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

AUTUMN 1999

Syn'apse

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

AUTUMN 1999

ISSN 1369-958X

Contents

JOURNAL AND NEWSLETTER OF THE **ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS INTERESTED IN NEUROLOGY** **AUTUMN 1999** ISSN 1369-958X

From the Chair...

In June, Martin Watson the *Synapse* Editor, resigned from the Committee due to university work commitments. This was a severe loss for the committee as Martin had worked so hard over the last few years to raise the profile of our journal, which is now highly acclaimed.

We thank him for his tireless work and wish him luck in his future projects.

This edition has been produced by a panel of committee members, namely Karen Rowland, our new Education Officer, Louise Gilbert, Committee Member, (both elected at the March AGM) Rosie Hitchcock and co-ordinated by Ros Wade.

As always ACPIN is seeking articles or case studies for inclusion in *Synapse*. If you would like to put pen to paper or should I say finger to keyboard, please contact Ros Wade (address at back of journal).

Synapse provides such a vital link in communication between members, regional groups and the National Committee.

Our first conference and AGM for 1999 entitled 'Neurophysiotherapy in the Older Client' took place at the Royal Free Hospital, London in March. The day was extremely successful and prompted much debate. A resume of the day by Nicola Hancock is included later.

Following the AGM, Margaret Hewitt resigned from the National Committee and we thank her for all her work over the last two years. Rosie Hitchcock was re-elected as CIG Liaison Officer and myself re-elected as Chair. Clare Scott-Dempster, Hon. Membership Secretary, is on secondment to Australia for six months. Rowena Wright is now Acting Membership Secretary.

Membership – need I say any more! The long awaited pilot direct debit scheme via the CSP has failed miserably and has caused considerable embarrassment for all the National ACPIN Committee who promoted it so positively.

The lack of communication from the CSP has caused chaos with our membership renewal system. I will elaborate further in a later report. I can only apologise to you as members and all the regional membership secretaries for the delay in acknowledging your membership and the inconvenience caused.

In view of all the many problems ACPIN voted to withdraw from the scheme and it is hoped that next year membership renewal will once again run smoothly. A membership form is enclosed with this issue of *Synapse*. Please complete and return to Kim Goodwin as indicated.

Unfortunately, due to lack of response the re-scheduled 'Millennium Bug' Study Day has now been cancelled permanently. However it may run at regional level sometime in the future.

Another date for your diary is our March 2000 Conference and AGM. This will take place on Saturday 25th March 2000, the venue being Leeds Metropolitan University. The subject for the day being 'Complex Disability – are you managing it?', a very contentious issue at the moment which is sure to promote active discussion. In view of the need for evidence based practice, it is hoped that the day will provide base guidelines for the treatment of such patients. The programme is being finalised, and an initial draft is included on page 37. Watch this space for application forms.

Feedback from the co-hosted Neuroeducation, ACPIN and NANOT, MS Workshops is featured in detail in this edition.

By the time you receive this copy of *Synapse* the Annual Congress entitled 'A New Beginning' to be held at the International Convention Centre in Birmingham, will have taken place. A full report on ACPIN's programme will follow in the spring edition of *Synapse*.

Looking even further ahead, our programme for the Second annual congress entitled 'Neurophysiotherapy: The CNS and Beyond' has been accepted. The Congress, which will run from the 20th-22nd October 2000 will once again be held at the prestigious International Convention Centre. I urge members to look out for details and book early.

Currently, in the initial planning stages is an exciting second ACPIN residential conference which will be held from 23rd-24th March 2001, the theme encompassing all aspects of 'Posture and Balance'. The venue will be the Stakis Hotel in Northampton.

As you can see ACPIN certainly has an inspiring programme of events planned for the next 18 months, not forgetting the Bobath memorial workshops which will take place next Spring.

As you are aware, the CSP is currently revising the Standards of Physiotherapy Practice. ACPIN has a representative who will attend the workshops to voice opinions on our behalf. The Standards are due to be published in twelve months time.

Following much debate regarding manual and therapeutic handling, Anthea Dendy has volunteered to co-ordinate a sub group who will collate information concerning such issues as risk assessments. I urge members to support this project by supplying Anthea with local policies in order that some basic conclusions can be highlighted.

I thought it might be helpful to include ACPIN's Business Plan compiled by the Executive Committee in March.

- To encourage, promote and facilitate the exchange of ides between ACPIN members.
- To promote the educational needs of ACPIN members by promoting Evidence Based Practice and Clinical Governance and by encouraging Continued Professional Development.
- To liaise with the Chartered Society of Physiotherapy on all issues related to Neurology.
- To promote networking with related organisations and professional groups.
- To facilitate the setting of Guidelines within chosen areas of practice.
- To enhance the application of clinical practice through standard setting and audit.
- To be financially accountable for all ACPIN funds via the Treasurer and the ACPIN Committee.

I hope you as members feel that we are meeting all of your needs.

Finally, a big thank you to all the National Committee members for all their hard work and support, and to all our members for their continued loyalty, especially this year. It is your encouragement that drives ACPIN forward to take on new challenges in the pursuit of excellence in this ever changing climate.

Linzie Bassett MCSP SRP
Chairperson ACPIN

Address for correspondence:
119 Wood End Road
Erdington
Birmingham
B24 8BH

The development of an Integrated Care Pathway for acute stroke

Rachel Tainsh, (Acting Senior I) and **Ros Wade** (Superintendent Physiotherapist) Regional Neurological Rehabilitation Unit, Homerton Hospital

'ICPs are task orientated care plans which detail essential steps in the care of patients with a specific clinical problem and describe the patients clinical course' (Campbell et al 1998).

Introduction and Literature Review

This article will describe the development of an Integrated Care Pathway (ICP) for acute stroke patients, it's successes, and difficulties around implementation.

The term 'managed care' originated in the USA in the late 1970s and early 80s, where the providers aims were to cut costs and at the same time improve the quality and efficiency of patient care. (Sandifer,1997)

There has been a growing interest in the concept in the UK because it is seen as a way of co-ordinating quality focused care delivery within the constraints of a budget. Managed care in this way is normally delivered via an ICP which is designed by the healthcare team to provide a simple and clear plan of proposed clinical interventions targeted at a specific group of patients. They can also be used to induce the use of clinical guidelines and systematic audit into clinical practice (Campbell et al 1998)

Multidisciplinary pathways of care (MPCs) are able to monitor interdisciplinary standards of care and incorporate evidence based practice and clinical effectiveness into patient treatment outcomes. (Wilson,1998) They have been used successfully in Multiple Sclerosis rehabilitation to audit both process and outcome following intervention. (Rossiter et al,1998)

In general the literature on stroke supports the view that the management of acute stroke victims in specifically designated Stroke units has a beneficial effect on the long term survival and functional outcomes and reducing the need for institutional care. (Bath,1997; Indrequick, 1997). Odderson (1993) reported on the benefits of an ICP in the acute stage which reduced the delay in rehabilitation management and produced a shorter length of stay.

Bath (1997) stated that stroke was no longer an untreatable or unpreventable condition and indicated how vital it is that hospitals design appropriate systems to manage patients in an interdisciplinary environment.

The Process

At the Homerton Hospital there is a dedicated 26 bed Stroke Unit to which patients with CVA may be admitted onto both acutely, or at a later stage from an acute medical ward for rehabilitation. From the literature it is seen that the initial care that a patient may receive can significantly contribute to the eventual outcome of recovery and their length of stay.

The multidisciplinary team on the Stroke Unit, were brought together by the clinical audit department to look at developing an ICP specifically for acute stroke patients admitted to the unit.

Our objectives were to provide a co-ordinated, efficient, consistent and systematic approach to care delivery in the first seven days of stroke and maximise the potential for recovery of the patient. Having reviewed the literature the needs of the acute stroke patient were documented and an ICP checklist was designed to cover the first seven days following a CVA.

The various steps in developing the ICP are outlined below:

- Review and discussion of ICPs from literature and other units.
- Defining the core group.
- Each discipline to identify it's own specialist interventions or components that were required.
- Development of a user friendly care pathway with clear and concise layout. This included the staff contact and signature form, the pathway, a variance sheet and guidelines.
- Pilot study on the Stroke Unit

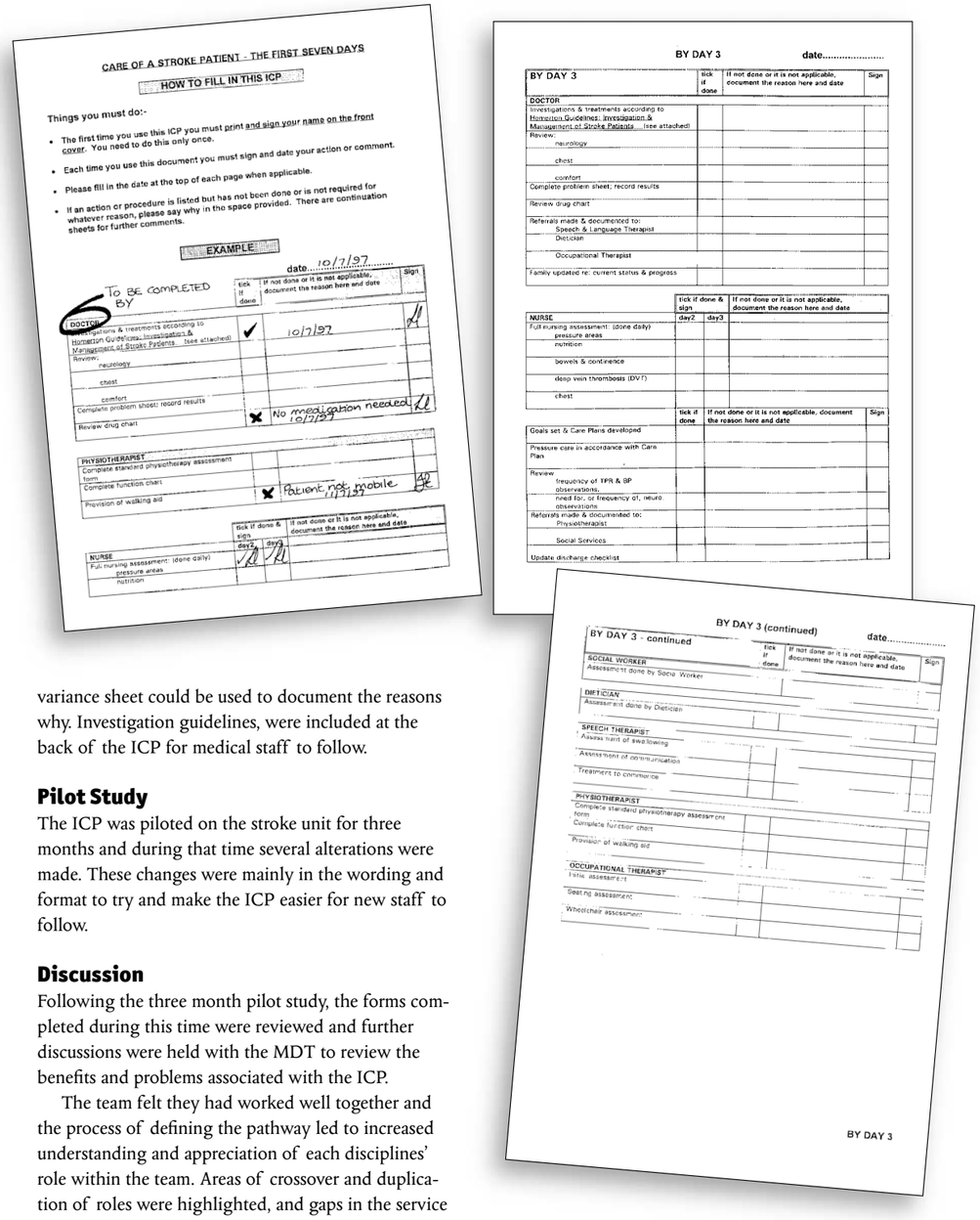
The Pathway

The ICP was split into four component parts: Initial, Day 1, By Day 3 and By Day 7. It was seen as an adjunct to the daily verbal communication between the team and patient, but additionally it provided a written record of all intervention.

Each discipline had the essential aspects of care attributed to them marked under the appropriate heading e.g. Physiotherapy, Nursing etc. The checklist was then ticked dated and signed once each part was completed, by the member of staff concerned.

Variance Sheets

Inevitably there were instances when there was a need to divert from the expected pathway, and then the variance sheet could be used to document the reasons why. Investigation guidelines, were included at the back of the ICP for medical staff to follow.



Pilot Study

The ICP was piloted on the stroke unit for three months and during that time several alterations were made. These changes were mainly in the wording and format to try and make the ICP easier for new staff to follow.

Discussion

Following the three month pilot study, the forms completed during this time were reviewed and further discussions were held with the MDT to review the benefits and problems associated with the ICP.

The team felt they had worked well together and the process of defining the pathway led to increased understanding and appreciation of each disciplines' role within the team. Areas of crossover and duplication of roles were highlighted, and gaps in the service were also identified. This improved the effectiveness of the team ensuring all patients in the study were assessed and appropriate intervention or necessary arrangements organised early.

On review it was found that the latter forms were less well completed. There had been a core group from the MDT who were committed to using the pathway and documentation. However staff turnover during this period was quite high in nursing and therapy, and regular education of staff in the process was time-consuming.

The other problem for the use of an acute ICP, was that during the pilot study only 17 patients were admitted directly to the unit. This represents a very small percentage of those admitted to the hospital as a whole, as a large number are initially seen on the

general medical wards and transferred to the Stroke unit at a later date. It would obviously be beneficial to have an ICP for acute stroke, for all patients admitted to the hospital, however without a clearly defined MDT on the general wards it would be difficult to implement.

One of the main advantages for the patients who were included in the study was that the discharge planning process was more proactive and there was a greater team approach to the process.

Conclusion

In hindsight, there was an enormous amount of work involved in attempting to establish this acute care pathway. There are many positive aspects of an ICP both from ensuring all patients receive equitable intervention and that the rehabilitation team provide a co-ordinated approach to treatment management and discharge planning.

On this Stroke Unit the ICP proved to be of limited effectiveness due to the lack of acute strokes and therefore future plans may be better focused at a 'rehabilitation and discharge pathway' than at the first seven days.

Projects such as this need clear, dynamic leadership, to drive the ICP and ensure that all staff are educated and feel ownership of it.

Those charged with pathway development must commit to the establishment and explication of clear goals, and to careful integration of the pathway with planned and existing continuous quality improvement processes. (Ramos, M. Ratcloffe ,C. 1997)

Ensuring clinical effectiveness and ongoing audit of standards of patient care remains a challenge, which needs creative solutions appropriate to individual units.

REFERENCES

Bath PMW (1997) *The Medical Management of Stroke.* **International Journal of Clinical Practice.** 51,8. 504-510

Campbell R, Hotchkiss R, Bradshaw N, Porteous M, (1998) *Integrated Care Pathways* **BMJ** Jan 316. 133-137

Indredavik B, Slordahl S, Bakke F, Rokseth R, Haheim L, (1997) *Stroke Unit Treatment long-term effects.* **Stroke** 28,10, 1861-1866

Odderson,R. McKenna,B. (1993) *A Model for Management of Patients with Stroke During the Acute Phase* **Stroke** 24, 1823-1827

Ramos MC, Ratliff C, (1997) *The Development and Implementation of an integrated multidisciplinary clinical pathway* **Journal of Wound Ostomy Continence and Nursing** Mar; 24 (2): 66-71

Rossiter DA, Edmondson A, al-Shahi R, Thompson AJ, (1998) *Integrated care pathways in multiple sclerosis rehabilitation: completing the audit cycle* **Multiple Sclerosis** Apr:4(2);85-89.

Sandifer QD, (1997) *Managing Care* **Journal of Public Health Medicine** 19,3.301-306.

Wilson J, (1998) *Integrated Care Management* **British Journal of Nursing** 7,4, 201-202.

At the time of writing this article Rachel Tainsh had been working as a Senior 1 on the Stroke Unit at the Homerton Hospital in London. Ros Wade is currently Superintendent Physiotherapist at the Regional Neurological Rehabilitation Unit at the Homerton Hospital.

Late stage rehabilitation and functional improvement – a case study

Brigitt Bailey, Senior Physiotherapist, Banstead Place Brain Injury Rehabilitation Unit.

Introduction

Late-stage physical recovery after acquired brain injury (ABI) is an issue often discussed amongst physiotherapists working in the neurological field. However very little has been written about the post-acute stage of rehabilitation and the possible effect this may have on any further functional improvements (Watson 1997).

Physical recovery after ABI can be very much hampered by severe cognitive, communication and emotional/behavioural problems and in many instances additional orthopaedic complications.

The combination of fractures and changes in tone influence physical recovery considerably, often leading to secondary complications including soft tissue shortenings and contractures (Yarkony & Saghal 1987).

Clinical evidence indicates that physical improvements occur for a considerable time after injury although at a slower rate and that secondary complications do respond to treatment at a later stage. The combination of these can lead to further improvements in function and independence (Davies 1994).

It is for these reasons that I felt I would like to write about one particular client, who made remarkable progress four years after his injury.

As is typical of this client group, information regarding previous intervention and progress is often limited.

Available History

SD was involved in a RTA in October 1990 and sustained the following injuries:

- Acute subdural haematoma for which he underwent neurosurgery
- Fractures to the right femur and tibia, which were fixed internally
- Cervical spinal subluxation at C6/7 for which he underwent an open fixation a week following injury
- Fracture of the right pubic ramus and ischium
- Comminuted fracture of the right tarsal bone and metatarsal heads

SD was an inpatient at a district general hospital until January 1992. No information about any physiotherapy intervention during his stay was available. In January 1992 he was transferred to a Head Injury Rehabilitation Centre and remained there until July 1992. Thereafter he attended as an outpatient at the Rehabilitation Centre. According to the available notes, he made good progress in terms of 'sitting posture and ability to use his hands for functional tasks'. Reports indicate that SD responded poorly to stretching/casting of established contractures of the right foot and knee. SD was admitted to Banstead Place on 3 January 1995, aged 24, more than four years after his initial injury.

Initial presentation

- **Handicap**
  - Unable to live in his own home and access local facilities
- **Disability**
  - Unable to sit independently
  - Unable to turn in bed and get out of bed unaided
  - Assistance of one person needed for all transfers
  - Unable to stand independently
  - Feeling of isolation and loss of self-esteem
- **Impairment**
  - Postural and balance mechanisms
    - Poor ability to recruit extension
    - Poor proximal stability leading to flexed posture with adduction and internal rotation of the right femur.
  - Pain
    - Pain and rashes in the right groin
  - Tone
    - Low tone in trunk and increased tone in all four limbs, more so in the lower limbs
  - Voluntary control
    - Incomplete movement available with use of total patterns of flexion in upper and lower limbs
  - ROM
    - FFD right hip – 25 degrees
    - Right hip abduction – 0 degrees
    - FFD right knee – 40 degrees
    - FFD right dorsiflexion – 5 degrees (with flexed knee)
    - Right shoulder elevation – 135 degrees
    - Left shoulder elevation – 115 degrees
    - FFD right elbow – 30 degrees
- **FIM/FAM score**
  - 122 (out of 210) on admission
- **Medication**
  - Epilim – 600 mgms daily
  - Baclofen – 100 mgms daily

Overall aim

SD's overall aim was 'To live in his own home with the support of a carer and to be able to access local resource centres and recreational facilities.'

After discussions with SD on how to achieve his aim it was decided to assess the current presentation and response to physiotherapy intervention. These interventions included:

- Mobilisation of soft tissues, particularly shoulder girdle, abdominals, hips, right knee, ankle and foot.
- Facilitation of underlying voluntary control
- Assessment of seating
- Practising of functional activities, ie moving in bed, transfers

After eight weeks of treatment, it became apparent that the right hip abduction was not responding to mobilisation and stretching and some other intervention needed to be considered.

The opinion of a rehabilitation consultant was sought and SD received a phenol block (at that time there was no local access to botulinum toxin) in the right obturator and antispasmodic medication was reviewed.

Within treatment sessions, the right hip was easier to mobilise into abduction/extension, but this did not result in any functional gain in standing. A stable supported sitting posture was achieved, allowing the use of the upper limbs for keyboard skills.

A reduction of the right groin pain and rashes was noted.

June 1995

Due to the lack of carry over in the right hip from treatment sessions, a decision was made to cast the right ankle to improve alignment and BOS to achieve standing (Booth, Doyle & Montgomery 1983). SD did not tolerate a below knee cast.

September 1995

Due to the poor result from the phenol block, a referral back to the rehabilitation consultant was made and he performed another block to the obturator nerve. Following this second block there was an objective change in available hip abduction and extension by 15 and 10 degrees respectively, SD was able to sleep in side lying as an alternative to sleeping in supine. SD was able to sit unsupported on a plinth with his arms free for tabletop functions. By this time the pain and rashes in the right groin had resolved. SD was now able to tolerate a long-leg hinged cast on the right leg to address soft tissue shortening. Improved alignment and ability to recruit extensor activity in the trunk as well as better foot placement allowed SD to transfer to the plinth, the toilet, the bed and the car using both upper limbs in a crouched standing position.

The reason why this block was more successful than the previous one is unclear. We were still unable to achieve a standing posture with flat right foot placement.

January 1996

To assess whether any further improvement in standing could be achieved SD was referred to a botulinum toxin clinic.

June 1996

SD attended the botulinum clinic and the following muscles were injected:

- adductor brevis, longus and magnus
- all heads of hamstrings

A 1000 unit of toxin was injected. This was a substantial dose and SD was unwell with flu like symptoms after the injection.

The botulinum toxin injection was supported by casting the right knee to reduce FFD , as recommended in the literature. (Dunne, Heye & Dunne 1995, Wilson, Childers, Cooke & Smith 1997).

Within 6 weeks a resultant reduction of the FFD of 15 degrees was achieved and this was maintained by use of resting night splint (backslab). During the day, a removable below knee cast was used to maintain planti grade and facilitate weight bearing. This allowed SD to be able to stand in an Oswestry standing frame with good alignment of hips and trunk for about 20 minutes.

Intervention continued until November 1996 when SD was discharged. At the time of discharge his functional abilities were as follows:

- Able to transfer independently in all situations
- Able to sit on a plinth unaided
- Able to use the computer with two hands
- Able to stand in a Oswestry frame for 20 minutes
- Symmetrical sitting and standing posture and no groin pain and rashes
- Able to turn in bed and get himself out of bed
- Emotional well-being

Outcome

FIM/FAM score on discharge 162 (out of 210). SD achieved his aim of living in his own home with the support of a carer and was able to become an active member of his community.

Comment

SD's case report is an example of how continuous assessment, evaluation and problem solving may allow some functional changes to be achieved over a prolonged intervention period. This is possible a long time after injury with a comprehensive problem solving approach.

The key to the successful intervention was the changes achieved in the secondary musculo-skeletal problems, which was achieved by the use of phenol and botulinum toxin and casting/splinting in combination with neurodevelopmental therapy (Davies l994).

I have outlined the physical progress SD made while receiving postmedical rehabilitation in a multidisciplinary team. However, there were also improvements in cognitive, communication and emotional and social behaviours. These changes in my opinion considerably contributed the physical gains and therefore to the achievement of SD's overall aim,

REFERENCES

Booth BJ, Doyle M, Montgomery J, (1983) *Serial casting in the management of spasticity in the head-injured adult* **Physical Therapy** 63, 12, 1960-1966

Dunne JW, Heye N, Dunne S, (1995) *Treatment of chronic limb spasticity with botulinum toxin* **A Journal of Neurology, Neurosurgery and Psychiatry** 58, 232-235

Davies P, (1994) *Starting Again* 299-380, **Springer-Verlag**

Moseley AM, (1997) *The effect of casting combined with stretching on passive ankle dorsiflexion in adults with traumatic head-injuries* **Physical Therapy** 77, 3, 240-247

Pope P in Edwards S, (1996) *Neurological Physiotherapy: A problem-solving approach* 135-161, **Churchill Livingstone**

Sbordone RJ, Liter JC and Pettler-Jennings P, (1995) *Recovery of function following severe traumatic brain-injury: a retrospective 10 year follow-up* **Brain Injury** 9, 3, 285-299

Yarkony GM, Sahgal V, (1987) *Contractures – a major complication of craniocerebral trauma* **Clinical Orthopaedics and Related Research** 219, 9396

Watson MJ, (1997) *Evidence for significant late-stage motor recovery in patients with severe traumatic brain injury: a literature review with relevance for neurological physiotherapy* **Physical Therapy** Rev 2, 93-106

Wilson DJ, Childers MK, Cooke DL, Smith BK, (1997) *Kinematic changes following botulinum toxin injection after traumatic brain injury* **Brain Injury** 11, 3, 157-167

Brigitt Bailey is Head of Physiotherapy at Banstead Place Brain Injury Rehabilitation Unit, Surrey. Banstead Place Brain Injury Rehabilitation Centre is part of the Queen Elizabeth Foundation for Disabled People. It is a post medical rehabilitation centre for young people with acquired brain injuries.
Banstead Place is a registered residential home and accredited by the Further Education Funding Council.

ACKNOWLEDGEMENT

I would like to thank Anthea Dendy for her support in compiling this article.

Using single case studies in clinical practice

Jackie Gardiner Senior I Physiotherapist, Neurological Out-patients Department, Ryhope General Hospital, Sunderland

Introduction

In response to the growing need to improve objectivity and investigate efficacy, the neuromedical physiotherapists at City Hospitals Sunderland have been investigating the use of single case studies within the outpatients setting. Two pilot studies have been completed looking at aspects of walking on a patient with multiple sclerosis and one with incomplete spinal cord injury. The studies lasted six months with alternate non treatment and treatment phases where measurements were taken weekly and treatment was performed twice weekly during the treatment phases. The outcome measures used were: timed ten metre walk (Wade et al, 1987 and Wolfston et al, 1990), distance walked in six minutes (Butland et al, 1982 and Lipkin et al, 1986) and timed one leg stand (Bohannon et al, 1984). It was concluded that the single case study design was a useful tool for physiotherapists working clinically who wish to assess the effects of their treatment with a view to improving their skills. However several points were raised that warranted further investigation.

In the pilot studies walking speed and endurance appeared to improve overall. However standing balance on one leg did not change, suggesting that this was an inappropriate outcome measure for walking. Neither patient appeared to vary their walking pace, i.e. they only had one speed which was unexpected. Although performance appeared to improve over the course of the study, there was no discernible difference between treatment and non treatment phases.

The practice of carrying out single case studies was beneficial to the therapists involved in the treatment, measurement and analysis of the results. It provided a rare opportunity to focus objectively in fine detail on the performance of one patient over a six month period. In particular it allowed observation of the patient during breaks in treatment, which is not normally possible (Riddoch and Lennon, 1994 and Worthington, 1995). It was decided to maximise on this benefit by repeating the process on a different patient, and to compare objectively measured changes in performance with predicted and perceived changes. It was also felt that the research process had benefits to other members of staff not directly involved with the analysis, and that this should be maximised.

The previous single case studies had some limitations which were to be reduced this time. The selection of subject was different in that although he was also a 'late stage' patient, i.e. his neurological damage had taken place over a year ago, he did not have a progressive condition, making analysis of change in performance more straight forward. In this case the outcome measures were selected in direct relation to the patient's particular problems, with more consideration given to his own goals. Outcome measures relating to the patient's perception of his performance were also used.The study was made more rigorous by extending the phases, allowing a greater number of measurements to be taken (Sunderland, 1990) and there was also a control measure to rule out other physiological changes taking place.

The aims of this single case study were to:

- Increase the therapists understanding of which aspects of treatment lead to improvement in the patient's overall performance.
- Observe and analyse the patient's performance when treatment was withdrawn, and the effect of subsequent reinstatement.
- Compare objective changes to the patient's perceived changes in performance.
- Test the therapist's expectations of changes in performance.
- Assess the usefulness of the outcome measures chosen.
- Assess the usefulness of the single case study design in the analysis of physiotherapy treatment.
- Increase the therapists understanding of the process of restoration and maintenance of motor function.

Method

The single case study ABAB design was used where A was the non treatment phase and B the treatment phase (Sunderland, 1990 and Worthington, 1995). The initial phase A1 was the baseline phase and lasted for five weeks with measurements taken weekly. Each subsequent phase lasted for ten weeks with measurements taken weekly. Measurements were not taken on weeks fourteen, twenty one, twenty two and thirty one due to patient holidays.

The outcome measures used were:

- Timed ten metre walk (Wade et al, 1987 and Wolfston et al, 1990).
- Number of paces taken over ten metres
- Distance walked in six minutes. (Butland et al, 1982 and Lipkin et al, 1986).
- Visual analogue scale of ease of walking (recorded by the patient prior to other measurements being taken).

The control measurement used was the General Health Questionnaire (Wade and Legh-Smith, 1986) to establish that other health changes were not taking place that might otherwise effect performance (Sunderland, 1990).

Results were plotted on graphs and analysed visually. No statistical analysis was undertaken.

Results

- **Ten metre timed walk** (see *Graph 1*)
  - **Baseline** The baseline was relatively stable with one outlying point at week 3. This indicates that the outcome measure was appropriate for the patient. The baseline did not have an overall trend
  - **Overall Trend** Over the course of the study the patient's walking speed increased initially before plateauing off in the second half.
  - **Difference Between Phases** Walking speed increased during the initial treatment phase B1. During the non treatment phase A2 walking speed plateaued off overall. Walking speed remained relatively consistent through the second treatment phase B2.

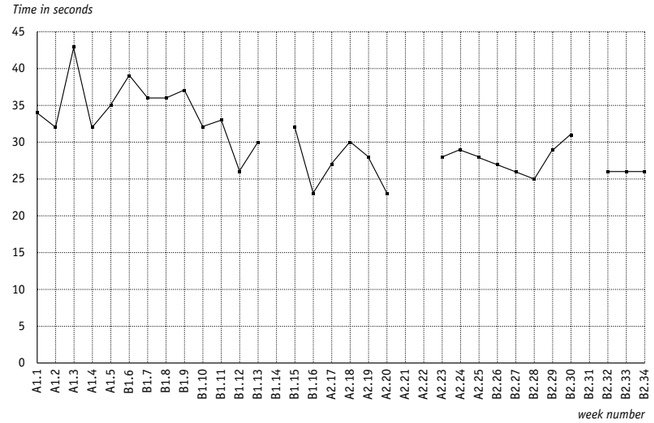
- **Number of paces over ten metres**
  - The number of paces taken over ten metres followed a similar pattern to ten metre walking speed.

- **Distance Walked in Six Minutes** (see *Graph 2*)
  - **Baseline** The baseline was relatively unstable indicating an inconsistent performance.
  - **Overall Trend** The distance walked in six minutes rose over the course of the study.
  - **Difference Between Phases** There appeared to be a noticeable difference between phases with performance being less consistent in the non treatment A phases. The majority of improvement was made during the treatment phases B1 and B2, with performance maintained overall in the non treatment phase A2.

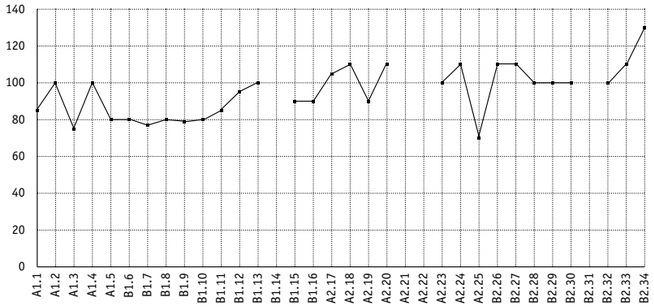
- **Visual Analogue Scale** (see *Graph 3*)
  - Ease of walking recorded by the patient on a visual analogue scale appeared to rise slightly over the course of the study.

- **General Health Questionnaire** (see *Graph 3*)
  - The control measure of general health and well being as recorded by the patient was relatively constant, indicating little change in circumstances.

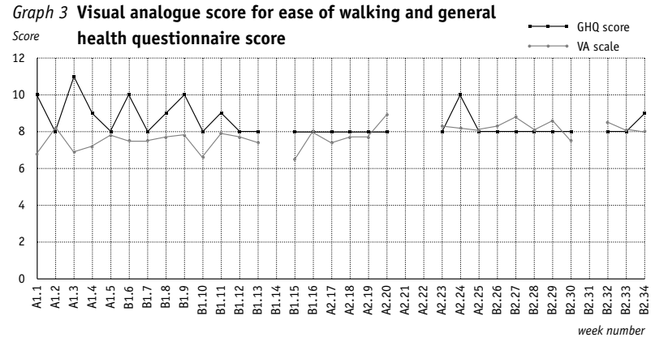
Graph 1 **Time taken to walk ten metres**



Graph 2 **Distance walked in six minutes**



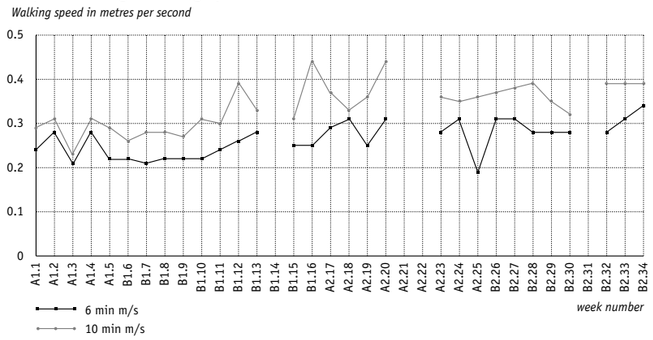
Graph 3 **Visual analogue score for ease of walking and general health questionnaire score**



Discussion

The first point to notice was that over the course of the study the patient improved in terms of increase in walking speed, increase in stride length (number of paces over ten metres reduced) and increase in distance walked in six minutes. The fact that all three measures

Graph 4 **Average walking speed for the ten metre walk and six minute walk**



showed similar improvement helped to validate them as outcome measures for that patient. In all three of the above measures most improvement was made during the initial treatment phase B1, this improvement was maintained over the non treatment phase A2 and some further improvement made towards the end of the final treatment phase B2. This pattern fitted expectations.

Looking more closely at the results for six minute walk which showed the biggest changes, several points emerged. The most obvious feature on the graph was the difference between treatment and non treatment phases. During the A phases where there was no treatment, performance was inconsistent. When the patient was having regular treatment (the B phases), performance was more consistent and showed some improvement. This suggests that the effect of the treatment was to maintain a consistent performance and to allow performance to improve. Closer analysis of the B phases showed an initial plateau or even slight deterioration in performance followed by a sharp improvement. This could be explained by the fact that initially the therapist and patient worked together to 'fine tune' the patient's pattern of walking, this caused walking to be slower as skill modifications took time to be learned. Once this process had been gone through, the patient was able to modify his walking outside of the department and subsequently increased the distance he walked on a daily basis. This lead to a measurable increase in performance. The fact that this pattern appeared for both B phases on the graph and not during the A phases added validity to the theory.

In the pilot single case studies it emerged that both the patients walked at the same speed during the ten metre walk and the six minute walk, suggesting that they were unable to change their walking speed functionally. In this study walking speed was calculated over ten metres and for the six minute walk and plotted on a graph (see Graph 4). For this patient walking speed increased over the course of the study in a similar way to the increase in other outcomes measured.

An increase in the distance that he could walk ie when out shopping, was the goal identified by the patient at the start of the study and physiotherapy treatment was primarily geared towards this, which explains the greater improvement in endurance above speed. The patient did not record great changes in his 'ease of walking' on the visual analogue scale which remained consistently high. He did notice changes in his daily function in that he was able to walk further and for longer, these comments were recorded informally in his physiotherapy records but not objectively as an outcome measure. It would have been appropriate to include specific questions about daily function for this patient.

Conclusion

In terms of the aims of the single case study as set out at the beginning, this project has been successful in the following ways:

- Improvements in the patient's performance were greatest in the areas highlighted by the patient as being of most concern in day to day function. The most effective treatment approach was problem solving with the patient and directing the patient to appropriate home activity. Function and performance increased most when the patient was sufficiently motivated to work on modifications himself.
- The effect of treatment withdrawal resulted in increased inconsistency in performance, although not an overall deterioration. The effect of reinstating treatment was to regain consistent performance and improve it. Changes were most noticeable for the six minute walk.
- The patient did not perceive as great a change in performance as was measured objectively, although he was aware of an increase in day to day function.
- The pattern of change was on the whole as expected by the therapist. The only surprise being the difference in average walking speed between the six minute and ten metre walking tests.
- The walking measures chosen were considered useful and validated by their relationships with one another. The visual analogue scale added to the overall picture by measuring the patient's perception of his performance, but was perhaps too vague to offer much insight into the effects of physiotherapy. A more useful tool would have been a short questionnaire relating to day to day walking function.
- The single case study design was highly appropriate for this type of research within a busy clinical setting.
- The project had proved successful in developing a deeper understanding of the possible effects of different physiotherapy approaches on the function of walking. In this case total involvement of the patient in problem solving and 'fine tuning' of skills which could then be continued at home, rather than heavy emphasis on mobilisation of muscle lead to an increase in function and measured performance.

In order to further increase our understanding of the mechanisms by which later stage patients can maintain and improve performance functionally, further investigations of this nature are needed. In this case a patient who was already highly motivated was found to benefit from further guidance. In future it would be interesting to investigate which approach to physiotherapy treatment would benefit a patient who was dysphasic or cognitively impaired as these patients are frequently referred back for treatment having lost function years after a stroke. Future studies should also take on the points noted here, that the chosen outcome measures should be very specific to the patient's identified problems and more importantly to their own goals. It might be necessary to 'try out' different measures over an open ended baseline period to assess consistency before settling on the measures to be used (Sunderland, 1990).

DATE	WEEKS	TEN METRE WALK	PACES	SIX MIN WALK	VA SCALE	GHQ SCORE	COMMENTS	VIDEO
		Seconds		Metres	cm			
3.4.98	A1. 1	34	36	85	6.8	10		Y
9.4.98	A1. 2	32	33	100	8.2	8		Y
17.4.98	A1. 3	43	35	75	6.9	11		N
24.4.98	A1. 4	32	32	100	7.2	9		N
1.5.98	A1. 5	35	34	80	7.8	8		N
7.5.98	B1. 6	39	34	80	7.5	10		N
14.5.98	B1. 7	36	33	77	7.5	8		N
21.5.98	B1. 8	36	34	80	7.7	9		Y
29.5.98	B1. 9	37	31	79	7.8	10		N
4.6.98	B1. 10	32	32	80	6.6	8		Y
11.6.98	B1. 11	33	31	85	7.9	9	L.LL painfree 2hr walk	N
18.6.98	B1. 12	26	29	95	7.7	8		N
25.6.98	B1. 13	30	29	100	7.4	8		N
	B1. 14							
6.7.98	B1. 15	32	31	90	6.5	8		N
16.7.98	B1. 16	23	28	90	8.0	8		N
23.7.98	A2. 17	27	29	105	7.4	8	R.UL pain,	N
30.7.98	A2. 18	30	30	110	7.7	8	R.UL pain	N
6.8.98	A2. 19	28	28	90	7.7	8	R.UL pain	N
10.8.98	A2. 20	23	26	110	8.9	8	Rx R.UL	Y
	A2. 21						Pt hols	
	A2. 22						Pt hols	
3.9.98	A2. 23	28	31	100	8.2	8		N
10.9.98	A2. 24	29	30	110	8.1	10		N
17.9.98	A2. 25	28	30	70	8.0	8		N
24.9.98	B2. 26	27	32	110	8.2	8		N
1.10.98	B2. 27	26	29	110	8.7	8		N
8.10.98	B2. 28	25	29	100	8.0	8		Y
15.10.98	B2. 29	29	29	100	8.5	8		N
22.10.98	B2. 30	31	30	100	7.4	8		N
	B2. 31							
5.11.98	B2. 32	26	34	100	8.4	8		N
13.11.98	B2. 33	26	28	110	8.0	8		N
27.11.98	B2. 34	26	27	130	7.9	9		N

Table of results

REFERENCES

Bohannon, R W, Larkin, P W, Cook, A C, Gear, J and Singer, J (1984) *Decrease in timed balance test scores with ageing* **Physical Therapy** 64, 7, 1067-1069

Butland, R J A, Pang, J, Gross, E R, Woodcock, A A and Geddes, DM (1982) *Two, six and twelve minute walking tests in respiratory disease* **British Medical Journal** 284, 1604-1608

Lipkin, DP, Scriven, AJ, Crake, T and Poole-Wilson, PA, (1986) *Six minute walking test for assessing exercise capacity in chronic heart failure* **British Medical Journal** 292, 653-655

Riddoch, J and Lennon, S (1994) *Single subject experimental design: One way forward* **Physiotherapy** 80, 4, 215-218

Sunderland, A (1990) *Single-case experiments in neurological rehabilitation* **Clinical Rehabilitation** 4, 181-192

Wade, D T, Legh-Smith, J and Langton-Hewer, R (1986) *Effects of living with and looking after survivors of a CVA* **British Medical Journal** 293, 418-420

Wade, DT, Wood, VA, Heller, A, Maggs, J and Langton Hewer, R. (1987) *Walking after stroke: measurement and recovery over the first three months* **Scandinavian Journal of Rehabilitation Medicine** 19, 25-30

Wolfston, L, Whipple, R, Amerman, P, and Tobin, JN (1990) *Gait assessment in the elderly: a gait abnormality rating scale and its relation to falls* **Journal of Gerontology** 45, 12-19

Worthington, A D (1995) *Single case design experimentation* **British Journal of Therapy and Rehabilitation** 2, 10, 536-557

Address For Correspondence
Jackie Nield MCSP BSc(Hons)
Senior I Physiotherapist
Neurological Out Patients Department
Ryhope General Hospital
Stockton Rd
Sunderland SR2 OLY

OTHER JOURNALS

The aim of this section is to list the titles of papers which have been recently published in key journals, and which may be of interest to ACPIN members

AGE AND AGEING

• 1999, vol 28, no 1

• Roper TA et al, *Intermittent compression for the treatment of the oedematous hand in the hemiplegic stroke: a randomized controlled trial* pp9-13

• 1999, vol 28, no 2

• Meara J et al, *Accuracy of diagnosis in patients with presumed Parkinsons disease* pp99-102

• Stone S, *Stroke units: more trials needed* pp95-7

ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION

• 1999 vol 80, no1,

• Canning C, Ada L and O'Dwyer N, *Slowness to Develop Force Contributes to Weakness After Stroke* pp66-70.

• Meythaler J et al, *Long-Term Continuously Infused Intrathecal Baclofen for Spastic-Dystonic Hypertonia in Traumatic Brain Injury: 1-Year Experience* pp13-19.

• Nelson B et al, *Can Spinal Surgery Be Prevented by Aggressive Strengthening Exercises? A Prospective Study of Cervical and Lumbar Patients* pp20-25.

• 1999 vol 80, no 2,

Barbeau H et al, *Walking After Spinal Cord Injury: Evaluation, Treatment and Functional Recovery* pp225-235.

• Stibrant Sunnerhagen K et al, *Upper Motor Neuron Lesions: Their Effect on Muscle Performance and Appearance in Stroke Patients With Minor Motor Impairment* pp155-161.

• Van Emmerick R et al, *Identification of Axial Rigidity During Locomotion in Parkinsons Disease* pp186-191.

• 1999 vol 80, no 3,

• Chantraine A et al, *Shoulder Pain and Dysfunction in Hemiplegia: Effects of Functional Electrical Stimulation* pp328-331.

• Wernick-Robinson M, Krebs D, Giorgetti M, *Functional Reach: Does It Really Measure Dynamic Balance?* pp.262-269.

• 1999 vol 80, no 4,

• Hesse S, Konrad M and Uhlenbrock D, *Treadmill Walking With Partial Body Weight Support Versus Floor Walking in Hemiparetic Subjects* pp421-427.

• Katz N et al, *Functional Disability and Rehabilitation Outcome in Right Hemisphere Damaged Patients With and Without Unilateral Spatial Neglect* pp.379-384.

• Wee J, Bagg S, Palepu A, *The Berg Balance Scale as a Predictor of Length of Stay and Discharge Destination in an Acute Stroke Rehabilitation Setting* pp448-452.

• 1999 vol 80, no 5,

• Lin F, Sabbahi M, *Correlation of Spasticity With Hyperactive Stretch Reflexes and Motor Dysfunction in Hemiplegia* pp526-530.

THE BRITISH JOURNAL OF OCCUPATIONAL THERAPY

• 1999, vol 62, no1

• Laporte D, Chan D and Sveistrup H, *Rising from Sitting in Elderly People, Part 1: Implications of Biomechanics and Physiology* pp36-42.

• 1999, vol 62, no 2

• Laporte D, Chan D and Sveistrup H, *Rising from Sitting in Elderly People, Part 2: Strategies to Facilitate Rising* pp64-68.

• 1999, vol 62, no 7

• Jackson T, *Dyspraxia: Guidelines for Intervention* pp321-326.

BRITISH JOURNAL OF REHABILITATION RESEARCH

• 1999, vol 38 (pt1)

• King C et al, *Coping effectiveness training for people with spinal cord injury: preliminary results of a controlled trial* pp5-14

BRITISH JOURNAL OF THERAPY AND REHABILITATION

• 1999, vol 6, no 1

• Chesson R, Massie S and Reid A, *Carers' perceptions of rehabilitation in a stroke unit* pp32-37.

• 1999, vol 6, no 3

• Chesson R, Cockhead D and Maehle V, *Expert opinion on therapy for people with Parkinson's Disease* pp124-129.

• Hope S, *Parkinson's disease: aetiology and treatment* pp.112-118

• 1999, vol 6, no 5

• Green J, Forster A, Young J, *A survey of community physiotherapy provision after one year post-stroke* pp216-221.

• Tyson SF, Turner GF, *Southampton Stroke Audit: assessing service quality* pp227-232.

• 1999, vol 6, no 6,

• Rogers P, Perren P, *Truth or illusion: evidence-based practice in the real world* pp275-280.

• 1999, vol 6, no 7,

• Patel S, Taylor L, *Only half the world: hemianopia or neglect?* pp327-329.

BRITISH MEDICAL JOURNAL

• 1999, vol 318, no 7175

• Chang Cl et al, *Migraine and stroke in young women: case control study* pp13-18

• Powell M, *Recent advances in neurosurgery* pp35-38

• 1999, vol 318. No

• Shaw P, *Motor neurone disease* pp1118-21

• Stewart J et al, *Ethnic differences in incidence of stroke* pp967-971

CANADIAN JOURNAL OF OCCUPATIONAL THERAPY

• 1999, vol 66, no 1

• Landry J et al, *Assessment and interventions with clients with apraxia – contributions from the literature* pp52-61

CLINICAL REHABILITATION

• 1999 vol 13 (suppl 1),

• Inman C, *Effectiveness of spinal cord injury rehabilitation* pp25-31.

• Ko Ko C, *Effectiveness of rehabilitation for multiple sclerosis* pp33-41.

• Rice-Oxley M, Turner-Stokes L, *Effectiveness of brain injury rehabilitation* pp7-24.

• 1999 vol 13, no 2,
• Clark MS, Smith DS, *Psychological correlates of outcome following rehabilitation from stroke* pp129-140.

• 1999 vol13, no 3,
• Parry RH, Lincoln NB and Vass CD, *Effect of severity of arm impairment on response to additional physiotherapy early after stroke* pp187-198.

• Mercier et al, *Description of a new motor re-education programme for the paretic lower limb aimed at improving the mobility of stroke patients* pp199-206.

• van de Weg FB, Kuik DJ, Lankhorst GJ, *Post-stroke depression and functional outcome: a cohort study investigating the influence of depression on functional recovery from stroke* pp268-272.

• 1999 vol13, no 4,
• Boissy et al, *Maximal grip force in chronic stroke subjects and its relationship to global uppper extremity function* pp354-362.

• Hellawell DJ, Taylor R, Pentland B, *Persisting symptoms and carers' views of outcome after subarachnoid haemorrhage* pp333-340.

• Turner-Stokes L et al, *The UK FIM and FAM: development and evaluation* pp277-287.

• Tyson SF, *Trunk kinematics in hemiplegic gait and the effect of walking aids* pp295-300.

DISABILITY REHABILITATION
• 1999, vol 21 (5-6)
• Mayo NE et al, *Disablement following stroke* pp 258-68

INTERNATIONAL JOURNAL OF REHABILITATION RESEARCH
• 1999, vol 22, no 1
• Bohannon RW, *Scoring transfer and locomotion independence of home care patients: Barthel vs FIM* pp65-6

• 1999, vol 21, no 2
• Ring et al, *Quality of care on a stroke rehabilitation ward: the use of urinary incontinence as a tracer* pp 241-5

LANCET (THE)
• 1999, vol 353, no 9167
• Gwinn-Hardy K et al, *L dopa slows the progression of familial parkinsonism.*

• 1999, vol 354, no 9174
• Kwakkel G et al, *Time well spent in stroke rehabilitation.*

• 1999, vol 353, no 9158
• Rudge P, *Are clinical trials of therapeutic agents for MS long enough?*

PHYSICAL THERAPY
• 1999, vol 79,no 5
• Swan L, Dupont J, *Multiple system atrophy* pp488-494

• Rimmer JH, *Health promotion for people with disabilities* pp495-502

PHYSIOTHERAPY
• 1999, vol 79, no 1
• Daley K et al, *Reliability of scores on the stroke rehabilitation assessment of movement (STREAM) measure* pp 8-23

• 1999, vol 79, no 2
• Beekman et all, *Energy cost of propulsion in standard and ultralight wheelchairs in people with spinal cord injuries* pp 146-158

• 1999 vol 85, no 3,
• Harvey L, Davies Smith A, Jones R, *The Effects of Weighted Leg Raises on Quadriceps Strength, EMG Parameters and Functional Activities in People with Multiple Sclerosis* pp154-161.

• 1999 vol 85, no 5,
• Watson M, *Clinical Reasoning in Neurology: Perry's Model* pp281-288.

• 1999 vol 85, no 7,
• Kwakkel G, Kollen B, Wagenaar R, *Therapy Impact on Functional Recovery in Stroke Rehabilitation* pp377-391.

SCANDINAVIAN JOURNAL OF REHABILITATION MEDICINE
• 1999, vol 31, no 1,
• Ravaud J, Delcey M, Yelnik A, *Construct validity of the Functional Independence Measure (FIM): Questioning the unidimensionality of the Scale And The 'Value' of FIM Scores* pp31-41.

• 1999, vol 31, no 2,
• Schantz P, et al, *Movement and muscle activity pattern in wheelchair ambulation by persons with para and tetraplegia* pp76-76.

• 1999, vol 31, no 3,
• Fujiwara T, Hara Y, Chino N, *The Influence of non-paretic leg movement on muscle action in the paretic leg of hemiplegic patients* pp174-177.

• Nieuwboer A et al, *Plantar force distribution in Parkinsonian Gait: A comparison between patients and aged-matched control subjects* pp185-192.

PSYCHOLOGY AND HEALTH
• 1999, vol 14, no 2
• Johnston M et al, *Perceived control, coping and recovery from disability following stroke* pp181-192.

Collated by Karen Rowland and Louise Gilbert

ACPIN NEWS

MEMBERSHIP

Linzie Bassett.
Chair ACPIN

As you are all aware last year ACPIN volunteered to join a pilot scheme initiated by the CSP whereby they would collect our subscriptions alongside the renewal of our CSP membership. The aim of combining forces with the CSP was to ease the tedious task of membership renewal for you, as members, and our own Membership Secretary.

Our hope was that this transition would run smoothly. Sadly we were mistaken.
To understand this convoluted procedure, I will give a short resume:

- November 1998 – CSP sent out direct debit forms to all ACPIN members. (NB some members did not receive their CSP membership card alongside this).
- December/January 1999 – ACPIN membership fee withdrawn from bank accounts.
- April 1999 – CSP send first list of members who have participated in the direct debit system.
- Reminder sent by CSP to all members who have not rejoined.
- July 1999 – receive final names of members who have joined ACPIN for 1999.

The communication between the CSP and all the CIGs involved in the pilot study has been extremely poor. Failure to meet deadlines has resulted in major delays acknowledging membership.

This whole procedure has been immensely frustrating for all concerned. There have been frequent telephone calls to the Membership Department by myself and Clare Scott-Dempster. The National ACPIN Committee have spoken at length to Gwynn Owen (Professional Adviser at the CSP) and have formally complained to Phil Grey, Chief Executive for the way in which this study has been run.

In view of the foregoing, the National Committee at our July Meeting, voted to withdraw from the scheme and will revert back to the 'old' system where members forward a cheque with their membership form directly to Kim Goodwin.

Please note a membership form for the Year 2000 has been enclosed separately with *Synapse*. Read instructions carefully.

I can only apologise once again for all the stress and inconvenience caused to all our members. Thank you for being patient and I hope that next year it will all run smoothly.

If you have any membership queries please do not hesitate to contact me or Rowena Wright, the Acting Honorary Membership Secretary. ■

HAVE YOU GOT THE MILLENNIUM BUG?

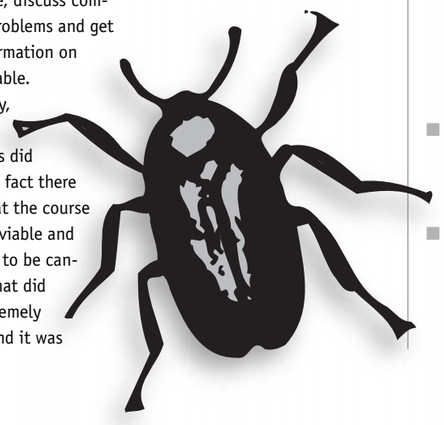
ACPIN National Conference
May 20th 1999
Information Management and Technology in Neurotherapy
Jackie Newitt MCSP SRP

The postponed 'Millennium Bug' Study Day was scheduled to take place in Birmingham on 20th May 1999.

Following feedback from the original planned programme we decided to open up the course further. The emphasis was adapted slightly to include more clinical application of Information Technology and NANOT members were invited to attend. We tried to create an innovative and stimulating programme that would appeal to both therapists with no experience in this field and those using computers on a more regular basis. It was designed to show how IM&T could compliment Neurotherapy practice and included opportunities for delegates to try out software, discuss computer related problems and get up to date information on what was available.

Unfortunately, to our surprise, the applications did not flood in. In fact there were so few that the course was deemed unviable and reluctantly had to be cancelled. Those that did apply were extremely disappointed and it was difficult for all involved to see why the day did not appeal to more therapists.

There are currently no plans to rerun this course. ■



HONORARY EDUCATION OFFICERS REPORT

Karen Rowland

I was appointed to this post at the AGM in March of this year. Currently I am lecturer in physiotherapy at Sheffield Hallam University and continue to work in a clinical setting. I am presently identifying my role within ACPIN and establishing myself in the executive committee.

I have identified some areas that I feel are important to develop during the next 12 months:

- Neuro physiotherapists require evidence to substantiate their arguments and therefore require access to the literature. Within all scopes of practice we will have to justify our treatment and be able to discuss the evidence in a clear and concise manner.
- With this in mind and as part of the First Class service document therapists need to access information services at a local level eg internet.
- Increased relationships with other special interest groups from musculoskeletal to pool and share ideas. Consider running joint courses.
- Discover the training needs of neuro therapists so that appropriate programmes can be implemented rather than the training courses dictating our learning.
- Review neurological education to enable therapists to develop both practical skills and academic argument.
- Discover the training programmes in each regional area and identify key areas that can be organised as national events. ■

MINUTES OF ACPIN ANNUAL GENERAL MEETING

March 20th 1999
The Royal Free Hospital, London

Chairperson: Linzie Basssett
The Chair opened the meeting at 12.05pm.

1. APOLOGIES
Margaret Hewitt, Martin Watson, Pam Evans, Anthea Dendy, Sharon Griffen, Kate Duffield.

2. MINUTES OF AGM 1998
Proposed: Ros Wade
Seconded: Louise Gatehouse
The minutes were approved and signed as a true record of the meeting.

3. PRESIDENTIAL ADDRESS
Sue Edwards
In her address Sue Edwards reviewed developments within Neurological physiotherapy as we approach the millennium, but urged members to remain concentrated on the patient at the centre of this, commenting 'Whose life is it anyway?'

Neurological physiotherapy has never been more exciting and challenging. More refined investigative procedures, the effective use of botulinum toxin/intrathecal baclofen and access to the Internet were given as examples. Whilst providing increased knowledge they continue to raise more questions.

'Evidence based practice' is the buzz word at the moment and as a profession we must provide it.

The literature provides information that supports varied treatment approaches. Whilst there are different concepts of treatment, surely all therapists have the same aims ie improve motor control, use movement science, redress muscle imbalance and enable patients to function with more normal movement patterns?

Great strides have been made clinically over the years. For example, many clinicians are now emphasising the need to address both the problems of spasticity and secondary bio-mechanical changes within hypertonic muscles. These two issues are not exclusive, despite many debates on the subject, and there may be a need for the literature to be updated on the rationale behind some of the therapeutic approaches to the management of patients with neurological disability.

Whilst incorporating these new and challenging developments into our treatments we must not lose sight of the individual at the centre of the proceedings. Therapists provide a service by imparting their knowledge and expertise, not their own individual views. They must recognise the expertise of the patient who have often lived with their disability for a long time, and involve the patient in decision making. A frank exchange of information, negotiation and co-operation is essential between the two parties.

Compensation was given as a prime example of how professional ideals may be at odds with the aspirations of the patient. In the eighties, compensation was almost a 'dirty' word, implying that the patient was using abnormal strategies to enable function. All patients strive for function and they will compensate. The therapeutic skill lies not only in determining the necessary compensation for function and that which is potentially detrimental to the patient, but also being able to sell this to the patient. By letting the patient compensate in a manner that helps his performance and does not adversely affect it now or in the future, and by telling him of the dangers of increased tone and how compensation may affect performance, you give the patient control.

ACPIN members have a key role to play in ensuring a balance between professional ideals based on sound scientific evidence and the needs and aspirations of the patient. Increased knowledge will lead to more choice for both the therapist and the patient.

4. CHAIRPERSONS ADDRESS
Linzie Bassett
Following feedback from the 1998 AGM, full Subgroup reports on the years activity were displayed at the conference and members were encouraged to read them during the day.

The National Committee were thanked for their hard work over the past year.

Goodbyes and thank-yous were said to Dr Sue Mawson (education Officer) and Margaret Hewitt, both of whom left the Executive Committee this year.
Also thanked were the Regional Committee members who resigned over the year: Sarah Bent, Emma da Vina, Kate Duffield, Paul Johnson, Laura Wheatley Smith, Nicola Goodwin, Katie Wilkie and Joanne McCaul

ACPIN's new President, Sue Edwards, has been able to attend several of the committee meetings, offering an experienced perspective on many issues.

ACPIN continues to flourish but membership is slightly lower(650) than last year(900). This is felt to be due to the renewal process, now via the CSP, which has had some initial teething problems.

Synapse is now a bi-annual publication and is becoming increasingly professional in its presentation. It relies heavily on the membership to submit material and members were encouraged to share thoughts and experience with each other. Martin Watson, (*Synapse* editor) and Kevin Wade, (designer) were thanked for their work.

In response to members request the research sub-group co-ordinated a nation-wide project to increase confidence in evaluating research.

Last years residential conference 'Neurophysiotherapy into the Next Millennium' was extremely well received and it is hoped that a future residential conference will be organised in 2001.

Future ACPIN events were highlighted:

- The postponed 'Millennium Bug' Study Day has been rescheduled for May 20th with a slight change in its emphasis to allow for more clinical relevance.
- Funding has been made available from the Neuro Education company to run study days for ACPIN members. ACPIN and Neuro Education have therefore organised four regional meetings on the topic of 'MS and Spasticity'.
- In October 1999 ACPIN will combine with the CSP to host the Annual Congress 'A New Beginning'.
- In Spring 2000 there will be four regional Bobath Memorial Workshops on Writing Case Reports.
- ACPIN's programme for the 2nd Annual Congress has been accepted by the CSP. It is entitled 'Neurophysiotherapy: the CNS and Beyond'. Ros Wade was thanked for devising the programme.

The CSP is currently reviewing the structure of clinical interest and occupational groups. ACPIN is actively involved with Gwyn Owen who is chairing the working party.

Linzie Bassett summarised her report by reminding members that as they strive in the pursuit of excellence to remain firm in their beliefs for the necessity of clinial specialist posts; the need for evidence based practice and the issues concerning manual and therapeutic handling
She ended by thanking members for making ACPIN a dynamic association to be proud of.

5. TREASURERS REPORT 1998/1999
Tricia Moffitt

- ACPIN Reserves as of 31st December 1998:
  General Account
  £25,136.00
  Bobath Memorial Fund
  £4,745.00
- Cash flow for 1998:
  Income
  £46,340.00
  Expenditure
  £39,770.00
  Balance
  £6,500.00
- Income is made up from:
  Courses/Sponsorship
  58%
  Membership Fees
  40%
  Sundries
  2%
- Areas of Expenditure:
  Course Fees
  57%
  Capitation Fees
  10%
  Synapse
  9%
  Travel
  9%
  Sundries
  4%
  Office Fees
  3%
  Administration fees
  8%
- Accountants:
  Unanimous vote to retain the current accountants – Langer & Co, 8-10 Gatley Road, Cheadle.
- Summary:
  ACPIN accounts are in a much healthier position compared to last year.

6. NOMINATIONS
Two vacancies on the Executive Committee each received two nominations. A closed ballot took place and the following members were appointed:

- Hon. Education Officer:
  Karen Rowland
  Proposed Sue Mawson
  Seconded Linda Strachan
- Executive Committee Post - Louise Gilbert
  Proposed Jackie Newitt
  Seconded Louise Dunthorne
- Rosie Hitchcock restanding as CIG Liason Rep was voted back onto the Executive Committee.

There were unfortunately no nominations for the vacant Hon. Audit Officer post.

7. AOB
None

Meeting Closed at 12.35pm ■

PUBLIC RELATIONS OFFICER'S REPORT AND REPORT OF THE COMMUNICATIONS SUB-GROUP 1998–1999

Anthea Dendy

The basic role of the PRO and Communication Sub-group remains to facilitate and enhance communication within ACPIN, and between ACPIN and other bodies. The regular annual committments of the group remain unchanged. These include regular revision of the display board, and the Regional Representatives pack, and compiling the motions for the Annual Representatives Conference (ARC).

This year members have continued to bring to our attention issues regarding manual and therapeutic handling and one of the group is representing ACPIN on the CSP Moving and Handling Development Group. ACPIN is also compiling a database of information from members as a resource for others, who may be finding this a difficult issue to resolve, to access and utilise.

The guidelines for use of video taping and photographic material have been finalised and were published in Synapse. All Regional Representatives have a copy for members to copy if they are setting up guidelines locally.

Our motion at ARC last year was carried unanimously. This year we still did not receive ideas from members on motions for Glasgow in May. The group looked at several issues. However on researching further it was found that the CSP had plans in progress to address the issues we had in mind so it was not appropriate to submit them. On a positive note we do have 2 representatives attending on ACPIN's behalf this year and the sub group will be supporting them in preparation to speak to any motions which the membership feel ACPIN should express an opinion. Regional Representatives will be feeding back members views to the sub group at the April Committee meeting.

Over the next year the Communications group hopes to begin a small project to target initially the local press. The aim will be to highlight and promote the role of physiotherapists in neurology. Our other main project is to be proactive with regard to offering members some financial support to attend events such as WCPT in return for representing ACPIN and forging links with similar international organisations.

Finally, the position of PRO has recently been taken over from Anthea Dendy by Nicola Hancock, who will now be chairing the Communications sub group. Nicola has many ideas for the group to take on, in particular with regard to using the media to highlight issues concerning physiotherapists working in neurology. So we are looking forward to a dynamic and proactive year! ■

ANNUAL REPRESENTATIVES CONFERENCE

MAY 1999 GLASGOW
Report compiled by ACPIN Representatives
Jenny Craig and Bhanu Ramaswamy

Due to the changes in the ARC Constitution agreed on since ARC 1998, this year's conference was a tame affair and passed without incident in the wonderful city of Glasgow. The second day saw much more 'heated debate' than the first, despite the early morning hangovers from a very successful Ceilidh following on from an evening Civic Reception and dinner laid on by the organisers of ARC.

There were ten sections in all, each introduced by a Council member to inform the representatives of work done to date, covering 34 known motions and several emergency motions, to be debated over the two days.

In addition to the main debate, on the Friday, a lunch time focus group was held in which to discuss the new-style Physiotherapy journal and an evening fringe meeting about 'Lone working'. Another fringe meeting, on the Saturday, explored the theme of institutionalised racism in the NHS and how to tackle it. Surgeries, held by Council officers and also by the CSP Solicitors, were also offered throughout the two days.

SECTION 1: NATIONAL HEALTH SERVICE
Motions in this section called for a campaign to prevent privatisation of the NHS; to continue to campaign for public funding for core services such as breast cancer screening, rather than one off supplements from private funds, such as the National Lottery; for the CSP to carry out a survey of out-patient physiotherapy departments to look into the driving force behind waiting list initiatives and its effects on the staff and lastly, having congratulated the publication of the Government's human resources strategies, A.R.C. called on Council to ensure the positive implementation of the strategies. All four motions were carried.

SECTION 2: MANAGEMENT ISSUES
The three issues debated and carried were, for the CSP to lobby the NHS Executive to produce national guidelines for the use and cost of agency staffing; for a coherent retention and recruitment policy to be developed and to recommend that an assistant career structure with recognised progression was drafted.

SECTION 3: PAY AND CONDITIONS
This section saw the first of the amendments to a motion and two emergency motions taken in common debate. This time, all were carried except the motion requesting the Scottish parliament be lobbied to provide Edinburgh and Aberdeen Weighting. Much concern was voiced over the new policies proposed by the Government with relation to potential changes to our pay and conditions, and the motion receiving much debate was that suggesting that Trusts should pay for their employees State Registration fees.

SECTION 4: EDUCATION
The motion calling upon the CSP to produce guidelines for returnees after a career break (and for their managers) to support re-entry in to the profession and the motion calling for the development of more part-time courses were carried. A motion looking into the costs of training was withdrawn, as it is already being looked into by council, and another motion (brought forward from the tertiary agenda) requesting that the issue of Occupational standards was investigated, and the motion was carried.

SECTION 5: EQUAL OPPORTUNITIES
The first motion called upon the CSP to investigate the existing inequalities in the provision of physiotherapy services for black and ethnic minorities; the second asked Council to draft a policy of equal consideration, for both assistants and qualified staff alike, when resources for education were allocated and the third called upon council to promote the needs of members with disabilities, including access to facilities where courses were run. All three were carried.

SECTION 6: HEALTH AND SAFETY
The motions debated and carried in this section were around the inadequacy of new Health and Safety inspectors employed in response to the new working time regulations, a request for investigations into whether strain injuries experienced by physiotherapists may be work related and the last one asked the CSP to research the incidence of work-acquired infectious diseases and the impact upon the membership.

SECTION 7: CSP CONFERENCES
Although only a short section on paper, these two motions caused much debate. The first motion, requesting a change in the A.R.C. Constitution and Standing orders, to ensure that only qualified physiotherapists voted on clinical issues dealing with decision making or a change to practice, failed. The motion calling on the CSP to review its policy on expecting those presenting papers at congress to incur the full costs, was finally remitted to council.

SECTION 8: PROFESSIONAL ISSUES
Again, a lively section, spurring much debate with issues such as the CSP being in an ideal position to promote the use of cannabis for medical use in trials (carried), and that on call services should be carried out only by those with recent and regular involvement in respiratory patients (failed on the grounds of impracticality, although it was accepted as being desirable). Another motion was that the CSP bring the adverse effect of educational policies on paediatric physiotherapy services to the attention of the Dept of Education and Employment. Another contentious motion was that looking into the scope of practice asking for a re-definition of our core elements of practice and for the CSP to remove archaic forms of treatment e.g. UVL, microwave. This motion was remitted to council. The other motions carried in his section were requests that training was provided to staff about sensitivity and rights of the Gay and BLT staff, and a request to make the Manual handling and the Legal advice packs free to members.

SECTION 9: CSP STRUCTURES
The first two motions about the endorsement and dissemination of information promoting the role of SIGs and the employment of a Public Relations Officer regionally, carried. The third motion sparking off a lot of heated discussion and misunderstandings was that about the full membership being allowed to vote on the issue of full voting rights for the assistants. This motion failed.

SECTION IO: HEALTH ECONOMICS AND SOCIAL POLICY
The three motions requesting more involvement in health education, more funding for community care and to help poverty - a known cause of ill health were all carried as was an added emergency motion requesting the CSP determine what members in this country and abroad may do to assist in supporting the Kosovan refugees.

Frontline will be publishing its bi-yearly update on the motions, but we felt that it would be good to have a feel beforehand of some of the more notable issues for debate. ■

UPDATE REGARDING MANUAL HANDLING

Anthea Dandy MCSP
Vice Chairperson ACPIN

In February of this year I attended a Moving & Handling Development Group (MHDG) meeting. This group was a subcommittee of the Professional Practice Committee (PCC) of the CSP. At the final meeting that I did attend there was a wide ranging discussion around many of the issues concerned with moving and handling. I informed members of the group that ACPIN was struggling with enquiries on moving and handling with neurological patients and to date our only action has been to try and gather a data base of what methods and equipment people were using and to recommend to members that they set up local guidelines and protocols.

There were a couple of issues raised at the meeting:

- With reference to equipment, it was highlighted by Brian Fletcher that as therapists we should all be feeding back to manufacturers regarding new equipment design, so that this is led by therapists rather than just being led by nursing needs. Examples were discussed of stroke units who are using suspension walking harnesses with hoist systems. I know plenty of other examples could be considered, such as the use of electric standing frames, use of stand aid hoists, use of overhead tracking etc.
- Members of the MHDG agreed that there was a need for guidelines and protocols to be produced by the CSP that could then be adapted to local needs. It was hoped that not only would these guidelines allow people to write local guidelines and protocols, but that it may also encourage Physiotherapists to question their practice and not to continue with a method just because they had always done it this way. It was concluded that the MHDG could draft generic guidelines for sample protocols to which the CIG's could add more guidelines and protocols specific to their area of practice. It was felt that these guidelines must, as far as possible, be related to any research evidence and linked to outcomes. The guidelines would be based on clinical reasoning and techniques. They could also be related to the topic of delegation of tasks. It was felt that at this stage it would not be possible to make the guidelines multi-disciplinary, but that other professions could be invited to comment at the draft stage.

The plan from the meeting was that at our next meeting in June we would brainstorm to draft the guidelines. Unfortunately, following that meeting and feedback to the PPC, I received a letter from Carol Owen (CSP), who is chairing the MHDG. In this letter she outlined that due to the fact that council elections were taking place and a new council would be taking up office in September, the PPC would have a new membership in October and at that time be looking at its work and plans for any sub-groups. As the current PPC only had one more meeting in July it did not feel able to commit the new committee to the two year programme of work which we had outlined. They therefore requested that the proposed programme should be considered in the autumn by the new PPC alongside any other bids and proposals for future work. The MHDG has therefore been asked to postpone its activities until the new committee has had time to consider its priorities. As you can imagine, this is very disappointing and I have written to the CSP to outline our disappointment and I will also be writing to the PPC to ask them to consider 'Moving and Handling'as a priority area of work for the future. I am therefore hoping that the MHDG will reconvene in November or December of this year.

In the interim it has been decided that ACPIN should set up a small working party, the terms of reference of which have not yet been set. We would anticipate that two of the roles we would take on would be:

- collation of information regarding equipment that members have found useful within therapy setting
- collation of any local standards and guideline protocols that members have developed which they feel happy to share with other ACPIN members. It may be from this that ACPIN can then draw up a skeleton framework to assist members in the production of local guidelines and protocols.

If you do have any information or work you have done that you would like to share with other ACPIN members, please forward it to me at the following address: Anthea Dendy, Clinical Physiotherapy Specialist in Neurology, Physiotherapy Department, St. George's Hospital, Blackshaw Road, Tooting,London SW17 OQT. ■

CLINICAL PRACTICE AND AUDIT SUBGROUP

The group has been reformed following the Chester Conference to focus on promoting Clincial Practice and Audit.

Current projects include:

- Bobath Memorial Workshops. The purpose of these workshops is to enable ACPIN members to gain the skills required to write a case report, and have the opportunity to participate in a practical workshops being guided to produce their own case report which may ultimately lead to publication.
- Manual Handling Guidelines. To collate information and offer advice in conjunction with the CSP on Manual Handling and produce some guidelines.
- To establish links with ACPIN's Audit Officer once in post. ■

THE EVALUATING RESEARCH ARTICLES PROJECT (ERA)

Feedback from the regional sessions August 1999
Pam Evans
Honorary Research Officer

A number of regional groups have returned the ERA feedback sheets which had been completed by those members who attended their ERA session. We have received informal feedback from most of the other regions. Thank you to everyone involved in getting this information to us.

Several regions reported disappointingly low attendances for these sessions compared with average attendances for other types of regional meetings. This suggests that reading and discussing research reports remains an unpopular activity for some members. However, some regional sessions were very well attended and, whatever the size of the group, the feedback was almost exclusively positive.

The ERA package was frequently described as offering a useful framework for evaluation and as being likely to improve confidence and to encourage more reading in members who used it. The most useful parts of the package were perceived to be the guidelines, the glossary and the members' support sheets.

The most common suggestions for possible useful additions to the package were that the glossary could be enlarged and that a further section including descriptions/explanations of common statistical tests could be added.

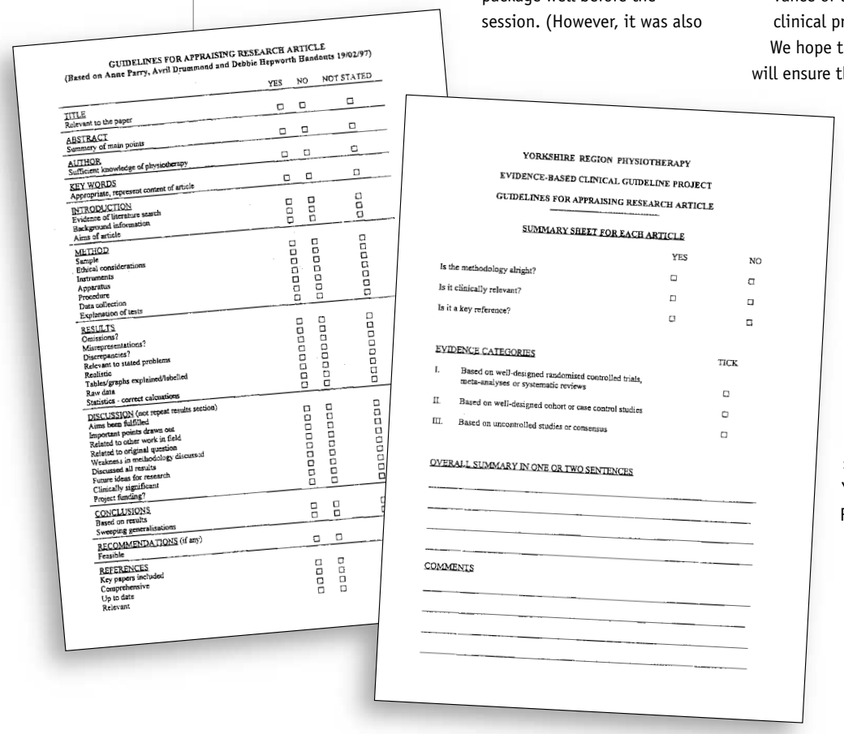
Comments on the ERA sessions indicated that the facilitators had ensured that the sessions had worked well. Many members emphasised the importance of receiving both the article to be evaluated and the relevant parts of the ERA package well before the session. (However, it was also clear that often, even when the article was made available, people hadn't managed to read it!) A surprisingly large number of members felt that the sessions should be held frequently.

The feedback has demonstrated that those who attended the sessions found them very valuable. The ERA project must be ongoing if it is to achieve its original aims. The principal long term aim of the project is to enhance the process of the translation of research findings into clinical practice. Its short term aims are to assist all members to:

- acquire the background knowledge necessary to read research articles in an informed manner
- develop or enhance those skills which allow them to critically evaluate research articles
- be able to discuss the findings of research studies with colleagues
- be able to analyse the relevance of the findings to clinical practice

We hope that each region will ensure that at least one more ERA session is held during the course of the coming ACPIN year. The Research subgroup, in turn, will examine the possibility of extending the package.

The following example has been submitted by the Yorkshire Region. ■



GUIDELINES FOR APPRAISING RESEARCH ARTICLE
(Based on Anne Parry, Avril Drummond and Debbie Hepworth Handouts 19/02/97)

	YES	NO	NOT STATED
TITLE			
Relevant to the paper	☐	☐	☐
ABSTRACT			
Summary of main points	☐	☐	☐
AUTHOR			
Sufficient knowledge of physiotherapy	☐	☐	☐
KEY WORDS			
Appropriate, represent content of article	☐	☐	☐
INTRODUCTION			
Evidence of literature search	☐	☐	☐
Background information	☐	☐	☐
Aims of article	☐	☐	☐
METHOD			
Sample	☐	☐	☐
Ethical considerations	☐	☐	☐
Instruments	☐	☐	☐
Apparatus	☐	☐	☐
Procedure	☐	☐	☐
Data collection	☐	☐	☐
Explanation of tests	☐	☐	☐
RESULTS			
Omissions?	☐	☐	☐
Misrepresentations?	☐	☐	☐
Discrepancies?	☐	☐	☐
Relevant to stated problems	☐	☐	☐
Realistic	☐	☐	☐
Tables/graphs explained/labelled	☐	☐	☐
Raw data	☐	☐	☐
Statistics - correct calculations	☐	☐	☐
DISCUSSION (not repeat results section)			
Aims been fulfilled	☐	☐	☐
Important points drawn out	☐	☐	☐
Related to other work in field	☐	☐	☐
Related to original question	☐	☐	☐
Weakness in methodology discussed	☐	☐	☐
Discussed all results	☐	☐	☐
Future ideas for research	☐	☐	☐
Clinically significant	☐	☐	☐
Project funding?	☐	☐	☐
CONCLUSIONS			
Based on results	☐	☐	
Sweeping generalisations	☐	☐	
RECOMMENDATIONS (if any)			
Feasible	☐	☐	
REFERENCES			
Key papers included	☐	☐	
Comprehensive	☐	☐	
Up to date	☐	☐	
Relevant	☐	☐	

YORKSHIRE REGION PHYSIOTHERAPY
EVIDENCE-BASED CLINICAL GUIDELINE PROJECT
GUIDELINES FOR APPRAISING RESEARCH ARTICLE

SUMMARY SHEET FOR EACH ARTICLE

	YES	NO
Is the methodology alright?	☐	☐
Is it clinically relevant?	☐	☐
Is it a key reference?	☐	☐

EVIDENCE CATEGORIES

		TICK
I.	Based on well-designed randomised controlled trials, meta-analyses or systematic reviews	☐
II.	Based on well-designed cohort or case control studies	☐
III.	Based on uncontrolled studies or consensus	☐

OVERALL SUMMARY IN ONE OR TWO SENTENCES

COMMENTS

REVIEWS

ARTICLES

A COMPARISON OF TWO PHYSIOTHERAPY TREATMENT APPROACHES TO IMPROVE WALKING IN MULTIPLE SCLEROSIS: A PILOT RANDOMISED STUDY

SE Lord, DT Wade and PW Halligan, Clinical Rehabilitation; 1998; 12; 477-486

Lyndsay Atkinson
Jenny Craig
Jan Matthew
Elizabeth Self

This study was carried out at the Rivermead Rehabilitation Centre. Only two of the authors stated their profession, respectively Lord: Physiotherapist; Wade: Consultant in Neurology Disability at the Centre. The reviewers felt that this was an appropriate team to be carrying out this type of research.

OVERVIEW
The objective of the article was to use a pilot study to compare two physiotherapy approaches to improve walking in patients with gait disturbance due to Multiple Sclerosis (MS). Patients were treated as outpatients and randomised into two groups: one using facilitatory approach; the other using a task-orientated approach.

CRITICAL REVIEW

Abstract
This outlined the study well using appropriate headings that made for easy reading and ease in assessing the relevance of the paper.

Introduction
The aims of the study were clearly stated as: a) to establish the practicality of evaluating two different therapy approaches; b) to establish whether both approaches had a beneficial effect and that neither was detrimental; c) to establish whether out-patient physiotherapy might improve the mobility of patients with MS.

It was clearly identified that there is a gap in research based knowledge within these areas by discussion of available literature. The actual literature review showed relevance to the study and highlighted the paucity of articles available in the MS field. It also highlight some of the conflicting evidence on the effectiveness of Physiotherapy

This section introduces the two approaches but leaves you wondering as to what facilitatory and task-orientated approaches actually involve. We recommend you read the Appendix at this stage as this is a brave attempt to specify treatment techniques in a potentially controversial area!

Method
The MS population was identified through referrals to the rehabilitation service and subjects were assessed for eligibility using a standard measure (10m walking Test).

Assessments appeared thorough, however a criticism could be that these were undertaken by the research physiotherapist. An independent assessor scored final assessments. The author however did show appreciation of the potential limitation. This introduced bias and inter-rater reliability.

The initial assessment was long and included relevant outcome measures (10m timed walk, Rivermead Mobility Index, stride length, Rivermead Visual Gait Assessment (RVGA), Berg Balance Test), and other normal assessment areas were included (tone, sensation).

The use of the RVGA, although appropriate, would have benefitted from more explanation of validity, measurement technique and scoring as this is an unfamiliar measure. The stride length assessment, from the reviewers' experiences, is very difficult to use accurately. Observation and repeated measurement of the placing of the heel is difficult even when a second assessor is available. This introduces some error in the data.

There followed more discussion around the treatment approaches, common elements of the two and their respective differences. In our view the methodology was sound and clear to follow for a randomised study.

Results
The statistical tests used, from our limited knowledge, were valid. All subjects were accounted for by reference to a user friendly flowchart and both groups were well matched. Data could be extracted relatively easily from the tables and each outcome was discussed for its clinical and statistical significance. Treatment effect was identified by comparison of measures pre and post treatment as well as between groups. Subject numbers (20 total completed) were befitting of a pilot study. Sufficient data was available to enable easy replication of the study.

Discussion
This long discussion highlights individual areas of strength and weakness of the study, for example; that no definite conclusions about the relative effectiveness of the two approaches can be made, and that both groups were treated by the same therapist. It also discusses that the results were consistent with previous similar studies. It concludes that it is practical to evaluate two different therapy approaches despite the study limitations. It is also precisely states that the other two aims were achieved in the research.
Recommendations for future research were also made.

We felt this study could easily be replicated and developed as costs were minimal, there were no ethical dilemmas and no risk to patients. The author also highlighted any limitations we identified.

We would recommend it as a valuable pilot study that promotes the feasibility of research studies and the benefits of treatment in physiotherapy practice. Whilst this is a pilot study and therefore inferences that can be made are limited, it does suggest that there may be little difference between treatment approaches and that we should be keeping an open mind about the alternatives available to us during treatment.

ADDENDUM
From Derick T Wade, Consultant in Neurological Disability:
Dr Peter Halligan is a Research Psychologist, with a long history of involvement in disability and rehabilitation research, and an interest in neglect.

The Rivermead Visual Gait Assessment is described in detail in a second paper published in Clinical Rehabilitation and is referred to. It is difficult to put all details into one paper. ■

A DISUSE MUSCLE ATROPHY OF LOWER LIMBS IN HEMIPLEGIC PATIENTS

Hachisuka K, Umezu Y, Ogata H, Archive Physical Medicine Rehabilitation 1997; 78: 13-18

Anna Hamer
January 1999

PURPOSE OF STUDY

To clarify the histopathologic findings from lower limb muscles in hemiplegic patients and determine whether the findings are related to the severity of paralysis or daily physical activity.

BACKGROUND

Few reports on histochemical and morphometric findings of quadriceps (none quoted). Morphological studies have suggested atrophy is derived from disuse, loss of central tropic effects or neurogenic atrophy.

METHODS

Muscle biopsies were taken from the vastus lateralis on the involved side (I-VL) and non involved (N-VL) in eight hemiplegic subjects. Four controls were matched for sex, age, height and weight, and had biopsies taken from the vastus lateralis (C-VL). In five hemiplegic subjects flexor hallucis longus (FHL) was sampled.

As an index of daily physical activity, a pedometer was used over one week to measure the average number of steps taken by the hemiplegic subjects. Severity of stroke was assessed using the Stroke Impairment Assessment Set (SIAS) and ADL using the Granger's version of the Barthel index.

The patients were an average of 21.8 months since onset of stroke and all wore an ankle foot orthosis. The use of other walking aids was not mentioned, and presumably the subjects were walking independently.

An image analyser was used to calculate the muscle fibre number and diameter of each fibre type on photographs of the processed biopsy sections.

The atrophy factor was an expression of abnormally small fibres and the hypertrophy factor an expression of abnormally large fibres.

Two-way analysis of variance (ANOVA) was used for the diameter, atrophy factor, hypertrophy factor, and fibre type proportion amongst the groups and the fibre types. The relation between morphometric values and patients' profiles was evaluated by the Pearson's linear correlation coefficients. Differences were considered significant at $p<.05$.

RESULTS

Hemiplegic muscle

- I-VL Type 2 atrophy
- N-VL Type 2B atrophy
- I FHL Type 2 atrophy with Type 1 hypertrophy

DISCUSSION

The atrophy was not related to the period after onset, severity of paralysis, or ADL score, but it was related to the daily physical activity.

The hypertrophy of Type 1 muscle fibres in FHL was explained as possibly due to the fact that, unlike the quadriceps during a gait cycle with a fixed and relatively inactive knee, the FHL was stretched during the stance phase of walking. The tonic contractures of FHL were postulated as a possible cause of muscle hypertrophy, especially Type 1 fibres.

Some possible causes of disuse atrophy were

- excessive bed rest during the acute phase
- lack of high threshold motor unit activation
- learned disuse
- sedentary lifestyle.

IMPLICATIONS FOR THERAPY

- Make days in bed as short as possible
- Prescribe exercises that activate high threshold motor units such as sit to stand and stairs
- Instruct a patient how to spend an active life.

CONCLUSIONS

Muscle atrophy was found in patients with hemiplegia. Disuse muscle atrophy was added to the muscle atrophy induced by unknown central trophic effects. The patients studied had undergone rehabilitation in a hospital in Japan approximately ten years ago. ■

A THE NATURE OF THE LOSS OF STRENGTH AND DEXTERITY IN THE UPPER LIMB FOLLOWING STROKE

Louise Ada, Nicholas O'Dwyer, Julie Green, William Yeo, Peter Neilson, Human Movement Science 15 (1996) 671-687

Anthea Dendy
St Georges Hospital

The aim of the article was to investigate the negative features of weakness and loss of dexterity following stroke, to establish whether there is a correlation between them.

In the stroke literature there has been some suggestion that there is a correlation between strength and dexterity. Research has also indicated that stroke subjects have difficulty moving forcefully at higher velocities, with more inaccuracy at faster speed of movement. It has also been shown that there is a reduction or loss of motor unit synchronisation associated with a corresponding slowness in the performance of rapid alternating movements. In addition, other studies have shown that stroke patients have difficulty in stopping contractions, thereby making it difficult to change direction during the performance of a task.

METHOD

This study reviewed 17 patients who had had a stroke within the previous 2 years, and examined elbow function. The subjects were tested for strength, dexterity and ability to generate fast movements of the affected elbow, and compared the results of a control group whose non-dominant arm was tested.

Strength was measured via the joint torque generated during a maximal isometric contraction of the elbow flexors and extensors. This was recorded by means of load cell attached between a table and frame to support the upper limb, linked into a computer. In the controls only the elbow flexors were assessed.

Dexterity is described as an 'adroitness or skill in using the body'. This was measured in the subjects by means of a tracking task, which required skilled interaction between the elbow flexors and extensors, through a range of 15˚, around a starting position of 60˚ elbow flexion. ability to generate fast elbow flexion / extension movements was also measured.

RESULTS

Strength in the stroke subjects' elbow flexors was significantly weaker than in the control group. The stroke subjects were also poorer at tracking both the slow and fast target than the controls on all measures, and showing a significantly greater deterioration at faster speeds. The stroke subjects were able to generate fast movements, and the flexors performed similarly to the extensors. The results showed no signifcant correlation between strength and dexterity.

DISCUSSION

The main finding was that where strength and dexterity can be examined separately, they are not related. The errors seen in tracking were as a result of lack of control, and not a lack of strength or difficulty in generating speed. There is a slowness of movement following stroke, which is well recognised, and weakness does contribute to this. In clinical practice it may well be useful, therefore, to be cautious with fast movements, and 'trade-off' accuracy with speed. In clinical practice it is important to include training aimed at both dexterity and strength, with failure to develop strength being a predictor of poor outcome.

The authors suggest that the results are in line with previous proposals by Carr & Shepherd (1987), that recovery is best promoted by practising under conditions of strength, speed and accuracy similar to those required for everyday function. ■

BOOKS

B NEUROLOGICAL PHYSIOTHERAPY

Professor Maria Stokes PhD, MCSP, Mosby International Limited, London (1998)
IBSN 0 7234 2593 0

PJ Moffitt MCSP

The author of this book claim it to be 'A new, dynamic textbook that every student should own… provides a clear and comprehensive insight into the basic concepts of neurology, specific neurological conditions and the full range of physiotherapy treatment approaches during rehabilitation'.

Although this initially may appear to be an extravagant statement, I feel this book largely does live up to its claim.

This book, being simply written and easily understandable, makes it a pleasurable book to read, rather than a hard slog of neurological jargonese. The book is well organised into logical sections making it easy to dip in and out of areas of interest. For this reason it is a good book for students and junior staff and, writing as a more experienced clinician, I found it refreshingly uncomplicated. However, the well-read clinician searching for in-depth academic information may not find all the material they require.

There is clever use of analogies in the neurophysiology section of this book that I felt provided a better conceptual framework for learners and newcomers to difficult neurological principles.

The practical approach of the book is highlighted in the section on neurological and neuromuscular conditions as it focuses on conditions we come across in our every day clinical practice (such as stroke, multiple sclerosis, parkinsons disease, polyneuropathies, spinal cord and brain injuries).There is also a large section focussing on lifetime disorders of childhood onset, such as cerebral palsy that may appeal to practitioners in these fields.

On each condition there is a outline of all elements that are relevant to that condition, such as pathology, anatomy and physiology, medical management and physical management, giving a comprehensive outline of the role of physiotherapy, as well as defining a holistic approach to the patient.

A strength of the format adopted by the authors is the inclusion of case studies in some sections. This makes it easier for the reader to relate to the points made previously in the text and feel that the author really understands patients and the problems faced by them and therapists.

The final section of the book examines different treatment approaches to neurological rehabilitation. I liked this section as it is objectively reviewed using an evidence-based model and interventions discussed are not biased towards any one therapeutic approach (the differences between the approaches are also nicely summarised in a table). It also includes principles of muscle imbalance and adverse neural tension. The author correctly highlights the lack of comprehensive research in all areas of neuro physiotherapy and calls for more work to be done.

In summary, I feel this would be a very useful book for all physiotherapy departments to have, and would not collect dust on the shelf. It is a practically orientated book and thus a good working handbook, written by a physiotherapist for physiotherapists. ■

B MY YEAR OFF

Robert McCrum, Picador 1998

ISBN 0 330 369689 7
Price £14.99

Andrew King
Leicester General Hospital
February 1999

This is a remarkable account of one man's encounter with stroke and its aftermath. Thousands of people have to face a similar disaster every year – 200 young people every week. Of these, an appreciable minority have felt the same need to record their experience. Many first-hand accounts of stroke are to be found in physiotherapy departments up and down the country. Computer technology has made the process feasible for some who have hitherto found it impossible.

So what makes 'My Year Off' different? Robert McCrum is a writer, one of our country's intellectual elite. He scatters through this book the names of novelists and journalists who visited him or spoke to him during his convalescence - Salman Rushdie, Kazuo Ishiguro, Robert Harris, Jeremy Paxman, Peter Carey, Michael Ondaatje. Visitors who have neither a book title nor a National broadsheet title to their name seem to be scarcely worth mentioning. Perhaps the author's attachment to this world is made all the stronger by the loss of confidence after his stroke. But that's not why this book is special.

There is a scattering of interesting remarks about physiotherapy, and about the practical stages and achievements of Robert McCrum's recovery. He was an in-patient in a specialist London Hospital and later also attended there for out-patient rehabilitation. His therapists ranged in description from 'pernickety', through the 'rather good', to 'friendly, intelligent, beautific', and finally to 'energetic, no-nonsense, genius'. So this is not the story of any stroke patient with typical access to the local provincial general or cottage hospital. There are fascinating sections about his fixation with his useless left arm, while physiotherapists seemed to spend so long on legs and balance, and on the difficulties with the concept of 'good leg' overuse. He tells of the illicit surreptitious daily shuffles to the bathroom with an Irish nurse. He experiments with acupuncture. The functional signposts of success appear at all-too-slow a pace - standing to pee, doing the stairs, a home visit, being at home again, the reassessment of driving skills at Banstead Place, going swimming, ordering a meal, travelling, etc. etc. But these events hardly registered with me on the first reading.

This book is a highly intelligent man's attempt to put into words some of the emotions unleashed by his stroke. Emotions shared in varying ways and intensities by almost all those who suffer a stroke. Robert McCrum's description of these emotions have an immediacy because he wrote about them in journal form at the time - the first 'barely legible scribble' starts three days after his stroke, he tells us. He describes for us his initial fear of a second stroke, of dying, even of night-time in hospital. His gratitude for moments of generosity and tenderness from nurses, caters and friends. His fear that he is no longer the same person, of having an altered personality, His desire to be alone, and his need for a companion. His overwhelming sense of powerlessness. His initial loss of confidence and motivation. His tears. His anger, depression, frustration and also determination. Even, and this is recounted with merciless lack of self-regard, his venting of his anger and frustration on his nearest and dearest.

Which brings us to Robert McCrum's wife, Sarah. Sarah married Robert only two months before his stroke. She stuck with him throughout this year of crisis and gradual recovery. She too wrote a journal during this time, and extracts from it give this book great impact. The special nature of this book lies in its account of the relationship between Robert and Sarah, between 'patient' and 'carer'.

This book uses a photo of Robert and Sarah together for its cover illustration -not without reason. Sarah is with him in this enterprise, even though she too fears that he is not the same person she married. At times she doubts his motivation to fight through, and doubts her own strength. We read of her depression, her tears (mostly unseen), her doubt about the future, her panic about their relationship. Sarah's journal provides us with a third eye, noting Robert's current concerns and moods throughout the year. 'The more Robert improves the angrier he gets about what he still can't do', she tells us. At the end of it all Robert is convinced of the importance of Sarah's role and determination to carry him through. The ever-changing relationship of a 'stroke-victim' and his 'carer' is also the relationship between two independent individuals with its own separate dynamic.

This is an optimistic book in many ways. Robert McCrum starts work again, this time as Literary Editor of The Observer. He and Sarah start a family. But he never shrinks from telling of the challenges of a battle whose outcome could not be known at the start. For him, it is like being on the 'front-line'.[1] He tries to be honest about some very strong emotions unleashed by a moment of crisis, a brush with the Grim Reaper, and the aftermath 'when you feel you are on the scrapheap'. Small wonder that many people have confided in him 'either the recent death or the profound sickness, of someone near to them, or their own encounter with acute illness'. [2]

All therapists working in this field should read this book. It will raise some important questions for rehabilitation professionals. It could also be at once a comfort and a challenge for many a stroke-sufferer and their carers. ■

[1] R.McCrum, 'Fear, rage, despair.' *The Observer*, Sunday 20 September 1998, p31.
[2] R.McCrum 'The suffering of strangers.' *The Observer*, Sunday 7 February 1999 People section p3.

COURSES

C BRIDGING CULTURES

World Congress for Physical Therapy 199, Yokohama, Japan.

Rosie Hitchcock

Over 4,000 Physiotherapists from 71 different countries attended the 13th International Congress of the World Confederation for Physical Therapy, May 23-28th Yokohama, Japan.

The Emperor of Japan, accompanied by his wife, officially opened the Congress on the first day at Yokohama's international convention centre, which is situated on the edge of Yokohama's picturesque harbour. Out of 8 international conferences held in Japan during 1999 the Emperor had personally selected WCPT as the conference he had officially wished to officially open, partly as this was the first time that an Asian country had hosted a WCPT event.

The keynote lectures scattered over the 5 conference days addressed some far ranging topics, some with significant current political implications, namely condemnation of the use of landmines and reinforcing the WCPT guidelines concerned with the abatement of the after effects of extensive torture practices still perpetrated world-wide, as well as helping to enlighten the general public of these horrific practices. Another of the lectures described the current state of rehabilitation in Japan. The development in education for physiotherapists and occupational therapists only started relatively recently in 1963, culminating in some of the recent courses being awarded a bachelor degree with an opportunity to take up a masters' course. The number of physiotherapists now registered is just over 19,000 and that of occupational therapists is 9,800. In contrast speech and language therapists were licensed to practice only a year ago and total approximately 2000. A long-term care insurance policy has recently been introduced by the Japanese Government as a healthcare payment system but no one was prepared to predict how this would affect future rehabilitation services.

The research report platform presentations were allocated to rooms according to speciality. The neurology presentations took place in one of the main halls and there was at least one session of these presentations each day. They were very varied in subject and were given predominantly by physiotherapists from Australia, Scandinavia, Belgium, Canada and the UK. There were a significant number of presentations addressing different aspects of Parkinson's disease, which reflects the current growth of research surrounding this condition. Aspects included characterisation of the different types of turning found in people with PD (A Ashburn et al) as well as describing a framework for physiotherapy service delivery in PD (D Jones et al)

One of the aspects of discussion in the presentations concerning the treatment of people with stroke appeared to be strength training both in early and late stage rehabilitation. These were very interesting presentations, both from Australia, and although initial results were very positive more details of the methodologies used, particularly the degree of abnormal tone present in the subjects would have clarified some of the points made.

The poster presentations were generally of a very high standard. The neurology section again covered a wide selection of topics though there was a high proportion of posters, predominantly by Japanese presenters devoted to different aspects of gait analysis and measurement.

Overall the Congress was deemed to be a great success not least because of the extremely efficient way it was run by the Japanese hosts. It is certainly a unique place to meet physiotherapists from all walks of life and comparing differences in clinical practice. Talking to a lecturer in neurology from the University of Johannesburg, S.A made me realise just how different and adaptable teaching of the subject has to be to realistically meet patients' needs particularly for those living in the townships.

Let's hope that the 14th WCPT to be held in Barcelona in 2003 will be equally successful as its predecessor in 1999. ■

I would like to thank ACPIN for its financial assistance enabling me to travel to Japan.

REFERENCES

The following references can all be found in the Proceedings of WCPT 1999.

- *Patterns of turning used by people with parkinson's disease*. Ashburn A, Stack E; University Rehabilitation Research Unit, Southampton General Hospital.
- *A framework for physiotherapy service delivery in parkinson's disease*. Jones D et al, c/o Institute of Rehabilitation, Regional Neurological Rehabilitation Centre, Newcastle upon Tyne.
- *Strength training in chronic stroke patients*. James M K et al, School of Physiotherapy, University of Sydney.
- *Effects of a lower limb strengthening program during rehabilitation of stroke*. McMeeken J et al, School of Physiotherapy, University of Melbourne.

NEUROPHYSIO-THERAPY AND THE OLDER CLIENT

ACPIN National Conference 1999

Nicola Hancock
ACPIN Executive Committee.

This extremely stimulating study day, which encompassed both theoretical and practical aspects, was held on Saturday March 20th at the Atrium Post-Graduate Centre, Royal Free Hospital, London.

The topic proved to be highly popular from the initial planning stage, with a 50% over subscription of applicants within four weeks of an early announcement in Frontline. For the first time, a waiting list system was introduced and the very few cancelled places leading up to the day were filled immediately with eager delegates. A considerable number of non-ACPIN members applied, with, understandably, particular interest being evoked within the AGILE group.

Highly regarded speakers were drawn together in this forum to present various aspects of Neurophysiotherapy in the Older Client. We were honoured to welcome Professor Geoffrey Goldspink from the Royal Free Hospital, Professor Ray Tallis from Hope Hospital, Salford and Dr Janet Simpson and Adele Reece from London and Hertfordshire respectively. The practical part of the day was led by four of the current trainee Bobath tutors- Cherry Kilbride, Catherine Cornall, Pam Mulholland and Ann Holland.

Professor Goldspink captured our attention and set the high standard for the day with a powerful lecture on 'Cellular changes in the neuromuscular system during growth and ageing'. He expanded previously discussed theories of the influence of motor neurones on muscle to present information on the role of active muscle on motor neurones. Professor Goldspink described the work of his team in combining electrical stimulation with stretch and the implications of this for therapy, along with their exciting project in which a new growth factor produced by active muscles, IGF1, has been cloned and has been shown to have a protective effect on the innervating motor neurones. This lecture was extremely well-received and left most of our own neurones firing wildly!

Dr Janet Simpson and Adele Reece then gave a lecture and video presentation on 'Falls in the elderly' Their presentation was based around the 'Guidelines for the collaborative, rehabilitative management of elderly people who have fallen', (Simpson et al, Physiotherapy 1998) The video showed a stroke patient demonstrating the result of being taught the 'backward chaining' method of getting up in the event of a fall. As we watched, many of us who work with normal movement principles in stroke rehabilitation could not fail to note the amount of compensatory strategies recruited by the patient to achieve her goal- but this provided an excellent reminder that in the event of a fall, transition from the floor to a safe area is of paramount importance to the patient at that moment. For those therapists new to the 'Falls' guidelines, this lecture provided a useful introduction; and for those more familiar to them, a pointed reminder.

After our AGM and an excellent lunch, Professor Tallis began the first of his three-part presentation on 'Neuroplasticity: towards the Millennium'. Professor Tallis had specifically requested this format of short sections, expressing concern that he would bore us with a full hour on the topic! However, it emerged that most delegates felt that he could have spoken for considerably longer on each part and were left illuminated and wanting more information.

The series began with 'The state we are in', which reviewed work on organisation of stroke care in the UK, and posed many questions about how rehabilitation actually works, challenging us to consider that on many occasions we are disproportionately happy with small gains made. This was followed by 'Neuroplasticity', looking at the concepts of plasticity, particularly in the older brain. The experimental and clinical evidence for these concepts was discussed and this second section concluded with the therapeutic implications of this work.

We then split into four groups for the patient demonstrations, each group being led by one of the trainee Bobath tutors. This provided a good forum for observing highly skilled clinicians working with older clients with neurological problems. A summary of these demonstrations can be found in the 'abstracts' section of this review.

Professor Tallis concluded the day with the final part of his presentation, entitled, 'Towards a science based neurophysiotherapy'. He stressed the need to develop plausible theories of driving plastic recovery and was enthusiastic throughout about the work of physiotherapists, whilst reinforcing that there was huge scope, and a vital need, to move forwards with our evidence base.

Evaluation
Responses received from the evaluation forms for the day were largely positive.
Some representative general comments are presented below:

- Well organised
- Kept to time, especially AGM
- Informative AGM
- More handouts required
- Good venue
- Good explanations from speakers
- More cold drinks required

A minority of delegates (two out of one hundred) commented that they were disappointed to find the patient demonstrations centred around the Bobath concept. However, the executive committee would like to point out that, on the initial application form, it was stated that these would be 'based on the Bobath concept'.

ABSTRACTS

Cellular changes in the neuromuscular system during growth and ageing

GEOFFREY GOLDSPINK
Professor of Anatomy and Developmental Biology, Chairman of Division of Basic Medical Sciences Royal Free and UC Medical School

Motor neurones influence muscle in that they dictate what type of physical activity is induced. However, it is also apparent that active muscles influence motor as well as sensory neurones. Muscles adapt to altered functional length by adding or removing sarcomeres to the ends of existing myofibrils. This happens to the muscle spindle as well as the other muscle fibres. This is apparently the case in patients with a postural deformity eg joint damage. Hence incorrect messages are sent to the CNS. We have studied electrical stimulation in combination with stretch and to study the genetic reprogramming of muscles. This is important as the type of therapy determines the type of muscle. Recently we have also cloned a new growth factor that is expressed by skeletal muscle when it is stretched and/or overloaded. For many years it has been appreciated that there is local as well as systemic control of tissue growth and repair. In recent experiments we have shown that this growth factor produced by active muscles also protects the motor neurones that innervate it. This helps to establish the mechanism for the cross talks between muscle and nerve.

Falls in the elderly

DR JANET SIMPSON
Hon Senior Lecturer St George's Hospital
ADELE REECE MCSP

Falls are common among old people including those who have suffered a stroke. Nyberg et al (Stroke 1995) showed that 39% fall after stroke. Community studies show that a small proportion result in serious injury: 5% Tinetti & Speechley NEJM, 1989, 6% Nevitt et al JAMA 1990. Rehabilitation is aimed at helping the elderly client cope with their anxiety at being on the floor and the consequences of a long lie. The document *Guidelines for the collaborative, rehabilitative management of elderly people who have fallen* (Simpson et al, Physiotherapy 1998) addresses these issues.

Neurophysiotherapy: towards the millennium

RAYMOND C. TALLIS
Professor of Geriatric Medicine

Neurophysiotherapy has traditionally been based upon techniques that either have no theoretical basis or a theoretical basis without adequate empirical support. Although there is good evidence that the overall package of rehabilitation works in conditions such as stroke many patients still remain bitterly disappointed with little impact having been made on their impairments. The future of neurophysiotherapy will depend on our: a) recognising the limitations of our present treatment and its evidence base, b) acquiring a deeper understanding of the plasticity in the brain, and c) developing theories which are based on biologically plausible ways of driving plastic recovery. The lecture will examine the present state of the art and suggest a way forward towards a genuine neuroscience-based neurophysio-therapy.

PATIENT DEMONSTRATIONS

1 MISS M

Tutor: Pam Mulholland

M, a 68 year old lady, sustained a right hemiplegia on 21.9.97. She was admitted to Royal Free Hospital, transferred to Queen Mary (Elderly Rehabilitation) 21.10.97. She was discharged home in November 1997, with Community Physiotherapy and Day Hospital 30.12.97, and Neuro gym out-patient 18.5.98 On discharge in November, she was walking in her flat only using one stick. She had no arm movement, but was independent in ADL. She had increased tone throughout right side, right arm at 90 flexion at elbow, and had constant pain in the right arm. She also experienced spasms, causing pain in the right leg especially the hip, and these affected her sleep.

Treatment on a weekly basis since discharge and continues to make steady progress.

Presently
Recovering function in right arm with occaisional pain. One or two leg spasms at night. Walking speed increased and now walking outdoors.

Assessment
M walked with a stick to treatment plinth. She had short but equal step length, little evidence of weight transfer and was unable to leave one leg behind. Reported pain in hip more or less constant when standing or walking.

Right elbow at 90˚ throughout.

Pulled into flexion from sitting to standing and was unable to position right foot backwards so that the knee was at 90˚.

In sitting, it was noted that the right side flexion with retraction of the right hip. Could not dissociate the right shoulder from the hip.

Left side held in flexion, and unable to transfer weight onto the left.

Demonstrated selective activity in both arm and leg, including selective finger movement whilst undressing.

Aim of Treatment

- To assess right hip alignment to find the cause of pain.
- To reduce flexor activity in hips, pelvis and trunk to enable acceptance of BOS.
- To facilitate dissociation of right hip and shoulder and right leg from left.
- To improve pattern of walking.

Treatment
Placed into modified supine (base brought to patient due to inability to let go of the flexor activity). Patient actually appeared to be levitating in relation to base of support (BOS).

Right hip appeared to be compressed in the acetabulum with the (expected) soft tissue adaptation at the back of the hip joint (gluteus maximus and TFL). Quadriceps and hamstrings were at the same time so adapted as to be blocking the knee flexion. Foot and ankle were the most mobile part of the lower limb.

Due to the lack of dissociation of the two legs to enable access to the right hip and pelvis, both legs needed to be taken together through rotation/flexion towards 90˚ at the hips to release the soft tissue adaptation. The distal key point (the foot) was then used to facilitate selective movement patterns to faclitate further letting go of the flexor activity. Once the right foot could be placed on the plinth (knee flexed) facilitation of selective movement of the left leg could take place on a more stable reference from the right, which in turn enabled the pelvis to be in less anterior tilt and facilitated more acceptance of the BOS in supine.

This then provided the

opportunity to work towards the dissociation of the right shoulder girdle from the pelvis/legs, through facilitated rolling to the left side.

In left side lying, assessment of the right upper limb showed a mobile scapula, selective movement at the shoulder joint, very restricted and malaligned elbow and forearm, and selective hand movement. Specific inhibitory mobilisations to the forearm and biceps enabled the facilitation of elbow extension from distal key point to increase range of movement at the elbow.

With preparation, the upper limbs could be used to facilitate Miranda back into sitting. In sitting, there was better acceptance of the BOS and M was beginning to automatically transfer weight.

From sitting, M was facilitated into standing, to give the feeling of standing with extension at the right hip and could be facilitated onto the right leg through lateral pelvic tilt without pain, then facilitated from standing to sitting to continue the dissociation of the leg from the pelvis and getting selective placing of the bottom on the plinth

After Treatment

Walking had changed considerably; there was better quality stance so therefore there was a better swing, longer stride length and definite transferance of weight.

M stated that she felt more balanced and that the stick now interferred with her walking.

She had no pain in her right hip.

Her right upper limb was better aligned at her side but was still not completely free.

2 MR V

Tutor: Ann Holland
Assisted by Ros Wade

V, an 83 year old gentleman was admitted to hospital on 8/1/99, via A & E, presenting with a left sided weakness. This followed a two day history of headache and facial pain. CT showed generalised atrophic changes in the area of the right lentiform nucleus, internal capsule and body of caudate nucleus with an area of infarct within the perforating branch of the middle cerebral artery. A past medical history included hypercholesterolaemia and anaemia with previous admissions for pneumonia and diarrhoea. Prior to his stroke V lived in a warden controlled flat. He was fully independent and ambulant including driving.

On assessment V presented with the following main physical problems/compensations:

- Left sided weakness with low tone throughout the left lower limb, proximal greater than distal, low tone around the left shoulder girdle with soft tissue shortening/distal increased tone in the left upper limb
- Overactivity of the right side with some underlying low tone around the right pelvis and right lower trunk (? pathological)
- Hypertonic left paravertebral muscles ? as a compensation for malalignment/low tone of the left shoulder girdle and pelvis
- Decreased left/right side interplay
- Overactivity of the head
- Altered balance mechanisms

Treatment/ongoing assessment commenced in the wheelchair, scaffolding the left pelvis with a towel to create a base of support in sitting, whilst addressing left shoulder girdle alignment and tonic activity in the left paravertebral muscles. The right upper limb was facilitated onto a high support on the right side to provide a background of extension. The overactivity in the right lower limb was dissipated through facilitation of active movement/letting go of activity and the left foot was mobilised prior to V being placed in standing on a small base of support by two therapists. A high plinth and therapist on the right side provided a reference point in standing.

This therapist was able to monitor overactivity on the right side whilst the second therapist sitting in front of V provided appropriate support to the left pelvis and dynamically recruited extensor activity up against gravity through facilitation of righting reactions. V was then facilitated to actively step around to face the high plinth.

Overactivity on the right had settled, however the head remained active so the position of prone standing was adopted. In this postural set it was possible to selectively address the tonic activity in the left paravertebral muscles, explore left shoulder girdle alignment and work actively to recruit pelvic and lower limb activity (stability/mobility). Following this V was actively facilitated back up into standing and for the first time was able to maintain active extension. Treatment then progressed to explore left upper limb activity.

The left hand was unable to accept/accommodate to the plinth as a base of support due to stiffness and soft tissue length. In order to address this more specifically, V was placed into perch sitting to maintain previously recruited extension and inhibitory mobilisation techniques were used to realign and lengthen soft tissue structures distally in the upper limb. With a hand that was then more able to interact with a base of support V was once again placed in standing with the therapist supporting alignment at the left shoulder girdle. This allowed for dynamic activity to be recruited at the shoulder girdle and pelvis as a basis for exploring reach and grasp/release in the left upper limb. With a more co-operative alignment of all keypoints, active recruitment of tone/activity throughout the left side and dampening down of overactivity/recruitment of extension on the right side, walking was then facilitated between two therapists. V was able to selectively step.

Post treatment posture in the wheelchair was reassessed. The alignment of keypoints appeared more co-operative and dynamic. It was recommended that a pillow be placed behind the trunk to maintain extension/facilitate carry over from the session. The importance of scaffolding a low tone pelvis was discussed. The pros and cons of strapping the left shoulder girdle was raised, however in this patient it was evident that the pelvis was key to trunk and shoulder girdle alignment.

3 MR S

Tutor: Cherry Kilbride
Assisted by Linzie Bassett

S, an 80 year old man, who suffered a left CVA on 3.3.99, previously fit and well and independent in all aspects of life. Initially following the stroke he was unable to speak, required NG feed, had a respiratory tract infection and was physically dependent for all activities.

Main presenting problems
22.3.99

(See also body chart right)

- over activity on the (l)
- trunk dominated by flexion, marked overuse of abdominals, fixed CKP held behind BOS
- pelvis held posteriorly but 'fixed' in anterior tilt, only pressure bearing through (r) side, with more of a fall onto that area
- head held in marked cervical hyperextension and fixation ++, generally stiff with decreased range of movement in all directions
- decreased selective movement (r) lower limb. Movement dominated by flexion and adduction. ? positive supporting reaction/hypersensitive (r) foot,
- upper limb (r) held in flexion, internal rotation and adduction at the shoulder, some discomfort in arm generally, ? some bony deposits around the elbow
- hypersensitive latissimus dorsi (r) leading to decreased disassociation of upper limb, trunk and lower limb

General Impression

Unable to accept base of support in any postural set, with a posture dominated by flexion throughout which blocks the CKP and thereby the possibility for reciprocal interplay in the trunk and pelvis necessary for righting reactions as a basis for balance. This is compounded by the fixation of the head and flexed and adducted limbs. However it was felt that underlying activity would be present on the (r) once the overactivity on the (l) had been dampened down, and the increased tone on the (r) had been reduced, and an interactive base of support established as a reference point for movement.

Functional Level

- required two for 'transfers'
- unable to balance in sitting therefore arms not free for function
- unable to stand
- unable to assist with dressing

Treatment Aims

- To decrease compensatory overactivity on the (l)
- To decrease asymmetry in trunk
- To reduce influence of flexion in trunk as a basis to gain some extension necessary for reciprocal interplay
- Establish a BOS at the pelvis
- To decrease flexor influence in upper and lower limbs on a background of a stable/interactive base

Short Term Goal

To establish a base of support to promote functional use of upper limbs i.e. assist with dressing

Treatment progression

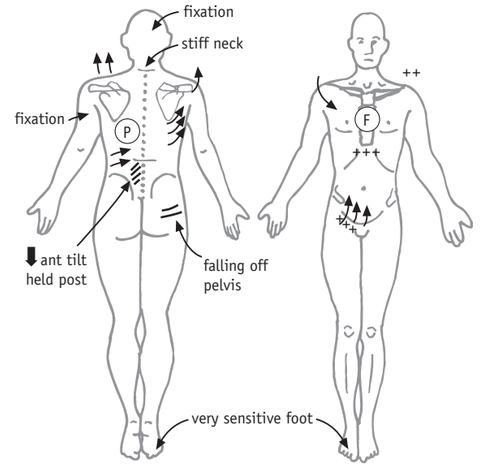
Treatment started in the chair to try to address aspects of the asymmetry but it quickly became clear that the interaction between his pelvis and wheelchair was inadequate, therefore he was moved to the plinth by the two therapists.

Supported sitting was tried first. As with all postural changes it took a considerable amount of preparation to facilitate a degree of acceptance of BOS. This posture allowed some access into the trunk and limbs to work towards the goal of decreasing flexion but it was decided to move into modified supine to allow further access into the pelvis, hips and also his head.

In modified supine, following preparation again to promote an acceptance of BOS it was possible to facilitate more normal movement pattern in the limbs, gain relaxation of his head and start to mobilise his CKP.

He was next taken into high perch sitting in the attempt to keep some of the aspects of extension gained. A facilitated stand was tried from here but it was probably a little adventurous for that stage!

On returning to the wheelchair at the end of the session he was able to spontaneously assist with putting on his pyjama top and was sitting with a symmetrical base with better cooperative alignment, of his limbs and head.



Body chart for case study 3 – 80 year old man

Additional notes:
- Visual problems
- Hyperextension of csp – ? impingement of C4 nerve root
- Lat dorsi tendon (r) very sensitive, especially upper fibres
- Overuse of abdominals into flexion
- Unable to accept BOS in any postural set
- Overuse of sound side ++

4 MRS T

Tutor: Catherine Cornall
Assisted by Nicola Hancock

T was a 75 year old lady with a diagnosis of a right CVA in October 1998. CT scan revealed generalised cerebral involution and an area of infarction in the frontal parietal lobes.

As is the case in assessing many patients initial thoughts and presentation are confounded on more detailed examination!

T presented in a wheelchair and from this seated position was able to demonstrate active movement of both upper and

lower limbs. She was able to assist in undressing using both arms and to move away from the back of the chair in preparation for transferring from chair to plinth.

It then became apparent that T had great difficulty in moving forward to transfer her weight from buttocks to feet for rising into standing. She deviated to the right, relied heavily on the right arm for support and did not transfer her weight forward over either foot

In feeling resistance to movement of the limbs it was noticeable that there was an increased resistance to movement bilaterally.

She had a history of an old fracture to the left tibia and fibula internally fixated in 1986, and reported that she had used a stick and walked with a 'limp' from that time. There was certainly evidence of significantly reduced range of dorsiflexion on the left interfering with foot placement. T also held the right arm in a pattern of internal rotation and extension which may have been an adaptation to the continuous and prolonged use of the walking stick (she described herself as always holding the stick well in front), or it may have been an adaptive response post CVA as part of a 'pusher' type pattern of activity.

The right foot also demonstrated atypical responses to being handled, it was stiff and hypersensitive.

The posturing of the arm interfered with her ability to transfer her weight to the right, the lack of range limited movement forward over the left foot and an increased hyperactivity in the right foot interfered with transfer forward over the right foot.

The overall picture in standing was therefore one of T attempting to compensate for being unable to transfer forward over her feet with flexion of the hips.

Treatment was initially directed at changing the pattern of activity in the right upper limb to allow the arm to be free to be placed on a support in a more co-operative alignment with the trunk and pelvis to allow for extension within the trunk and lower limbs.

Mobilising the feet as they were placed in an appropriate position for standing and working from a raised plinth enabled T to experience

- transfer of weight forward through both her feet, with extension at the hips rather than flexion.
- standing with hip extension and her line of gravity through her ankles rather than behind. ■

THE PRINCIPLES OF TREATMENT FOR YOUNG ADULTS WITH CEREBRAL PALSY

Tutor: Pauline Christmas
24th April 1999

Sarah Jennings
Senior I Physiotherapist,
Rehabilitation Unit, Sir Robert Peet Hospital, Staffordshire

This was a study day organised by West Midlands ACPIN, which included the AGM.

The day was attended by both physiotherapists working in paediatrics and those working with adults.

The programme comprised of two lectures on the principles of treatment of cerebral palsy and the application of normal development, and two patient demonstrations on young adults with cerebral palsy.

All aspects of the day were stimulating and informative, providing a catalyst for discussion amongst the course participants. The day was particularly useful as a forum for therapists working in different specialist fields (ie, paediatrics and adults) to meet and exchange ideas and experiences.

The feedback from the day was excellent and all the participants felt the day was an opportunity to look at an area of physiotherapy which is sometimes sadly neglected. ■

TEAM MANAGEMENT OF SPASTICITY IN MS: FROM ACUTE TO COMMUNITY

Linzie Bassett
ACPIN Chair

Last November ACPIN was approached by David Nodder of Neuroeducation to participate in a series of roadshows based on the topic of MS and spasticity. The days would be sponsored by Athena Medical Neurosciences. After much discussion this method of approach was considered a valid method of promoting ACPIN and neurophysiotherapy.

David Nodder was the coordinator and therefore had the responsibility of organising the days, with some suggestions for speakers and the group work from ACPIN. NANOT were also invited to co-host the days.

Our venues were planned for June 1999.

- Birmingham Heartlands Hospital, Birmingham
- St George's Hospital, London
- Chase Farm Hospital, London
- St James' University Hospital, Leeds

Each venue was fortunate enough to have a National ACPIN committee member chairing the day, which helped to structure the days.

Following consultation with the Executive Committee a programme was formulated and speakers were invited to lecture on our behalf.

All meetings had over 50 delegates, showing the theme for the meetings was relevant to our current members.

The feedback from the meetings has been collated for each venue alongside a summary of the day by an individual delegate. See later reports.

This new venture has certainly been a learning experience for the committee highlighting the problems of co-hosting meetings. In view of the fact that ACPIN's name was being promoted and with regard to our reputation for high standards which we did not wish to jeopardise, the lack of ownership and in particular, concerns over arrangements handled by a third party, caused a great deal of anxiety.

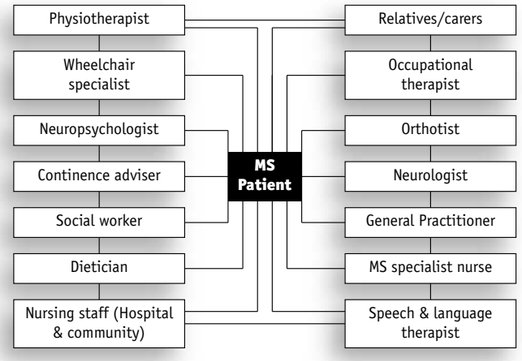
From the evaluations it can be deduced that more than half the delegates for each workshop felt that the day would have an effect on their clinical practice.

Many of the delegates commented on the 'team approach' and how reassuring a co-ordinated MDT can be in providing an appropriate package of care for MS patients.

The group work highlighted the number of disciplines who could be involved in treating such a complex and variable client group effectively.

The need for accurate assessment is essential, followed by agreed goals. Communication is vital between all members of the team to facilitate a successful outcome.

It is hoped that delegates will take time to reflect on their own service and subsequently initiate changes wherever possible.



Disciplines who could be involved in the treatment of MS patients
(Diagram compiled from evaluation group workshops)

OVERVIEW

The Birmingham study day

Elizabeth V Norton
Senior Physiotherapist
Helen Ley Care Centre,
Leamington Spa.

Heartlands Hospital, Birmingham, June 2nd 1999, was the first venue of these study days

There was a good turnout of delegates, not only from the West Midlands, but also drawing from Oxford, South Wales, Leicestershire and Merseyside. The conference was open to physiotherapists, occupational therapists and nurses working with patients who have Multiple Sclerosis (MS).

The day started disappointedly with the news that there would be no physiotherapy speaker due to illness and at such short notice the organisers were unable to offer an alternative speaker. However they promised that lecture notes would be obtained and forwarded to each delegate. The day itself therefore included three speakers, with Dr Jim Unsworth starting the conference off with a lively and stimulating lecture on the management of spasticity using drugs. It was encouraging to hear a consultant acknowledge that some of his best referrals came from the therapists treating his patients, and that he preferred to have a focused client based referral approach. Dr Unsworth highlighted the need to tailor appointments for patients to accommodate any changes in their condition and for those who were on a 'changing medication programme'.

Ms Nikki Ward followed this with a lecture on her role within Birmingham and Coventry as an MS Nurse Specialist. She emphasised the importance of those involved in the treatment and management of MS patients that they should fully understand the effects and implications that MS has to that person, their families and their individual lives. Ms Ward quoted from the findings of a survey conducted by the MS Society, undertaken in 1997, that 74% of people with MS will experience spasticity, and of that figure an overwhelming 78% will have their lives either moderately or severely affected. Two case studies were cited to illustrate different types of psychosocial factors which are further exacerbated by the problems of spasticity which affects so many people as stated previously. At present she reported that she has no criteria for whom she refers on for physiotherapy but tends to be governed by the availability and access of physiotherapy in each geographical area which can prove to be quite difficult in some areas. Both Ms Ward and Dr Unsworth were in favour of a service involving respite, that included a holistic review of each individuals situation.

After an excellent lunch the final speaker of the day was Ms Jo Evans an OT Clinical Specialist based in Leeds. Using an informative case study she illustrated how important team management is when trying to facilitate the needs of a patient within his own home setting. It was refreshing to see that what the patient felt was important to him was taken as priority with clinical expertise drawn on to minimalise tonal abnormalities as far as possible in order to maximise function in daily living.

Ms Evans lecture was followed by group workshops looking at three hypothetical case studies. The aim being to draw up a problem list, clarify aims of treatment and then discuss progression of treatment. This part of the day went down with mixed reviews. It was highlighted in the feedback session that it was difficult to work out which of the problems were primary and which were secondary. This was because it was felt that there were too many unknowns/uncertainties.

However a couple of points were brought out:

- It would be useful to have key workers to co-ordinate resolution of patients' individual problems.
- There are huge variations for provision of care for patients with MS within the different health authorities.

At the end of the day, although interesting and with some extra food for thought, I did come away feeling that the actual workshop topic had not really been addressed. With each guest speaker given half an hour, for their own individual topic, it would have been an impossible task to cover effectively the remit given in such a short period of time. ■

Please see over for results of the evaluation forms given out on these study days.

	Wednesday 2nd June 1999		Thursday 3rd June 1999	
	42 evaluations out of a possible 50		54 evaluations out of a possible 62	
	Results %	**Comments**	**Results %**	**Comments**
Overall feelings about the course				
Excellent	0	383% commented on the cancellation of the physiotherapy lecture. **Response** In view of the fact that we were informed at 9.00 a.m. that morning of the speaker's illness we were unable to find a replacement at such short notice. We realise this disappointment influenced the atmosphere of the day.	9	Course notes would have been helpful. More time for lectures. More specific information particularly medical management and spasticity. No references. Too low pitched. Athena staff helpful and knowledgeable. Appreciated ACPIN connection to allow dissemination to a wider audience. Enjoyed mixed audience.
Very good	31		30	
Good	36		28	
Quite good	21		24	
Disappointing	12		9	
Venue and catering				
Excellent	52	Excellent lunch Cold drinks required	54	Too long a lunch (1½ hrs). Wonderful food. Lacked vegetarian option. Very professional and well organised. Easy to hear, airy room. Too dark. Difficult to hear speakers. Difficult to see A-V
Very good	43		38	
Good	5		45	
Quite good	0		2	
Disappointing	0		0	
Speakers and their content				
Excellent	2.5	Not specific enough. Did not clarify management of spasticity Lack of evidence of clinical effectiveness. Dr. Unsworth's lecture was rushed. Well chosen speakers. Emphasised good holistic approach.	9	Quality of presentations good but did not meet expectations. Dr Hardie, excellent, clear and concise. More information on zanaflex versus Baclofen. OT case study good. Required more specific treatment techniques. More on root cause of spasticity. Physio focused on positive features of UMN. Useful to bring together and MDT approach. All speakers interesting but no new information.
Very good	43		37	
Good	38		28	
Quite good	14		15	
Disappointing	2.5		5.5	
Group work				
Excellent	0	Very mixed response. Some delegates found this session useful, others favoured a question and answer session. Basic level. Groups too big. Very physio orientated. Proved good MDT approach. Lacked direction. Stimulating to have opportunity to discuss variations in other health authorities.	2	37% felt the groups were too big. Larger group worked well. Would have preferred discussion specific to spasticity and video/photo of real patient. Not sure what aims were. Useful consolidation. Constructive and good idea. Disorganised, not as informative as the day. Although aware of difficulties of group work. Time too short. Time to discuss with other disciplines.
Very good	10		7	
Good	33		31	
Quite good	28.5		43	
Disappointing	28.5		13	
Effect on working practice				
Great deal	0		5.5	
Quite a lot	17		27	
A little	76		55	
Not at all	7		7	

General Comments

- Microphones not loud enough.
- Lack of directions from motorway.
- Availability of handouts prior to lectures.
- Well chaired.
- Renewed enthusiasm to set up a better service locally.

General Comments

- Difficult to find hospital site.
- Lack of aims and objectives.
- Programme too short.
- Lack of references and mention of outcome measures.

	Monday 21st June 1999		Tuesday 22nd June 1999	
	37 evaluations out of a possible 50		32 evaluations out of a possible 50	
	Results %	**Comments**	**Results %**	**Comments**
Overall feelings about the course				
Excellent	5	Length of lectures maintained attention. Good variety of speakers. Good multidisciplinary input. Good Chairperson. Good to find out fellow professionals dealing with the same problems.	25	Interesting, thought provoking, well organised. An excellent overview of treatment for ms. Good revision session but still enough new ideas to be stimulating. Needed more of a mix of the disciplines. Sexuality not addressed as an issue. (NB the nurse did talk about this! *CK*). Perhaps talks too short. More speakers from other disciplines to be included.
Very good	62		47	
Good	22		25	
Quite good	11		3	
Disappointing	0		0	
Venue and catering				
Excellent	0	Excellent room. Shorter lunch break. Poor vegetarian options Poor directions/parking	34	Food was lovely/yummy/brilliant. Please label veggie food. More juice drinks required , small room made it difficult to eat in. Not enough seats during coffee. Poorly signposted/poor map/directions. Could have started earlier – more time for discussion.
Very good	27		50	
Good	43		16	
Quite good	27		0	
Disappointing	3		0	
Speakers and their content				
Excellent	14	Clear. Good ranger of speakers. All aspects of acute and community care covered.	38	Particularly interesting to hear from a specialist MS nurse. Good range without too much overlap. Very relevant could have listened to more. All friendly approachable and obviously knowledgeable. More illustration of how the teams work together. A little more on current research and innovation ideas would be great.
Very good	54		47	
Good	27		12	
Quite good	5		3	
Disappointing	0		0	
Group work				
Excellent	5	Could have used time to formulate guidelines. Worked well. Useful to have a facilitator. Needed more time for feedback.	6	Pooling information and experience always useful. Needed more time. Increased direction as no direction for large % of time. Very Physio dominated. More helpful to have real case in the flesh. Felt it was more of an exercise to let speakers know we had listened.
Very good	32		32	
Good	41		34	
Quite good	17		25	
Disappointing	5		0	
Effect on working practice				
Great deal	5		19	
Quite a lot	57		56	
A little	35		25	
Not at all	3		0	

General Comments

- Good to be aware of other practices and teams.

General Comments

- May be useful to see how many trusts have all four members of team.
- Helpful overview.
- A lot of what we do already nice to have it reinforced.
- Groups too big (NB max of 10 *CK*).

MANUAL THERAPY TECHNIQUES

Dear Colleagues,
Motions 18 and 19, carried at ARC in May, ask the CSP to investigate the incidence and the impact of:

1. strain injuries to the joints of the hand (motion 18)
2. work-acquired infectious diseases (motion 19) which physiotherapists may be at risk of in the course of their occupation.

Studies and local experience indicate that manual therapy techniques pose a risk to physiotherapists in terms of developing painful joints in the hand and wrist for example. Given the repetitive nature of other physiotherapy techniques, it is possible that this situation is not limited to other areas of practice (respiratory care, neurology and paediatrics for example).

Anecdotal evidence suggests that Physiotherapists are coming into contact with increasingly diverse and resistant strains of infectious diseases as a result of their work. Infection control policies are in place, although these vary across the country, and not all workplaces will adhere to them.

In order to develop an indication of the extent of these issues within the profession, I am writing to ask your readers to contact me if they have experience of either of the above issues. The information obtained will be held in confidence and used to gain a picture of the situation, before considering what further work is indicated.
Yours sincerely,

Gwyn Owen MSc MCSP
Professional Adviser
Tel: 020 7306 6615
email: oweng@csphysio.org.uk

CSP COLLECTION OF ACPIN ANNUAL SUBSCRIPTIONS

Dear Colleagues,
You will be aware that ACPIN has been participating in a pilot project whereby current group members were invited to renew their ACPIN subscription via the CSP.

The ACPIN Executive Committee is aware of the confusion and frustration experienced by members during 1999 as a result of participating in this scheme.

The Clinical Interest Groups participating in the pilot project have recently met with Gwyn Owen (Professional Adviser) and Rosemary Ward (Membership Officer) from the CSP to share members' concerns and an action plan has been agreed to address these issues.

ACPIN Executive has decided to withdraw from the pilot project for 2000. Opportunities to rejoin the scheme will be offered to all clinical interest groups on an annual basis. ACPIN may therefore consider rejoining the scheme at a later date depending on the service offered and the views of the membership.

Please accept our apologies for any inconvenience caused by the introduction of the pilot project during 1999.
Yours sincerely,

Linzie Bassett MCSP
Hon Chair ACPIN
Gwyn Owen MSc MCSP
Professional Adviser

LYCRA GLOVES

Dear Colleagues,
Have you any experience of using 'lycra gloves' for rehabilitation of acute stroke patients with problems of proprioception, inattention or spasticity? We are hoping to set up a small project and would like to hear from anyone else who has used these gloves.
Yours sincerely,

Louise Dunthorne
Ipswich Hospital NHS Trust
Tel: 01473 704150

GLOSSOPHARYNGEAL ('FROG') BREATHING
what, when and how ?

An educational video for physiotherapists, other health care professionals and patients on how and when to teach/learn glossopharyngeal breathing (GPB) has been made by Barbara Webber and Jane Higgens.

The technique was first recognised in the 1950s during the polio era, but should not be considered just historic today. It can be of enormous benefit to many people with respiratory muscle weakness or complete respiratory muscle paralysis. This film shows patients with cervical spinal cord injury, Duchenne muscular dystrophy and poliomyelitis using GPB and talking about the benefits it has given them. It gives a detailed demonstration on how to teach it and the indications and contraindications for its use.

Physiotherapists working in the field of neurology will come across many patients who would benefit from learning this technique.

What are the benefits of glossopharyngeal breathing?

- It makes coughing more effective
- It can be a substitute for respiratory muscle function and allow independence from a ventilator
- It maintains or improves compliance of the lungs and chest wall
- It makes the voice more audible
- It augments the air supply when demands are made
- It is a safeguard in times of ventilator or power failure

If you are interested in obtaining a copy of the video (43 mins) (price £20.00 inclusive of P&P payable to 'GPB Video') please contact: ***Barbara Webber, Sunnybank, The Platt, Amersham, Bucks HP7 OHX. Tel. 01494 725724.***

Guidelines

FOR AUTHORS IN *SYNAPSE*

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:

RESEARCH REPORT
A report which permits examination of the method, argument and analysis of research using any method or design (quantitative, qualitative, single case study or single case design etc).

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.

REVIEW PAPER
A critical appraisal of primary source material on a specific topic related to neurology.

TREATMENT REPORT/CASE STUDIES
A report of the treatment of a patient or series of patients which provides a base line description of established treatments, or a new insight into the techniques or treatment of people with a specific problem.

SERVICE DEVELOPMENT QUALITY ASSURANCE REPORT
A report of changes in service delivery aimed at improving quality.

ABSTRACTS
Abstracts from research projects, including those from undergraduate or higher degrees, audits or presentations. They should be up to 300 words and where possible the conventional format: introduction, purpose, method, results, discussion, conclusion.

TECHNICAL EVALUATION
A description of a mechanical or technical device used in assessment, treatment, management or education to include specifications and summary evaluation.

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.

POINTS OF VIEW
Articles discussing issues of contemporary interest and any other matters relating to neurological physiotherapy.

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*.

COPY SHOULD BE:

- typed or printed
- double spaced
- on one-sided A4 paper with at least a 1" margin all round
- consecutively numbered
- include the name, qualifications, current position, and contact address of the author(s).
- Ideally, a disk copy of the material should also be included. Documents preferred in *Microsoft Word* for Macintosh or Windows.

References should use the Harvard system. In the text quote the author(s) surname and date (Bloggs 1994). At the end of the article give the full references with the first author/editors name in alphabetical order, eg Bloggs A (1994). 'The use of bandages in the treatment of people with head injuries'. *Physiotherapy* 67, 3, pp56-58.

Tables and figures should be given appropriate titles and numbered consecutively as they appear in the text. Each should be presented on separate sheets of paper after the text.

Any **photographs** and line drawings should be in black and white, in sharp focus with good contrast and at least 5" x 7".

Two copies of each article should be sent to:

Ros Wade
Synapse Administrator
30 Heyworth Road
Stratford
London E15 1ST

Note: all material submitted to the administrator is normally acknowledged within two weeks of receipt.

ACPIN Regional Representatives

Requests for information regarding ACPIN membership should be addressed to the appropriate regional representative.

EAST ANGLIA
Sharon Griffen
15 Granary Close
Lingwood
Norwich
NR13 4EP
Tel: (w) 01493 337818

KENT
Janice Champion
Coniston
Grain Road
Lower Stoke
Rochester
Kent
ME3 9RE
Tel: 01634 270198

LONDON
Anne McDonnell
Physiotherapy Department
Royal Free Hospital
Pond Street
London
NW2 2QG
Tel: 020 7830 2438

MANCHESTER
No Representative

MERSEYSIDE
Jenny Craig
Research Office
Young Rehab Unit
Walton centre for Neurology and Neurosurgery
Lower Lane
Liverpool
L9 7LJ
Tel: 0151 529 5071

NORTHERN
Leslie Yule
Physiotherapy Department
Community Rehabilitation Service
The Green
Wallsend
Newcastle
Tel: 0191 200 7086/7214

NORTHERN IRELAND
Margaret Lewis
Department of Rehab Medicine
Level 3 OPC
Royal Group of Hospitals
Belfast, N Ireland
Tel: 01232 240503 ext 2238

NORTH TRENT
Steve Cheslett
43 Mill Street
Greasbrough
Rotherham
South Yorks
S61 4ES
Tel: 01709 561399

OXFORD
Nicky Sharman
Physiotherapy Department
Stoke Mandeville Hospital
Aylesbury
Bucks
HP21 8AL

SCOTLAND
Emma Forbes
Physiotherapy Department
Stirling Royal Infirmary
Stirling
Scotland
Tel: 01786 473 499

SOUTH TRENT
Linda Cargill
176 Mansfield Road
Derby
DE1 3RB

SOUTH WEST
Formerly Bristol
(Stationary Holder)
Liz Britton
Physiotherapy Department
Frenchay Hospital
Frenchay
Bristol
Tel: 0117 918 6565

SUSSEX
Julia Buck
Physiotherapy Department
Eastbourne District General Hospital
Kings Drive
Eastbourne
BN2 1 2UD
Tel: 01323 417400 Ext 4794

WEST MIDLANDS
Anne Murray
Physiotherapy Department
(Young Adults)
Royal Leamington Spa Rehabilitation Hospital
Heathcote Lane
Nr Warwick
CV34 6SR

WESSEX
Helen Foster
Physiotherapy Department
Southampton Hospital
Tremona Road
Southampton
S09 4XY
Tel: 01703 777222 ext 4562

YORKSHIRE
Jill Hall
Physiotherapy Department
Lincoln Wing
St Jame's University Hospital
Beckett Street
Leeds
Tel: 0113 206 4375