Indicators) that would enable me to investigate the characteristics of trunk recovery following a stroke. Like all good researchers I found that gaining my PhD simply showed me how little I really knew and I have continued in the quest for knowledge trying to provide evidence to underpin neurological rehabilitation.

Can you summarise some of the achievements you are proudest of?
Top of the list must be my two children who are now at university doing medicine and architecture. They are both accomplished at sports, have good careers and are great company and good friends. Becoming a Reader at Sheffield Hallam University has probably been my greatest academic achievement. My main role here is to develop research capacity and capability in others, staff and students. This I find exciting and fulfilling. Finally the Msc in Neurological Rehabilitation which we validated eight years ago. This has given me a great sense of achievement as I have seen senior clinical specialists come onto the modules lacking confidence in their own academic ability and graduating in the autumn of each year with proud faces and happy families.

What projects are you involved in currently?
I'm currently working in a number of areas all in neurorehabilitation. We are currently doing a RCT of Botox A as an adjunct to physiotherapy for the management of upper limb spasticity. I'm also a partner on a project developing an exoskeleton for remote rehabilitation of spinal injury patients (don't ask, engineers are a mystery to behold!) I'm also partner on a large stroke study looking at technology developments as an adjunct to rehabilitation. Again I think my role here is keeping the engineers in the real world of stroke patients and their needs. As ever I'm continuing my work with TELER developing with colleagues a library of stroke indicators validating them locally and hopefully nationally. Finally I'm working in the area of falls analysing the characteristics of balance on a large population of over 60 females. As you can imagine there are more projects on the boil however finding time is ever a problem.

What do you see your role as ACPIN president involving?
This is a very difficult question to answer as I follow such distinguished predecessors who have given so much as presidents of ACPIN. I suppose I see my role as providing academic leadership for the group at a national level. As I am currently working two days a week as research lead for allied health professions within the NHS I feel I am quite politically aware, this should enable me to help drive ACPINs agenda forwards within the current NHS environment. I hope that through this leadership I can empower others within ACPIN to seize the opportunities that foundation status offers us putting neurological rehabilitation at the forefront of many NHS organisations.

▶▶

What are your aspirations and hopes for the future?
'Evidence' is going to be the theme for my Presidency. I hope to enable and encourage colleagues to be able to use the evidence that's out in the clinical and public domain, look at existing scientific research and extrapolate the findings to neurorehabilitation and provide new evidence of efficient and effective neurological intervention. My hopes are for more clinical specialists to undertake professional doctorates and to see the development of more consultant posts in neurological rehabilitation.

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ACPIN news

ACPIN AGM 2005

5th March 2005.
Hilton Hotel
Northampton.

MINUTES

Opened at 12.25pm

1. Present
Mary Cramp
Louise Dunthorne
Emma Forbes
Nicola Hancock
Cherry Kilbride
Jo Kileff
Sue Mawson
Louise Rogerson
Jackie Sharp
Ray Tallis
Jo Tuckey

2. Apologies
Ros Cox
Louise Gilbert
Sesa Isheya
Anne Rodger

3. Minutes of AGM 2004
Accepted as accurate record of events. Proposed Cherry Kilbride, seconded Linzie Bassett.

4. Retiring President's address
Ray Tallis

5. New President's address
Sue Mawson

6. Chair's address
Nicola Hancock

7. Treasurer's report
Jackie Sharp. Accountants voted in by a majority vote.

8. Election of re-standing executive committee members:

- Ros Cox *Committee member* majority vote
- Jo Kileff *Committee member* majority vote
- Mary Cramp *Honorary Research Officer* majority vote
- Cherry Kilbride *Honorary Secretary* majority vote
- Jackie Sharp *Honorary Treasurer* majority vote
- Jo Tuckey *Honorary Membership Secretary* majority vote
- Anne Rodger *Diversity Officer* majority vote

9. Election of new executive committee member
Julia Williamson was voted in by unanimous decision.

10. AOB
none

Meeting closed at 12.50pm.

PRESIDENTIAL VALEDICTORY

Ray Tallis FRCP, DLitt, F Med Sci

I can't believe it. My term of office is now completed and I shall walk out into the sunset at the end of today as an ex-President of ACPIN. It hardly seems a day (as they say) since Sue Edwards handed over the baton to me and here I am handing over the baton to another Sue: a Ray between two Sues; a thorn between two roses; a wannabe physio between two instances of the real thing.

I have felt very proud to have been an ectopic medic in your domain and I feel even prouder when I think of the eminence of both my predecessor and my successor. When I assumed my present office, it was an opportunity to say some nice (and true) things about Sue Edwards. My demitting from office is an opportunity to say some nice (and true) things about Sue Mawson.

Many of you will of course know Sue as one of the leading figures in neurophysiotherapy in the United Kingdom at the present time. For those few of you who do not know her, here are some facts which hardly begin to do justice to her achievements. She has made an enormous contribution to placing research into neurological rehabilitation on a sound basis through her work in developing the TELER system. This system addresses one of the toughest challenges in neurorehabilitation research: that of determining the impact of treatments by measuring things which are not only objective, valid and repeatable but also, at the same time, relevant to patients' goals. In addition, she is engaged in cutting edge research looking at the use of innovative technology in patients with a variety of conditions, including stroke. She is currently supervising four PhD students and has innumerable publications under her belt. In short, ladies and gentlemen, your new President is a physiotherapist and clinical scientist of the greatest distinction.

It will be obvious from this that the good ship HMS ACPIN has an excellent Commodore. And, of course, a wonderful crew headed up by Captain N Hancock and her merry band of officers – another group of seemingly effortless multi-taskers in the heroic mould of Linzie Basset. All of this makes being President, Sue, absolutely wonderful. If you model yourself on me, it consists of just swaggering around, pontificating at intervals, and accepting the occasional bottle of wine and kisses on the cheek. As a lifestyle, I strongly recommend it, although, given that you are the real thing rather than a wannabe, I imagine you will be much more hands on in the true physiotherapist mould than myself.

Anyway, it's time to say goodbye. The usual thing is to to look back. When I do so, it strikes me how many glum things I have said about the future of the healthcare professions – physiotherapy, medicine and so on. I must say, I still feel nervous about what the politicians have in store for us. Though I am less worried than I was. Politicians are starting to realise that it is no use throwing managers and documents at medical problems: in the end, the quality of care for the patients depends on the people, such as yourselves, who are actually giving it.

I am very privileged at present to be a member of a Working Group of the Royal College of Physicians - headed up by Baroness Cumberlege – looking at *Defining and Maintaining Professional Values in Medicine*. Being involved in this group has been very stimulating. It is multi-professional and includes experts outside of the healthcare professions. We have had the opportunity to quiz some key players – Dame Janet Smith of the Shipman report, Sir Liam Donaldson (the Chief Medical Officer) and Sir Nigel Crisp to name just a few – and there are more to come. I feel very hopeful that this report really will make clear what it is about professionals that is valuable, how we should define our relationship to the public, and how (very importantly) we may assert our leadership in advancing the science-base of our profession, in developing new treatments, and in improving the ways in which we deliver care. The report will be out at the end of the year and we shall be spending the early part of 2006 publicising it. I am looking forward – (hint, hint!) – to talking to you about the report, which, although it is mainly about the medical profession, has messages for all professions. We have more in common than whatever it is that separates us, as my experience of being President of ACPIN has made even plainer to me than it was before.

Being free to be professionals - accountable to the public but not subject to endless external interference – is particularly important at the present. For we have grounds for being cheerful about the future of the basic science and the clinical science underpinning the activity that is our central preoccupation – the rehabilitation of people with neurological disability. The day of science-based and evidence-based – as well as wisdom-based and humanity-based – practice is coming closer and ACPIN, of course, is in the forefront of this. And this is part of a more cheerful picture which I want to share with you.

Everyone knows that people are living longer. The facts are staggering. In the UK, life expectancy at birth increased by 30 years over last century. In the last 20 years alone – since I became a consultant – life expectancy for men has increased by five years. Some people have tried to turn this wonderful trend into grounds for being gloomy by worrying that, since people are living longer, they are going to suffer more chronic illness. This is not turning out to be the case. There are data from both the UK and USA to show that the age-adjusted incidence of chronic illness and disability is declining. Many factors have fed into this but the role of good preventative care and of first-rate rehabilitation for those who fall victim to chronic disease has been central. There is an excellent prospect that, if present trends continue, we shall find that, increasingly, people are living to a ripe old age with relatively little chronic disability in their final years. In short, the mission of medicine in the wider sense – of helping people to have a long life ending in an independent old age – is looking less and less like *Mission Impossible*.

The role of the rehabilitative professions in helping to achieve this utterly worthwhile (and achievable) goal – by the prevention, limitation and reversal of disability – is, and will remain, absolutely central. And, given that neurodisability is the most serious challenge for the future, neurophysiotherapists will be pivotal. The future will be both exciting intellectually and gratifying because of what we can do for our patients. Achieving *Mission Possible* will, of course, be a huge challenge: the desired outcome will not happen of its own accord. All the more reason, then, to resist any attempts by government, managers and others to deprofessionalise us, to dumb down our approaches to care, to force us to take short cuts to meet targets, and to short–change our patients.

It seems to me that the role of ACPIN, in defining, maintaining and further improving standards of care cannot be over-stated. So all power to your elbow.

Finally, this is my chance to say 'thank you' for a most interesting, fun-packed, gratifying and inspiring three years working with you all and for the great honour you conferred on me by making me your President. You deserve the gratitude of your patients and your colleagues. You certainly have mine.

NEW PRESIDENT'S ADDRESS

Sue Mawson MCSP BSc.(Hon) PhD

In 1989 an article was published in Geriatric Medicine entitled: *Measurement and the future of rehabilitation*. In the article the author Professor Raymond Tallis quoting evidence published by the King's Fund Consensus Forum on stroke management stated, 'Rehabilitation varies widely, mainly reflecting differences in resources but also widely reflecting different beliefs. There is no absolute proof that individuals or collective services benefit patients.' Porfessor Tallis posed the question, 'Should rehabilitation be abandoned?' As novice researcher and neuro-clinician it was this statement that stunned me I was incensed by the arrogance of the man a medic to boot, little realising that his words were so true.

In 1986 Richard Schmitt the doyen of motor learning wrote, 'Without movement the human race would not survive,' by 1997 only eight years after I read Ray's words I was writing in my doctoral thesis 'without measurement the physiotherapy profession won't survive'. I had learned how significant his words had been.

Professor Tallis had galvanised me into action and contributed to my future direction and quest to provide the evidence of effective rehabilitation. How strange, but apt, that I should succeed the man who ignited my passion for both measurement and evidence and who in an indirect way resulted in me being where I am today! As President my theme will be evidence – what evidence actually is in a health care environment, what evidence currently exists in the field of neuroscience, cognitive behavioural science as biomechanics and finally how do we provide new evidence from a measurement and research design perspective.

In a conversation earlier today, Ray suggested that I would be a better President than he because I was a physiotherapist. This is in fact is far from the truth. As a professional body we have frequently been described as charlatans because of our lack of a research base. With his huge reputation as a neuroscientist Ray has provided us with much needed credibility in the scientific world.

To ACPIN members I would like to say how lucky we have been for Ray's leadership, support and vision and to Professor Tallis I would like say that I promise to continue on the path that he inadvertently but without doubt placed me on sixteen years ago.

CHAIRPERSON'S ADDRESS

Nicola Hancock BSc (Hons) MCSP SRP

As I stand here in front of you today, I find it hard to believe that another year on the ACPIN calendar, and my first as Chair, has passed by. I would like to begin by offering my sincere thanks to the Executive and National Committees for their tremendous support in this first phase of my Chairmanship and to those of you who sent me personal messages last Spring. I trust I can rely on your ongoing support as the next year progresses.

As usual, it has been a busy year for us all. One major project has been the development of the *Neurology Network for Interactive CSP*, which will be launched nationwide in May following a successful pilot in Northern region. My thanks to all those in this region involved in developing and moderating the pilot site, you have represented ACPIN most positively. I would encourage you all to log on to this excellent tool as soon as possible. Northern region really have excelled themselves as they were also closely involved in the development and publication of the physiotherapy booklet following the NICE Guidelines for MS, a very useful working document.

As you know, many ACPIN members consulted on the NSF 'Long-Term Conditions' and we finally have a publication date of 10th March. On the 14th March, the document *Working Differently* will be launched at the AHP Federation annual conference, which focuses on the AHP role in improving services to people living with a long term condition. I have had feedback from the CSP this week that the support from physiotherapists and ACPIN in particular has been instrumental in its development.

The review of the *Splinting Guidelines* has unfortunately fallen a little to the back burner, but I can assure you that this is a priority for the coming months.

Our Autumn Conference 'Hands On Neurophysiology' was well attended and received, held in the very appropriate surroundings of the National Hospital for Neurology and Neurosurgery, London

We took a break from CSP Congress this year but will be back in style on the 7th/8th October 2005, with our programme ‘Cognition and Behaviour: Complex Challenges to Rehabilitation’ Congress format has changed significantly but we have fought hard to maintain the right to a two day programme for our membership and we now have CSP approval. I wonder following all the negotiations if our programme should be subtitled ‘Complex challenges to Organisation!’ but Jo Tuckey is doing a great job.

Departures from the committee include both Sally de la Fontaine and Caroline Brown, regional reps from Surrey and Borders and Yorkshire respectively and I thank them for their commitment and wish them well in future ventures. Membership of the regional committees is very variable, some are more buoyant than others, and I would urge you all to get involved at this level, however small a contribution you think you can make.

From the Executive Committee, we have had the resignation of Alison Bailey Hallam who has moved back to the US with her family.

Membership for the year in general is progressing well, over 850 already and still rising towards last year’s total of 1250.

Synapse continues to develop and progress and I feel particularly proud biannually as it drops on the mat. It is incredible that Louise Dunthorne co-ordinates and completes this journal entirely voluntarily and on top of her work and family commitments. Indeed this applies to all the Executive committee posts. Thanks also to our graphic designer Kevin Wade.

I am also pleased to inform you that we have had three motions accepted for ARC and are now actively seeking ACPIN members to present and support these.

Before I cease my ramblings, I do of course have one further goodbye and indeed a hello to make. The time has come for us to part company with Professor Ray Tallis, our President now for three years.

What does one say about Ray? There were, quite understandably, some definite rumblings in the masses when Ray first took up his post; ‘A medic! President of ACPIN! What were we thinking of!?’ Fortunately, it transpired that we were thinking extremely clearly, one might even say we were enlightened in our choice. Ray has proved to be the most ardent flag flyer for neurological physiotherapy, always flamboyant, more than occasionally controversial and steadfastly supportive. His work for the Royal College of Physicians and the Department of Health have proved invaluable to our organisation and I truly believe there are a far higher number of physicians and government ministers who know more of this job that we all love than there were three years ago.

On a personal note, Ray and I share two other passions, those of good red wine and our families, and we have spent a few lovely evenings sinking one whilst discussing the other.

We will miss you Ray, and thank you for everything.

Fortunately, we have the great honour of welcoming Dr Sue Mawson as our new President and I know that Sue is extremely keen to play an active role in the committee, on which she has previously served as an Executive member. I thoroughly welcome you, Sue and look forward to working with you.

I hope that this has given you some idea of our work in 2004/5 and plans for the coming year.

I hope to see you all at Congress and of course back here for our Silver Jubilee Residential Conference in 2006, when we will be revisiting and exploring Stroke. Look out for the adverts…

TREASURER’S REPORT

Jackie Sharp

I will now present a summary of the financial accounts for National ACPIN for the year end 31st December 2004.

Over the past two years it has been the Executive committee’s intention to enhance national ACPIN’s reserves. This was on the advice of our accountants and I am pleased to report that for the year end 31st December 2004 we had a net surplus of £18,616.

The accounts show a reduction in the total income and expenditure for 2004 compared with the previous year.

The total income (*Figure 1*) was reduced by £13,500.00 and this was primarily because we did not hold a residential course in 2004. In 2003 our March residential course generated over £34K but last year the single day March conference generated only half of that.

Membership income was only slightly up on the previous year despite the increase in membership fees by £2.50 but capitation income from the CSP had doubled. This was due to the CSP catching up with a payment owed to ACPIN from 2002.

We have continued to make a small income from charging for copies of the manual handling guidelines and our database.

Expenditure (*Figure 2*) for 2004 was considerably down on 2003, again as a result of less course expenditure. But overheads were also less and this was mainly due to travelling expenses. These are expenses incurred by members of the committee travelling to and from national and executive committee meetings. The reduction was unexpected but there was a 20% drop in the number of expense claims I received from committee members last year, possibly reflecting less attendance at meetings.

INCOME

	2004	2003
	£	£
Courses	24,392	40,921
Membership	31,621	31,439
Capitation	5,358	2,740
Manual Handling	207	269
Database	205	358
Sundries	671	285
Total	**62,454**	**76,012**

Figure 1

EXPENDITURE

	2004	2003
	£	£
Courses	16,819	39,946
Synapse	8,587	7,518
Travel	3,765	6,903
Administration	5,973	5,983
Capitation	5,144	5,048
Website	1,398	1,951
Research bursary	734	784
Accountants, bank charges, and sundries	1,418	1,751
Total	**43,838**	**69,884**

Figure 2

An additional expense for 2004 was the ACPIN survey of *Neurological Physiotherapy Services* which was sent out to all the membership. This has been included under expenditure for *Synapse* which accounts for the increase in costs here.

Figure 3 (overleaf) divides the course income and expenditure up between the two conferences held last year. In 2003 we were able to bring both conferences in on budget after a number of years of losses, but in 2004 we made a profit on both courses. This was achieved by tighter control of organisational overheads, in particular for the November conference, where they were kept deliberately low by hosting the event at a hospital venue rather than in a hotel. High conference attendance rates and lower than usual speaker and committee travelling expense claims for the November conference also added to the profit made.

The balance sheet (*Figure 4*) on the

COURSE INCOME AND EXPENDITURE

	Income £	Expenditure £	Surplus/(Deficit) £
March 2004 *Exploring gait*	16,052	13,818	2,234
November 2004 *Hands on neurophysiology*	8,190	2,891	5,299

Figure 3

BALANCE SHEET AT 31 DECEMBER 2004

Capital and reserves

	£
Reserves brought forward at 1 January 2004	16,444
Surplus/(deficit) for the year	18,616
Reserves carried forward at 31 December 2004	35,060

Figure 4

31st December 2004 showed a profit of £18,616, and we were able to carry forward reserves of £35,060 into 2005. Whilst these reserves may seem high, they are essential as both our programme at the CSP congress later this year and the next residential conference early in 2006 will both require a significant financial commitment now.

Copies of Accounts 2004
Full copies of the ACPIN accounts are available on request

Vote for Accountants
Vote to retain the current accountants for 2004: Langers, 8-10 Gatley Road, Cheadle, Cheshire, SK8 1PY.

DELEGATE REPORT

Kirsten Cheadle South West Regional Representative

As always, ACPIN put together a varied and interesting programme for the conference this year. The speakers were experts in their field and many are members of the Physiotherapy In Pain Association (PPA) special interest group. There were 120 delegates from all over the UK which meant that it was a good forum for exchange of ideas and catching up with old acquaintances.

The day was opened by Mick Thacker who gave an excellent lecture to set the scene for the other speakers of the day. He took us back to the neurophysiology of pain that we'd all forgotten. His enthusiasm ensured that we were all awake and attentive and that we remembered his take home message that pain is in the brain not the tissues.

Heather Cameron followed with an interesting talk on the measurement and treatment of neuropathic pain. We had a whistle-stop tour of pharmacology for pain and touched on eletrical stimulation as a cost effective treatment.

Lester Jones gave us an insight into the cognitive side of pain, critiquing the currrent evidence surrounding patients attending to and catastrophising their pain. He highlighted the importance of: past experience, the meaning of pain, associated fear and the rehabilitation process in the patients perception of their pain.

The afternoon session started with two talks by physios from the Regional Rehabilitation Unit at Northwick Park Hospital. Lisa Knight showed the hard work and commitment by the whole team that went into producing an integrated care pathway for hemiplegic shoulder pain. She discussed how the development of this tool improved documentation surrounding patients' pain and how it led to the setting up of a shoulder clinic to ensure that the MDT kept the issue at the front of their minds.

Diana Jackson, a senior clinical research fellow discussed the use of a tool to assess shoulder pain in patients with cognitive and or communication deficits. She highlighted that when a patient's pain is estimated by someone else there is very poor reliability and it is much more accurate to assess self reported pain. She discussed the pros and cons of visual analogue scales, numerical rating scales and diagrams of faces when assessing stroke patients and introduced her concept of SPIN – a pictorial scale of pain intensity. This uses pictures of people doing different activities or in different postures and circles with increasing percentages shaded red to indicate an increase in pain for patients to point to.

Dr Chris McCarthy shared the background and work to date on his study looking at classifying low back pain to help in the management of this complex area. His very entertaining talk discussed which common factors should go into a non-specific low back pain assessment which included a psychosocial assessment, functional demonstration of movements bringing on the pain as well as the more traditional elements such as body charts, red flags and palpation. His study aims to look for clusters of patients reporting similar findings on assessment and to then look at strategies for treating these clusters. See *www.backclass* for more information.

The final lecture of the day was presented by Mark Smith who discussed his research into the measurement of thermal sensory perception after stroke. His research is looking at whether the type of stroke according to Bamford's classification (TACI/PACI/LACI/POCI/bleed) correlates with the level of thermal sensory perception and how these compare to healthy normal subjects. It will be interesting to see what results this study finds.

The day was certainly very successful and I am sure that everyone present will have taken home useful information to help understand the pain that so many of our patients are suffering and challenge our ideas on how to best measure and treat them.

EVENTS SUBGROUP REPORT

Anne Rodger

The Autumn one day course on 'Hands On Neurophysiology' at the National Hospital for Neurology and Neurosurgery in November 2004 proved very popular. The day went very well, and the 'open forum question' session promoted lots of discussion.

The Spring Conference and AGM in Northampton on 'Pain and Neurodisability', 5th March 2005 also attracted good support (see previous item).

The CSP Congress in October 2005, will be following a slightly different format, and will be held over two days on Friday 7th to Saturday 8th October. ACPIN will be organising two full days of lectures on the topic of 'Cognition, Perception and Behaviour'.

2006 will be our Silver Jubilee Year. ACPIN is organising a two day residential course at the Northampton Hilton with a celebratory dinner on the Friday night. The provisional topic is neuromuscular disorders.

Details of all ACPIN courses are on the website and are advertised in Frontline. Feedback on course programmes are always valued. Thank you for your continuing support.

HANDS ON NEUROPHYSIOLOGY

Delegate report

ACPIN Day Conference, Saturday 13th November 2004, National Hospital for Neurology and Neurosurgery London.

John Hall

Dr Mayston started the day by addressing the various techniques to measure CNS activity, to test the CNS by stimulation and to picture the CNS. Electromyography, cutaneo-muscular reflex (CMR), PET and SPECT were explored, using examples from physiotherapy-relevant research to explain their benefits and limitations.

Dr Martine Nadler discussed transcranial magnetic stimulation (TMS) tracing changes during and after constraint-induced therapy, giving a motor cortical map of activity. CMR has been used to show changes to certain responses of voluntary EMGs during the acquisition of a novel motor skill and, subsequently to recovery of hand function post-stroke.

Allie Turton highlighted the usefulness of TMS as a non-invasive and painless technique to explore the corticospinal pathway activity. The pros and cons of TMS were brought to life with a memorable cardboard model, photographs and a few more 'wiggly lines'. TMS has been used to scrutinise hand function and swallowing post-stroke, and there is a potential for rapid rate TMS as a rehabilitation tool.

A discussion forum then helped us to link what we'd just heard to our own clinical perspectives.

Caroline Alexander gave a thought-provoking and highly relevant presentation on reflex control of the shoulder girdle muscles. EMG studies explored the relationship between the upper and lower fibres of trapezius; taping along or across the lower fibres of trapezius and whether general or task-specific concentration will facilitate shoulder girdle musculature.

Dr Marko Bogdanovic presented work on partial body-weight support treadmill ambulatory training using functional magnetic resonance imaging. MRI picks up an increased flow of oxy-haemaglobin which occurs when areas of the brain have been activated. In the group studied, reorganisation of dorsal pre-motor and motor areas of the cortex were demonstrated.

In summary, the conference was very well organised, lived up to my expectations and has given me plenty of ideas to take up for CPD.

COMMUNICATION SUBGROUP

Emma Forbes

The Communication subgroup have been working towards updating the *Regional Representative Pack*. It should be available on electronic format and on new headed paper very soon.

We have also been busy writing the motions (see below) for the Annual Representatives Conference in Cardiff.

We submitted four motions and have had three of these accepted. At this moment we are unaware whether these will feature on the first or secondary agenda. These deal with issues of extended scope practitioners, rehab services and guidelines.

We actively participate in ARC and are keen to campaign for real issues that matter to our membership. Any ideas for next years ARC should be forwarded to myself.

We also need four delegates to attend ARC for this year and anybody keen should again contact myself.

ARC MOTIONS

Extended Scope Practitioner

This conference demands the CSP urgently provide a framework of core competencies to facilitate the development of extended scope practitioner posts in neurology.

Explanatory notes

There is a requirement for extended scope practitioner posts across the country to insure neurological physiotherapy experience is recognised and indeed utilised. The CSP should develop a framework to ensure the development of these posts are facilitated and standardised across the country. This would ensure high standards are maintained and posts can be created without delay.

Rehabilitation Services

This conference demands the CSP should immediately lobby the government to secure funding for the NHS to provide equal access to neurological rehabilitation following discharge from acute services to end regional discrepancies and indeed variations in the provision of patient care.

Explanatory notes

It is becoming increasingly evident that some geographical areas have outpatient and/or community neurological rehabilitation services insitu while in other areas there is minimal neurological physiotherapy provision following acute services. With research evidence and RCP and BSRM guidelines both stating adequate outpatient and community services are required to achieve successful outcomes with neurological patients the CSP should lobby the government to raise the profile of follow up neurological rehabilitation services and secure funding promptly.

Wheelchairs

This conference demands the CSP immediately provide standards for wheelchair provision which ensure equal consideration is given to lifestyle and physical needs.

Explanatory notes

There is evidence to suggest the basic principles of seating are to understand the different needs of each user group including physical, psychological and social. The CSP should develop guidelines to highlight the aspect of social needs and lifestyle so patients' seating has a positive impact on quality of life and does not compromise patients ability to participate in life.

Guidelines

This conference demands that the CSP immediately lobby government to clearly identify the funding required and the source from which such funding should come to allow the implementation of national guidelines including RCP, NICE and NSF.

ACPIN programme for CSP Congress 2005

Birmingham Friday 7th & Saturday 8th October

Cognition *and* ***behaviour***

complex challenges to rehabilitation

The conference aims to explore various aspects of cognition and behaviour and some of the problems encountered following brain injury. Most importantly it aims to highlight why an understanding of this area is beneficial to physiotherapists working in neurology as well as provide some useful advice on the treatment and management of patients with cognitive or behavioural issues.

Friday 7th October

- ***An introduction to cognition and implications for physiotherapists***
  Anne Brannagan, Clinical Specialist Occupational Therapist and
  Kit Malia, Cognitive Rehabilitation Therapist
  Both are from Headley Court, Epsom, Surrey.
- ***"No good telling me I've got to do it myself": enabling personal confidence in progress following stroke*** *Fiona Jones, School of Physiotherapy, St George's Hospital Medical School, London*
- ***Memory impairment following brain injury – rehabilitation of memory***
  Donna Malley, Clinical Specialist OT, Oliver Zangwill Centre, Cambridgeshire.

Saturday 8th October

- ***Conversion disorder***
  Physiotherapy team, National Hospital for Neurology and Neurosurgery, London
- ***Managing patients with challenging behaviour***
  Katrina Moles, Physiotherapist, Royal Hospital for Neuro Disability, Putney
- ***Understanding and treating dyspraxia***
  Therese Jackson, Head Occupational Therapist, Aberdeen Royal Infirmary

Explanatory notes
All members agree that production of guidelines is a positive move to ensure the standardised use of clinically effective practice. However, this is only possible is appropriate funding is identified otherwise guidelines remain a paper exercise and not put into practice. We believe the CSP should campaign on behalf of all members to insure the government provide the funding to fulfil the purpose of the guidelines.

CLINICAL PRACTICE AND AUDIT GROUP

As explained in the groups report for the Autumn edition of *Synapse*, following a regional review of the *Core Standards of Physiotherapy Practice* by ACPIN members it was generally felt that there was no need for additional neurology specific standards. In addition the CSP made it clear, following our review, that special interest groups should not publish additional standards of practice.

Unfortunately the revised CSP core standards are still awaited and it is as yet unknown whether the revised standards will address the areas of concern raised by members in some of the regions. The main areas of concern were that the current core standards lack recognition covering issues surrounding patients with cognitive, communicative or behavioural impairments, as well as a lack of reference to National Service Frameworks or guidelines. Once the new standards are published, the group will reassess them in light of the comments made.

The other projects this group is working on include revamping the ACPIN welcome letter that is sent to all members at the beginning of the year, plus compiling a new feature for *Synapse* which aims to promote and share good practice. The intention is that members can write in and tell us about innovative practice, programmes or projects that they are involved in, and the sub-group will help compile it into a feature article. This idea is in its 'early stages' so watch this space! If anyone would like to share their good practice, please contact Louise Dunthorne, the *Synapse* co-ordinator.

RESEARCH SUBGROUP

The Research subgroup would like to thank members for their involvement in the *Research Questionnaire* and the *Survey of Neurological Service in 2004*. Reports of these activities were included in *Synapse* Autumn/Winter 2004 issue and there is still some further work to do with this information. However, this type of activity is time-demanding for ACPIN members, the research subgroup and the national committee. In line with our initial plan, we are not repeating the *Research Questionnaire* in 2005 and we will review this decision in 2006. As a result, the research subgroup is taking the opportunity to consider its future plans. We plan to continue the ACPIN research bursary. The value of the bursary has been increased to £800 and the next deadline is 1st June 2005. Details can be obtained from Mary Cramp (Honorary Research Officer). We also plan to continue with *Research Forum*, the section in *Synapse* that focuses on research-related issues. We are always happy to receive suggestions about the issues you would like to see addressed in *Research Forum*. In a broader context, we also welcome suggestions about how you would like the research subgroup to support you.

Our aims for 2005 are as follows:

- To provide support for ACPIN national committee & liaise with the CSP and external agencies on research-related issues
- To promote and support research activity within the membership
- To advance understanding of aspects of research among the membership
- To continue with research focused section in *Synapse*

Other news

DEVELOP YOUR PROFESSIONAL SKILLS AND KEEP UP TO DATE

Ralph Hammond, Training and Promotions Manager, iCSP, The Chartered Society of Physiotherapy, London, UK.

Clinicians frequently report they have no easy way of discussing clinical problems with colleagues, that they have no time to access up to date research, and are inundated with new policies – now there's a new way to overcome these challenges.

interactiveCSP is an easy to use web site, designed to enable physiotherapists and assistants to gain access and share knowledge on specific clinical and professional interests. It has an email facility to enable you to tap into the 'know how' of the profession. It was purpose-built to meet the needs of physiotherapists and assistants. Don't believe how easy it is to use? Check it out: ***www.interactivecsp.org.uk***

> **"The system is very user friendly and has become my point of reference on a wide variety of issues from managerial to clinical.**
>
> **Chartered Physiotherapist**,
> N&Y Pilot evaluation response, 2003

Why and how it was developed

interactiveCSP was developed to strengthen the communications and networking capacity of physiotherapists to meet the current needs and changing requirements emerging from the health modernisation reforms of recent years.

The system was designed and built in response to a range of demands identified through extensive consultation with physiotherapists in the Northern and Yorkshire regions.

WHAT IS IT?

- *interactiveCSP* is an easy to use web site
- Designed for physiotherapists and assistants
- Signposts to knowledge on specific clinical and professional interests
- Email facility to contact everyone on the network
- The address is ***www.interactivecsp.org.uk***

The system was then piloted in the Northern and Yorkshire regions and comprehensively evaluated.

There are 60 networks; many moderated by physiotherapists. There are over 7,000 items of content, and this will rise and rise. To help *iCSP* is fully searchable and includes an email bulletin that sends out regular updates to each network user summarising any new content.

How is ACPIN involved?

ACPIN plans to establish a 'neurology' network on the system when it rolls out across the UK in 2005. This will provide you with access to a range of content related to the aims of the specialty. The network will contain services including: news, events, documents, discussions, links to useful websites, and projects, all providing content related to neurology. You can post clinical questions to other physiotherapists who share your interests, tell them about techniques you have tried, share ideas, and provide clinical tips.

> **"I consider myself really fortunate to have been in the northern region during its pilot and value the impact it's had on the information I can easily access.**
>
> **Chartered Physiotherapist**,
> N&Y Pilot evaluation response, 2003

ACPIN will be responsible for the network, and will shortly be asking for volunteers to help them to run or moderate it. This essentially means overseeing content added by users and contributing items based on your knowledge and experience to ensure that the network builds into a valuable library of relevant knowledge and an active exchange of information and experience between users. The role can be shared among several people, does not require advanced computer skills, and can be adapted to suit the time that you have available – taking perhaps a few hours a month. All moderators will also receive initial and follow-up training on both the system and the role, and ongoing support.

> **"I have managed to be more aware of what is going on than ever before.**
>
> **Chartered Physiotherapist**,
> N&Y Pilot evaluation response, 2003

Developing your professional skills

Being a moderator will put you at the centre of clinical and professional knowledge-sharing regarding physiotherapy practice in neurology– irrespective of where you live or work. You will be able to both learn from and participate in valuable discussions with your peers and it will greatly improve your IT skills and confidence.

Is it doable?

Currently over half of the moderators on the pilot system are physiotherapists, covering all ages, grades and IT skill levels. So, yes, it *is* doable!

interactiveCSP will help improve your professional skills. You can use it to keep up to date with research, learn about local and regional initiatives as well as government policy, and get to know more about what is going on in the profession.

KEY CHARACTERISTICS OF *ICSP*

- Easy to use
- Built around specific interests, such as acupuncture, diversity, respiratory, research
- It's personal and flexible
- Access is for CSP members only
- Users can add content
- It's fully searchable

Once you start to participate you could use this as an example of your development and how your professional profile is evolving as you learn more about the profession and wider health policy.

What do your colleagues think of it?

The pilot website was run in Spring 2003 in the Northern and Yorkshire regions of England. It was evaluated during Summer 2003 with extremely positive findings:

- 93% of users (all members of the CSP) thought *iCSP* either 'good' or 'excellent'
- Over 90% rated the services either useful or very useful.
- More than two thirds indicated *iCSP* had added significant value to their CSP membership.
- One member said, 'a wonderful resource for keeping up to date with national developments and peers.'

Register to *interactiveCSP* – if you are not yet registered the best way to get a proper feel for the system is to register and use it. To register, go to *www.interactivecsp.org.uk*, click on 'register', and fill in the on-line registration form. You need to know your membership number and your email address to complete the registration process.

Interested in finding out more about becoming a moderator?

A letter was sent out over the new year to all members of ACPIN telling you more about moderating. Contact Ralph at: hammondr@csp.org.uk

COGNITIVE REHABILITATION
&
PHYSIOTHERAPY

COURSE LOCATION: Gatwick Hilton, Gatwick Airport, Sussex, UK **Dec 3rd 2005**

INSTRUCTORS: Kit Malia & Anne Brannagan

'Neuro-physiotherapists need to be not only skilled in the physical management of neurological deficits, but also experienced in recognition and handling of associated cognitive and behavioural deficits which may impact on the patient's ability to engage and cooperate in therapy sessions and to carry over physical gains into daily activities'

Section 7.2 (p.39) of Rehabilitation following acquired brain injury: National Clinical Guidelines (2003) (Turner-Stokes L, Ed). Royal College of Physicians and British Society of Rehabilitation Medicine. London: RCP, BSRM

COURSE DESCRIPTION:

This one day interactive workshop is suitable for physiotherapists working with adults who have cognitive problems following brain injury.

The course presents a practical model within which to understand cognitive problems in the physiotherapy environment. The workshop format encourages the development of practical activities that can be put into practice within the department.

AIMS:

- To define cognition
- To provide a practical cognitive framework
- To increase therapists' understanding of cognitive problems and how these impact on physical function
- To provide practical ideas that physical therapists can implement
- To demonstrate how physical therapy sessions can be used to treat cognitive problems

COURSE CONTENT:

INTRODUCTION: Why run this course? Defining cognition. The 5 cognitive modules – attention, visual processing, information processing, memory & executive functions. Metacognition. Identifying the impact of cognitive problems on physical rehabilitation. The 4 approaches to treating cognitive problems.

ATTENTION & INFORMATION PROCESSING SKILLS: Defining attention. The 5 levels of attention. The importance of attention. Understanding what it is like to have attention problems. Defining information processing. The relationship to memory and organisation skills. Capacity, speed and control. Recognising information processing problems.

ATTENTION/INFORMATION PROCESSING AND THE PHYSIOTHERAPIST: Ordering motor tasks according to cognitive demands. Evidence from published articles. Concept of resource competition and overload. Conscious versus automatic skills. What this means for the day to day practice of physiotherapy. Practical organisation and treatment strategies to incorporate rehabilitation of attention and information processing deficits into the physiotherapy department.

VISUAL PROCESSING/MEMORY AND THE PHYSIOTHERAPIST: Defining visual processing. Hierarchical visual processing model. Understanding what it is like to have a visual processing problem. Visual processing and the PT. Defining memory. The 5 processes involved in memory. Memory and the PT – practical suggestions.

EXECUTIVE FUNCTIONS AND THE PHYSIOTHERAPIST: Defining executive functions. Suggestions for the PT to use in helping develop executive functions.

REVIEW OF OWN PRACTICE: In small groups time is spent reviewing practice. How will you alter practice to take account of cognitive problems? How could you structure physiotherapy sessions to improve cognitive deficits? Practical demonstration of how physical skills can be used to treat cognitive deficits.

£66

Brain Tree Training

www.braintreetraining.co.uk

TO BOOK A PLACE: If you would like to attend, please pay online or send your name, address, phone number and email address to Sally Dawson at the address below.

01276 472 369

Brain Tree Training
PO Box 79, Leatherhead
Surrey, KT23 4YT, UK

Enquiries@BrainTreeTraining.co.uk

Research forum

In the last issue of *Synapse*, we reported about the survey of neurological physiotherapy services, sent out with the 2004 Spring issue of *Synapse*. We are following up on one interesting aspect of the survey that stimulated discussion within the research subgroups, that is, the response to questions about clinical guidelines. Clinical guidelines utilise research evidence and it therefore seemed appropriate to consider some issues relating to them in Research Forum.

Another important matter to bring to your attention is one of the stated aims of ACPIN which is 'to encourage members to participate in research activities and the dissemination of information'. We hope that you are aware of the ACPIN research bursary – but in case you missed it last time, we are including the terms and conditions for the bursary again. If you are interested, the date for you to note is 1st June – the next deadline for submission of an application. Firstly though, we want to inform members how ACPIN would like to support researchers and clinicians who would like to present and discuss their research with other ACPIN members.

PRESENT YOUR RESEARCH TO ACPIN MEMBERS!

- Do you think your research (large or small scale) is interesting and relevant to neurological physiotherapy?
- Do you want to gain experience of presenting your research, either by poster or oral presentation to a friendly and supportive group?
- Would you like to discuss you work with professional colleagues with interest and experience of neurological physiotherapy?

ACPIN normally organises two national conferences per year and these conferences are great occasions to engage in interesting and stimulating discussion with fellow physiotherapists working in neurological services throughout the country. They are also an ideal forum to gain experience of presenting research and exposure for an area of research of interest to you. ACPIN national committee would like to provide support for members (and other interested parties) to present and discuss their research work with ACPIN members. However, we feel that many people are unaware of the opportunities available to present their work at national conferences and response to calls for recent conferences have been poor.

ACPIN conferences are generally one or two day affairs held in March and October/November (with exception of recent ACPIN programmes at CSP Congress). Forthcoming ACPIN conferences will offer opportunity for presentation of research relevant to neurological physiotherapy. Poster presentations will be held at one day conferences and both poster and oral presentation sessions will be held at two day conferences. This applies to ACPIN conferences only – ACPIN programmes at CSP Congress will not operate in this way but follow standard procedures for CSP Congress.

ACPIN will be running a programme at CSP Congress, October 2005 and the next ACPIN conference where you can present your work will be in March 2006. So there is plenty of time to plan ahead! This will be a special occasion, as it will mark the 25th anniversary of ACPIN. The process for applying to present your work is simple. When conference details are published, a call will be made for poster/oral presentations and interested parties should submit an abstract of their work for consideration. For all ACPIN conferences, details will be published with the conference details in *Synapse*, in *Frontline*, on our website and hopefully on iCSP, which is due to come online to all the membership in May. If you have any further queries about presenting your research to ACPIN members, you can contact Mary Cramp, Honorary Research Officer (address: School of Health & Bioscience, University of East London, Romford Road, Stratford, London, E15 4LZ; email: m.c.cramp@uel.ac.uk).

CLINICAL GUIDELINES: ARE THEY RELEVANT?

The survey of neurological services in 2004 asked two questions of members in relation to *Royal College of Physicians (RCP) Stroke Guidelines*:

1. **Have you or do you refer to the RCP Stroke Guidelines?**
2. **Have the *RCP Stroke Guidelines* improved your clinical practice?**

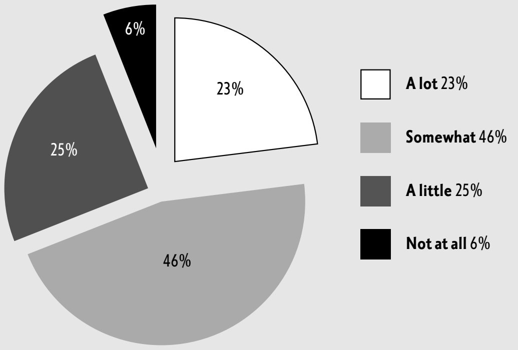
The possible answers to the above questions were:

- A lot
- Somewhat
- A little
- Not at all
- Not applicable.

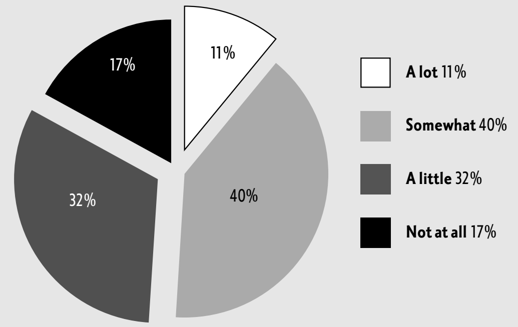
197 of the 277 members who returned the survey indicated that they treated stroke patients. With non-responders and those who answered not applicable excluded, 188 responses were analysed and are described below. *Figure 1* shows the percentage response rates in each category to the questions above. Indications are that, although there was good awareness of the *RCP Stroke guidelines*, the guidelines have had limited impact on clinical practice.

The results interested the Research Subgroup of the ACPIN national committee. Given that clinical guidelines draw on available research evidence, it seems pertinent to discuss in this forum some of the issues related to clinical guidelines and draw attention to key sources

PERCENTAGE RESPONSES



Question 1 – Refer to RCP Stroke Guidelines



Question 2 – Improve clinical practice

Figure 1

about clinical guidelines.

Clinical guidelines are defined as 'systematically developed statements to assist patient and practitioner decisions about appropriate health care for specific clinical circumstances' (Field & Lohr, 1992). While clinical guidelines may be derived from consensus or expert opinion, an evidence-based approach to the development of clinical guidelines is increasingly utilised. Therefore, a key aspect of any clinical guidelines is consideration of the nature of evidence used to formulate the guidelines.

What is the nature of evidence?

Literature search strategies and evaluation of the evidence are key processes in the development of clinical guidelines. Published clinical guidelines provide information about the assessment of evidence. For example, the *National Clinical Guidelines for Stroke: Second Edition* includes a table (*Table 1*) as guidance to the import given to the evidence. It is therefore essential to consider the nature of evidence included in the guidelines and grading applied to different types of evidence when reading clinical guidelines.

Evidence based practice is shaped by what forms of knowledge are counted as evidence (Gibson & Martin, 2003 p351). Questions are being raised about the nature of evidence in clinical practice and the apparent over-reliance on the randomised controlled trial (RCT). Hierarchies of evidence, which place RCT's at the pinnacle of the triangle (and so imply superiority), can be commonly found in prominent publications used by physiotherapists such as the *National Clinical Guidelines for Stroke* (Intercollegiate Stroke Working Party, 2004) and *National Service Frameworks* eg the *NSF for Older People* (Department of Health, 2001). However, the use of research design should therefore be driven by the nature of the question being asked and not by the method that is deemed to be the gold standard.

GUIDELINE STRENGTH: LEVEL OF EVIDENCE AND GRADE OF RECOMMENDATION

Level of Evidence	Type of Evidence	Grade of recommendation
Ia	Meta-analysis of randomised controlled trials (RCTs)	**A**
Ib	At least one RCT	**A**
IIa	At least one well designed controlled study but without randomisation	**B**
IIb	At least one well designed, quasi-experimental study	**B**
III	At least one well designed, non-experimental descriptive study (eg comparative studies, correlation students, case studies)	**B**
IV	Expert committee reports, opinions and/or experience of respected authorities. This grading indicates that directly applicable clinical studies of good quality are absent.	**C**
Consensus of working party	Recommended good practice based on clinical experience of the Guideline Development Group	**D**

Table 1

Intercollegiate Stroke Working Party (2004) National Clinical Guidelines for Stroke: Second Edition. p6

It has been recently documented that many therapists find guidelines too broad and not easy to implement; disappointment was also voiced that the current system fails to acknowledge the value of practice-generated knowledge (Ilott et al, 2004). Therefore, it is perhaps timely to remember that other forms of evidence can be utilised in the delivery of evidence-based healthcare. These include gleaning knowledge from clinical experience, patients, clients and carers, the local context and environment as well as more formal research (Rycroft – Malone et al, 2004).

What is the clinical relevance of guidelines?

The development of practice guidelines aims to improve the quality and efficiency of care. They can be seen as a logical step in the process of professionalisation of physiotherapy and a way to justify our position in the healthcare system (Hendriks et al, 2000). Guidelines can be used to 'guide' professionals in their daily practice and make it explicit what we do and why we do it. They are a frame of reference and can help us in our decision making process, decrease variability in practice and can initiate changes in our established patterns of practice (Hendriks et al, 2000; Woolf et al, 1999).

Clinically, a survey of physiotherapists' attitudes towards evidence based practice and personal experiences in the Wessex area (Barnard & Wiles, 2001) demonstrated that some therapists, particularly those working in the community setting, felt a lack of engagement with the development of clinical guidelines. This was due to poor access to library facilities and difficulties meeting peers. The CSP has worked hard to advertise and promote new guidelines on their release but access to information needs to be considered.

Clinical guidelines do provide an opportunity to promote the value of physiotherapy and to argue for resources to improve services. We have to be careful here though. For example, many departments purchased treadmills on the strength of the recommendations made in the first edition of the *National Clinical Guidelines for Stroke* in 2001. Later review of the literature suggested that lack of research into conventional therapy interventions, poor quality of and difficulty comparing primary studies plus the use of a variety of outcome measures meant there is little hard evidence as yet to justify changing clinical practice in favour of treadmill training of gait after stroke (Manning & Pomeroy, 2003). To advance this situation, it is important that department and clinicians share protocols/parameters of training and the clinical outcomes of the training. As outlined above, 'clinical evidence' is also a valuable resource to inform practice.

There is a lack of evidence into conventional therapy interventions and indeed which components are most effective. Do we disregard clinical interventions just because of lack of evidence or current quality research? Do guidelines lead to 'recipe' treatment based on RCTs of selected 'uniform' patient groups? Most evidence is from experimental studies of groups of patients but patients are individuals and may respond differently and application of 'recipes' may compromise quality of care. It has been argued that a starting point for the application of any evidence to an individual patient should be in determining how the patient is similar to the patients in the study group and not how they are different (Scalzitti, 2001) and that we should use the results of research trials as part of our decision making for an estimate of treatment effect for the individual patient (Herbert et al, 2001).

Do we provide management of our

1010101010101010101010 **STATS NOTE** 1010101010101010101010

THE MEDIAN – PIGGY IN THE MIDDLE

Our STATS NOTE series on the measures of central tendency used in descriptive statistics would not be complete without examining the MEDIAN in a little more detail.

The median is literally the mid-point in a set of results, such that if you arrange your data in increasing order, there are as many values above the median as below it. If you have an odd number of results then the median is the actual value of the middle score itself. If however if you have an even number of results then the median is the average of the two middle scores. As with the mode and the mean, the median can be easily calculated by hand or using a computer spreadsheet programme.

The median is most useful when used with skewed values or data with outliers. In the following illustrations the median remains stable, whilst the mean is radically affected by large changes to the scores in the two different situations. Say, for example you wanted to investigate the current practice in your area for the number of days between botulinum toxin injection to the upper limb and subsequent splinting, you might be presented with the following set of results

1 1 2 7 7 7 21 28 35 42 56

where the median length of time would be calculated as 7 days, the mode 7 days and the mean 18.8 days. If however your data did not have such extremes of scores, for example

1 2 3 4 5 7 7 7 8 9 10

then although the median and the mode would still be 7 days, the mean would be considerably reduced to just 5.7 days.

Other points to consider:

- On its own the median give us insufficient information about our data - if our research is to be accurately interpreted then we need to know more about the nature of our results such as the range of scores
- The median is mainly used with numerical values but it can also be used with ordinal and some nominal data.

As with the mode the general rule of thumb should be that it is usually advisable to calculate the mean if your data allows, however:

- If you have calculated the mean but would like to know more information about your results
- Or if you have skewed values where the mean would be adversely affected by outliers

then THE MEDIAN is a useful measure to use.

patients in accordance with current clinical guidelines? As yet a literature search by the authors showed no current published articles relating to clinical guidelines for neurological rehabilitation. A recent survey of manual therapists showed that to some extent they were acting in accordance to the main areas of the guidelines (Strand, 2005) but it also highlighted areas of deficit which in itself is a useful tool to further improve quality of care. Clinical audit is a useful way of evaluating our practice alongside guidelines. Again, results need to be disseminated to the profession as a whole. Clinical guidelines have been recommended as an information source for continuing professional education and as instruments for self assessment /peer review to learn about potential gaps in performance (Feder et al, 1999). However, studies have shown that medical clinicians might be concerned about the impact of clinical guidelines on their clinical autonomy and satisfaction with practice (Davis & Taylor-Vaisey, 1997).

Reading the clinical guidelines are an opportunity to reflect upon our current service provision and organisation, to see how we can improve the quality service for our patients eg the need for increasing information for patients and flexible referral systems. This may lead to further research or innovative changes to services for patients.

Sourcing clinical guidelines

There are now a number of web-based resources to provide up-to-date information and access to clinical guidelines.

- http://libraries.nelh.nhs.uk/guidelinesFinder/
  A database of UK approved evidence-based clinical guidelines available on the internet in full-text and associated information (maintained by the Sheffield Evidence for Effectiveness and Knowledge service)
- www.csp.org.uk/effectivepractice/guidelines.cfm
  Web pages maintained by the Chartered Society of Physiotherapy to inform members about current guidelines relevant to physiotherapy and ongoing developments.
- www.nice.org.uk
  National Institute of Clinical Effectiveness
- www.sign.ac.uk
  Scottish Intercollegiate Guidelines Network (SIGN)

The last two are key agencies for the development and publication of clinical guidelines within the UK.

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ACPIN RESEARCH BURSARY 2004/2005

We thought it would be timely to remind members about the ACPIN Research Bursaries. The purpose of the award is to encourage research activity among the membership and to assist members undertaking research as part of their current workload or undertaking research as part of an educational course. There are some amendments to the application procedure and the value of the award. Bursaries of up to £800 are available to cover research-related costs.

Awards

- The maximum award allowable is £800.
- Awards will be made to cover research-related costs in relation to a specific project, eg Equipment; Materials/Consumables; Specialist software; Travel expenses.
- Awards will not be granted to cover the following: course fees; computers, staff time (secretarial support of data entry; blinded Rx)

Eligibility

- Applicants will be full members of ACPIN of at least two years standing.
- Applicants will be resident in the UK.
- Applicants will be planning to or currently involved in research.
- Research must be related to physiotherapy for neurological conditions.
- Members conducting research as part of an educational course are eligible to apply for support.
- Applicants are expected to be the active participant in the proposed project.
- Applicants cannot apply for more than one bursary.

Application procedure

- Applications for the award must be submitted on the standard application form (available published in *Synapse* or can be obtained from Mary Cramp (Hon. Research Officer).
- Applications will be considered twice annually. Completed application forms should be received by 1st December or by 1st June for consideration at the National Committee meetings in January and July respectively.
- An application once submitted may only be re-submitted upon invitation.

Applications will be considered in competition bi-annually. Completed applications will be considered and graded independently by members of the Research Subgroup, ACPIN National Committee. Recommendations for awards will be reviewed by an independent expert referee. Awards will not given automatically for each competitive round. Applicants will be informed of the decision of the committee within two months of the application deadline. The decision of the Committee is final.

Terms and conditions

1. Awards are made on the understanding that the investigations comply with ethical and safety requirements of the involved institutions. Evidence of ethical approval and insurance arrangements may be requested.
2. Bursaries must be used solely for the purposes set out in the application procedure. Any changes in proposed expenditure must be agreed to by ACPIN. At the end of the research project, any remaining balance should be returned to ACPIN.
3. A summary of expenditure accompanied by receipts (where appropriate) will be required.
4. ACPIN must be notified of any further changes in the proposed project eg timescale etc.
5. Recipients of a research bursary will be required to produce a report for Synapse on completion of the research project. The report will be expected within six months of completion of the project.

Other news extra

ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS INTERESTED IN VESTIBULAR REHABILITATION (ACPIVR)

A small but committed group of physiotherapists interested in vestibular rehabilitation have been meeting regularly in the last few years, with an aim of promoting vestibular rehabilitation.

We have collected a database of about 200 physiotherapists who have expressed an interest in vestibular rehabilitation. The group is now ready to formalise its agenda and we are looking at moving towards becoming a recognised Clinical Interest Group within the CSP. We anticipate that membership to ACPIVR will be £10 *per annum*. The group's initial priorities will be: organising relevant courses, looking at competencies and improving recognition of vestibular disorders within physiotherapy

If you would like to find out more about the group, or if you are interested in joining the committee, please contact: Anne Rodger, Clinical Specialist in Physiotherapy, Therapy Services, National Hospital for Neurology and Neurosurgery, London. WC1N 3BG. (0207 837 3611 x3438). Anne.rodger@uclh.org

If you were previously on the database, please also contact Anne so that it can be updated.

Pain
& NEURODISABILITY

ACPIN national conference & AGM

Abstracts, references and biographies

Saturday 5th March 2005
Hilton Hotel
Collingtree
Northampton

LECTURE 1

Mick Thacker MSc Grad Dip Phys MCSP MMACP
International Lecturer, PhD student, King's College, London

Brain pain: an overview of pain and the central nervous system

This talk will focus on the recent advances in the neurophysiology of neuropathic pain. It will take a broad based approach to the molecular aspects of pain and will include a discussion of the role of neuropeptides, neurotrophins and cytokines/chemokines in the production and maintenance of neuropathic pain following nerve injury. Both alterations in the peripheral and central nervous systems will be outlined and correlates between pain production and neuro-de/regeneration identified. The effects of this pathobiology on higher level processing will be described and the implications of this science for the clinician will also be included. The talk will also include a brief discussion on the modern concepts in the management of neuropathic pain.

Biography

Mick qualified in 1987 and went to work at St Stephen's Hospital. He pursued his interests in neuromusculoskeletal physiotherapy undertaking the MACP modular course, which he passed with distinction in 1991. He continued to work in out-patients and formed a strong professional relationship with David Butler and Louis Gifford. He obtained his MSc in 1995 from University College London, where he was able to foster his interest in pain neurophysiology. Mick began his lecturing career in 1994 at Brunel University and then St George's Medical School before moving to King's College London. He is in the last stages of his PhD (supervisors Prof Pat Wall, Prof Steve McMahon and Dr Steve Thompson) which focuses on the role of the immune system in the production of neuropathic pain. Mick lectures both nationally and international-ally on pain neuroscience and treatment. He is co-author of the several articles and book chapters including most notably the chapter on physiotherapy in the new edition of *The Textbook of Pain.*

LECTURE 2

Heather Cameron MCSP, MSc
Research Fellow, Pain Research Institute, University of Liverpool

Mechanisms and management of neuropathic pain

Pain is a multidimensional phenomenon that can vary in intensity, location, time pattern and quality. Neuropathic pain (NP) has been defined by the International Association for the Study of Pain as 'pain initiated or caused by a primary lesion or dysfunction in the nervous system'.

Unlike acute nociceptive pain, neuropathic pain does not signal noxious tissue stimulation and therefore to the sufferer often feels abnormal. It may have a burning or electrical quality and is often associated with allodynia (a painful response to a non-noxious stimulus) and/or hyperalgesia (a heightened response to a noxious stimulus). These not only cause distress and discomfort to the sufferer but can be a barrier to rehabilitation. The presence of allodynia can make the lightest of touches painful and therefore hinder therapy of which skin contact is frequently an integral component. In addition to the pain, symptoms may include numbness, lack of sensation, weakness, reduced function, loss of balance and co-ordination, abnormal reflexes, discolouration of the affected skin and trophic changes in the affected area.

Traditionally NP has been classified as 'peripheral' or 'central' according to where the site of the lesion occurs. Whilst these terms are still generally utilised, research has demonstrated that central changes occur in response to peripheral injury and vice versa. A number of researchers are now calling for a more mechanistic classification whereby NP is classified according to underlying mechanisms producing symptoms rather than site of trauma or disease process. This may allow treatment strategies to be better targeted, however in reality we are some way from this in the clinical situation. Modern imaging technologies in the form of functional magnetic resonance imaging (fMRI), Positron Emission Tomography (PET) and magnetoencephalography (MEG) have also allowed us to further understand the functional aspects of NP.

NP is often associated with a disease process e.g. diabetes mellitus, herpes zoster, multiple sclerosis or may be secondary to trauma eg peripheral nerve/spinal cord injury, CVA or head trauma. As neurological deficit is often apparent it is upon this that medical attention frequently focuses. However the NP may contribute as much or even more to a patient's actual distress or disability.

Despite extensive research, particularly in the past two decades, chronic NP remains an unmet therapeutic challenge. Management typically relies on pharmacological agents however NP does not respond to traditional analgesics such as Non-Steroidal Anti Inflammatory Drugs. Anticonvulsants and antidepressants therefore remain the mainstay and have shown some efficacy. Novel agents however are emerging although efficacy has yet to be demonstrated.

In some instances neuromodulation therapies (TENS, spinal cord stimulation, Deep Brain or Motor Cortex stimulation) or Neuroablative procedures (eg Drez, Thalamotomy) may be appropriate and effective for specific NP.

Current theories on mechanisms of and the clinical management of neuropathic pain will be discussed.

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Biography

Heather Cameron qualified in 1990 and since then has worked in various hospitals on Merseyside.

She has specialised in pain medicine and neuro-modulation for about eight years; her most recent clinical post was in the pain clinic at The Walton Centre for Neurology and Neurosurgery, Liverpool. During this time she developed an interest in both neuropathic pain and the central mechanisms of pain and undertook an MSc in Pain Management in 2003.

She is currently a full time Research Fellow in the Pain Research Institute, University of Liverpool and is undertaking a PhD, having received a researcher development award from the Department of Health in 2004.

Her current research is investigating the psychophysical properties and neural correlates of experimental and clinical pain utilising functional magnetic resonance imaging (fMRI) of the brain.

LECTURE 3

Lester Jones MSc Med
Senior Lecturer Kingston University and St George's Hospital Medical School

The **cognitive** component of pain

Pain is defined as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage' (IASP). And, as has been presented at a previous ACPIN conference, pain is always 'located' in the brain! It is a perception based on the evaluation of inputs, outputs and previous experiences of the brain, and the attached nervous system.

Cognition can be defined as mental activity that encompasses perceiving, remembering, learning, thinking, interpreting, believing, and problem solving. These cognitive processes all have the potential to influence the pain experience and also to individualise that experience.

Focus of attention is considered an important aspect of perception of pain. This session will explore how past experiences, the meaning of the pain, associated fears and the rehabilitation process might enhance or inhibit the attentional focus, and therefore the perception of pain.

A final point will be made about pain measurement and how the use of simple scales may not be enough.

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Biography

Prior to arriving in the UK in 2000, Lester Jones worked at the University of Sydney, Pain Management and Research Centre in a clinical role. This involved the management of patients suffering complex pain conditions in a programme modelled on the INPUT programme at St. Thomas'. As well as his physiotherapy training (La Trobe University, Australia), he has a psychology degree, a post-graduate psychology qualification, and a Masters Degree in 'Pain Management' from the Faculty of Medicine, University of Sydney. He is currently employed in the Faculty of Health Care and Social Sciences, Kingston University & St George's Hospital Medical School (University of London), as a Senior Lecturer (School of Physiotherapy), and in November 2004 was appointed as honorary Senior Lecturer, in the Faculty of Medicine at the University of Sydney. He is also involved as an online tutor for the certificate and diploma distance-learning courses in 'Pain Management', run by the University of Sydney. His interests include the study of pain and management of pain, application of cognitive-behavioural principles, the bio-psycho-social model and education.

LECTURE 4

Lisa Knight Grad Dip Phys
Private Practitioner and Educator, MSc Student

Developing a tool for the team management of shoulder pain in hemiplegia

Hemiplegic shoulder pain is a common and distressing sequel to neurological damage. It is currently believed to affect 40% of stroke patients with residual impairments, at some point during the year post onset (Gamble et al, 2002; Ratnasbapathy et al, 2003). The significance of pain to the rehabilitation team is that it interferes with many aspects of therapy, limits functional use of the arm and may increase the period of hospitalization (Roy, 1995).

The government has encouraged development of evidence based clinical guidelines and the introduction of defined protocols as a means of improving care (DOH, 1996). There is some evidence to suggest that management in the acute phase benefits from this structured approach (Sulch and Kalra, 2000). In neurological rehabilitation, where care is often individualised in complex cases, it may be more practical to look at specific aspects of management.

Since 1997 the team at the Regional Rehabilitation Unit, Northwick Park Hospital, have been using and developing an integrated care pathway for the manage-ment of hemiplegic shoulder pain. This stemmed from an initial retrospective notes audit, that revealed inadequate documentation of the problem and no system for management (Jackson et al, 2002). The integrated care pathway was informed by a systematic literature review (Turner-Stokes and Jackson, 2002) and clinical consensus. It prioritized pain management, support and positioning, but was not prescriptive in terms of treatment. There was emphasis on the recording of variance to inform further development of the tool.

The second round audit showed an increased awareness of shoulder pain as a documented problem (Jackson et al, 2002). However, the ongoing documentation and monitoring were inconsistent. A fortnightly multidisciplinary review allowed for better consideration of treatment strategies for persistent or resistant symptoms. Centralisation of the documentation and categorisation of outcome were also introduced. Differences in results between the second and third round audits demonstrated several important factors when developing multidisciplinary management tools. These include the need for regular review of both patients and notes, user-friendly documentation, ongoing education of staff and strong leadership and commitment (Jackson et al, 2003).

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Biography

Lisa Knight qualified in1989 from St Thomas's Hospital, London and, since 1991, has been working within neurosciences. She has experience of acute, post-acute and community settings. Her most recent post was as clinical specialist at the Regional Rehabilitation Unit, Northwick Park Hospital.

In 2002 Lisa started to work towards an MSc in neurorehabilitation and is hoping to complete this in the near future. She is now working in private practice, combining clinical work with education.

Her areas of interest are the management of severe complex disability, specifically head injury, ataxia, and treatment of the hemiplegic shoulder. She is committed to the development of clinical guidelines in neurophysiotherapy.

LECTURE 5

Diana Jackson Msc MCSP
Senior Clinical Research Fellow, Academic Department of Rehabilitation, King's College Hospital and RRU, Northwick Park Hospital, London

Assessing shoulder pain in patients with cognitive/ communication deficits

National clinical guidelines for stroke stress the importance of regular pain assessment to aid diagnosis and management of conditions such as shoulder pain and to enable patients to participate in decisions about their care[1]. Valid and reliable pain assessment is also essential for research into the efficacy of interventions to alleviate pain. However, there is no consensus as to how pain should be assessed in stroke patients. The systematic communication, assessment and documenting of pain symptoms in health care settings generally has been shown to be poor[2] and this is especially so for patients with aphasia, perceptual deficits and cognitive problems. They may have difficulty alerting clinicians to the presence of pain, be unable to use pain scales designed for the general population[3], and may not receive the treatment they need[4,5].

Shoulder pain assessment in patients with such difficulties will be considered here in the context of theoretical models of pain communication[6,7]. These explain assessment as a sequence of events during which the inner experience of pain is transmitted to the outside world through verbal report and/or behaviours suggestive of pain. A number of intrinsic and extrinsic variables affect all stages of this process.

Transmission of information through self-report is arguably the best reflection of someone's pain. Alongside our care pathway for hemiplegic shoulder pain (also presented in this programme), we have therefore been investigating more accessible ways of helping patients with communication deficits to describe their pain using tools that exploit their particular strengths. For example, presenting simple questions in either verbal, numeric or pictorial form and taking time to create a 'communication ramp' by staged teaching in their use[8,9].

Where patients are unable to self-report reliably, proxy judgements of shoulder pain made by clinicians offer the only alternative, but should be regarded with caution. As well as rating a different dimension of pain, they are subject to additional measurement error, that of the proxy rater[10]. Furthermore, these two dimensions of pain correlate poorly in patients with chronic pain[11]. This problem could be improved by the development of a specific scale of shoulder pain behaviour using previously applied methods[12,13,14]. The first phase of a study to design such a tool will be described and ways of taking this work forward will be proposed.

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Biography

Diana Jackson trained as a physiotherapist at Kings College Hospital and worked in various settings before specialising in neurological rehabilitation. Following an MSc in Rehabilitation Studies at Southampton University, she joined the Regional Rehabilitation Unit at Northwick Park Hospital in 1996 as a Research Associate working on a trial of aerobic exercise training for patients with acquired brain injury.

A subsequent project to develop an ICP for managing hemiplegic shoulder pain rekindled a long-term interest in this problem; specifically the difficulty of assessing pain. This led to a PhD in the subject from Southampton University. Using mixed methods, contributory studies examined shoulder pain assessment from the perspectives of stroke patients and health professionals.

Now a Senior Clinical Research Fellow in Academic Rehabilitation within the Department of Palliative Care and Policy at Kings College London, Diana is currently researching the experiences of carers of adults with acquired brain injury. She is also preparing to build on her earlier work, with the objective of developing guidelines for shoulder pain assessment in stroke.

LECTURE 6

Dr Chris McCarthy PhD MCSP MMACP
Research Physiotherapist (Chair of MACP) The Centre for Rehabilitation Science,
University of Manchester

The **diagnosis** and classification of low back pain in neurology

We work in a culture that encourages evidence based practice and the critical analysis of the evidence we use to make clinical decisions. In the neuro-musculoskeletal fields an evidence base to support some of our treatment approaches is slowly developing. A major problem in our evidence base is the size of the treatment effects that are often demonstrated in clinical trials of rehabilitation approaches. Is it possible that our best efforts to identify effective treatments for patients are being thwarted by the lack of consideration of heterogeneity in our trial designs? Low back pain is a classic example of a 'catch all' diagnosis that results in diverse, heterogeneous clinical presentations. Consequently, trials of interventions in 'Low Back Pain' suffer from considerable washout effects, where the benefits for some are offset by the lack of benefit for others. There is recognition that this lack of diagnostic specificity may be reducing the effect sizes of intervention in clinical trials and thus reducing the confidence we have in our treatments.

Clinical trial designs need to reflect the fact that in clinical practice treatments are 'matched' to clinical presentations and that menu treatment is not applied to every one who presents with a broad diagnosis of 'pain', for example. The author is currently conducting a study that aims to produce a system to sub-classify non-specific low back pain and enable subgroups of patients to be identified who may be more suited to particular, specific interventions. It is hoped that this process will strike a chord with colleagues working in the neuro-rehabilitation field and that similar processes may be initiated or encouraged.

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Biography

After qualifying from Coventry School of Physiotherapy in 1989, Chris McCarthy worked clinically in the North West for ten years before undertaking a PhD at the University of Manchester. His thesis investigated the relative effectiveness of home and class-based exercise for patients with osteoarthritis of the knee, (Findings: classes reduce pain and are cost effective – three years summarised in seven words!). His Post-doctoral fellowship work is an evaluation of how we as physiotherapists sub-classify a pain syndrome we will have all either experienced ourselves or seen in our patients – non-specific low back pain. He will argue that we are not helping our cause in the endless search for a panacea for 'low back pain' and that in common with a great many clinical syndromes we need to be more specific in our diagnoses. We need to be evaluating specific treatments for specific neuromusculoskeletal presentations.

LECTURE 7

Mark Smith Grad Dip Phys, BSc (Hons) Health Studies
Clinical Specialist Physiotherapist-Stroke Services/ Chief Scientist Office Research Training Fellow, Royal Victoria Hospital, Edinburgh.

Measuring thermal sensory perception as an adjunct to understanding abnormal pain perception after stroke

Stroke patients suffer from various pain-related syndromes. Alterations in sensation, causing hyperaesthesia or relative anaesthesia, may affect pain perception. This factor has been associated with the development of Central Post-Stroke Pain. Pain causes untold distress, may delay discharge from hospital and is not well understood in stroke. It is challenging to research and difficult to assess using common clinical methods within this patient group and so may hinder effective treatment. A system for the clinical classification of differing subgroups of stroke has been shown by cerebral imaging to have validity and reliability through consistent agreement with the site and size of the cerebrovascular lesion. Thermally generated sensory stimuli travel within the nervous system in established pathways common to the transmission of nocioceptive signals (somatosensory cortex, ventral posterior thalamus, anterior and lateral spinothalamic tracts and A /C fibres). Studying the ability of different types of stroke patient to perceive changes in temperature via the skin may illuminate theoretical issues related to the neurophysiology of nocioceptive transmission. This could subsequently inform the quantification and execution of pain management and soft tissue protection strategies.

The measurement technique employs Quantitative Sensory Testing (QST), a technique for the objective assessment of sensory perception that has not been widely used in the stroke population. This involves the delivery of accurately measured thermal sensory stimuli and the recording of various parameters of the subjects' responses. The Thermal Sensory Analyser (TSA-2001, Medoc) is a system that provides a means of testing patients' responses to such stimuli.

The overall aim of this research is to compare the thermal perception ability of stroke patients of differing types with a healthy sample of people. Hot and cold sensation thresholds are established using method of limits. Random sequences of pairs of temperatures (2AFC) in warm and cool ranges (eg 36-38°C and 18-20°C) are used in a forced-choice paradigm to establish sensory discrimination. Non-parametric Signal Detection Theory (SDT) techniques are then used to determine P(A) for sensitivity and B Criterion for selection bias measures, to determine the extent of variation between stroke and healthy populations. It is proposed to measure the differences between and within the various groups using Student's T-test and ANOVA, assuming normal distribution, and non-parametric testing such as the Wilcoxon Matched Pairs Signed-Ranks Test should the distribution be abnormal. A p-value of <0.05 will be set as the level of statistical significance in the interpretation of the results.

Pilot data suggest that statistically significant differences do exist between the thermal sensory perceptual abilities of certain stroke subgroups in comparison with healthy individuals – these will be described. Variations include relative paraesthesia in affected limbs and hypersensitivity in non-affected limbs and the perception of cold as heat. Estimates from the effect sizes within the pilot sample suggested that around 30 individuals will be required within each sub-group for subsequent study. This will total 150 stroke patients and 30 healthy controls.

This work is still in progress and we do not yet have a full set of results to discuss. However this technique may provide a valuable tool in the clinical management of patients with stroke.

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Biography

Mark Smith graduated in Physiotherapy, Edinburgh 1985. He completed a BSc Hons degree in Health Studies 1991. He then worked in Dunfermline hospitals for almost two years, then at Western General Hospital, Edinburgh for twelve years from 1986 until 1998. Since 1998 has been clinically based at the Royal Victoria hospital, Edinburgh. He there developed an interest in neurological rehabilitation, initially in the Department of Clinical Neurosciences and then was a founder member of the Stroke Team at the WGH in 1992.

He has pursued an interest in the measurement of various outcomes of different types of stroke patient. His publications relate to mobility outcomes of stroke – 'mobility milestones', developing outcome prediction models and the study of pain perception in patients with brain damage following stroke, particularly hemiplegic shoulder pain.

He currently holds a three-year research fellowship from the Scottish Executive, Chief Scientist's Office (government funding) for 0.5 WTE of clinical time, and an HSA Scholarship, through the CSP, for academic pursuit of a PhD degree at Queen Margaret University College, Edinburgh.

His committee work has included the National Advisory Committee for Stroke (Scotland), the British Stroke Research Group and SIGN 64 Management of Stroke Guideline Group.

His international experiences have included working in St Petersburg, Russia and Blantyre, Malawi, East Africa developing stroke services.

Reviews
articles, books, courses

Reviews of research articles, books and courses in Synapse are offered by Regional ACPIN groups or individuals in response to requests from the ACPIN committee. In the spirit of an extension of the ERA (Evaluating research articles) project they are offered as information for members and as an opportunity for some members to hone their reviewing skills. Editing is kept to a minimum and the reviews reflect the opinions of the authors only. We give the authors of the original book or paper the opportunity to respond. We hope these reviews will encourage members to read the original article and not simply take the views of the reviewers at face value.

A CONTRACTURES IN THE POST-STROKE WRIST: A PILOT STUDY OF ITS TIME COURSE OF DEVELOPMENT AND ITS ASSOCIATION WITH UPPER LIMB RECOVERY

Pandyan, AD, Cameron M, Powell J, Stott DJ and Granat M.H in *Clinical Rehabilitation* (2003) 17, pp88-95

Articled reviewed by **Surrey & Borders ACPIN**

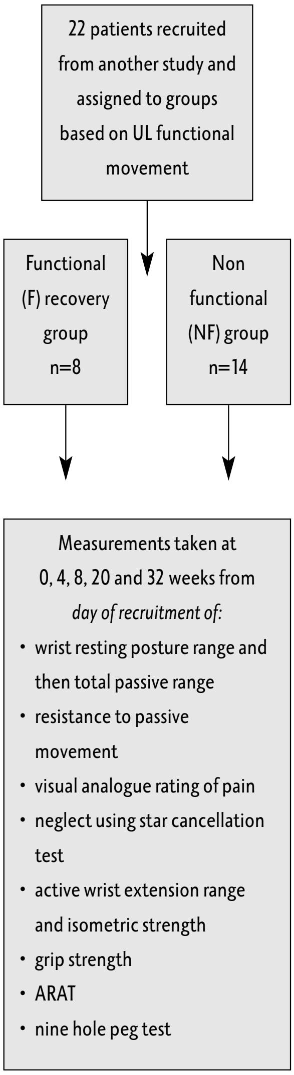
Aims To identify the time course of contracture formation at the wrist in an acute stroke population. To study its relationship to physical impairments and functional recovery.

Abstract Good overview of the objectives of the study and their method. Reading this, makes you want to read the rest of the study.

Introduction The researchers report the fact that contractures in upper limbs in stroke are common, but that there is little information available in the literature on the time course of contractures. It mentions the fact that immobility and spasticity, as well as other factors such as neglect and pain are thought to contribute to the development of contractures, but that the evidence to support this claim is tenuous. Although significant to the nature of this study, they do not however define what is meant by contracture. (ADP: Note the word spasticity is also not defined)

The introduction clearly states the aim of the study and ends with the hypothesis that poor functional recovery would lead to the development of contractures.

Method This is a longitudinal study, where the subjects had been selected from a control group of a previous randomised control trial carried out by the researchers.



22 patients recruited from another study and assigned to groups based on UL functional movement

Functional (F) recovery group n=8

Non functional (NF) group n=14

Measurements taken at 0, 4, 8, 20 and 32 weeks from *day of recruitment of:*

- wrist resting posture range and then total passive range
- resistance to passive movement
- visual analogue rating of pain
- neglect using star cancellation test
- active wrist extension range and isometric strength
- grip strength
- ARAT
- nine hole peg test

Baseline measurements and most outcome measures are described in detail. Resting posture, passive wrist range of motion and resistance to passive wrist extension were used to quantify contracture; these were all measured on a piece of equipment designed for a previous study. The authors do not provide the reader with a clear understanding of the measuring system, but refer to their previous study.

Data analysis Mean and standard error were used to summarize the results and the Friedman's test to determine if changes had occurred. The Mann-Whitney U-test was used to determine if differences existed between the groups at the start of the study. No power analysis and minimal descriptive statistics are included. Given the restricted sample size, it is difficult to comment on the usefulness of the quantitative statistics performed.
Authors' comment: In the absence of any baseline data a power analysis is redundant, ie it cannot be done. The standard error (SE) was specifically provided to enable other researchers to conduct appropriate power calculations. (Given the small sample the tests used were the best available)

Results The researchers provide results for the sample as a whole and for the two assigned groups. The analysis from the subgroup highlights the fact that, what was quantified as 'contracture' showed little change in the functional group, but significant change in the non-functioning group; the resting postures were more flexed, resistance had increased and passive range of movement decreased.

Whereas the modified Ashworth scale and neglect changed little in the functional group, the Ashworth scale increased significantly and neglect decreased in the non-functional group. Pain did not change significantly in either group.

As might be expected active range of movement, strength and the functional tests all improved in the functional group, but not in the non-functional group.

Discussion The groups profile did not alter significantly over the study period, suggesting that contractures were worsening in the whole group, in spite of improvement in function. The authors consider that this ambiguity may be due to the influence of the NF group and they then further discuss the subgroup analysis rather than the whole group. Would a matched sample design have been better?
Authors' comment: Heterogeneity in any convenience sample is a problem and I am not convinced that a matched pair design is viable when only one centre is involved.)

In the NF group, changes consistent with developing wrist flexion contractures were seen and appeared in the first six to eight weeks. The authors speculate that the most likely cause is immobilization. Given that the choice of outcome measures measured a combination of neural and non-neural factors, this seems a plausible inference.

Clinically, this work heightens our awareness of at risk patients. Patients who may be more at risk are those with less motor and functional recovery. They are also more likely to demonstrate changes in passive movement and resistance.

General comments

STRENGTHS

- Despite arbitrary nature of dividing the sample into two groups, it was a useful way of investigating the different qualities (more so if the subjects had been matched).
  Authors comment: Limitations are identified and possible alternatives are highlighted.

LIMITATIONS

- Assumed a common understanding of contracture.
  Authors comment: Contracture (and spasticity) are two commonly used words which have far too many

definitions. Given the restriction on the number of words and the fact that such a paper is written for a professional audience such a definition is redundant. One would expect the readers to pick up the citations and check for the appropriate definition.

- Validity of outcome measures, especially as some specifically developed for their study.
  Authors comment: Validity is implicit and in the absence of an accepted definition of contracture one has to go back to measure from first principles.
- Readers not informed of the physiotherapy input (splinting, positioning etc) the subjects were receiving during the study.
  Authors comment: Agree a serious limitation, we attempted to quantify physiotherapy but failed. Maybe this is the challenge to the physiotherapist, documentation of your treatments in a transparent way.
- Matched sample design may have been better.
  Authors comment: This is a moot point.
- Small sample size.
- Authors' conclusion is strong, based on the small sample size and the fact they were looking at both neural/non-neural aspects.
  Authors comment: I see statistics as a tool to prove the obvious. Given the nature of relationship demonstrated and the theoretical understanding of the phenomenon of contractures the conclusion is reasonable.
  Authors comment: We should have used simultaneous EMG measurements to further investigate neural factors.

A RELATIONSHIP BETWEEN CHANGE IN BALANCE AND SELF-REPORTED HANDICAP AFTER VESTIBULAR REHABILITATION THERAPY

K Murray, S Carroll, K Hill (2001)
in *Physiotherapy Research International*
6(4) pp251-263

Articled reviewed by **Gillian Park**, physiotherapist, Area Rehabilitation Team, Stirling Royal Infirmary

Overview This trial aimed to investigate the relationship between change in balance performance and change in self-related handicap after a home exercise programme in patients with chronic vestibular dysfunction. It was reviewed as part of a journal club because the title appeared relevant to us as we are currently looking into the evidence available on Vestibular Rehabilitation

Abstract The abstract clearly outlined the aims of the study to investigate the relationship between two outcome measures. It indicated that the home-based exercise programme used significantly improved balance abilities in people with chronic vestibular dysfunction. However, this positive outcome would be later questioned following further reading of the article.

Introduction The background to the authors is unknown from the title page or anywhere in the article. However, later in the study we questioned whether the physiotherapist involved in the data collection was in fact one of the authors. This was never confirmed however, if this was indeed the case could have lead to great bias in the results due to a lack of objectivity.

Literature review The literature review had various limitations with regards to the literature supporting it. The concept of vestibular rehabilitation, the specific exercise programme used and the need for psychological input were each backed up by only one referenced article even though the text stated 'various studies and authors'. There was also no reference made to the widely used Cawthorne-Cooksey Exercies or the Brandt Daroff Regime.

Methods 16 subjects with vestibular disease identifed by a neurologist, and a history of dizziness and impaired balance were used in the study.

The Smart Balance Master System (SBM) and the Dizziness Handicap Inventory (DHI) were the outcome measures used prior to and on completion of the four-week exercise programme.

The exercise programme included habituation training, gaze stability, balance and mobility training and fitness activities for ten minutes, three times a day. The programmes were reviewed weekly and updated by the physiotherapist. A diary was also completed by each patient to show completion of the exercises.

Some limitations in the methodology were noted. It was a small sample size, fourteen of which were female, and there was no control. The length of time since onset of symptoms ranged from three months to 78 months and there was no analysis made to acute or chronic patients The site of lesion of each patient was classified as either central or peripheral, however, there was no explanation as to how this classification was made especially when some of the diagnoses were unknown.

The home exercise programme was not clearly explained so therefore could not be replicated in future studies. With four variables in the treatment programme it was also impossible to identify which of these resulted in the changes identified. We question whether comparisons can be made between subjects due the wide variety of treatments used.

Results Appropriate statistical analysis was carried out and a negative correlation between the SBM and the DHI was shown. However, on presentation of the statistics inconsistency between graphs were noted. In Figure 2 the mean average was used, but in Figure 3 it was the median score which may have resulted in a skewing of the figures towards a more positive treatment effect. Figure 4 was also not clearly labelled and therefore difficult to analyse.

On first reading it was interesting that the authors analysed the changes in the functional, physical and emotional subscales of the DHI. A positive change was noted on the physical subscale. However, as they had excluded any individuals with 'a primary psychological disorder' it seems unreasonable to show any change in the emotional subscale. Therefore the comparisons with other studies looking at psychological problems appear inappropriate due to the exclusion of this client group.

In summary With the absence of a control group we feel that an opportunity has been missed to develop a recommended regime of exercises for the treatment of this client group. We did feel that the use of the patient diary was advantageous to patient compliance throughout the four-week programme. This is an aspect of this study that we feel we can go on to implement in our own clinical practice.

C ANALYSIS AND TRAINING OF WALKING FOLLOWING STROKE

Tutors: Paulette van Vliet and
Andrew Foxhall
28th/29th November 2004
Lightburn Hospital, Glasgow.

Review by **Lynn Speirs**, Senior Physiotherapist, St John's Hospital, West Lothian.

This two-day course was a mixture of informal lectures with discussion and clinical sessions with patients.

Time was spent using the philosophy of movement science in the analysis of gait (biomechanical model) to look at the kinematics of walking (and therefore the missing aspects) and then to link them to the compensations. The advice after this was to initially choose the greatest problem to concentrate on in treatment. Analysis then became more specific, for example decreased hip control became decreased hip extension mid to late stance.

After using the kinetic model of gait and the correct terms to assess the deviation and compensations, possible causes were then assessed ie muscle shortening and/or muscle weakness. Research has shown any muscular changes in the plantarflexors have a profound effect on gait as soleus is responsible for knee flexion in swing rather than the hamstrings. Increasing the speed of walking with improved hip extension elicits more hip flexion activity, which in turn allows more knee flexion. Training strategies concentrated on maintaining muscle length through a variety of methods and strength training, eccentrically and concentrically, using body weight where appropriate. Importance was placed on choosing the appropriate positions for effective strengthening.

The main messages of this course were therefore to use an evidence-based approach, systematically analyse, use task specific exercise and anticipate and aim to avoid

C ASSESSMENT AND TREATMENT OF PATIENTS WITH A PREDOMINANCE OF HYPOTONIA

Tutor: Debbie Strang, Bobath tutor
27th, 28th August 2004
Drumchapel Hospital, Glasgow

Review by **Alison Murray** MCSP, SRP

This course was the second of three study weekends offered by the tutor. The first course was an 'Introduction to Normal Movement' and the third was 'The Assessment and Treatment of Patients with a predominance of hypertonia'.

The course consisted of theory sessions, practical sessions and patient presentations. An initial theory session looked into the pathology of hypotonia. Participants learnt that the initial 'flaccid' state seen in some patients immediately post stroke is not actually representative of the damage incurred by the stroke. Rather it is a response of the CNS to shock and it is a brief, transitory phase. True hypotonia is a loss of influence from higher centres of control onto the spinal cord. This occurs in two major systems, the reticular system and the corticospinal system. The 'apparent' weakness seen in hypotonia is produced through a deviation of reciprocal innervation, which in turn affects tone and normal movement. The decreased stability seen in hypotonia can lead to muscles that are normally global mobilisers becoming stabilisers to maintain posture and balance with an ultimate reduction in the ability to move selectively.

Principles of treatment were explored emphasising the care required when handling compensations. It is however important not to discourage active movement as we need it to activate the CNS through movement and reciprocal innervation develops with experience of movement.

Theory sessions were interspersed with practical sessions and patient demonstrations. a high percentage of the time was spent in practical sessions. As we had two instructors on the course we all received good individual feedback regarding our handling and the opportunity to discuss issues in smaller groups.

Feedback was very positive, there was a lot of information to take in but good reading material, course notes and references were provided. We all left invigorated to try out new techniques in our own clinical areas and look forward to the complementary course in assessment and treatment of patients with hypertonia.

Regional reports

KENT

Lisa White
Regional Representative

Throughout 2004 the Kent committee of four members was very active, albeit behind the scenes. We ran a shoulder study day in November 2004 which was well attended. It was a locally hosted event with speakers from the surrounding areas. Lectures ranged from basic anatomy of the shoulder complex to the use of acupuncture in pain relief in hemiplegic shoulders. The day was generally well received, although the difficulty of aiming lectures to an audience of varying levels of experience was acknowledged.

Professor John Rothwell will be returning to Kent following his highly successful study day two years ago. On July 2nd he will be taking a study day at the Chatham Dockyard Venue entitled 'The cerebellum, the basal ganglia and movement disorders with a bias to therapy'. Fliers and application forms will be sent out to Kent members shortly.

We had a successful and well attended AGM in March when Janice Champion guided us through the use of the gym ball in neurological therapy. We would like to thank Janice for her continued support of the Kent Region.

Following the AGM we have had an increase in both ACPIN and committee members and we now look forward to a highly active and productive 2005.

LONDON

Sandy Chambers
Region Representative

From the London Region Committee, may we wish all of you a belated Happy 2005! As some of you know, we have been busy re-organising the coming year's CPD format for London Region. In 2003 and 2004 the attendance at the evening lectures steadily dwindled. We have asked for feedback and we have decided to try scheduling fewer sessions but to include more half-day programmes. Additionally we are increasing our advertising to remind people that, as ACPIN members, they have a no-cost opportunity to hear interesting and relevant topics – as well as to meet-up with old (and new!) friends.

Programme for 2005

- 18th June (morning half-day) *Topics in evidence-based practice* Prof Val Pomeroy, Cathy Donaldson, and Emma Cook (St George's Hospital).
- 10th September (study day) *Orthotic management of gait and the lower limbs in the neurologically impaired adult – theory, evidence and clinical reasoning* Paul Charlton, Richard Sealy, and Gita Ramdharry (NHNN Queen Square).

Please watch for further details in *Frontline*. ACPIN members will be posted a flyer soon. As ever, we welcome new Committee members who want to represent ACPIN, help organise events, or to be more involved with their neurology-colleagues – doing a little or a lot – we can always find a place. Please contact us if you have ideas or questions.

MANCHESTER

Nina Smith
Regional Representative

Thank you to all speakers for their contribution in 2004, and those who will be involved in the 2005 programme.

Evening lectures are generally well attended and membership continues to be steady. Manchester ACPIN Committee meets every month for programme planning, evaluation, and information exchange. We are planning a half day Normal Movement course this year.

Programme for 2005

- May *Trauma and shock.*
- June *Negotiating treatment.*
- July *Pilates, gym ball and core stability.*
- September and October *Biomechanics of gait and treadmill walking: lecture and research presentation.*
- November *Biomechanics of gait and treadmill walking: patient demonstration.*

Flyers with more details about forthcoming events are sent to each member and appear in *Frontline*. Poster displays at each evening meeting will continue, these can be about a research project, practice and service development or an area team – anything that helps information sharing in the region.

If you are interested in becoming a committee member, or have any suggestions for topics or speakers for future lectures please let any of the committee members know.

MERSEYSIDE

Jo Jones
Regional Representative

2004 ended with a very successful rerun of our Vestibular Rehabilitation Study Day with Pam Mulholland, and 2005 has started with an equally popular and successful 'Acupuncture in Neurology' course facilitated by Val Hopwood. Keeping the momentum going, the remainder of our 2005 schedule is as follows:

- May 21st *Advanced Splinting – a one day programme to include lecture, patient demo, practical, discussion and problem-solving* Sue Edwards.
- June Evening lecture *Current MS Projects and Service Development in the region* Jenny Thain.
- September 23rd/24th *Basic Splinting* Sue Edwards.
- November Two day course *FES* Christine Singleton and Jenny Thain.

Please keep an eye out in *Frontline* for specific details of those courses not yet finalised.

At the time of writing, our current membership stands at 23, since it was 55 at the end of 2004 I sense that more than a few members (and dare I say, even some committee!) have 'filed' their 2005 application forms in the pre – Xmas furure! So please, dig them out, fill them in and send them off asap! Jo Howarth's departure from the committee is imminent and will leave us with 9 (10 little Indians comes to mind!) and whilst this is still a relatively healthy number new 'blood' is always welcome. Our thanks to Jo for all her hard work on the committee in various guises over the years, and we wish her every success with her studies.

And finally … at the risk of repeating myself yet again, feedback and new ideas are always very welcome and very useful!

NORTHERN REGION

Julia Williamson
Regional Representative

Although it was some time ago now, I wish you all a Happy New Year. Here's the latest update of events in the North of England.

In October 2004, we held a successful MS study afternoon. It was well attended and participants were able to find out about local projects funded and supported by the MS Society. This was followed in November by an afternoon of lectures based around the use of Botulinum toxin in Stroke, and a randomised controlled trial, which will look into this area. Again, this was well-attended and offered participants insight into the demands of conducting such research. We took December and January off, I hope no-body minded, but it just seemed such a busy time of year!

So, refreshed, a busy year is ahead. By the time you read this, the Regional AGM will have happened (I hope I saw you there). Whatever time of year, we are always on the look out for more committee members, the workload is not heavy and we tend to hold meetings during the day (including free coffee and biscuits!) If you cannot commit to a committee post, we are keen for people based in the middle of the region (Hexham direction) to possibly host a course or two, which would be more accessible for those travelling from the west of the region. Wherever you are based, we are always very keen to hear your ideas for courses and events; everything we organise has been suggested by members.

Programme for 2005

- May 7th *Neuroplasticity* John Rothwell (Education Centre, Sunderland).
- October *Case report writing* (exact date and place tba).
- November *FES* (exact date and place tba).

Any ideas/suggestions for courses, please send to Julia.williamson@nuth.northy.nhs.uk

NORTH TRENT

Emma Procter

Regional Representative

The last year has seen many changes on the committee, which was partially due to a baby boom (Congratulations Alex and Sharon) and I would like to take this opportunity to thank all those departing for their hard work over the years.

The membership is thriving and the committee is endeavouring to put together a varied lecture program for 2005.

Programme for 2005

- May *Pusher Syndrome* L McKay (TBC)
- July 13th *Neurophysiology of Learning* N Snowdon
- September 6th *Guidelines for Long term Conditions – Discussion on Implications for practice* J Petty
- November 17th *Botox Trial* A Clarke

We will let members know nearer the time confirmed dates and venues. It would be wonderful if attendance remained as high as it was for January's lecture – thank you everyone for your support.

We are also hoping to put on a couple of courses but these are still in the planning stage. If you have any ideas for courses or lectures they will be very gratefully received, as would any offers to join the committee-contact myself (emma.procter@sth.nhs.uk) or any of its members if you are interested.

OXFORD

Fiona Cuthbertson

Regional Representative

I would like to extend a big thank you on behalf of the Oxford ACPIN committee to everybody who contributed to our excellent 2004 programme and to all of our members who continue to support events both regionally and nationally with great enthusiasm.

Oxford's 2004 programme came to a close with an extremely well received course led by Bobath Tutor Pam Mulholland entitled Postural Control and the Upper Limb – indeed the course was such a success that we have already booked Pam to come back in 2006.

Our 2005 programme kicked off to an impressive start with a very successful evening in Reading led by Helen Talaga on the practical management of patients with ataxia. As this was the last evening lecture to be held at Battle Hospital before its closure, I would like to take this opportunity to thank all of those who have been involved in their organisation over the past few years, especially Liz and George.

Finally we would love to hear from you if you are interested in becoming a committee member or if you have any ideas for our 2006 programme. Please feel free to let any of the committee know or contact Claire Guy on 01865 737372/5.

Programme for 2005

- May 11th Practical workshop *Spinal injuries* (National Spinal Injuries Centre, Stoke Mandeville).
- June *Pilates evening* (Oxford Centre for Enablement) (details to be confirmed).
- July 20th Summer social evening – Punting (Meet Cherwell Boathouse, Oxford – time to be announced)
- September *Orthotics evening* (High Wycombe) (details to be confirmed).
- October 12th 7.30 pm *Managing the painful shoulder; A Musculoskeletal perspective* Jane Moser (Oxford Centre for Enablement)
- November 3rd/4th *Hydrotherapy in Neurology* Alison Skinner (Oxford).

We will send out fliers with further details of individual lectures and courses. Please also refer to the branch news noticeboard section of Frontline where up to date lecture and course details can always be found.

SCOTLAND

Paula Cowan

Regional Representative

The Scottish committee is flourishing at the moment. We would like to welcome six new members: Cassie Gibson, Julie Hooper, Julie McDonald, Wendy Juner, Lynn Donnelly and Lindsay Masterton. We look forward to a productive year.

Programme for 2005

- September *Orthotics* (Glasgow).
- November *Vestibular Rehab* (Stirling).

Feedback: We have had several successful courses last year namely a gait course, dyspraxia and spasticity. If you would like further info then please contact the committee.

A wee reminder to renew your membership because with such a healthy committee this will be a good year to be a Scottish member!

SOUTH WEST

Kirsten Cheadle

Regional representative

South West ACPIN have had a number of evening and weekend courses which have been successful, if not fully subscribed. Sue Edwards' Complex Disability course was both enjoyable and informative. The gym ball evening and Huntington's Disease presentation were also well received.

Programme for 2005/6

- June *Posture management course* Wendy Murphy and Pauline Pope, (Cardiff).
- September *Interpreting scans*
- November *Practice and Feedback for Stroke Patients* Paulette van Vliet
- February *Spinal Cord Injury Rehabilitation*

We also hope to offer a free place at Congress to one of our members, more details to follow.

Please see our website www.southwestacpin.net for further details. All courses will also be advertised in the branch news notice-board section of *Frontline* as ususal.

We ended 2004 with almost 120 members and encourage everyone to subscribe again this year. With thanks to our contacts in South Wales we are able to run a course in Cardiff and are building links in Plymouth so hope to hold some lectures there. If anyone else is interested in being part of the committee – even via the internet/telephone, or has suggestions for courses or speakers, please give one of the committee a ring to discuss this further (all details on our website).

Thank you to all members for their support and we look forward to seeing many of you throughout 2005.

SURREY & BORDERS

Brigitt Bailey

Regional Representative

We have a membership of nearly 60 and attendance at our evening lectures has been generally very good whilst our courses have also been successful, which is all positive news!

Our first lecture from an Occupational Therapist, Sarah Porter, on 'How much effort do you put into getting up in the morning?' – an activity analysis focused on cognition and perception, was very practical and well received, so hopefully NANOT will be able to suggest another topic in the future.

In November Diane Jackson gave a lecture on the Northwick Park ICP for painful hemiplegic shoulders which created lots of discussion and interest.

We have put together the following programme for 2005 and will advertise in *Frontline*, as a reminder, as well as sending out flyers.

Programme for 2005

- June 15th, 7.00pm *Case studies looking at the Management of Posture* Pauline Pope (Woking Community Hospital).
- September *Core stability* (date, speaker and venue to be confirmed).
- November 10th, 7.30pm *Communication* Rosemary Townsend – Speech and Language Therapist (St Peter's Hospital, Chertsey).

The sad news is that we will be losing some of the committee this year but have had only one member expressing an interest in joining. Hopefully, at our AGM in February we will be able to recruit some new blood to provide fresh ideas and enthusiasm to keep this branch running successfully.

In the meantime, a BIG thank you to all the committee for all their hard work since the formation of the branch in February 2002.

WESSEX

Helen Foster
Regional Representative

Since the autumn report Wessex Region have run a couple of successful courses. This included an 'Early Stroke Treatment Study Day' and a 'Posture Management' course, both of which had very good feedback. We began 2005 with an excellent evening lecture on 'Orthotic management of Spasticity'. Thank you to speakers for their support and time.

The committee is very conscientious but quite small. Naomi Wells has just joined us as treasurer after the birth of baby Jack but we are really keen for some exciting ideas and new blood. Anyone interested in joining the committee is very welcome. We meet 30 minutes prior to evening lectures or contact any member of the committee for further information. Thank you to the current committee for all their hard work.

Programme for 2005

- *Pilates for People with Neurological Problems* Lucia White and Moira Rees
- *Early Management of Spinal Cord Injuries* Salisbury Spinal Injury Unit
- *Taping Techniques* Melissa Benyon MCSP
- *Facial Palsy Management* Lorraine Clapham MCSP
- *Research* Emma Stack Ph.D

WEST MIDLANDS

Liz Cohen
Regional Representative

The West Midlands branch membership has remained strong in 2004 with over 90 members. The committee continues to be active with about ten regular attendees.

Study days and courses remained well subscribed throughout the end of 2004. On Tuesday September 21st we held a successful evening lecture at The Priory Hospital in Birmingham welcoming Carron Sintler who shared the findings from her MSc dissertation entitled 'The Patient and Carers perspective after Stroke'. We originally planned two lectures, but due to unforeseen circumstances Jill Ramsay who was going to talk about 'upper limb proprioception' had to cancel. On September 25th and 26th Helen Lindfield and Laura Finucane ran the Outpatient Techniques in Neurology weekend, which was once again over subscribed and very well received. On November 6th we welcomed Kate Fernyhough back to Birmingham to run the popular Pilates day.

Programme for 2005

- Saturday September 3rd Study day *Practice and feedback for stroke patients* Paulette van Vliet (Venue is to be confirmed).

We do have some other study days and evening lectures in the pipeline but at present have not been confirmed. For example a possible splinting course in May.

Thank you for your continued support. We always value your opinions and ideas for future events. Any queries about the courses advertised, suggestions or interest in joining the committee please contact Liz Cohen.

YORKSHIRE

Regional Representative – post currently vacant

Yorkshire ACPIN continues with a mix of evening lectures and study days. Over the last few months this has included Paulette van Vliet leading a day workshop on practice and feedback with stroke patients, and Jacki Stephenson giving an update on the MS society funded projects. Our most recent evening was a Botulinum Toxin interactive session, where I was persuaded to practice my presentation skills!

We continue to advertise our lectures in *Frontline*, but recently advertised on the CSP interactive site which, amazingly, generated interest from a physiotherapist in Australia, who requested copies of the Botulinum presentation as he was unable to attend!

For the future we are currently planning several meetings including a stroke update, following the publication of the latest RCP guidelines and an evening on Brain Gym.

Programme for 2005

- May 14th AGM and study day *Neural control of gait and CPGs* Dr Lyn Rochester and *FES* Christine Singleton.
- June 14th *Outpatient techniques* Phil Commons
- September 24th *Posture Management study day* Pauline Pope

I will sadly be standing down at our AGM as Yorkshire Regional Representative, and would like to take this opportunity to say how much I have enjoyed being involved with ACPIN at both a Regional and National level. I really recommend it for helping to push practice forward and also for all the excellent networking opportunities. I will, of course, still be attending lots of ACPIN events. It is anticipated that Jill Fisher will take my place and I'm sure she will also value the experience.

As a committee we are always looking for new ideas for future lectures/ courses, so please either contact one of us with your suggestions (my email is caroline.brown@york.nhs.uk) or why not join the committee yourself? We look forward to hearing from you.

Guidelines for authors

***Synapse* is the official newsletter of ACPIN. It aims to provide a channel of communication between ACPIN members, to provide a forum to inform, instruct and debate regarding all aspects of neurological physiotherapy. A number of types of articles have been identified which fulfil these aims. The types of article are:**

CASE REPORTS

Synapse is pleased to accept case reports from practitioners, that provide information which will encourage other practitioners to improve or make changes in their own practice or clinical reasoning of how to influence a change or plan a treatment for that condition. The maximum length is 2000 words including references. An outline is given as follows:

Introduction

State the purpose of the report and why the case is worth reading about to include in short sentences:

- The patient and the condition.
- How the case came to your attention.
- What is new or different about it.
- The main features worth reporting.

The patient

Give a concise description of the patient and condition that shows the key physiotherapeutic, biomedical and psychosocial features. The patient's perspective on the problem and priorities for treatment are important. Give the patient a name in the interests of humanity, but not the real name. Do not include any other identifying details or photographs without the patient's permission.

Intervention

Describe what you did, how the patient progressed, and the outcome. This section should cover:

- Aims of physiotherapy.
- Treatment, problems and progress.
- Outcomes, including any changes in impairment and disability.
- Justification of your choice of treatment; clinical reasoning
- The patient's level of satisfaction and the outcome and the impact on quality of life.

Method

This should clarify what intervention took place and what measurements were taken. It should include:

- Description(s) of outcome measures used and reference
- Interventions carried out (where, when, by whom if relevant)

Implications for practice

Discuss the knowledge gained, with reference to published research findings and/or evidence about clinical effectiveness. For example:

- Outcome for the patient.
- Drawbacks.
- Insights for treatment of similar patients.
- Potential for application to other conditions.

Summary

List the main lessons to be drawn from this example.

References

These should be in the Harvard style (see section on 'Measurements' below).

Further guidelines for writing case reports were published in the Spring 2001 issue of *Synapse*, page 19.

ABSTRACTS OF THESIS AND DISSERTATIONS

Abstracts from research projects, including those from undergraduate or postgraduate degrees, audits or presentations. They should be up to 500 words and where possible the conventional format: introduction, purpose, method, results, discussion, conclusion.

AUDIT REPORT

A report which contains examination of the method, results, analysis, conclusions and service developments of audit relating to neurology and physiotherapy, using any method or design. This could also include a Service Development Quality Assurance Report of changes in service delivery aimed at improving quality. These should be up to 2000 words including references.

REVIEW OF ARTICLES

A critical appraisal of primary source material on a specific topic related to neurology. Download the ACPIN information sheet *Reviewing research articles* for further guidance from the ACPIN website.

PRODUCT NEWS

A short appraisal of up to 500 words, used to bring new or redesigned equipment to the notice of the readers. ACPIN and *Synapse* take no responsibility for these assessments, it is not an endorsement of the equipment. If an official trial has been carried out this should be presented as a technical evaluation. This may include a description of a mechanical or technical device used in assessment, treatment, management or education to include specifications and summary evaluation.

REVIEW OF BOOKS, SOFTWARE AND VIDEOS

Short reviews of up to 500 words to include details of availability, price and source for purchasing.

LETTERS TO *SYNAPSE*

These can be about any issue pertinent to neurological physiotherapy or ACPIN. They may relate to material published in the previous issue(s) of *Synapse*.

PREPARATION OF EDITORIAL MATERIAL

Copy should be produced in Microsoft Word. Wherever possible diagrams and tables should be produced in electronic form, eg Excel, and the software used clearly identified.

Hard copies should be as close to journal style as possible, on one side of A4 paper with at least a 25mm margin all around, consecutively numbered.

The first page should give:

- The title of the article
- The names of the author(s)
- A complete name and address for correspondence
- Professional and academic qualifications for all authors, and their current positions
- For research papers, a brief note about each author which indicates their contribution and a summary of any funds supporting the work

All articles

- The text should be well organised and written in simple, clear correct English. The positions of tables, charts or photographs should be appropriately titled and numbered consecutively in the text.
- All abbreviations must be explained.
- Any photographs or line drawings should be in sharp focus with good contrast for best reproduction.
- All charts should be in black and white only and captions should reflect this.
- References should be listed alphabetically, in the Harvard style with punctuation as follows: Bloggs A, Collins B (1998) The use of bandages in treating head injuries Physiotherapy 67,3 pp12-13.
- In the text, the reference should be quoted as the author(s) names followed by the date: Bloggs A (1994)
- Acknowledgements are listed at the end.

Measurements

As the International System of Units (SI) is not yet universal, both metric and imperial units are used in the United Kingdom in different circumstances. Depending on which units were used for the original calculations, data may be reported in imperial units followed by the SI equivalent in parentheses, or SI measurements followed by imperial measurements in parentheses. If the article mentions an outcome measure, appropriate information about it should be included, describing measurement properties and where it may be obtained.

Permissions and ethical certification

Protection of subjects: Either provide written permission from patients, parents or guardians to publish photographs of recognisable individuals, or obscure facial features. For reports of research involving people, written confirmation of informed consent is required. The use of names for patients is encouraged in case studies for clarity and humanity, but they should not be their real names.

Submission of articles

The disk and two hard copies of each article, should be sent with a covering letter from the principal author stating the type of article being submitted, releasing copyright, confirming that appropriate permissions have been obtained, or stating what reprinting permissions are needed.

For further information, please contact the *Synapse* co-ordinator:
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Note: all material submitted to the administrator is normally acknowledged within two weeks of receipt.

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