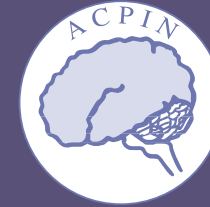


JOURNAL AND NEWSLETTER OF THE ASSOCIATION OF
CHARTERED PHYSIOTHERAPISTS INTERESTED IN NEUROLOGY

SPRING 2000



Syn'apse



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ASSOCIATION OF CHARTERED
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ISSN 1369-958X



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SENDING YOU ALL BELATED MILLENNIUM GREETINGS! Well, here we are four months into the year 2000, I cannot say that the ethos of neurophysiotherapy has changed dramatically since last year. However, there are still important issues and planned events to look forward to, as always in ACPIN's action packed calendar.

First, membership. Despite last years problems, we currently have 1,100 members, making ACPIN one of the largest clinical interest groups. I would like to thank you as members for your support and faith in us as a committee.

Secondly, our new *Synapse* team, co-ordinated by Ros Wade have continued to develop *Synapse*, making it a quality journal. Its high standard can only be maintained by you as members forwarding articles, reviews, case studies or general queries to the team for inclusion.

From the Chair...

ACPIN continues to promote sharing of knowledge by facilitating workshops, conferences and study days throughout the year. By the time you receive this copy of *Synapse*, our first conference and AGM for the year entitled 'Complex Disability, are you managing it?' will have taken place. A full report will appear in the November issue.

In addition, six regional study days have been planned in conjunction with Athena Neuroscience, on the topic of 'The management of spasticity in the Community' with an emphasis on Multiple Sclerosis.

The Bobath Memorial Study Days will take place this Spring and representatives from each region will have been allocated a place. A detailed summary will be produced by Jackie Newitt for the November edition. The study days will be held in May and June this year. Any ACPIN members will be able to attend free of charge, but places will be limited. Look out for flyers confirming dates and venues, which will be sent directly to you

The second CSP Annual Congress and trade exhibition, entitled 'Expanding Horizons' will run from 20th-22nd October 2000 at the ICC, Birmingham. The ACPIN programme entitled 'Neurophysiotherapy: the CNS and Beyond' has been finalised and is enclosed in this edition. Following the success of last year, I strongly recommend that you book your place early to avoid disappointment.

The planning of our second residential conference which will be held from 23rd-24th March 2001, on the theme of 'Posture and Balance' has begun in earnest. Several eminent speakers have been approached and have agreed to lecture. The venue will

be the Stakis Hotel in Northampton. Look out for further details.

Finally, the Events subgroup are proposing to run a study day on the topic of Medico-legal issues following comments and recommendations from several of our members. This also relates to our motion for ARC this year, which was unfortunately rejected. Nicola Hancock's report will explain the reasoning behind such a motion.

As you are aware the CSP is revising its Standards of physiotherapy practice. To date, new Core Standards have been developed and these are currently being piloted. Speciality Standards are to be incorporated into the final document so that members have access to all the standards.

CIG Liaison Representatives have represented ACPIN on the Standards Working Party. Presently, five Executive members convened to review the Speciality Standards and our comments have been forwarded to Martyn Sumner, Clinical Standards Project Officer. We await a response and will keep you informed of the Standards release date, which is planned for later this year.

ACPIN is currently looking into developing its own website so that all our news can be disseminated quickly. Watch this space!

As ever, ACPIN strives to promote the educational needs of members by promoting Evidence Based Practice and Clinical Governance and by encouraging neurophysiotherapy.

Also, in this issue is an update by Anthea Dendy on the progress of the complex issue of therapeutic handling.

I would like to take this opportunity to thank all the hard working members of the ACPIN Committee, particularly Jill Hall, Yorkshire Regional Rep and Jenny Craig, Merseyside Regional Rep who have both resigned from the National Committee to pursue further opportunities in their respective careers. ACPIN continues to be one of the strongest of the CIGs, growing from strength to strength, and with your continued support ACPIN can move forward and tackle even more challenging issues!

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ARTICLES

Botulinum toxin: patterns of usage and outcome measures

Brian Durward, Head of Physiotherapy, Queen Margaret College, Edinburgh and Sasha Baggaley, Junior Physiotherapist

Introduction

Botulinum Toxin (BTX) injections are being increasingly used for the management of spasticity for a variety of neurological conditions, including stroke (Bhakta et al, 1996), brain injury (Elovic, 1996), multiple sclerosis (Borg-Stein et al, 1993) and cerebral palsy (Cosgrove et al, 1994). The drug exerts its effect at the neuromuscular junction by inhibiting the release of acetylcholine from the motor-end plate, causing a flaccid paralysis and reduced muscle spasticity. Its effects are observed within 24-72 hours, but the blockade is reversed after a few weeks or months (Cosgrove et al, 1994).

With the growing requirement in the health service for objective evaluation of outcome in rehabilitation (Haas and Crow, 1995), it has become 'the professional responsibility of physiotherapists to strive to identify and develop appropriate measurements, which preserve objectivity and that might serve to identify the effects of intervention.' (Durward and Baer, 1995).

The World Health Organisation (1980) proposed a system of classifying the consequences of illness into four levels of pathology, impairment, disability and handicap. An awareness of these categories when planning treatment aims and selecting outcome measures may encourage both a holistic approach to patient care, and provide a comprehensive evaluation of treatment effects, which is necessary when treating the complexity of problems neurology patients can present with.

Although considerable evidence supports the effectiveness of BTX in reducing spasticity, its influence on spasticity-related disabilities, for which there is no agreement on adequate assessment measures, has yet to be clarified (Reiter et al, 1996). A study of BTX for stroke patients' upper limb spasticity (Hesse et al, 1996), found improvements in certain self-care activities (eg hand hygiene), but standardised functional assessments failed to reflect this effect. This demonstrates the relative insensitivity of global assessments of

motor impairment and disability to effects secondary to spasticity, or patient reported improvements. Sampaio et al (1996) also found a discrepancy between improvement of spasticity scores and functional status, but attributed it to a possible mismatch between muscles treated and muscles needing treatment, due to protocol restrictions. They stressed the need for double-blind, placebo-controlled trials using homogeneous populations and treatments.

Table 1

Aims of Research

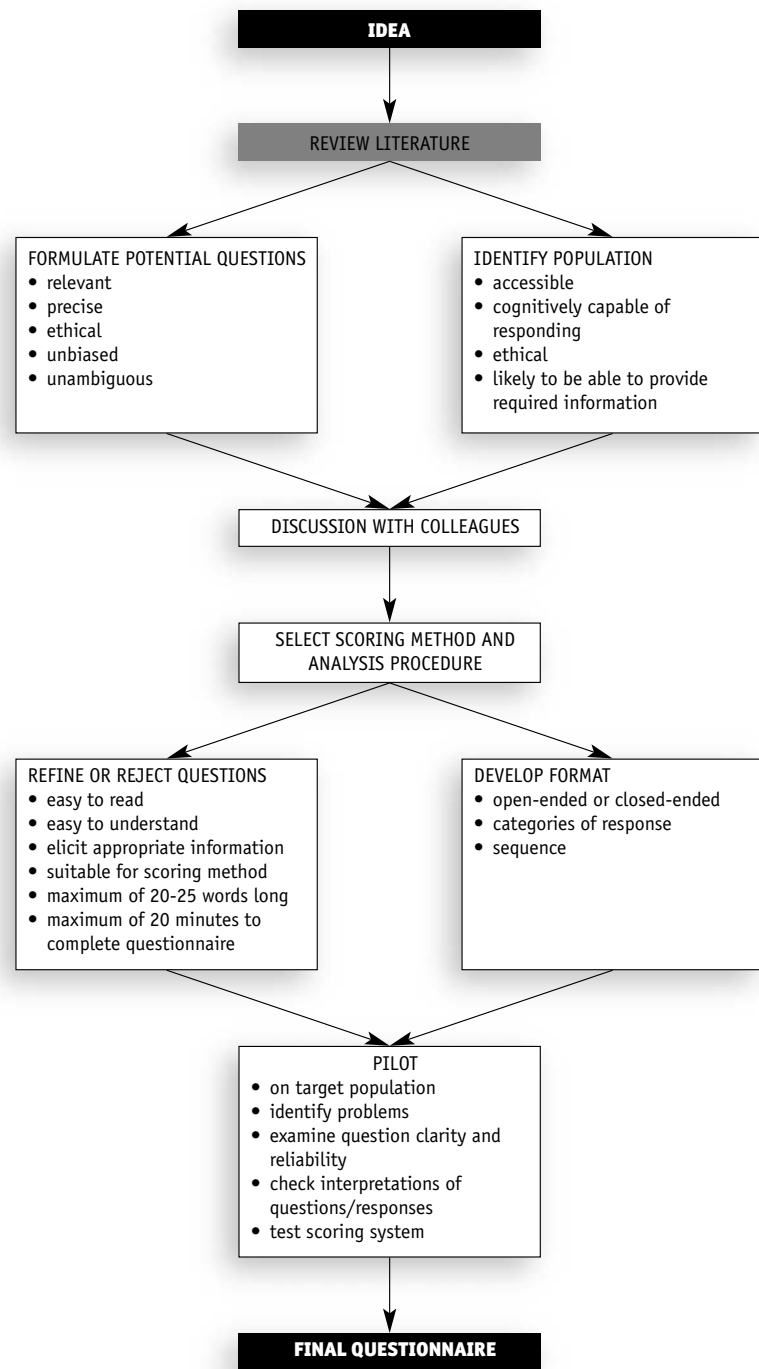
- Identify the population receiving treatment with Botulinum Toxin for spasticity
- Identify the advantages and disadvantages of using this treatment, from a physiotherapist's perspective
- Identify the measures being used to evaluate treatment effectiveness of patients receiving Botulinum Toxin injections for the management of spasticity
- Estimate whether the focus of treatment with Botulinum Toxin is at the level of impairment, disability or handicap.

Methodology

- **Study Design** A questionnaire was designed to collect data regarding the current use of BTX in the management of spasticity. Postal questionnaires are an effective, time and cost efficient means of obtaining data from large numbers of people over a broad geographical area, for descriptive or statistical analysis (Bork and Francis, 1985).
- **Questionnaire** To be a useful research tool, the questionnaire must be reliable, valid and sensitive (Fallowfield, 1995). The questionnaire in this study was designed to attempt to meet the aims of the research (Table 1) using the procedure in Figure A.
- **Population Identification** Physiotherapists specialising in the area of neurology are most likely to work with patients treated with BTX for spasticity. A mailing list for Association of Chartered Physiotherapists Interested in Neurology (ACPIN) members was obtained to target this population. One hundred members were selected (semi-randomly) from the list by the group's secretary (full details were not provided). Anonymity and confidentiality were assured and participation was voluntary.
- **Piloting Procedure** To ensure the questionnaire was valid, a pilot test was run on three experts in the field. They were asked to note how long the questionnaire took to complete, and any problems with presentation, clarity or comprehension. An

Figure A

Questionnaire design procedure



interview was conducted to establish whether questions and answers were interpreted appropriately by respondents and the tester. Following this, problem questions were removed or adjusted.

■ **Final Questionnaire** Consisted of a cover page (explaining the aims, contents and instructions), and

two sections. Section A required baseline data on variables relating to the respondent (area in which they work, years of experience, grade of physiotherapist, and number of BTX patients they have treated). Section B required information about a patient treated with BTX. This section was designed to meet the aims of the study, using both open-ended and closed questions. Open-ended responses had to be categorised for analysis.

• **Aim 1** Details were required about the patient who the respondents had most recently worked with, to increase accuracy and reliability of responses (French, 1993). These included pathology, duration, age, area injected and the number of times injected, previous treatments and their perceived success.

• **Aim 2** Questions required respondents to list up to five advantages and disadvantages. These questions were open-ended because the literature only considered them from the perspective of drug administrators or purchasers, rather than therapists.

• **Aim 3** Respondents were asked which tool or technique was used to establish a baseline measure of spasticity, and which outcome measures were used to monitor the effects of treatment.

Information of variables which might affect outcome measurements was also required eg when and how often the measures were made; and any other therapy the patient received in conjunction with the injection.

• **Aim 4** Since respondents may not have had an understanding of the WHO's definitions for the classifications of impairment, disability and handicap, the level of focus was estimated by considering the aims of treatment and outcome measures used.

■ **Mailing Procedure** A copy of the questionnaire, with a cover letter, instructions for its return, and a stamped, self-addressed envelope, was sent to 100 ACPIN members.

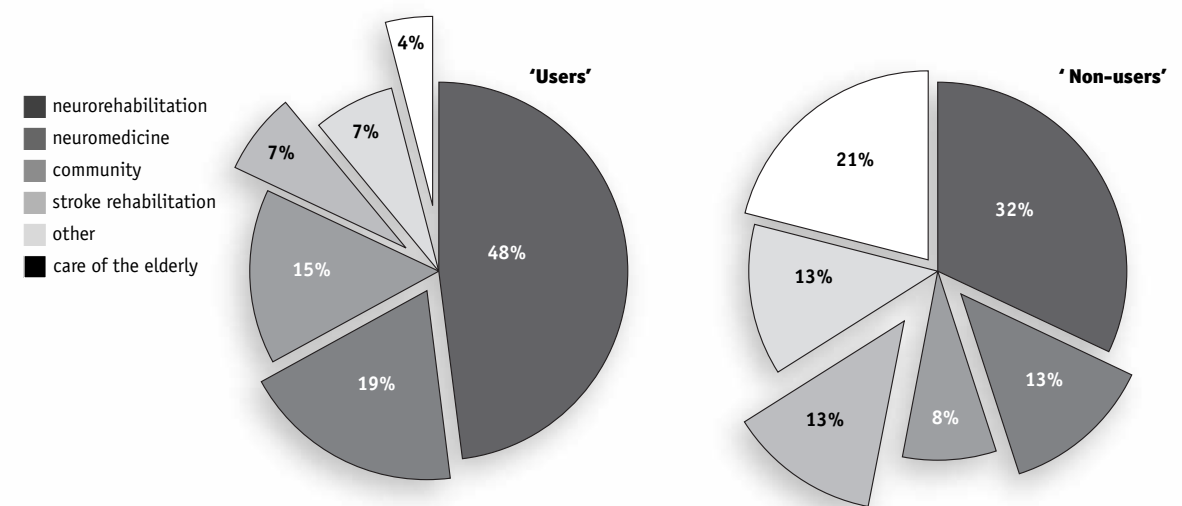
■ **Data Collection and Analysis** Responses were recorded in Windows SPSS (Statistical Package for the Social Sciences). Information was converted from descriptive to numerical format to facilitate analysis of qualitative information. Due to the low response rates, information recording method, and response categories used, only response frequencies could be analysed.

Results

• **Response Rate** Fifty eight questionnaires were returned, of which 27 had been fully completed ('users'); twenty four respondents had no experience with this patient group, but completed Section A ('non-users'); seven questionnaires were returned unanswered.

Figure B

Areas in which respondents worked



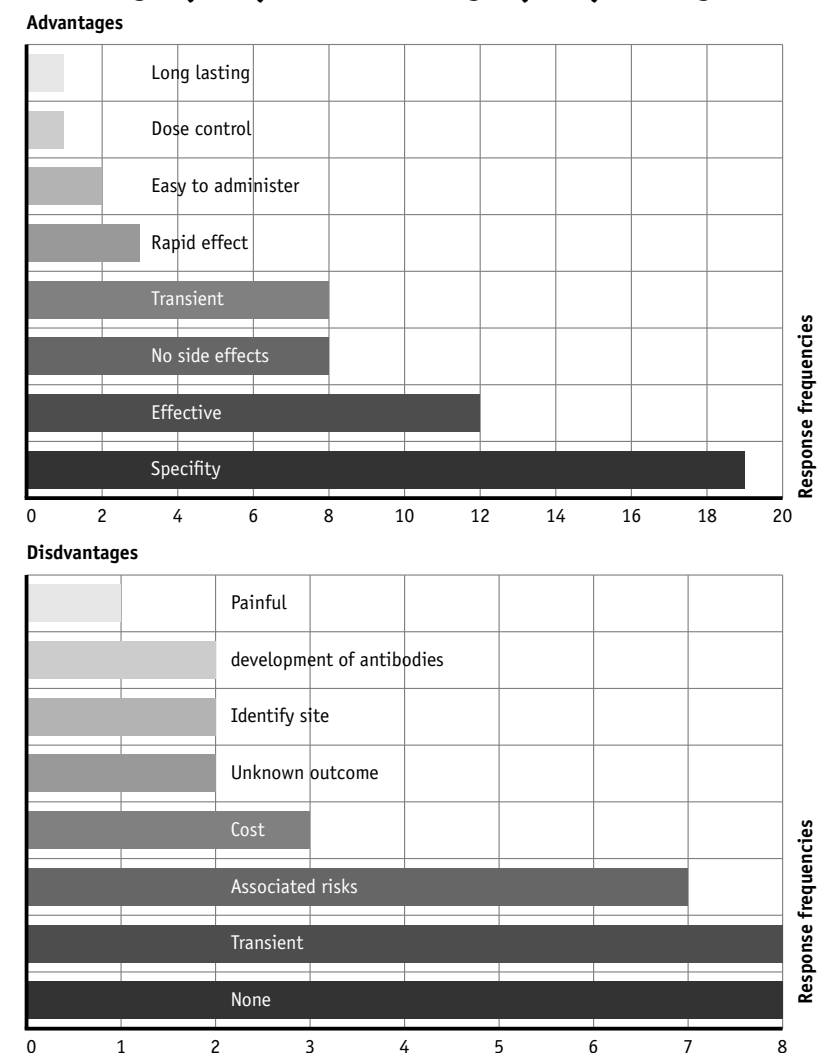
• **Respondent Profile** The pie charts (Figure B) illustrate the areas in which respondents worked. Users were predominantly Senior I Grade, with 2-4 years experience in this field, and had treated between 3-5 BTX patients. Eighty five percent had been involved in the decision to use BTX, as part of a multidisciplinary team.

• **Aim 1** Raw data can be seen in Table 2. The majority of patients described had been diagnosed as CVA (45%), and were aged between 40-70 years (56%). The onset of pathologies had been within the last three years for most patients (74%). The most frequently reported criteria for selecting patients was their degree of hypertonicity (21%), followed by a poor response to other treatments (15%); age was the least frequently reported criteria for selection (2%). Prior to treatment with BTX, 29% of patients had tried other pharmacological measures to manage their spasticity, and 29% had been treated with splinting or serial casting, of which 33% of cases were considered unsuccessful, and 56% were only partially successful. The upper limb and lower limb were being treated with similar frequency, but specific muscle groups were not identified for all patients. Most patients had received only one injection with BTX (67%), although three patients were reported to have received up to three repeat injections.

• **Aim 2** The ability to target specific muscles for a local effect, and the perceived effectiveness of the drug were the most frequently reported advantages of using BTX. Eighteen more advantages than disadvantages were reported, and eight respondents stated that there were no disadvantages of using BTX in their opinion. The transient nature of the drug was considered both an advantage (eight respondents) and a disadvantage

Figure C

Advantages (n=54) and disadvantages (n=36) of using BTX



SUBJECT	PATHOLOGY	DURATION	AGE (YRS)	MUSCLES INJECTED	FREQUENCY	SUCCESS
1	Spasmodic Torticollis	27yrs	41	Sternocleidomastoid levator scapulae	3	short term
2	Head injury	15yrs	27	Hamstrings	1	yes
3	Spasmodic Torticollis	9mth	45	Sternocleidomastoid splenius; upper trapezius	2	short term
4	CVA	2yrs	56	Biceps brachii; sartorius	3	yes
5	CVA	18mth	83	Flexor carpi radialis; flexor digitorum longus	2	short term
6	CVA	3yrs	65	Wrist and finger flexors	1	short term
7	Head injury	6mth	27	Hamstrings	1	yes
8	CVA	6mth	67	Hamstrings	1	yes
9	Multiple sclerosis	10yrs	37	Hamstrings; hip flexors	1	yes
10	CVA	2yrs	23	Gastrocnemius; soleus	1	partially
11	CVA	4mth	70	Hamstrings; hip adductors	1	yes
12	Head injury	14mth	35	Pectoralis; biceps; brachioradialis	1	short term
13	CVA	5mth	49	Medial hamstring	2	short term
14	RSD type pain	2yrs	15	Tibialis anterior; tibialis posterior	2	short term
15	Spinal cord lesion	6wks	36	Forearm flexors; biceps	1	don't know transferred
16	CVA	5yrs	54	?Biceps or forearm flexors	2	partially
17	Cerebral palsy	10yrs	10	Gastrocnemius; rectus femoris	1	yes
18	Head injury	18mth	25	Wrist flexors; gastrocnemius	1	yes
19	CVA	10mth	69	Wrist flexors; finger flexors	1	yes
20	Multiple sclerosis	2yrs	22	Gastrocnemius; radial arch of foot	2	yes
21	CVA	8mth	65	Hamstrings	1	yes
22	Head injury	3yrs	18	Biceps; brachialis; brachioradialis	1	yes
23	Encephalitis	7mth	53	Finger flexors; triceps	1	no
24	CVA	6mth	55	Forearm flexors	1	short term
25	CVA	7yrs	61	Pronator teres; biceps;	3	yes
26	CVA	18mth	65	Long finger flexors	1	don't know died
27	Intramedullary cyst	18yrs	37	Hamstrings	1	don't know transferred

Table 2

Raw data of patient profile

(also eight respondents). These response frequencies can be seen in Figure 3.

• **Aim 3** Most respondents used the Ashworth Grading Scale (37%) or goniometry (33%) to obtain a baseline measure of spasticity. Conversely, outcome of treatment was predominantly measured using goniometry (56%), with the Ashworth being used by only 22% of respondents (Table 3). Despite reduction of pain reported as an aim of treatment by ten respondents, only five used a pain measure for a baseline or outcome measure.

• **Aim 4** Response categories used for the aims and

outcome measures were assigned to the most appropriate level. Figure 3 shows both aims and outcome measures were predominantly focused at the impairment and disability levels, with minimal focus on handicap.

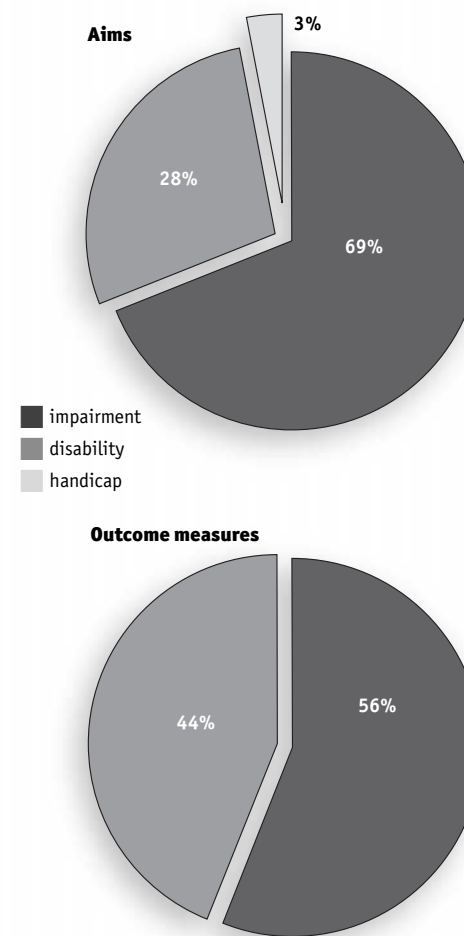
Discussion

From the questionnaire it was found, in relation to the study aims, that:

- 1. Various neurological pathologies are being treated with BTX, predominantly stroke patients between the age of 40-70 years. This may reflect

Figure C

Aims and outcome measures focused at the impairment, disability and handicap levels



the high incidence of stroke, which rises rapidly with age and is the most common cause of neurological disability in the adult population (Downie, 1986). However, the target population is not necessarily representative of all physiotherapists working in neurology (eg few paediatric members), therefore, the findings may lack reliability.

- 2. Ability to target specific muscles is recognised as a major advantage of the drug, whilst its transient nature is considered both a disadvantage and an advantage. The style of questioning did not facilitate ranking responses or determining whether advantages outweighed disadvantages.
- 3. The Ashworth Scale was mainly used to record baseline measures of spasticity, which is the only reliable and valid test of spasticity available in the clinical setting (Bohannon and Smith, 1987); range of movement was used most frequently to measure outcome, even though it is not a direct measure of

Table 3

Baseline and outcome measures

BASELINE MEASURES			
Response category	Frequency of response	Percentage of frequency	Percentage of respondents (n=27)
Ashworth scale	10	22	37
Goniometry	9	20	33
Functional assessment	7	16	26
Don't know/none	6	13	22
Video analysis	4	9	15
Other tone grading	4	9	15
Pain scale	3	6.5	11
Other	2	4.5	7

OUTCOME MEASURES			
Response category	Frequency of response	Percentage of frequency	Percentage of respondents (n=27)
Goniometer	15	32	56
Functional ability measure	10	21	37
Ashworth grading scale	6	13	22
Gait analysis measure	4	8.5	15
Video analysis	4	8.5	15
None	3	6.5	11
Don't know	3	6.5	11
Pain measure	2	4	7

Table 4

Suggested categories for aims and outcome measures

WHO CATEGORY	AIM	OUTCOME MEASURE
Impairment	Reduce spasticity	Ashworth grading scale
	Reduce pain	Pain measurement scales
	Prevent secondary complications	None suggested
Disability	Increase range of movement	Goniometry
	Improve function	Functional measures/video analysis
	Improve gait	Gait analysis/video analysis
Handicap	Improve hygiene	Functional measures
	Improve comfort	None suggested

spasticity. This highlights a problem that exists in neurology with finding appropriate measurements that will reflect the aims of treatment, are easy to use, and are reliable and valid. Poor question design resulted in difficulties in analysing which measures were used and when they were used.

- 4. Impairment and disability were the main focus of treatment, based on reported aims and outcome measures. The absence of handicap measurement reflects the lack of suitable measures available

(Wade, 1992); a lack of outcome measures relative to aims may reflect the paucity of reliable and valid measures in neurology.

When drawing conclusions from these findings, limitations of small sample size and population used must be considered. Also, poorly worded questioning and the use of open-ended response formats created problems with analysing information due to ambiguities, vague responses, and possible misinterpretation of questions, restricting its reliability.

Conclusion

The transient nature of BTX, coupled with its high financial cost (Jordan and Bames, 1994) and the potential to develop antibodies with long term use (Hambleton et al, 1996) raises concern over the cost/benefit ratio of using this treatment (Reiter et al, 1996). It is therefore important that guidelines are developed for optimum dosages and patient selection criteria, by conducting research using randomised, controlled trials, long term analysis of patients receiving treatment, and precise documentation of outcome measures in both a clinical and research setting.

Physiotherapists are responsible for finding and using 'the most appropriate, reliable and sensitive tools available in order to evaluate and justify physiotherapy intervention' (Crow, 1995). Therefore, goals of BTX treatment should be carefully identified according to the patient's clinical features, and measures used should reflect these, in order to determine the effects of BTX at more than just the level of impairment.

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A simplified balance measure by functional reach

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Introduction

Standing balance is a convenient and clinically accessible measure of outcome of rehabilitation of acute conditions such as stroke. Methods of assessing balance include the use of simple ordinal scales (Bohannon et al, 1984), (Bohannon, 1989), (Berg et al, 1995), (Bohannon et al 1995) as well as more sophisticated systems providing ratio data (Era et al, 1985), (Berk et al, 1992), (Norre et al, 1993), (Make et al, 1990). One much used example is the Balance Performance Monitor (Hinman, 1997). An often cited and simpler instrument is the Functional Reach (FR) test (Duncan et al, 1990). In this test, FR is defined as 'the difference between arm's length and maximal forward reach, using a fixed base of support'. It is recorded by measuring the horizontal distance between a subject's third metacarpal joint in upright standing and forward extended positions. Results from this test were found to be reliable, and correlated well with those obtained using more precise electronic equipment (Duncan et al, 1990).

In practice, problems can arise in reproducing the starting position for subsequent repetitions of the test. Variations may be generalised into two categories: (1) angulation of the body in the sagittal plane; and (2) rotation of the upper torso. In the first case, should the subject be leaning forward in the start position, then the overall reach measurement will be reduced and vice-versa. Twisting the torso can have a similar effect. For elderly subjects or those suffering from acute conditions, it is often impractical to spend a large amount of time positioning prior to the test due to the generation of fatigue. In many cases, accurate positioning is impossible.

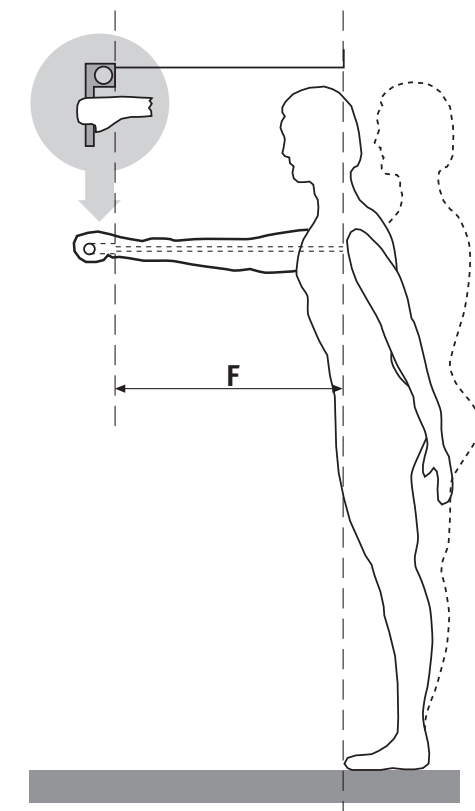
A modified balance test has been developed which eliminates the above problems. Being simpler and quicker to perform, the test is suited to all hospital and community settings, and is especially applicable to subjects who tire easily, or those unable to maintain consistent upright starting positions, e.g. people with stroke. The test does not require any specialist equipment and, as nothing needs to be affixed to a wall, is ideally suited to use in the home.

The Modified FR Test

Rather than record the distance between start and extended positions, an FR assessment may be performed by measuring the distance a subject can reach in front of the limit of their base of support. The modified test utilises a simple measuring device consisting of a self recoiling tape measure connected to a handle (see Figure 1). Any such device may be constructed, provided the same device is used each time a subject is tested. By hooking the start of the tape vertically in line with the end of the toes, the reach measurement can be read directly from the tape as the subject holds the handle and leans forward. Figure 1 illustrates the modified FR test.

- Instructions for carrying out the test are as follows:
- 1. Select a vertical edge (eg a door-frame), suitable for hooking the tape onto.
 - 2. The subject stands (without shoes), toes vertically aligned with this edge.
 - 3. The subject raises the arm that is adjacent to the vertical edge to shoulder height.
 - 4. The tape is hooked onto the vertical edge at shoulder height, and extended until the subject is able to grasp the handle of the unit.
 - 5. Give the following command whilst demonstrating the movement. 'Reach forward as far as you can then stand upright again. Be careful not to lose your balance or move your feet. Don't look down; keep looking directly forward.'

Figure 1



- 6. As the subject leans forward, the tape will uncoil, and the maximum extension is read directly from the tape.

The reach measurement (F) is the horizontal distance between the end of the toes, and the point at which the tape enters the measuring unit when the subject is in the fully extended position. Allow three attempts, recording the furthest reach. The following points should also be taken into consideration:

- 1. Twisting the wrist may alter the recorded reach measurement; instruct the subject to keep the wrist straight.
- 2. The measuring device handle should be held in the centre of the closed fist butting up to the thumb, and not extended into the fingers, which will increase the measured distance.
- 3. There is a tendency for the subject to reach downwards as well as forwards, which increases the recorded measurement. If necessary, keep the tape horizontal as the subject leans forward by altering the height at which it is hooked onto the vertical.
- 4. If the test is performed against a wall, ensure the subject's hand is not resting against the wall to provide additional stability. The FR measurement also includes arm length, so it is inappropriate for comparing balance between individuals. Rather, the test is most appropriately used to detect changes in an individual's balance over time.

Reliability and Validity

Inter-rater and intra-rater reliability were investigated by performing the test on a small sample of individuals with no disability. All individuals were trained to perform the test procedure, and acted as both subject and rater. To assess intra-rater reliability, all raters tested subjects twice, with tests separated by 15 minute time intervals (n=20). To assess inter-rater reliability, six subjects were tested twice by different raters, again separated by a 15 minute interval. Correlations were calculated using Pearson's product moment.

From the small sample studied, coefficients of $r = 0.788$ for intra-rater reliability and $r = 0.991$ for inter-rater reliability were obtained. Both are highly significant ($p = 0.01$), suggesting that the modified FR test can provide reliable measurements. More work is needed to investigate its reliability in different settings and with different subjects.

The validity of the FR test as a measure of balance has been previously demonstrated (Hinman, 1997). The modified test also requires subjects to lean forwards as far as they can without over-balancing, and hence fulfills the same purpose. The modified test is currently being used to test the balance of acute stroke patients as part of a larger study.

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The future of national standards for ACPIN

Madeline Simpson MSc MCSP

Background

This project was supported financially from the ACPIN membership in an attempt to investigate the future position of the general standards booklet produced by ACPIN. The project work formed the research element of the *Masters in Health Care* programme at Exeter for the researcher, using a qualitative approach in the form of focus groups.

Aims and objectives

The aims of this project were to explore the effects and impact of the National Standards published by the Association of Chartered Physiotherapists Interested in Neurology in 1995.

The objectives were to evaluate this document in terms of:

- The ability to interpret the standards in relation to locally provided services.
- The usefulness of the document in terms of uni-professional and multi-disciplinary clinical audit.
- The positive and negative effects of the introduction of the National standards with recommendations for their future development.

Method

This project was carried out using focus groups with senior physiotherapy members of ACPIN drawn from five of the ACPIN regions in the United Kingdom. An attempt was made to select members for the groups who had been ACPIN members for at least two years and were in a Senior post in the speciality as this was considered to be the people most likely to have had the opportunity to influence the implementation of the standards.

The focus group members were asked to explore themes related to the objectives of the project and to discuss particular successes and problems which participants had experienced in relation to the standards.

Main themes for discussion included:

- Distribution and initial reaction to the standards.
- The effect on local audit.
- Which standards to choose in comparison to those

produced by other Clinical Interest Groups.

- Relationship to other professions where standards may have been used for multi-disciplinary audits.
- Any problems using the standards or in getting audit underway generally.
- Suggested changes for the future development of ACPIN standards.
- How should the standards be brought in to undergraduate training.
- Suggestions for future implementation strategies.
- Relationship to evidence based guidelines.

All the focus groups were recorded and fully transcribed prior to analysis. Data was then analysed using a modified Grounded Theory approach. The style of the focus groups allowed for the development of the key themes from one group to the next giving the opportunity to test and reinforce the ideas generated. Triangulation of the results from the focus groups were discussed in relation to:

- Information generated from a meeting to investigate the whole area of the use of standards of physiotherapy practice by all of the clinical interest groups of the Chartered Society of Physiotherapy and
- a discussion held with members of an additional ACPIN Regional group following a lecture given by the researcher.

Results

A selection of key results have been chosen for reporting in this section of the article, as with all qualitative studies a large amount of data was generated.

- **Distribution and initial reaction** Whilst the membership were generally enthusiastic about receiving a 'free' copy of the standards, there was little evidence that the document had been actively used for quality or audit projects. Comments included a lack of time for such activities and the fact that the standards were too basic. Another key point included the fact that members had not understood the purpose of the document and then how to interpret the standards to a local level for audit purposes.
- **Content** Comments included the fact that many of the ACPIN standards were in fact common to several Clinical Interest Groups, therefore standards should be reviewed together and in conjunction with the Chartered Society of Physiotherapy in their work to produce a new set of 'core' standards. A particular emphasis was placed on the need to develop a standard relating to manual handling of neurologically impaired patients by physiotherapists.
- **Effect on local audit** Whilst there was some evidence of physiotherapy audits across a range of topics few had made use of the ACPIN standards.

Where examples of good practice were discussed participants were keen to suggest ways of sharing these with colleagues such as:- a list of contact names to be included in the new edition, audit examples to be published in Synapse. It was also proposed that if such a document was published in the future then this should include a template of how to interpret the standards at a local level.

- **Choosing ACPIN standards in comparison to other Clinical Interest Groups** This had not proved to be a problem. Many of the participants were not aware of the work from other groups, although an enthusiasm was shown for the publications from the MS Society (Freeman et al 1997), (MS Society 1997).
- **Relationship with other professions** Despite earlier results about the lack of use of the ACPIN standards, where multi-disciplinary audit projects were underway, several examples of members using the standards in a multi-disciplinary forum were discussed. This often highlighted the lack of anything similar in other professions and an acceptance for some groups that these were a good starting point.
- **Problems in using the standards** Again the lack of understanding of the purpose of the document was brought out and also that by the time they were published the agenda had moved on in healthcare particularly in relation to evidence based practice and the need to consider outcomes rather than structure and processes. Several comments were also made about the inability of some physiotherapy teams to influence factors such as transport arrangements for patients which have set standards within the document.
- **Changes for the future** All the focus groups wanted to keep a publication which is unique to ACPIN. However there was general recognition that the development of a new style document and the follow up implementation strategies would have a significant demand on time, expertise and resources, for this to be a successful venture. It was suggested that successful implementation could be brought about with the use of the strength of the ACPIN Regional groups which had been responsible for excellent educational programmes in the past.

Discussion and conclusion

The results have broadly shown that there is substantial support for the continuation of such a publication but with radical changes concerning content, style and methods of implementation. The results will be used particularly by ACPIN to inform the process for the development, dissemination and implementation of the

next edition of the standards document.

The work has already been presented at a National ACPIN conference and as part of the scientific programme of World Confederation for Physical Therapy Congress 1999. An action plan was also drawn up as a result of the work and discussed with the national committee of ACPIN to assist in the strategic vision for the development of work on standards in the future.

It is hoped that the methods used for this project may provide a framework, which other Clinical Interest Groups could apply in the review and evaluation of their own Standards. The results may also be of value to the Chartered Society of Physiotherapy in suggesting future implementation strategies and style of delivery in the application of 'standards' documents produced by any of the Clinical Interest Groups.

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Reflex therapy and its use in neurology

Jo Smith Oliver MCSP, SRP Physiotherapist,
Complementary Health Centre, Hackney, East London

As physiotherapists working with neurological conditions, we are dealing with aspects of co-ordination and control, and teaching patients how to improve their quality of life. Reflex Therapy is just one area of our profession where these issues can be easily addressed and incorporated into normal mainstream care. It is just one area of complementary medicine which encourages homeostasis between all systems in order to promote balance. It emphasises the connection between body, mind and spirit and is unique in that the feet are seen to exist as microcosms of ourselves. Gentle pressure here can relieve pain and improve mobility in a profound and extraordinary way.

History

Reflex Therapy is old medicine. It has been practised for thousands of years with records found in Egypt and India as well as in the Far East. The Association of Chartered Physiotherapists in Reflex Therapy (ACPIRT) – including healthcare professionals – was set up in 1994 after having been recognised by the CSP the previous year. There are now over 200 members. It was set up by Christine Jones, a physiotherapist who was awarded a fellowship in 1998 in recognition of her innovative practice.

ACPIRT and the Midland School

At the inaugural meeting of ACPIRT it was agreed that Reflex Therapy expressed as two words should be used as an umbrella title encompassing all different aspects of this ancient medicine. It therefore includes reflexology, reflex zone therapy and reflextherapy as taught by the Midland School of Reflextherapy (MSR). Courses are open to physiotherapists, nurses and other healthcare professionals who have studied anatomy and physiology to nursing level. There is a strong emphasis on the integration into mainstream physiotherapy. Courses are endorsed by the CSP and credited by Coventry University.

What is it?

Reflexes exist in our feet that mirror us in our entirety. Our toes represent structures in and around our heads, including our thoughts. Our heels are manifestations of our low back, hips and pelvis, the structures that connect us to the earth when we are relaxed. Busy, stressed people and many children with neurological disorders have difficulty in letting their heels touch the ground, although for different reasons! The reflexes to our vital organs are found on the soles of the feet in a pattern that exactly mirrors our thorax and abdomen. The spine along the medial border of the foot. Patients with paraplegia will present with a callus or areas of altered colour or sensation at the appropriate level of the lesion. It is often attributed to pressure from shoes.

After many years in Orthopaedic Medicine, I have been amazed and fascinated by this system, which has always been present in us and so often overlooked. Immediately following a CVA, patients will present with a bruised area around the soft pad of the great toe, the reflex to the brain. Only when we take the time to look for these signs do we find them. Gentle massage to the solar plexus reflex on the sole of the feet, will encourage deep breathing and relaxation, a factor so important in the care of degenerative conditions, where fear is a major issue.

Relaxation

I have never yet met anyone who does not enjoy this treatment. The implications of touch are profound, many papers emphasise the effects of massage on the circulation and nervous and immune systems. With the additional benefit of an understanding of the reflexes this is an obvious advantage. I know children who stick their feet out of the duvet at bed time to help them to sleep! Willing helpers can also be taught the rudiments of reflex therapy, enhancing connections between them and their families, thus reducing strain on community hours.

MSR Approach

As all practitioners are registered physiotherapists or healthcare professionals, prior knowledge of underlying pathology is always considered. The approach to treatment is always gentle and painful or hypersensitive reflexes being eased into a state of relaxation, allowing a resolution of symptoms to occur effortlessly. The principles of Naturopathy and Chinese Medicine are always considered, emphasising natural health and the connection between mind and body.

Integration into Normal Practice

Reflex Therapy can be integrated into all areas of physiotherapy and easily included as part of a treatment session. It can last from anything, between two to

fifty minutes, depending on the condition of the patient and the time available. It is a joy that this profound and yet simple process can also stand alone in its own right in the treatment of neurological conditions, where exercise and mobility are no longer an issue.

Jo Smith is holding a one day introductory workshop in May 2000 and can be contacted on 020 7275 8434 or email: holistic.health@virgin.net. She also teaches on courses for the Midland School in London and other selected venues.



ACPIN AGM and conference on posture and balance

23-24th March 2001, Stakis Hotel, Northampton

ACPIN have decided to organise their own two-day residential conference for 2001. It will be held at the Stakis Hotel, Northampton, just two minutes drive off the M1 motorway at junction 15. The hotel has 139 rooms *all* with en suite facilities. There is a leisure centre on site with swimming pool, whirlpool spa, sauna, steam room, solarium and fully equipped gym.

At this stage the committee are in the process of approaching speakers and finalising details. The conference will include a gala dinner on the Friday night.

The provisional programme, with an overall theme of posture and balance, is planned to include the following topics:

Friday 23rd

- The Vestibular System and its implications for Physiotherapy
- Balance and Vestibular testing
- Therapeutic Management of Vestibular Problems
- Outcome measures for Posture and Balance
- Alignment and Posture – A Normal movement Approach

Saturday 24th

- Inattention and Neglect
- Pusher Syndrome-Pathological or acquired?
- Neuromuscular Stability
- Biomechanical analysis of balance in gait
- Losing Balance-Falls in Parkinson's disease



MEDICO-LEGAL ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS

Society of Expert Witnesses Spring Conference

Joint meeting with the MLACP

Expert witness masterclass 2000

12th and 13th May 2000

9.00am – 4.30pm (lunch and tea included)

At the Swallow Hotel, Bristol

Multidisciplinary breakout session on Saturday 13th May

'Health Professionals – Living with Litigation'

For further information please contact: Jenny Archer, Programme Organiser, Bangor Physiotherapy Practice, 8 Ranfurly Avenue, Bangor, Co. Down BT20 3SN Tel. 01247 270 932

Exercise training *following* brain injury

SEMINAR AND WORKSHOPS • WEDNESDAY 28TH JUNE 2000 • 10.00AM – 4.00PM
REGIONAL NEUROLOGICAL REHABILITATION UNIT HOMERTON HOSPITAL HOMERTON ROW LONDON E9 6SR

Seminar topics to include:

- Mechanisms involved in improving aerobic fitness
- Psychological aspects of exercise training
- Effects of aerobic training in early brain injured patients

Practical sessions will include:

- Optimising exercise training
- Monitoring the effect of training on a cycle ergometer
- Measurement of heart rate, work rate and perceived exertion

For registration forms contact the course organiser:

Dr Andrew Bateman
Department of Health Sciences
University of East London
Romford Road
London E15 4LZ

e-mail A.Bateman@uel.ac.uk
telephone 020 8223 4512

Clinical seminar registration fee
(including coffee, tea and lunch)
£45.00



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

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• Urquhart D, Morris M, Ianseck R, Gait Consistency over a 7-day interval in people with parkinson's disease pp696-701.

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• Lin K et al, Abdominal weight and inspiratory resistance: their immediate effects on inspiratory muscle functions during

maximal voluntary breathing in chronic tetraplegic patients pp741-745.

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• Jackson T, Dyspraxia guidelines for intervention pp321-326.

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• 1999 vol 13, no 6

• Schonherr MC et al, Functional outcome of patients with spinal cord injury: rehabilitation pp457-464.

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THE WOOLF REPORT: MEDICO-LEGAL UP-DATE

Louise Gilbert MCSP
ACPIN Executive Committee

In July 1999 the Medico-Legal Association of Chartered Physiotherapists held their Summer Meeting. The topic of the evening was to give an update for physiotherapists acting as expert witnesses following the introduction of new procedural rules in April 1999. Mr Jeremy Hyam (LLB) was invited as the guest speaker and some of his main discussion points as to the duties of the physiotherapist expert and the impact of the new civil procedural changes are addressed below.

The two main categories in litigation where evidence from a physiotherapist is likely to be called are medical negligence and personal injury. Both of these fields are now subject to new procedural rules which affect duties of the expert to the court and to the parties to litigation.

It is important to note that an expert witness should never assume the role of advocate. The duties and responsibilities of the expert witness are to present expert evidence and to provide independent assistance to the court by way of objective and unbiased opinion in relation to matters within his/her expertise.

The New Civil Procedural Rules, the result of Lord Woolf's *Access to Justice* report came into force on 26th April 1999 and apply to all civil cases. The duties of the expert witness are given a slightly different aspect with the introduction of the new recommendations. Some of the main

recommendations are summarised below:

- That as a general principle a single expert should be appointed wherever the case concerns a substantially established area of knowledge.
- Where opposing experts are appointed they should adopt a single co-operative approach including if possible joint investigation and a single report.
- Meetings between experts advising opposing parties should normally be held in private.
- The court should have a wide power to order that an examination or test should be carried out and a report submitted to the court.
- Training courses and published materials should provide expert witnesses with a basic understanding of the legal system and their role within it, focussing on the expert's duty to the court.

The expert must be aware of the relevant legal principles which the court applies in medical negligence/personal injuries cases. Firstly, the standard of proof is the balance of probabilities ie more likely than not. Secondly, where expert evidence is involved, the 'Bolam test' is applied for judging whether there has been a breach of duty. The Bolam test applies to the standard of care expected of a professional in cases of alleged negligence ie that of 'the reasonable professional man following the accepted approved standard of care' (Dimond 1999 p102). Thirdly, if breach of duty is proved, and that breach has caused the relevant injury, then the Plaintiff is entitled to compensation.

The legal principle is that damages are awarded to put the victim of the civil wrong into the position he would have been had the wrong not been committed.

The physiotherapist expert is usually called upon in assessing and quantifying an appropriate care regime. Also in giving an opinion as to the patient's future care needs which is usually quantified by assessing annual cost of care.

The expert's report must comply with the requirements set out in the practice direction. The main requirements for the form and content of the report are:

- Expert evidence should be an independent product of the expert. The report must contain details of the expert's qualifications.
- The report should be addressed to the court and not the party from whom the instructions are received.
- Opinion should be objective and unbiased and in relation to matters within his/her expertise.
- It should state the facts or assumptions upon which his/her opinion is based. Details must be given of any literature or materials used within making the report.
- Where there is a range of opinion on the matters dealt within the report the range of opinions must be summarised and reasons for the expert's own opinion given.
- If the opinion is not properly researched because insufficient data is considered available, then this must be stated with an indication that the opinion is no more than a provisional one.

- A summary of conclusions reached should be given.
- It should contain a statement that the expert understands his duty to the court and has complied with that duty.
- It should state the substance of all material instructions (oral and written) on the basis of which the report was written.
- The report must be verified by a Statement of Truth. The Civil procedure Rules (CPR 32.14(2)). highlight that: A person who makes a false statement in a document verified by a statement of truth, or who causes such a statement to be made, without an honest belief in its truth, is guilty of contempt of court.

The obvious change is the appointment, where possible, of a sole expert. The new rules also restate that the expert's overriding duty is to the court and not the parties. Two of the main aims of the new rules are to remove any unnecessary systematic bias and hopefully to help speed up the legal process and prevent long litigation delays. An expert's evidence is based on his/her own training (both academic and practical) and experience in a particular field. It is the court's responsibility to assess whether any given expert has the requisite experience and competence to be of assistance.

The physiotherapist acting as an expert witness may increasingly be instructed as a joint single expert. It is important however, to consider, are you the right expert? The CSP has laid down guidelines and criteria for the role of expert witness and also has a list of expert witnesses and areas of

speciality. It is recommended for example that an expert witness should have been working within the speciality concerned for five years, should be a senior I or higher, should have credibility with peers and some form of legal training. For further information on guidelines and training courses please contact Pen Robinson, Director of Professional Affairs, at the CSP. ACPIN would be interested in your comments and in hearing from any members who are currently involved in preparing reports.

Reference

Dimond, B 1999 *Legal Aspects of Physiotherapy* Blackwell Science UK

CSP ANNUAL REPRESENTATIVE CONFERENCE 2000

Eastbourne, 4-6 May 2000
Nicola Hancock PRO

The following motion was submitted to the ARC agenda committee at the CSP on behalf of ACPIN, after suitable discussion at committee meetings: *'This conference demands that the CSP should impose more stringent regulations on those members acting as so-called 'expert witnesses' in legal cases, to ensure that only highly competent and experienced therapists act in this capacity.*

ACPIN has anecdotal evidence that therapists with insufficient knowledge and experience in the field of neurology have submitted legal reports and provided testimony'

The explanatory note required for the submission process read as follows: *'ACPIN is extremely concerned at reports from senior members of less than highly experienced therapists providing expert testimony in legal cases. Whilst we recognise rules 1-8, scope of professional practice, address such issues, clearly some members are less than diligent in these circumstances.*

The Society must legislate against this and, as a minimum, ensure that any disciplinary action taken against such therapists results in a 'guilty' verdict. In an age of clinical governance and with increasing litigation, this issue of professional accountability must be urgently addressed.'

Unfortunately, we received notification that the motion was ruled 'inappropriate for Congress', from Penelope Robinson, Director of

Professional Affairs at the CSP. I have decided to quote directly from her letter so that all ACPIN members have the fullest information available on this issue. She writes, 'The Society sets standards for expert witnesses in respect of both professional and legal standing. A full CV is requested before a persons' name goes on the list. As with all members, the Society is not a policing body but will act on complaints received. If you have evidence of a member acting outside their area of expertise, this information should be forwarded to the Society and an investigation will take place. Also, we cannot stop any member acting as an expert and in whatever capacity, if requested to do so. I am aware of members with little or no expertise agreeing to act in this way and I have grave concerns about this, but the Society only has sanctions on those on the expert witness list'.

It is therefore clear that the CSP recognises the issue and admits to having 'grave concerns' but feels unable to act further. The Executive Committee would be delighted to hear from any members who have thoughts on this issue and would ask that you contact Nicola Hancock, PRO, as soon as possible.

Please also note that any members who wish to have future involvement in ARC on behalf of ACPIN are actively encouraged to contact the Committee.

EMERGENCY RESPIRATORY CARE

Cherry Kilbride
ACPIN Secretary

A meeting was called at the CSP by the respiratory special interest group (ACPRC) to discuss the growing concerns around on call/emergency respiratory work. In addition to respiratory specialists, representatives were also there from paediatrics, management, community and neurology. It was chaired by Gwyn Owen, CSP Professional Advisor. It was essentially a brain storming and sharing of ideas/experiences forum. It was clear from all there that there was a common concern re competency of on-call rota staff. This was especially so for those staff working in musculoskeletal or less acute settings. Another area of discussion was the management and teaching of carers of such techniques as suction in the community. This being obviously pertinent to the long term care of Multiple Sclerosis and Motor Neurone disease patients.

The session was thought to be successful in raising many issues which Gwyn is to take forward in conjunction with the relevant parties. ACPIN awaits further communication and will keep you updated via future issues of *Synapse*.

THE STROKE ASSOCIATION

Cherry Kilbride
ACPIN Secretary

Last year ACPIN were delighted to have been invited to be involved in the planning of a teaching module to be used as part of a wider training programme for staff who work in residential/nursing homes looking after clients who have had strokes. The aim of the module was to increase the awareness of movement problems arising from stroke and possible complications ie painful shoulder.

Areas covered in the programme include aspects of positioning, seating, care of the arm and formulation of a 'mental check list' for potential movement difficulties during transfers or walking. An emphasis was placed on NOT teaching any aspects of manual handling – for obvious reasons. This programme is still in pilot form but ACPIN will keep you informed of the eventual outcome.

NATIONAL CLINICAL GUIDELINES FOR STROKE

Ralph Hammond MCSP
Professional Adviser, CSP

The Royal College of Physicians in London is soon to publish *National Clinical Guidelines for Stroke*. They cover the management of patients with acute stroke from the onset, through rehabilitation to the longer-term. This report outlines what clinical practice guidelines are, how these particular guidelines were developed, and aims to encourage readers to get hold of a copy when they are published!

DEVELOPMENT

These National Clinical Guidelines have been developed by the Intercollegiate Working Party for Stroke, co-ordinated by the Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians. The Intercollegiate Working Party (IWP) is a multi-professional group representing a wide range of professionals who provide care for people who have had a stroke. The CSP has had a representative on this group since its formation, Margaret Hastings FCSP. Previous work produced by the IWP has been Outcome Indicators (Lennon, Hastings 1996), and the National Sentinel Audit of Stroke (Rudd 1999).

The guidelines have taken nearly two years to develop. Work originally started in April 1998. The Department of Health provided funding for the guideline development, however the working party was independent of the Department. The guidelines are currently being appraised for endorsement by the National Institute for Clinical Excellence (NICE).

WHAT ARE CLINICAL PRACTICE GUIDELINES?

Clinical practice guidelines are 'systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances' (Field MJ, Lohr KN 1992). They form part of the evidence base from which practitioners work. They are written on a carefully defined topic and, after a systematic search, use the best available evidence. They should define the search strategy, references used, the reasoning for how the recommendation was written, and provide a grading of the strength of the recommendation and the quality of the evidence.

Guidelines aim to facilitate evidence-based practice, and commissioning. They attempt to draw together all relevant research on the topic, consider conflicting research, and make recommendations to help the clinician and the patient make decisions about treatment options. They are statements to inform clinicians, but not rigid rules. Clinicians still have to decide if the guideline is appropriate for a specific patient (recognising, for example, multi-pathological states) and how to use the guideline in individual cases. Guidelines can also be used to make a case for the provision of a treatment. The process of development of the guideline can help to spot gaps in research literature and provide pointers to where research needs to be undertaken.

PHYSIOTHERAPY REPRESENTATION

Sheila Lennon MCSP and Ralph Hammond MCSP were the physiotherapy representatives on the working party, on behalf of

the CSP. Margaret Hastings FCSP was the original representative, she resigned in late 1998, nominating Ralph as her successor.

The other members of the working party (which numbered 32) include representatives from patient and carer groups, (the College of Health, Stroke Association, Different Strokes), the medical, therapy, and nursing professions, (Royal Colleges), public health, and social services. Members were required to liaise with their professional body at all times, and with anyone else they felt appropriate. Accordingly, a physiotherapy working party was set up to help with the physiotherapy-specific element.

This included: Ms Amanda Archer MCSP (on behalf of the Association of Chartered Physiotherapists in the Community, ACPC); Dr Ann Ashburn MCSP (ACPIN); Mrs Suzanne Hogg MCSP (Chartered Physiotherapists Working with Older People, AGILE); Mrs Sue Irani MCSP (ACPIN); Ms Louise Johnson MCSP (AGILE).

The guidelines were peer reviewed. The physiotherapy peer reviewers were: Mrs Anthea Dendy MCSP (collating comments from ACPIN members); Dr Anne Forster MCSP; Dr Val Pomeroy MCSP; Ms Judy Mead MCSP (Head of Clinical Effectiveness CSP).

EVIDENCE GATHERING

The main author is Professor Derick Wade, who is the author of the Epidemiologically-based Health Needs Assessment for Acute Cerebrovascular Disease. Evidence to underpin the guidelines was obtained in many ways. The literature search consisted of systematic searches of computerised databases (Medline, 1966, AMED, 1985, CINAHL, 1982, Embase, 1988).

The Cochrane Collaboration database was used, and other national guidelines reviewed (eg Agency for Health Care Policy and Research (ACHPR) 1995, Scottish Intercollegiate Guidelines Network (SIGN) 1997, 1998).

Given the huge number of journals needing to be searched, hand searching was not undertaken. However the Cochrane database of trials was used. This includes information from hand searched journals. Prime evidence was taken from research specifically relating to stroke. In many areas the limited research available was less specific, but still relevant, and so some studies include patients with other, usually neurological, diseases.

WHY DEVELOP THESE GUIDELINES?

The major stimulus to develop the guidelines was the burden of stroke on the NHS. Stroke constitutes over 4% of NHS expenditure, is the third highest cause of death in the UK, and the biggest single cause of major disability (Wade, et al 2000). There was also concern that standards of service vary widely around the UK, and this has been confirmed by the Clinical Standards Advisory Group report (CSAG, 1998), and the National Sentinel Audit of Stroke (Rudd et al 1999). This latter report showed that less than half of all Trusts have stroke units, and that patients are managed better within stroke units (Rudd et al, 1999).

PURPOSE OF THE GUIDELINES

The aim is to provide clinicians and managers with explicit statements, where evidence is available, on the best way to manage specific problems. Local

services will need to add detail to these statements, and advice is given on this. They are centred on the more common clinical problems faced in day-to-day practice, and are intended to be used by all professions, in all settings, and at all points in the management of the patient following a stroke.

The underlying principles are that they should address issues in stroke management that are important, draw on published evidence wherever possible, indicate areas of uncertainty or controversy, and be useful and usable.

Each recommendation is classified according to the level and grade of evidence used. Levels of evidence were graded according to a standard classification hierarchy: meta-analysis of randomised controlled trials as level 1, well-designed, controlled studies level 2, non-experimental descriptive studies level 3, and expert committee reports etc at level 4

TOPICS

The guidelines are divided into typical patient problem areas. Within this framework the evidence published is often pertinent to several areas. So you have to read the whole document! The first chapter is from a report on patients' and carers' focus groups, conducted by the College of Health, making recommendations on areas such as service development, knowledge of staff, shared decision-making, information once at home.

The rest is divided into 3 sections:

1. Service provision

Terminology
Service organisation
Approaches to rehabilitation
Carers and Families

2. Clinical care

Acute diagnosis
Acute interventions
Early disability assessment and management
Rehabilitation interventions
Transfer back to the Community
Long term management

3. Service Evaluation

Topics of more immediate interest to clinical physiotherapists include motor impairment, spasticity, sensory impairment, functional rehabilitation interventions, activities of daily living, equipment and adaptations, and treatment following discharge.

CONCLUSION

The Royal College of Physicians is soon to publish *National Clinical Guidelines for Stroke*. These have been produced under the auspices of the Intercollegiate Working Party for Stroke. They make recommendations based on clinical research to help clinicians and patients make decisions about interventions. They are not rigid and will be updated as new evidence is published. They will be a useful source of information for all physiotherapists involved in the delivery of care for patients who have had a stroke and their carers.

The *National Clinical Guidelines for Stroke* will be available from the Publications Department, The Royal College of Physicians, 11 St Andrew's Place, London NW1 4LE. Price £20. Tel: 020 7935 1174; Fax: 020 7487 3988.

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UNITED KINGDOM ACQUIRED BRAIN INJURY FORUM (UKABIF)

Louise Gilbert
ACPIN Executive Committee

The annual Conference and general meeting was held at The Royal Hospital for Neuro-disability in Putney on 27th November 1999. This was a multidisciplinary day with a wide variety of delegates.

In the morning Dr. Keith Andrews gave a critique of the Royal College of Surgeons Working Party Report on 'The Management of People with Head Injuries'. This report was published in June 1999. The aims of the report were to establish current practice, identify deficiencies in the provision of services and make future recommendations to correct deficiencies and monitor outcome. Some interesting points were made including the fact that over 50% of patients are managed by general surgeons, many units have no on-site neurosurgical facilities with 15% of units being over 50 miles away. Only 50% of surgeons have specialist training in Head Injury management and yet two thirds are expected to care for patients long term. Up to 30% of orthopaedic surgeons are caring for head injury patients, yet again only 40% have specialist training. Only 50% of neurosurgeons reviewed had protocols for Head Injury patients.

Some of the main recommendations are that A&E departments should establish a close relationship with a Neuroscience Unit and in all but exceptional cases patients needing neuroscience input

should be referred to that unit. Each A&E department should have adequately resourced short stay facilities for patients for the first 48 hours. Also, local policies consistent with nationally agreed guidelines, must be developed with the linked neuroscience unit on appropriate management of patients. There are seen to be weaknesses within the report in that there are enormous resources to be found with no attempted costing of implication. There is at present a shortage of facilities and only 50% of needed consultants, with many private Brain Injury Units are closing due to lack of funding. The strengths of the report however are that there is recognition of a problem with the need for an integrated service noted and in the process of implementation.

Dr Anthony Rudd from the Royal College of Physicians reported on the National Stroke Audit. This working Party was set up to identify variations in the organisation and delivery of care and to promote consistency of care for patients. Within the UK, 206 hospitals were audited on 40 consecutive patients admitted with a diagnosis of CVA (from 6894 patients.). The results showed how haphazard care is at present. Only 50% of patients had access to specialist stroke teams, 64% to a specialist consultant and 29% to a clinical psychologist. Documentation of care was noted to be particularly poor, for example only 40% of patients were noted to have had weight assessed, 55% had assessment of swallow noted and 23% of patients had cognitive function noted to be assessed. There was also poor documentation of disability, handicap and carer needs. It is

of interest to note that when 50% of care was provided on a stroke unit that the process of care was significantly better in virtually all respects compared to general wards or generic rehabilitation wards. Regional variances were seen in outcomes. However results are viewed with some caution as they can be interpreted in different ways. Results of the audit provide good evidence for future funding and resources and development of standards and benchmarks of care. It was discussed that Integrated Care Pathways are maybe not helpful in the case of CVA due to the variability of the disease. The team is at present attempting to develop recovery curves where outcome and recovery is predicted from individual input of patient variables. This will hopefully lead to individual care pathways in the future.

Also during the day the Lord Woolf spoke about 'Access to Justice' and his recent reforms in the litigation process and Dr Simon Fleminger discussed evidence-based practice in acquired brain injury.

Overall the day was very informative and highlighted many of the difficulties in patient care throughout the UK. It also gave many positive visions of, hopefully, a better future.

USEFUL WEBSITES FOR NEURO- PHYSIOTHERAPY

It has been suggested that identifying websites appropriate to neurophysiotherapy would be helpful. If you have any addresses that you find useful, please let us know.

**1. OUTCOME MEASURES
RELATED TO SPASTICITY**
http://wemove.org/spa_pal.html#a_cgs

**2. CSP OUTCOME MEASURE
DATABASE**
<http://www.nice.org.uk>

- click on 'databases' (top, centre icon)
- click 'search online'
- Search for: put in key word e.g stroke or to see the whole database key in 'csp'
- Search categories: tick – 'Title', 'Abstract', 'Keywords'
- Database: tick – 'Bibliography'
- Date: 'until' '1999'
- Results: tick – 'simple'

When you see the whole measure you are interested in, double click on the 'title' and the whole record will be expanded.

**3. TRAUMATIC BRAIN INJURY
MODEL SYSTEMS NATIONAL
DATABASE**
<http://www.tbims.org/to/database.html>

This site contains extensive information on 1051 cases, and annual follow up information extending to ten years post injury.

CONGRESS REVIEW

A NEW BEGINNING CSP ANNUAL CONGRESS AND TRADE EXHIBITION *Neurophysiology and Clinical Practice*

Ros Wade
ACPIN Events Group

The new format of the Chartered Society of Physiotherapy (CSP) annual congress, *A New Beginning*, took place at the International Convention Centre in Birmingham in October 1999. The CSP joined together with seven special interest groups and keynote speakers to run a conference with concurrent lecture programmes, discussions and supported by the largest trade exhibition for a physiotherapy function.

The keynote speakers were Mr Simon Eisberger, Managing Director of Cellnet, who spoke on 'Promoting a Global Brand' and Mr Chris Moon MBE who spoke on 'Motivation'.

ACPIN's programme, bringing together a clinical and academic focus to our speciality, was supported by highly acclaimed speakers. I would like to take this opportunity again to thank each one for their presentations and their support for ACPIN. It was an exciting programme and promoted much discussion.

ACPIN was allocated a lecture hall for 300 delegates. From our previous conference it had been requested not to allow delegates late entry into lectures. Inevitably this did cause some difficulties and I can only apologise to those people who missed a lecture due to this. Next year all lectures will be open. There were also some problems with AVA which again hopefully will be addressed for next time.

However, overall the programme worked well and the feedback on the content of the talks was positive. All ACPIN's talks were well supported, so thank you too for your support.

And then there was the Congress dinner. I won't say anymore, except that next year ACPIN and other SIGs will be holding their own meetings on the Saturday night!

Putting together the programme, planning and co-ordinating the conference, even down to chairing the sessions in front of 300 people (!) has been a major learning experience for the Executive committee. It has required a great deal of time and inevitably we made mistakes. However, I think overall, most people who attended the new format Congress would agree that it was a highly professional event and this certainly is the way forwards for promoting physiotherapy into the next century.

And so to next year. The CSP Annual Congress and Trade exhibition will be held again at the International Convention Centre, Birmingham from October 20th-22nd. The title is 'Expanding Horizons'; and with this in mind ACPIN have again had a programme accepted entitled 'Neurophysiotherapy: The CNS and Beyond'. Again, we are extremely grateful to the speakers who have agreed to support the programme. Full details are on page 25 and a booking form appears on pages 45 and 46. Again there will be concurrent lecture programmes from SIGs, and the support of a large trade exhibition.

Sir Ranulph Fiennes will be the only keynote speaker, and will present the Founders lecture on the Saturday morning.

Socially, the welcome reception on the Friday is to be extended, and then the SIGs and Congress dinner will be held on the Saturday. ACPIN have organised a buffet at the Novotel hotel, so you can come along, eat, drink and relax whilst discussing the major points of the day!

It is important to note that the Motor Show will be on in Birmingham the same weekend and therefore accommodation will be limited; so book early. Note the early booking fee of £135.00 before 31 May 2000.

We look forward to seeing you there!

CONGRESS REPORT

Louise Rogerson
Senior 1 physiotherapist
Burton House Rehabilitation
Centre, Manchester.

On entering the impressive International Convention Centre building in Birmingham you were greeted by promotional information for the general public and a large spacious area for registration. The whole system was very well organised and you were given an extensive welcome pack including business cards, a free bag and a pen! The lecture room for ACPIN was very impressive although a little small on occasions with the large numbers attending.

The opening lecture by professor Raymond Tallis was entertaining, informative, and challenging which seemed to set the tone for the weekend, with excellent presentation tools and informative content. The set lectures over the whole weekend were highly informative and quite inspirational, reminding us all that research is going on, and that our practice is continually being appraised and developed, based on the evidence.

The free paper sessions were both cerebrally and cardiovascularly challenging – firstly deciding which lecture to attend, and secondly could you run fast enough to get to the theatre in time for it to start! Once again the presentation formats were excellent and could be clearly seen by all.

Overall, the weekend was run in a very professional manner, the lectures were well introduced and sessions ran to time as planned. The content was varied and interesting, and most importantly seemed to

deliver what the title promised.

I am sure that all the delegates would join me in a big thank you to all the committee members of ACPIN for all their hard work and planning – it certainly paid off! Of course, the standard is set now – you've got a lot to live up to ACPIN!

ABSTRACTS & LECTURE NOTES

PLASTICITY OF THE NERVOUS SYSTEM AND THE FUTURE OF NEURO-PHYSIOTHERAPY

Professor Raymond Tallis

There is increasing evidence that rehabilitation is effective following stroke. Many patients, however, still remain significantly disabled. The art of stroke rehabilitation is, therefore, relatively undeveloped as a science. We have no clear idea of the elements of the rehabilitation package that bring about the benefits that are seen and even less evidence about the respective merits of the particular techniques of remedial therapy. Many of these have anyway grown up as a result of custom and practice rather than being fully grounded in what is known about the damaged brain and ways in which recovery might be promoted.

The talk will focus on ways in which stroke rehabilitation in future may be made more effective. Several strategies will be considered but the main emphasis will be on reversing impairments, either by building on elements of current techniques identified by rigorous studies as effective or, and more importantly, by developing new techniques designed to drive neuroplasticity. Current understanding about the ability of the brain to reorganise in response to damage and, more widely, the ability of excitable tissue (brain, nerve, muscle) to respond to external stimuli in ways that may be useful for neurological rehabilitation will be discussed. The central role of appropriate

afferent information in enhancing desirable plastic changes and inhibiting maladaptive ones will be discussed and their application illustrated with examples. The value of using simpler models such as the reversal of muscle wasting will be emphasised and examples will also be given of the process of driving plasticity in the cerebral cortex.

The huge effort that will be required to bring neurotherapy close to neuroscience has implications for the organisation of research. These, too, will be discussed. As stroke therapy becomes more scientific, other elements of humane care will not become less important. Just as an appeal to 'holism' should not be used to justify an unscientific, approach to therapy, the advent of scientific treatments should not excuse forgetting holistic care.

Professor Tallis is Professor of Geriatric Medicine at the University of Manchester and an Honorary Consultant Physician in Geriatric Medicine with Salford Royal Hospitals NHS Trust. He is the author of over 150 medical publications, but has also published and broadcast extensively on non-medical topics. He was awarded an Honorary Doctorate of Letters for his contributions to literature and philosophy in 1997.

THE ROLE OF CENTRAL PATTERN GENERATORS IN WALKING

Dr Pam Evans BA, MCSP, Dip TP

The presence of spinal centres capable of independently generating locomotion was first demonstrated in cats in 1947. Much of the early work which followed was concerned with examining the autonomy and the flexibility of these 'central pattern generators' (CPGs) in different species.

With the growth in understanding of the cellular mechanisms underlying biological function came further opportunities to investigate how the generators might work. It became possible to study the circuitry of CPGs of simple animals and to identify the behaviour of individual cells within them. Currently evidence indicates that the cyclical patterns of locomotion are usually produced by intrinsic characteristics of pacemaker cells, but that this pattern is reinforced by the circuitry of the network. Such layers of reinforcement ensure the remarkable functional reliability of CPGs.

Efforts to understand the complex networks which make up mammalian CPGs have concentrated upon the interactions between the generator networks and signals both from sensory receptors and from the locomotor centres in the brain. In recent years such studies have revealed that CPGs have close, two-way relationships with the brain centres and also with the spinal pathways which mediate sensory input and motor activity. The first reports of isolated CPG activity in humans

expanding horizons

2000 Congress and Exhibition of the Chartered Society of Physiotherapy

20–22 October · International Convention Centre · Birmingham

Following the success of our programme at the 1999 Congress, ACPIN have put together another exciting programme to expand our knowledge both of the CNS and treatment concepts in neurophysiotherapy. We are delighted to have the support of such a wide variety of speakers, covering such a range of topics.

The conference will again combine concurrent SIG programmes, discussion times and social events. Sir Ranulph Fiennes is the keynote speaker for the congress and there will again be a large trade exhibition.

ACPIN have organised a buffet supper at the Novotel Hotel, and at only £10 per head (including a glass of wine) come along, relax and discuss the major points of the day!

EXPANDING
2000
HORIZONS
THE CHARTERED SOCIETY OF PHYSIOTHERAPY



Friday 20th October	Saturday 21st October	Sunday 22nd October
14.00 Welcome <i>Linzie Bassett</i> Chair of ACPIN	10.30 Coffee	9.30 Muscle Imbalance in Relation to the Neurologically Impaired Patient. <i>Dave Fitzgerald Dip Eng, MISCSP, MCSP, Grad Dip Manip Ther.</i>
14.05 Adaptation of nerve, muscle and soft tissue to Immobilisation <i>Professor Goldspink</i>	11.00 The Holistic Approach to Alignment <i>Patty Shelley MCSP</i> Senior Bobath Tutor	10.15 The Forgotten Autonomic Nervous System <i>Patty Shelley MCSP</i> Senior Bobath Tutor
15.00 Tea	11.45-12.30 Mulligan Concept: Stability or Mobility <i>Annette Bishop MCSP</i>	11.00 Coffee
15.30 The Application of Functional Electrical Stimulation (FES) <i>Dr Jane Burridge MCSP</i>	16.15-17.30 Acupuncture in Neurological Conditions <i>Val Hopwood MSc, MCSP</i> This lecture is jointly supported by AACCP & ACPIN	11.30 The Bobath Concept Today <i>Dr Margaret Mayston, PhD, MCSP</i> Director of the Bobath Centre
16.15-17.00 Neurodynamics-Effect in the Neurologically Impaired Patient <i>Anita Wade MCSP</i>	19.30 ACPIN Buffet Supper at the Novotel Hotel	12.30 Close <i>Linzie Bassett</i> Chair ACPIN



have also appeared.

These experimental observations could have important implications for therapists concerned with the re-education of walking. In the short term they may pose more questions than they answer, but some questions could form the basis of future clinical studies.

Pam Evans has wide experience both as a clinician and as a lecturer. She gained her MSc in physiology in 1992 and has continued to research on a part-time basis in neurophysiology in the field of motor control. She is also a Senior Lecturer at the Faculty of Healthcare Sciences, St Georges Medical School and Kingston University.

THE USE OF THE TREADMILL WITH NEUROLOGICALLY IMPAIRED ADULTS

Catherine Ann Kendrick Grad Dip Phys SRP, MCSP.

The use of the motorised treadmill with neurological patients is a developing field in neurological rehabilitation. It follows the task oriented approach to skill acquisition and can be used either on its own as an exercise tool or with body weight support (BWS) to re-educate gait.

Many stroke patients are physically deconditioned and fatigue easily. This further limits functional mobility. Recent studies suggest that aerobic exercise will not only improve cardiovascular function but may also improve motor recovery. (Potempa 1995, Macko 1997).

The treadmill may therefore be an appropriate tool to enable patients to exercise aerobically and additionally provide a task-oriented training for gait.

Early treadmill studies were carried out on cats following spinal cord transection. The animals were trained on a treadmill with some of their body weight supported in order to restore gait. (Barbeau 1987). Later treadmill training with BWS was shown to be effective in re-educating gait after incomplete spinal cord injuries (Barbeau 1992). The animal and spinal cord studies both support the existence of the interneuronal circuits responsible for locomotion.

More recent studies have investigated the use of BWS and the treadmill with early stroke patients in optimising gait recovery (Visintin 1998).

The research I am currently involved with is investigating both the effects of exercise on functional mobility and the use of BWS and the treadmill with chronic stroke patients.

The use of the treadmill with neurological patients has many potential benefits for a variety of patients but requires further investigation to clarify its role in physiotherapy practice.

Catherine Ann Kendrick has in the last year taken on a part-time research post funded for two years by the Stroke Association to investigate the use of treadmill training in chronic stroke patients. This is complimented by a part-time clinical position in the Regional Rehabilitation Unit, Addenbrookes Hospital.

PHYSIOTHERAPY FOR PEOPLE WITH PARKINSON'S DISEASE – DESCRIBING UK PRACTICE

Dr Ann Ashburn, Brenda Lovgreen, Diana Jones

An investigation of best practice physiotherapy in Parkinson's disease in the UK has been undertaken by a team of clinical and academic physiotherapists. The project aims were to develop a consensus on service delivery and treatment frameworks, and provide a baseline model of practice to guide future research. Stage I was a Delphi survey of specialist physiotherapists (Senior I or above and at least 2 years experience working with the client group, a current case-load). Statements relating to context, reasons, actions, and effects of physiotherapy were rated on a scale of 1-9 by n=49. Specialists (> 20 years post qualification; with 10 years treating the client group, with 11 patients a month) worked mostly in Care of the Elderly (60%). Marked variation was evident in actual practice contexts, and early referral was rare. However there was strong consensus on the elements of an optimal context which included early referral, and the reason for physiotherapy – to maximise functional ability and minimise secondary complications through movement rehabilitation within a context of education and support for the whole person. In the actions domain an eclectic approach to treatment, with techniques drawn from a range of approaches, was considered to have the best outcomes. Effects should be measured at a functional level and relate to

specified aims of treatment. Stage 2 involved case studies of nine best practice sites. Direct case study of three sites involved site visits and face to face interviews with clinicians, managers, multidisciplinary team members, patients and carers. Indirect case study of six sites involved telephone interviews with clinicians and managers. The foci of Stage 2 were clinical activity, service structure and patient views. Final results in all three areas will be discussed. The project has been sponsored by Glaxo Wellcome under the auspices of the Parkinson's Disease Society. Plans to extend the project into Europe will be presented.

Dr Ann Ashburn is a Senior Lecturer in Rehabilitation at the University of Southampton. She is one of a team of physiotherapists investigating best practice for people with Parkinson's disease in the UK.

Brenda Lovgreen is a Senior Lecturer at the Manchester School of Physiotherapy. She is a founder member of the Physiotherapy Research Society.

Diana Jones is a Research Physiotherapist at the Institute of Rehabilitation, University of Northumbria at Newcastle. She will be the physiotherapist on The Cochrane Collaboration Movement Disorders Group team undertaking a review of the paramedical professions and Parkinson's disease.

IS SPASTICITY JUST HYPERREFLEXIA?

Dr John Rothwell BA, PhD

Spasticity is both the name of a syndrome (increased tone, increased flexor reflexes and reduced motor performance) and a description of a particular type of muscle tone. I shall consider only the latter, and describe to what extent stretch reflexes, increased background muscle contraction and changes in mechanical properties of muscle all contribute to the clinical impression of increased resistance to movement.

The sensitivity of the stretch reflex is controlled by activity in descending systems from the brainstem reticular formation. When these are deprived of input from the cerebral motor areas, stretch reflexes are enhanced. Classically, enhanced stretch reflexes are thought to interfere with voluntary movement by, for example, producing inappropriate activity in antagonist muscles during contraction of the agonist. However, this may not be the whole story. Sometimes stretch reflexes are only enhanced when examined at rest. Stretch reflexes elicited during voluntary movement may be relatively normal. The outcome is that there is little reflex interference with ongoing movement. The most likely cause of disordered voluntary movement is not enhanced tone, but inappropriately focused commands from the central nervous system.

Finally it is worth considering the possible benefits of increased muscle tone. It can stiffen the legs to bear weight. In addition, increased reflex feedback may even be useful to

supplement voluntary contractions through spinal reflex loops.

Dr John Rothwell is Head of Movement Disorders, MRC Human Movement and Balance Unit, Institute of Neurology, Queen Square, London. He has two areas of special interest; transcranial magnetic stimulation and the pathophysiology of movement control in patients with diseases of the basal ganglia. He is deputy editor of *Brain*, Neurophysiology Editor for *Experimental Brain Research* and Editor for the *Journal of Physiology*.

PHYSIOTHERAPY MANAGEMENT OF ESTABLISHED SPASTICITY

Sue Edwards FCSP

Abstract with additional lecture notes.

Increased tone is a common manifestation of neurological pathology and is often a key determinant of the severity of disability. The physiological definition of spasticity, that of 'a motor disorder characterised by a velocity dependent increase in tonic stretch reflexes with exaggerated tendon jerks' (Lance 1980) has survived for nearly twenty years and yet has little relevance in clinical practice or more importantly to the patient.

So what are we treating? Hypertonia is a combination of both neural and non-neural components. The central nervous system (CNS) knows how to organise and control movements, and so changed motor patterns should be considered adaptive rather than pathological (Latash and Anson 1996). Neural aspects of tone are described as positive release phenomenon or an acquired response to CNS damage. The presentation of hypertonia is different between gross cerebral pathology such as in head injury and more localised lesions as occurs with cerebrovascular accident. There is also a difference between cerebral and spinal hypertonus. Non-neural aspects of tone include the intrinsic stiffness of the muscle structure which occurs, described as thixotrophy, and stiffness and contracture in external structures such as connective tissue.

Therapeutic approaches differ significantly in the analysis and interpretation of the term spasticity. Some view the abnormal, neural aspects of tone as being the main cause of the posture and movement disorder and others, the changes in muscle and soft tissue, that is the non-neural aspects of tone, as being the key disabling factor.

Increased muscle tone is often apparent following central nervous system damage and the stereotyped patterns which invariably result from the increased tone contribute to the development of abnormal movements and postures.

What are the general principles of treatment? Should treatment be aimed at normalising tone? Positioning and movement form the basis for therapeutic intervention. Positioning in bed, in sitting and in standing are essential in maintaining range of movement and in stimulating appropriate activity. Equally, passive and active movements to maintain range, enable this effective positioning.

Splinting has been shown to be effective in the maintenance of muscle and joint range and yet there is still controversy between therapists as to the value of splinting for patients with increased tone. It has been shown that 87% of patients with severe or even moderate head injury develop contractures.

Splinting, therefore, may be used to maintain or regain range of movement, and can be prophylactic or corrective. It may be useful as a means of assessment for a more permanent device. Splinting should always be seen as an adjunct to treatment and the purpose

of the splint considered. For example, it could be that the use of a splint distally has a positive effect on proximal control, but in other casts the spasticity is shunted to the more proximal muscles. Some patients are able to accommodate to the splint, but in others it just serves as a resistance against which the patients' tone is exacerbated. It has also been clearly shown that muscles which are immobilised will atrophy. The advantage of splinting is that it maintains optimal joint position, and removable casts enables treatment of muscle and soft tissues during physiotherapy sessions. In addition to the purpose of splinting there are also implications around whether splinting is constant or intermittent, when splinting should take place and for how long, as well as what materials to use and for which type of patient.

The use of botulinum toxin as an adjunct to therapeutic intervention has shown positive results. It has the ability to cause prolonged focal muscle weakness without systemic toxicity, but is not effective for more widespread hypertonus. It works by blocking the release of acetylcholine at the neuromuscular junction (Anderson et al 1992), but then recovery occurs over weeks and months by terminal sprouting which restores end-plate neurotransmission (Marsden and Quinn 1990).

Stereotyped patterns which result from increased tone contribute to the development of abnormal movements and postures. While quality of movement is imperative for optimal function, the restoration of normal movement is

often an unattainable goal in the presence of CNS damage. It is important to determine a functional goal. There must be a balance between re-education of more normal movement patterns and acceptance of necessary and desirable compensation. The therapeutic skill lies in determining that compensation which is necessary and even essential for function and that which is unnecessary and potentially detrimental to the patient. There is a paucity of clinically based research studies and what evidence there is from studies is not robust and is often conflicting.

Sue Edwards trained at the Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, Shropshire, qualifying in 1971. Throughout her career she has specialised in the management and treatment of patients with neurological disability. She has lectured both nationally and internationally on many aspects of neurological physiotherapy, and more recently this has been primarily on the use of splinting for patients with neurological dysfunction. She was awarded a Fellowship of the Chartered Society of Physiotherapy in 1995 and was elected President of ACPIN in March 1998. She is the editor and main contributor of *Neurological physiotherapy: a problem-solving approach* which was published in June 1996.

WHAT ARE ASSOCIATED REACTIONS?

Mary Lynch-Ellerington MCSP, SRP

There follows a transcript from the lecture notes.

Twitchell (1951), Walshe (1923) and others have described 'associated reactions' as a phenomena seen after cerebrovascular accident (CVA) only in the hemiplegic side and always demonstrating physiological signs associated with potential hypertonia and hence eventually seen as a pattern of stereotypical behaviour ie hypertonia. Of course, it is also known that associated reactions can be seen in tetraplegia and spinal cord injured patients. This was recognised by Brunstrom (1956), Lazarus (1992), Bobath et al.

On investigation of the historical perspective of the study of associated reactions it is seen that the history began in 1921 and continues to the present day. Indeed last year the phenomena and discussion regarding its neurophysiological basis between Stephenson et al, Roberta Shepherd and myself (Physiotherapy Research International 1998) may well lead to some conclusive research in the near future. Riddoch and Buzzard (1921) appear to be the first authors to adopt the term 'associated reactions' using it to describe the uncontrolled motor activity seen in the limbs of hemiplegic and quadriplegic subjects in association with voluntary movements.

However, in conjunction with making valid observations, the authors also

contributed to some confusions which remain today, despite more recent published work by Dr M Mayston. That is the authors did not consider associated reactions to be a phenomenon linked to the affected limbs of subjects but noted merely that reactions were stronger in the hemiplegic limbs. Many researchers confuse associated reactions and associated movements and switch the terminology.

Further definitions have sought to be more precise but again often leading to confusion. Mulley's definition in 1982 has not been accepted by other authors and/or clinicians as both his own work and that of others has shown that associated reactions and voluntary movement could co-exist in a hemiplegic limb albeit under different environmental controls.

Again, although some authors have utilised Dewald's 1987 definition for their studies, notably Dvir et al in 1993 and 1996, the reference to associated reactions being involuntary movements is contentious and potentiates further confusion between the terms associated reactions and associated movements.

Secondly, no evidence has, as yet, been provided to support any link between associated reactions and spasticity and therefore Dewald's use of the term in definition is misleading. Associated reactions, hypertonia and biomechanical changes in muscle can all occur in parallel and in some patients the link between these differing positive aspects of an Upper Motor Neurone (UMN) syndrome may be stronger than in others.

So which definition is the most correct or the most rele-

vant to the present day clinical presentation? The Walshe definition continues to be the most frequently quoted. It was adopted by the Bobath concept because it reflected the clinical picture they were studying. The Bobath concept and its current practitioners refute any suggestion that associated reactions are reflex responses and therefore predictable and stereotypical. The Walshe definition was qualified by the following statement he made as a result of his study, 'it is essential in studying associated reactions that the conditions of examination be constant. If the conditions are changed then the resultant associated reactions may undergo even more striking variations'.

Secondly, Dr and Mrs Bobath observed that voluntary effort was a key feature of the potentiation of associated reactions and also that the stronger the effort, the greater the excursion of the hemiplegic limb and/or the stronger the after-discharge contraction pattern.

Walshe's study supported their observations in that he concluded that from a range of stimuli, strong tonic voluntary muscular contraction of the normal limbs was the type of stimulus most effective in eliciting an associated reaction but he noted that the force of an associated reaction cannot always be measured by the actual excursion of a limb.

RELEVANT RESEARCH

It is probably because of the nature of considerable variance within the manifestation of associated reactions that relevant research is sparse. The individualistic nature of the phenomena prevents studies of a homogenous group. With two

notable exceptions, the research has, therefore, concentrated on studies such as by Cornell, Dvir and Panturin that use associated reactions as an outcome measure to evaluate intervention. Using electromyographic studies (EMG), Dickstein in 1996 concluded that associated reactions are indeed 'postural reactions' that are triggered by a destabilising task eg walking, and generally involve the activation of muscles remote from the area of displacement.

Furthermore, Dr Mayston 1996 and 1998, in her study on the neurophysiology of associated movements in man, revealed different mechanisms of neural connectivity with significant clinical relevance for management.

CLINICAL IMPLICATIONS

Firstly, associated reactions are seen as a positive response of an UMN lesion. The delayed and slow emergence of associated reactions is taken as evidence that they, like other positive features of an UMN lesion, are not the simple unbalancing of excitation and inhibition but involve some functional or structural rearrangement of the central nervous system ie central nervous system plasticity, involving collateral sprouting and changes in receptor sensitivity.

Secondly, all authors agree that a contraction of the relevant muscles is necessary to produce an excursion of the limb or body. Some authors such as Dvir and Panturin and Dickstein refer to associated reactions as phasic contractions lacking a background of postural control ie contractions without the necessary stabilising components (the slow

oxidative components). However, repeated contractions can eventually potentiate increasing changes in muscle fibre type from fast glycolytic (fg) to slow oxidative (so). Presumably, though yet to be investigated, a posture of the limb may be held when biomechanical changes in muscle and soft tissue have been potentiated.

During twenty five years of clinical experience the control rather than the inhibition of associated reactions has been a major focus in my interactions with patients. Associated reactions are there for a reason. They represent, in one aspect, an element of the recovery of motor function ie they are seen as a positive aspect of an UMN lesion by many authors. However, although positive in one sense, they are always accompanied by areas of low tone or weakness as the neurologist sees it, or selective hypotonia as the clinician sees it. For example, patients who repetitively demonstrate an inadequate postural tone particularly against gravity on, say, sit to stand task produce flexor associated reactions during the task that more than often initially disappear when an upright alignment has been achieved. It is an effort for them to stand. When the patient then starts to walk, they have difficulty in reacting appropriately to the constant displacement and associated reactions are manifested increasingly as the task continues.

Although associated reactions and associated movements occur under similar circumstances, associated reactions are always associated with hypertonia. Associated

reactions do not mirror the intended movement or activity the person potentiates. They can be seen as an exaggeration of the pattern of hypertonia already.

In summary, associated reactions appear to be manifested from a number of causal factors related to the impairment, the management of the disability and the demands of the environment ie the rehabilitation setting.

The impairment always brings with it a loss of anti-gravity activity particularly related to locomotion low tone around the ipsilateral pelvis and therefore eventual weakness of muscle activation is a common problem. Due to the possible effect on the ipsilateral pathways there may be also low tone in the truncal components of the non hemiplegic side. This may be also complicated by the use of medication, in particular baclofen. Effort, as Walshe et al so eloquently described, produces summation and irradiation. Effort however in a repetitive task such as self-propelling wheelchair activities also produces stereotypical patterning and loss of joint range.

Hypersensitivity is seen in patients who have a dysfunction of the cortico-spinal tract and/or system. Documented by Paten and Lemon, hypersensitivity is often seen more prevalently distally, eg positive supporting reaction. Hypersensitivity can be treated and certainly should not be ignored.

Clearly emotion and fear also play a part in increasing tone naturally and in an exaggerated response in patients with lesions of the central nervous system.

Perturbation, which is unex-

pected or sudden displacement as Dickstein et al found, produces strong associated reactions. For an effective response to displacement selective movement is required.

Habituation where patients eventually learn to function and many use the associated reactions as an alternative, albeit pathological, form of postural fixation when stability has been lost or is unable to be accessed.

Finally the Bobath concept still believes that in many instances associated reactions prevent the recovery of selective movement and therefore function. In today's world of health care which revolves around budgets not people there is a very strong and disturbing trend to 'manage the disability', rather than treat or alter the impairment.

Associated reactions create noise and therefore bringing this noise into order can allow the therapist to more specifically change the causal factors. That is to:

- Isolate the inefficient component
- Reduce the effort by changing the environment eg power chair.
- Cost effective by changing the task.
- Employ plasticity to change response to hypersensitivity.
- Use manual means to alter biomechanical changes.

■ A full text of Mary Lynch-Ellerington's second lecture at Congress, 'Why do movements involving rotatory components alter tone in muscle', will appear in the Autumn issue of *Synapse*.

THE ROLE OF THE RETICULAR SYSTEM; ITS IMPORTANCE FOR PHYSIOTHERAPISTS

Dr Nigel Lawes MB, BS

Summary of slide presentation.

WHERE IS IT?

- The reticular formation is in the brain stem (excludes other 'reticular' nuclei)
- It is arranged in four groups
- The neurones extend well beyond the limits of a 'nucleus'

WHAT ARE ITS CONNECTIONS?

- With most of the central nervous system (CNS)
- General and special sensory pathways
- Somatic motor pathways
- Visceral and endocrine systems
- Emotional, attentional and motivational systems
- Not with frontal and temporal poles

WHAT DOES IT DO?

- Most somatic and visceral functions
- Somatic efferents to the dorsolateral system (discrete distal flexion of the upper limbs), and ventromedial system (synergistic extension of upper limbs, lower limbs and trunk)
- Initiates locomotion and mediates cortical effects
- Co-operative asymmetries of antigravity muscles
- Injury to the dorsolateral system results in loss of discrete flexion of the fingers and elbow, but axial posture and locomotion are normal
- Injury to ventromedial system results in fingers and elbow normal, but unable to reach out; axial posture slumped and immobile, and

locomotion and righting reactions impaired

HOW DOES IT WORK?

- It excites or inhibits interneurons that:
 - control the level of extensor tone
 - regulate the balance of stiffness and compliance
 - select temporal and spatial windows for input
 - prepare the cord for voluntary movement
 - regulate reciprocity between antagonists
 - regulate tension (increases on movement, decreases in static postures)

SUMMARY

- **Where is it?** In the brain stem
- **What are its connections?** With most of the CNS
- **What does it do?** Most somatic and visceral functions
- **How does it work?** Modulates inhibition and excitation
- **What is its relation to physiotherapy?** Restores its modulation of surviving patterns

Dr Nigel Lawes read medicine at St Thomas' Hospital Medical school. In 1973 he worked as part of the clinical scientific staff in the MRC Hearing and Balance Unit and then as lecturer in the Department of Biomedical Science, University of Sheffield. He is currently senior lecturer in Neuro-science in the Department of Health Sciences, University of East London.

A full list of references for this lecture can be sent via e-mail. Please contact Ros Wade, *Synapse* administrator.

AN OVERVIEW OF THE CEREBELLUM

Jon F Marsden MSc, MCSP, SRP

The treatment and management of Cerebellar ataxia continues to be a challenge for physiotherapists. This paper seeks to explore present views on Cerebellar function in order to provide a basis for further understanding of the efficacy of physiotherapy intervention.

Throughout its' extent the Cerebellar cortex has a remarkably uniform cytoarchitecture with different (micro)zones in the cerebellum receiving different inputs and in turn projecting to different outputs (Voogd et al 1998). In view of this uniform cytoarchitecture it is proposed that the Cerebellum performs one common computational function on these separate input-output channels (Wolpert et al 1998).

Proposed theories of Cerebellar function include its' role in co-ordination (Thach et al 1992), timing (Llinas 1991), motor learning and adaptation (Bell et al 1996) and more recently cognition (Schmahmann 1997). The anatomical and physiological bases of each of these theories will be reviewed in turn. How the theories help to explain the signs and symptoms of subjects with Cerebellar lesions will be discussed and possible implications for therapy will be speculated upon.

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Jon Marsden qualified as a physiotherapist in 1991 and gained experience first at the United Bristol Healthcare Trust and later at the National Hospital for Neurology and Neurosurgery. He is currently undertaking a PhD attached to the MRC Human Movement and Balance Unit, Queen Square, entitled *Oscillations and Synchronisation in the Motor System in Health and Disease*.

MANAGEMENT OF ATAXIA

Lynne Fletcher MCSP

An understanding of the problems ataxia presents to the patient is essential for an effective treatment and management.

The individual symptoms are variable depending on the site of lesion but also considerably in the compensatory activity the patient adopts.

Facilitating the patient to experience movement in as varied a way as possible maintaining their ability to error correct and improve the quality of their movement performance is an essential part of therapy.

Many patients limit their potential by fixation due to fear of falling and the subsequent limited movement

experience leaves no possibility to improve co-ordination skills.

Goals of physiotherapy must manage the problems of the patient in terms of function, safety and the need to challenge the system to update skills rather than shut down the system through compensatory activity.

Lynne Fletcher qualified in 1976 and worked in the NHS for 17 years almost exclusively with neurological patients. She qualified as a Bobath tutor in 1986 and as an advanced tutor in 1994. She now works in private practice and teaches Bobath related courses both nationally and internationally.

A full text of this presentation will appear in the Autumn issue of *Synapse*.

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The purpose of this section is to enable therapists to submit reviews on articles that they have read and discussed or courses they have recently attended and are of interest and relevance to current clinical practice and academic teaching. The views expressed in these pages are not necessarily those of the Synapse committee, and in the case of articles we recommend that you should read each article in full.

COURSES

MANAGING DISABILITIES IN NEUROLOGICAL DISORDERS

10 June 1999 Murrayfield Stadium Conference Centre.

This free seminar, sponsored by Athena Neurosciences, was attended by a large number of physiotherapists and other health professionals including nurses, occupational therapists speech therapists and doctors. The program was predominantly medically oriented, with presentations on management strategies in Parkinson's Disease (PD) and Multiple Sclerosis (MS). These included discussion of recent studies on some of the newer drug therapies, and the management of spasticity, in MS with most detail given on medical strategies, although the importance of the whole multidisciplinary team was frequently acknowledged.

Multiple Sclerosis is an autoimmune disease resulting in recurrent areas of inflammation within the optic nerves, brain and spinal cord. It has a prevalence of 100 / 100 000 of the population and is the commonest cause of neurological disability in young adults. The peak age of onset is 33 years with a ratio of female to male of 3:2.

Dr Crawley from Aberdeen Royal Infirmary, presented an excellent lecture entitled

'Disease modification: Therapy in Multiple Sclerosis' (MS), but spoke on one aspect only, the very topical issue of the use of Beta Interferon in MS.

He emphasised that the burden of MS is disability, not reduced lifespan, and described some of the outcome measures used in research on disability in MS, notably the Neurological Assessment Kurtzke Expanded Disability Status Scale (EDSS). Details of this assessment were given, and can be found in Multiple Sclerosis (1997), edited by Jurg Kesselring, Cambridge University Press, Cambridge, and other sources.

In studies of Beta interferon, the key units for this scale were between six (able to walk with assistance – cane, crutch or brace) to seven (essentially restricted to wheelchair).

KURTZKE SCALE

- 1 No disability, minimal signs (eg extensor plantar)
- 2 Minimal disability eg slight weakness
- 3 Moderate disability, although able to walk
- 4 Able to walk and self sufficient despite relatively severe disability
- 5 Walking for 1/4 mile unaided.
- 6 Assistance (crutches/sticks) for walking
- 7 Wheelchair use
- 8 Restricted to bed with effective use of arms
- 9 Totally helpless and bedridden
- 10 Death due to MS

Its limitations, identified by Kurtzke himself, who never advocated its use as a definitive measure in MS, are that it is not linear, there can be large and small differences between units, and that it only measures mobility, which is only part of the disability of MS.

The progression of MS from the early demyelination, shown by MRI scans, which is repairable, to the more frequent lesions of the relapsing progressive type, in which axonal loss occurs and disability is present, was shown in a very clear diagram. There are two forms of the disease, with the majority of MS (85% of cases) are described as 'relapsing – remitting' with 50% of these showing progressive symptoms in ten years, and wheelchair bound within fifteen years. This is then defined as 'secondary progressive'. The second, and less common presentation, is described as 'primary – progressive'. This tends to have an older age of onset, 40-60 years and with less marked changes on MRI and little inflammatory change in the cerebrospinal fluid.

Dr Crawley also addressed the question what does Beta Interferon do in MS patients? Short trials show a 30% reduction in relapse rate, and a 50-75% reduction in active lesions seen in MRI scans. The immunology suggests that it reduces T-cell modulation, blocking T-cell activity, and thus reducing inflammation and the resultant nerve damage. Questions still need to be answered about the method of administration and dose effect. In the PRIMIS study, it is given subcutaneously, and there is doubt that intramuscular interferon is effective in

the dose given in other studies.

A recent trial between 1995-1998 (published in the Lancet) was described from the European Study Group on Interferon beta (1b).

Details also appear in a review by Hall GL, Compston A, Scolding NJ, (1997) *Beta interferon and multiple sclerosis. Trends in neurosciences* 20, 2 pp63-7.

The trial group were 18-55, with secondary progressive disease, defined as sustained disability for six months. The EDSS scores ranged from 3.0-6.5, and the trial was placebo controlled. Apologies for not having the number of patients involved.

Outcome measures were the primary end point – the time taken to confirmed progression by one step on the EDSS scale; and the secondary end point – the time to becoming wheelchair dependant ie 7.0 on the EDSS scale.

There was a 25% drop out in both placebo and treated groups. There were four deaths which occurred during the study; two were suicides, and two were cardiovascular related.

The results showed that patients on Beta Interferon continued to deteriorate, but at a slower rate, and that patients gained a year between 6.5 and 7.0 on the EDSS scale, effectively a year out of the wheelchair.

Dr Crawley then considered some of the problems, such as 'Does the improvement continue or can neutralising antibodies develop?'

The side effects are minimal, but frequent, such as mild flu-like symptoms (occurring in up to 60% of cases) and injection site problems, which con-

tributed to a 10% drop out rate.

The cost – currently is £10,000 per patient per year. For example, if Highland region wished to use interferon on 100 patients, it would cost £1,000,000 per year and at present, post code prescribing exists, as it is available in some regions and not others eg Grampian – yes but Strathclyde – no.

The current guidelines on the prescription of Interferon for consultant neurologists only, (not GPs), as of June 1999, have only two criteria.

- 1. The patient must be diagnosed as the relapsing/ remitting type of MS with two defined relapses in two years.
- 2. The patient must still be ambulant ie below 7 on the EDSS.

A new study, which is eagerly awaited, is by SPECTRIMS – Secondary Progressive Interferon beta (Seroma) in MS, and Dr Crawley had some preliminary releases from June 1999, which appeared to be very similar to the previous study. More concrete data showing more improvement is required before the drug becomes available for all postcodes. (The general feeling of the meeting was that a year out of a wheelchair is surely worth paying for! Also, any improvements in function apart from mobility are surely significant, and should be considered).

As well as Beta Interferon, other therapy was described briefly. Copaxone-Glatirame – has similar efficacy to beta interferon, at a similar cost. There are a large number of drugs which are classified as immune modulators, and which may assist in remyelination by

oligodendrite genesis. This would delay or prevent axonal loss in the early stages, and may reduce disability.

Following this lecture Ms Rhona Currie, a MS specialist nurse gave a presentation on 'a patient's perspective on Beta interferon therapy, or the nurses interpretation of it.' She is the nursing team leader for the Beta interferon program at the Southern General Hospital in Glasgow. The clinic shares the home monitoring with a private nursing firm. Each patient and family members are trained in giving injections and educated about the program, side effects and other aspects of the treatment. Contraindications to the treatment include pregnancy, and female patients of childbearing age must be on contraceptive protection.

Side effects were noted in 96% of patients again predominantly associated with flu type symptoms and problems with the injections site. These gradually eased over three months with 96% of patients expressing the symptoms were at a bearable level by then. Patients found that taking paracetamol at the same time, and injecting before going to sleep at night eased this side effect. Local skin reactions were settled by using an auto injection device. Heavier periods occurred with female patients.

Ms Currie reported that at a nine month review, many patients were depressed, for a variety of reasons. Many disliked giving themselves regular injections, and many found the side effects wearing. The suicide rate in the study described by Dr Crawley bears evidence to this as well.

Ongoing support for patients

on the program was given in the form of regular meetings, ostensibly to give information, and there was a good rate of attendance, with 50% of the patients involved.

She stated that when patients said they were unsure about the programme, it meant they needed more information, and possibly counselling.

Some patients were paying for the treatment, and they had their own problems and agenda.

The issue of postcode prescribing is very real, and causes much distress to patients, carers and the management team.

In conclusion, she emphasised that education and information – not misinformation – about Beta interferon therapy is essential for patients, carers and the entire management team, so that this valuable treatment option can be delivered most effectively.

These lectures gave an overview of a controversial topic, and many insights into this therapy.

The speakers all gave polished presentations and insights into new and recent developments, which are important for therapists to understand, when dealing with patients, support groups and relatives. One criticism was that the lecturers' notes were not available, and would have saved frantic scribbling of references. Otherwise, the venue, food and weather were the best that could have been provided, with Edinburgh basking in sunshine for the whole evening.

MANUAL HANDLING FEEDBACK

Siobhan Galloway
Merseyside ACPIN

This is a report back on a workshop which was held in August 1999 at Clatterbridge Hospital entitled, 'Guidelines for Moving and Handling Practice within Neurological Physiotherapy: Discussion and Questioning'.

A physiotherapist who has a post-graduate qualification in Ergonomics, Philip Morrow, started the day with an introductory lecture, which included looking at present regulations and moved onto challenging our practice by analysing some techniques from a purely ergonomic stance. Audience response to this was mixed, but perhaps we should be more open to closer scrutiny of our seemingly widespread methods.

An hour of general discussion was then held with areas of interest noted. Six discussion subgroups were formed, and feedback then collated.

The six areas were:

- 1. General considerations for setting guidelines.
- 2. More prescriptive writing of guidelines.
- 3. Equipment.
- 4. Evidence Base/Research.
- 5. How do we judge skill?
- 6. Risk assessments.

Prior to the discussion there was a break and three company representatives were present to demonstrate relevant equipment.

1. CONSIDERATIONS FOR SETTING GUIDELINES

The discussion group was assigned the task of examining what should be key considerations when assessing moving and handling situations. The

group identified 6 specific areas that would require analysis:

- Objective/Ultimate goal
- Facilitators ability/availability
- Patient ability
- Equipment requirements/availability
- Environment
- Legislation/Responsibilities

The general conclusion of the group was that many of the areas covered led along a route towards standardising Risk Assessments already in use by many Trusts and encouraging handlers to take individual responsibility for assessing specific situations. Several areas of confusion were also highlighted which will require clarification for future developments. These included:

- Understanding of the term 'transfer'.
- How do manual handling issues fit in with the rehabilitation philosophy.
- How do we improve methods of disseminating information on any new legislation?
- Concerns around expectations of the physiotherapy profession, irrespective of grade/skill level.

Within all of the discussion described the importance of gaining a solid evidence base was consistent and therefore should underpin all guidelines developed.

2. MORE PRESCRIPTIVE WRITING OF GUIDELINES

This group started by considering systems that have been used before or that they had experience of. This included Red/Amber/Green levels of risk and possible coding or scoring systems. The pros and cons of these were considered and the idea of a flow chart which could be used to choose a technique depending on what a

patient was capable of was also muted. It was thought important that a positive approach be taken highlighting capabilities rather than inabilities, and also empowering nursing staff to be leaders in this area.

Another factor to be considered was to assess cognition, perception and receptive language ability prior to physical assessment so that adjustments could be made if necessary.

The group found it difficult within the time constraints to agree a specific way to approach breaking down techniques or ability based systems.

3. EQUIPMENT

Initially the group formulated a list of the different pieces of equipment available to us to assist in moving and handling, including transfer boards, sling and standing hoists, sliding sheets, standing frames, transfer belts, and turn tables.

Two pieces of equipment were then chosen and the pros and cons of using them were discussed.

Sling Hoists

■ *Advantages* – suitable for unpredictable patients, heavy patients, patients with many compensations, patients who fatigue easily, patients who need more than two people to transfer manually and for handlers lacking in specific handling skills.

■ *Disadvantages* – use of hoist may be unsafe if staff are untrained in its use, it results in reduced opportunity for weight bearing, if the patient feels unsafe it may result in increased tone increased compensations and a lack of confidence in the therapist.

Transfer boards

■ *Advantages* – portable, cheap, may encourage some weight bearing through the lower limbs, may assist to reduce compensations into extension, may promote independent transfers, can assist to break down a 'pivot' transfer into stages.

■ *Disadvantages* – reduced facilitation of extension, some types of seating are unsuitable to use with a transfer board, the patient is required to have sitting balance, they can be difficult to use towards a hemiplegic side due to reduced ability to weight bear through the upper limb.

Other considerations that were made:

- We should increase our awareness of equipment available.
- We should look at equipment positively and use it as an adjunct to rehabilitation.
- It is important to be trained in the use of equipment. This was considered to be the role of the company representative initially. It was then thought that the therapist should then make a clinical judgment as to the appropriateness of the piece of equipment for a certain task. No decision was made as to who should be responsible for ongoing training.

4. EVIDENCE BASE/RESEARCH

The group started with a 'brain storm' on 'What research do we need as evidence?'

The field is so diverse that we could not draw any definite conclusions as to the correct research to suggest but ideas included:

- What transfer should we look at?
- Should we research Normal Movement first as a baseline?

■ Should we research skill level of therapists, including what training and supervision is available?

■ What makes us decide it is necessary or appropriate to transfer and not use equipment?

■ What objective measures could be used eg EMG, Gait labs, Pressure pads etc?

■ Is it only the low back region we should address or should we look at other regions eg pelvis and shoulder girdle?

We then discussed that we had very little knowledge between us of what evidence there is already available and what the implications of this current evidence are. We felt the first area of study in this field should be to look at the available evidence and also investigate what evidence the RCN document, which dictates so much of our practice, is actually based on.

The next step would be to try to describe the normal movement concept and use this to 'define the problem'.

It was difficult using this discussion to ascertain which type of research should be implemented. It was suggested a quantitative survey might be useful to find out what therapists' currently base their practice on and current techniques in use. This would then inform a further qualitative study. There would be a lot of planning and preparation required for this to obtain the best study proposal, design and methodology.

It was also felt important that ACPIN should set up links with research units and other therapy groups e.g. NANOT to combine forces in this mammoth project.

In conclusion from this group, we were unable to

clearly define a specific problem and study design but we felt that with the appropriate, skilled people in Research and in Clinical practice involved, ACPIN could strive towards gaining some evidence for our daily clinical practice in this field.

5. HOW DO WE JUDGE SKILL?

The group thought that we need to set a minimum criteria skill level required for a safe transfer of a neurologically impaired patient. This seemed more applicable than naming certain professions/grades within a profession as skilled/unskilled etc as this does not guarantee a level. There was much discussion before the group finally agreed the following set of criteria:

- Understanding of 'technique' including patient ability, cognition and physical ability, patients condition, tone, shoulder etc, environment, principals of normal movement
- Awareness of own physical limitations
- Communication, with patient and colleagues and planning and risk assessment
- Manual handling education
- Knowledge of available equipment and correct/safe use of.

The group also felt that people are trained by named competent professionals and not just physiotherapists as we are unable to be responsible for training everybody.

6. RISK ASSESSMENTS

To derive therapeutic benefit the group felt that it was necessary to accept an element of risk.

Risk assessments are currently being carried out, but not always formally docu-

mented, partly because there is some confusion as to what is legally acceptable.

An individuals' experience produces variances in risk assessments, so a baseline in knowledge through recognised training would help to minimize this.

CONCLUSION

This topic of moving and handling is obviously one of great interest at the moment. Participation was limited to seventy people although more showed interest. It had been decided to include all disciplines and most were represented, even though we had decided to limit this large topic to neurophysiotherapy guidelines so that it was more manageable. We also had decided that we should look at ourselves first and the issues relating to us before looking at other areas. Not surprisingly more questions were asked than there were answers. It has been suggested that a national day may be needed. The momentum now needs to be continued, the question is how? Merseyside ACPIN committee have nominated a liaison person for further ideas to be relayed to a national level but we do feel it is also up to the members to carry this forward in their own areas. Writing guidelines for moving and handling within neurophysiotherapy is a big task and one which obviously needs further consideration. For any further information, suggestions please contact Siobhan Galloway on 0151 428 4078

RESPONSE TO MERSEYSIDE ACPIN WORKSHOP

Anthea Dendy

ACPIN Executive Committee

The National ACPIN committee are very grateful to Merseyside ACPIN for reporting back on the workshop they held in August last year. This report was sent to myself and provided the basis for some of the preliminary discussion of the working party. The opening comment that some of the audience were not comfortable with the challenge thrown up to our current practice was an interesting and very valid one. Those of us with a particular interest in this field have now been left in no doubt that we must look at the way we do some things within therapy sessions and ask ourselves how appropriate these are, if we are doing them in the most appropriate way and if not is there another way of achieving the same or similar therapeutic effect. Asking colleagues working outside our area of clinical practice to stand in the corner of the room and watch what we get up to is a very useful and enlightening exercise, as I found myself when I asked a colleague from musculoskeletal out patients to watch us in the gym at St George's one morning! This exercise highlighted to us the need to look at some of the high risk handling techniques we carry out, and to carry out risk assessments and write accompanying protocols for them.

The subgroup that looked at guidelines writing came up with some interesting points and the idea of a flow chart is one that is being utilised by

the working party. Similarly we have discussed formulating an equipment list with pros and cons. When visiting departments it is noticeable that many already have chosen to invest in electric standing frames and walking hoists. At present ACPIN would like to encourage members to share their experiences with pieces of equipment with each other. Synapse would seem to be a very appropriate way to achieve this and we can only encourage you all again to write a short summary for Synapse so that departments do not purchase inappropriate equipment, and that we do buy the piece of equipment that most suits our needs.

Personally I think we should remember that no piece of equipment, it seems to me, will fulfill our therapeutic 'ideal' but we must look at ways of using equipment to help us achieve our aims whilst reducing risks to ourselves, our colleagues, our clients and their carers.

Research in this field is another huge area and again not something ACPIN is in a position to directly undertake. However we may feel we could usefully draw up a list of possible priority areas to assist in directing appropriate research. In addition to those ideas suggested we must also consider the evidence for the use of the techniques and interventions we advocate. For example when we are training carers to assist clients into standing frames how much scientific evidence have we got to support the value of regular standing to justify any associated risk in carrying out the procedure? The same could be said for much of what we do and advocate, unfortunately, and we

must continue to utilise our clinical experience in these decision making processes. We should not however be carrying out a pivot transfer rather than hoisting just because its in the gym so therefore its therapy!

Documentation of risk assessment is a key requirement in our clinical practice and an area we would urge all members to place particular emphasis on. It is particularly important to document the clinical reasoning for carrying out a particular procedure, especially if within therapy this is different to the manual handling being used by other disciplines.

In conclusion the workshop was obviously a very useful day. I am sure everyone would be interested in the next stage and how Merseyside ACPIN members have moved on from the conclusions drawn. If other areas of the country decide to or have nominated liaison people in the same way perhaps we could use the working party to facilitate a National network to assist in sharing all of the good work that is going on throughout the country and save some of the reinventing of the wheel that notoriously happens in these situations.

ACPIN MANUAL HANDLING WORKING PARTY

Anthea Dendy
ACPIN Executive Committee

This group was formed in the autumn last year as members' concerns regarding manual handling issues continued, and as the CSP working party within which we had representation had not reformed.

To date the group has met twice. The members of the group are:

■ **Anthea Dendy**, Clinical Specialist, St Georges Hospital, London

■ **Vicky Sparkes**, Lecturer, University of Hertfordshire

■ **Monica Busse**, Physiotherapist, Private Rehabilitation Centre

■ **Rosie Hitchcock**, Lecturer, University of Southampton

Following correspondence with the Superintendents in Spinal Cord Injury we have also been pleased to welcome their representative, **Dot Tussler** (Superintendent Physiotherapist, Stoke Mandeville) to the group.

At our first meeting we brainstormed all the issues around manual handling and, as always, seemed to end up with more questions than answers! We agreed that we would limit our current work to looking at Manual Handling in Therapy, and associated topics. From this we drew up a list of several sub sections such as risk assessment, equipment, research etc. and agreed to decide on which aspect to consider tackling first. We were all in agreement that attempting to write National guidelines for manual handling in therapy was a huge task which we could not feasibly take on and

felt that by the time we had achieved our objective most of our members would have local guidelines in place and would therefore gain little benefit.

As all areas will have to look at this issue locally considering the environment, staff and carers, client group, etc we felt it would be more useful to try and provide some frameworks with which people could work to assist them in the risk assessment process.

The group is therefore currently trying to develop a flow chart demonstrating the risk assessment process for handling in neurophysiotherapy, indicating where risk assessments may be required and where a protocol format may be able to be utilised for this. Headings to consider for these protocols with one or two examples may also be developed.

The group will continue to meet every two months and disseminate its work through Synapse and the regional network as appropriate. Examples of local work which we have received have been invaluable in assisting with our discussions so please continue to send these to the address below so that we can share your work with ACPIN members nationally.

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ARTICLES

SHARED RESPONSIBILITY FOR ONGOING REHABILITATION: A NEW APPROACH TO HOME-BASED THERAPY AFTER STROKE

Jonathan J Basket, Joanna B Broad, Gabrielle Reekie, Clare Hocking and Geoff Green.

Clinical Rehabilitation 1999, 13: 23-33

Anne Murray, Linzie Bassett, Lucy Johnson, Annette Price

This article describes a comparison between a hospital based outpatient therapy programme and a community style approach for two groups of stroke patients.

The paper itself is clear to read and divided well into sections aiding its review. It was felt that the title does not adequately reflect the article, but the abstract is well written and logically presented. Although an address for correspondence is included there is no background information about the authors.

OVERVIEW

A randomised control design was used to 'assess the efficacy of a programme of continuing self directed exercises for people discharged home after stroke, supervised once a week by therapists'. A total of 100 stroke patients were assessed on the week of discharge, at six weeks and at three months post discharge. A range of outcome measures were used to evaluate gait speed, limb function and activities of daily living. Therapist contact time, the mood of the patients and carers together with their anticipated and perceived outcomes were assessed. The

results demonstrated no statistical differences between the control and experimental groups, except relating to the contact times ($p=0.003$). The authors concluded that the supervised home based programme is as effective as outpatient or day hospital therapy.

CRITICAL REVIEW

Introduction

The aims of the study are clearly stated but the background to the development of the design refers mainly to the authors' past experience rather than the literature.

Method

The method described appears to be comprehensive. Inclusion criteria are stated; the exclusion criteria appear later in the results. Ethics approval and informed consent were obtained. The method of randomisation is clearly described. Baseline data were collected for all subjects to evaluate if the two groups of stroke patients were comparable.

The patients in the control group were treated either in a Day Hospital setting or the relevant outpatient department, when only physiotherapy or occupational therapy was required. Thus, there may have been a difference in input given within this group. Day hospital patients were assessed by the multidisciplinary team and treatment goals agreed. Patients attended two or three times a week, with progress monitored at weekly reviews but the duration of outpatient therapy input is not clarified. Information is provided on the treatment approaches, but there is none on the skill mix of the therapy teams.

The patients in the experimental group were assessed at home by a research physiotherapist and occupational therapist and goals set. No information is provided of the level of expertise in neurological rehabilitation of either therapist. The subjects followed a self-directed therapy programme, receiving weekly visits from the therapist for a maximum of 13 weeks or 'as long as judged necessary'. It is commented that if the therapist decided that some 'hands on' therapy was essential, it was provided and the time documented.

It is noted that transfer to the control group could be made, when patients required medical input or support, which could not be provided on the home-based programme.

Outcome was assessed by two independent 'research officers', who were blind to the nature of the two intervention programmes. A series of referenced measures were used to assess both the experimental and control groups over time. The authors comment that every 'effort was made to standardise assessments'. An un-referenced scale is used to measure and record the patients and 'caregivers' expectations and perceived improvements from the therapy.

Statistical information regarding the size of groups that are required to determine significant changes in the tests is given, stating that a sample size of 45 subjects in each group is necessary to detect clinical significance with various measures.

Acknowledgement of the limitation of the Modified Barthel Score to detect improvement when the entry

score is high is included.

Results

A clear diagrammatic representation of the patient progress through the study is provided.

Out of the 50 patients in each group at the start, 46 of the control and 44 from the experimental group were finally assessed at three months. However, one subject who was initially allocated to the home therapy group crossed into the control group, as the caregiver could not be provided with enough support; this subject remained in the experimental group for data analysis rather than being excluded from the study.

It is stated that there were no significant differences between the two groups, in age, sex, side or severity of stroke or associated diseases or conditions at the beginning of the study.

The results state that there were no significant differences between the groups for neurological, physical and activities of daily living function as measured by the assessments at baseline, six weeks and three months. The data is included in a table, showing the mean and standard deviation for each measure. A statistical significant bias towards the control group was obtained for the Barthel score ($p=0.048$). The authors comment that this was not apparent when very low scores (<45) were removed.

The results showed that there were no significant differences in anxiety or depression scores of either group of patients, or of the caregivers, with respect to stress.

It appears that each received the same number of hours and that there was no

significant difference between the number of visits. However, the authors report that there was a difference in the time period over which contact was maintained, being a mean of eight weeks in the experimental group and a mean of six weeks in the control group. Thus the time period of therapy intervention was not a controlled factor in this trial.

Discussion

Reference is made to previous studies looking at home therapy programmes where these approaches were found to be as effective as rehabilitation based at an outpatient department or day hospital. The authors state that the results should be reassuring for patients living in rural areas where access to outpatient departments may be limited, or where a home programme is their preferred choice.

The difficulty in designing a study, which examines a wide range of disability and handicap in stroke patients, is highlighted. The limitations of the sample size, and the 'surrogate' quality of life measures used for mood disorders, is discussed.

The authors report that there was an increasing variance in the 10 metre walking speed of the experimental group, suggesting that 'some subjects improved well but others did worse in general than the hospital group'. This is followed by the observation that there may be a subgroup who do better in home therapy. However, the authors ignore the fact that there may be subjects who 'may' do worse with this approach. Perhaps, therefore, further study prior to making firm conclusions that one approach is as good as

another, should have been undertaken.

Although significance was not reached, it is observed that 53% of the caregivers in the home group compared to 36% in the control group appeared to judge the outcome favourably. The authors suggest that the home group caregivers felt more supported and may have benefited from discussion with the therapist, opportunities which the caregivers in the hospital group may not have been able to access.

There are no summarising conclusions, but acknowledgements are included to those involved in the study and for project funding.

References

The comprehensive reference list includes up to date and relevant literature.

Summary of review

On the whole, the paper was easy to read and relatively clear, only on more detailed review did questions with regard to the protocol and method arise. Although discussion of the results appeared thorough, issues with regard to the increasing variance in walking speed in the home therapy group were not introduced until the discussion. Thus, it was felt that an important point had been omitted, which could have contradicted the conclusions made.

The numbers for this study were relatively small for significance. Prior to a change in working practice, questions with regard to subgroups that may respond differently to the home therapy approach would need to be answered. Larger group numbers and clear methodology would be required.

A NEW APPROACH TO RETRAIN GAIT IN STROKE PATIENTS THROUGH BODY WEIGHT SUPPORT AND TREADMILL STIMULATION

Visintin Et Al Stroke (1998) 29 pp1122-1128

Jo Kipling and Anne Marsh
Senior Physiotherapists
St Lukes Hospital, Bradford

The title briefly outlines the article, however, it does not mention the comparisons that will be made between training with full body weight and body weight support.

The abstract however, summarises the article well, but the key words are somewhat brief and perhaps could include 'treadmill' and 'gait'. Some of the authors are from schools of Physiotherapy and Occupational Therapy, it is not clear regarding the background of others, but all have studied at either PhD or MSc levels.

The introduction shows evidence of a literature search with adequate background information and clear aims, (although more than 10 references were their own). The methodology is that of a randomised control trial involving 100 patients who fitted the criteria for study over the period October 1992 to January 1995. They were split into two groups by block randomisation. Both groups received gait training by their own physiotherapists for six weeks, four times a week.

The experimental group received training on a treadmill with a percentage of their body weight supported on an overhead harness, while the control group received their training on a treadmill with a harness

but while supporting their full body weight themselves. The apparatus was well described with an accompanying photograph. All subjects received regular weekday physiotherapy in addition to the above, aimed at maximising function.

Measurements were made by an evaluator blind to the method, before commencement of training, at completion of the six week period and at a three month follow up. The outcome measures used were the balance scale, an early version of the lower extremity portion of the stroke rehabilitation assessment of movement (STREAM), walking speed and endurance. The walking speed and endurance were fully explained in the text and would be easy to reproduce. Despite the balance scale being referenced it remains unclear as to its reliability for stroke, as only 46% of subjects in the study had suffered stroke. It is also not explained why an early version of the STREAM was used as opposed to the refined version. However, this may be because the STREAM was still under research at the time.

The article did go to some lengths to explain the reasons why some subjects failed to complete the study and the general characteristics of these subjects.

Results of the study were in easily understandable tables and clear graphs. The ANOVA statistical test was used.

The results indicate that whilst both groups showed improvement at completion of training and at three month follow up in all four outcome measures used, the group with body weight support showed a significant improvement in the STREAM scale and for walking

speed. No significant results were found in balance or walking endurance.

The article suggests that further research is desirable in order to identify the optimal period in which to use this method of training, although this could be limited by the specialist equipment needed. The authors do not discuss any weakness in their research or method, but in general it seems to be a well designed study, which should provoke discussions regarding the treadmill as a future treatment modality.

REGIONAL REPORTS

EAST ANGLIA

Louise Dunthorne
Regional Representative
Tel: 01473 712587

East Anglia ACPIN suffered a poor year last year with no timetabled events and a subsequent drop in interest or motivation amongst members. However, Millennium fever has spread and we are now rejuvenated! The committee has been re-appointed, and have held a couple of meetings to organise events for the coming year. The Chairman is Sharon Griffin.

We have also had a re-surge of interest and our Regional membership total has risen to 41. We are hoping to increase this further with active recruiting by the committee.

Because of the huge geographical area covered by our Region, evening lectures have traditionally been poorly attended. We have decided to focus on a number of study days/half days instead.

Topics planned are:

- June **Management of Spasticity for the Community MS Patient.** To be held at the University of East Anglia, and being sponsored by Athena Neurosciences. It will include relevant neurophysiology, neurophysiotherapy and case studies.
- September **Manual Handling in a Clinical Setting** Running on a workshop basis, this day will enable therapists working in neuro-rehabilitation to share ideas and problem solve about manual handling issues.
- November **Respiratory Problems with the Neurological Patient** The venue will be Addenbrook's Hospital, and the day will

cover both acute and chronic conditions that can be encountered.

We do hope the future looks brighter for the East Anglian ACPIN branch, and look forward to active participation of our members to this end!

KENT

Janice Champion
Regional Representative
Tel: 01634 270198

The Kent region held three successful evening meetings during the year which were all well attended. We also held two Friday/Saturday courses titled 'A practical approach to Musculo-Skeletal techniques for Physiotherapists in Neurology' in January and February 2000, tutored by Heather McKibben.

We held our AGM in March at Medway Maritime Hospital when Janice Champion demonstrated a patient treatment. Our June meeting, held at the William Harvey Hospital in Ashford, was a symposium looking at assessment and evaluation titled 'Is your treatment effective?' This meeting was chaired by Dr. Cecily Partridge and several ACPIN members presented their ideas.

Our November meeting was a lecture 'Do we need to talk to our patients?' based on the Bio-psycho-social model given by Lis Willmet who is the Senior physiotherapist with the pain management team based at Medway Maritime Hospital. This was followed by a discussion facilitated by mulled wine and mince pies!

This March, Gill Williams, who has been our chairperson for several years will be resigning. Gill has worked very hard promoting ACPIN in Kent

and keeping our group motivated and alive. We would like to thank Gill very much for her dedication and enthusiasm.

This means we need a new chairperson – any volunteers?

Our aims for the forthcoming year are to improve the networking of the "neuro-physios" in the region and to support the professional development of our members by providing informative and thought provoking meetings and study days.

Next years programme is still in the planning stage but the AGM is confirmed as an 'Introduction to Pilates' by Susan Rhodes who is the specialist clinician in musculo-skeletal physiotherapy at Medway Maritime hospital. This will be held in the Physiotherapy department at Medway on 15th March 2000.

LONDON

Anne McDonnell
Regional Representative
Tel: 020 7830 2438

1999 has been another successful year for the London region. The programme has remained varied with evening lectures, and half or full weekend days. Attendance was good for the majority of lectures which included: 'Neuropathology/Myopathy' (Jane Nicklin); 'Cognition and Perception' (Theresa Jackson); and 'Bobath into the year 2000 – a Personal Perspective' (Anna Hamer).

2000 began well with the Millennium Extravaganza which was well supported. Lectures this year include:

- **Surgery for Parkinson's Disease** Dr Gary Hotten
- **FES The latest developments** Jane Burridge

■ **PVS/Locked in Syndrome** Amanda Wright

■ **Management of Acute Spinal Injury** Sue Rowley

■ **Management of Dystonia** Sophie Mullen/Anita Gregson

■ **Spasticity/hypertonia: The Clinical Implications** Sue Edwards

■ **Joint ACPIN and NANOT Study Day** on Current Research in Stroke

MANCHESTER

Louise Rogerson
Regional Representative
(from March 2000)

Manchester's 1999 programme continued in the same format as previous years with ten evening lectures/workshops, with a break in August and December. We had a disappointing response to fliers sent out asking, for ideas for the 2000 programme, with only a handful returned from approximately sixty sent out. The committee has decided along with the response we received to continue with the format of evening lectures. Any members who would like to see changes made to this format in the future please contact the secretary; Gill Dean Lofthouse on 01204 360010. The evening programme last year covered a variety of topics including, 'Seating', 'Update on CT/MRI scans', 'Research on Parkinson's disease', feedback from Alison Batchelor on 'Stroke rehabilitation in the USA', muscle imbalance workshops and patient demonstrations. Attendance varied with the patient treatment/workshops always bringing in the larger numbers.

Our committee is just about hanging as several members

have teaching and research commitments as well as a baby boom in the last couple of years.

Our current 'official' membership is 30, well below our usual 60-70 members.

A new initiative has been set up in the region by Paula Kershaw, senior I physiotherapist at Hope hospital in Salford, to encourage regional in service training for senior 1 physiotherapists working in neurology. These take place every three months half a day and have so far included patient treatment and problem solving and a workshop on outcome measures. Paula can be contacted on 0161 787 5328 for further information. Manchester's 2000 programme includes:

- **Research in Neurology,**
Hilary Chatterton
- **Current trends in the management of MS**
- **Management of neurogenic shoulder pain in patients**
- **Patient workshop on Upper Limb** Pam Mullholland
- **Update on the use of Botox in patients with spasticity**
- **Update on Physiotherapy for Parkinsons Disease**
- **ANT in the treatment of neurological patients**

■ **MERSEYSIDE**

Jenny Craig
Regional Representative
(Resigned March 2000)

On behalf of the Mersey Committee, I would like to thank all our members and speakers during 1999 for their support and also to extend our thanks once more to Sharon Williams, who continues with her invaluable support both as our President and with her bi-annual workshops, which are

always a great success. Our membership reached 58 this year despite all the National membership difficulties, so we hope to continue to grow in 2000! The Committee remains dedicated to providing a comprehensive lecture programme for next year and also support for members. Some changes in Committee positions will occur during next year but members will be informed of these locally.

Our current bank balance is healthy, following the implementation of charges for lectures and we still have the computer, which is accessible for committee members, and are compiling databases etc on this.

The highlight for the lecture programme for us in 1999 has to be the Moving and Handling Workshop. I would like to thank all the Committee for their extremely hard work in preparing this.

Other events in the year included a successful Muscle Imbalance two weekend course by Nick Hodie and two very interesting lectures on the history and development of Neurosurgery and Neuroradiology. Other successful lectures were Medical Management of PVS, Dystrophy's and CJD.

This year's programme includes: two follow up courses on Trigger points; a workshop with Sharon Williams; and lectures on acupuncture, orthotics and spinal cord injury.

■ **NORTHERN**

Lesley Yule
Regional Representative
Tel: 0191 200 7086/7214

Thank you to ACPIN members for your continued support throughout 1999 and into 2000. Northern ACPIN has had an eventful programme of evening lectures and weekend courses throughout 1999. We would like to thank all those who have educated and inspired us in the last year. We hope there is something to offer everyone in the coming year.

Events last year included: a weekend course on neurophysiology; the upper limb and painful shoulder; and a Bobath workshop.

Current membership stands at 70-80 members. The programme for 2000 is taking shape and will include further weekend courses on: movement science; pain; pilates, muscle imbalance; communication in CVA as well as Bobath workshops.

■ **NORTHERN IRELAND**

Margaret Lewis
Regional Representative
Tel: 01232 240503 ext 2238

Northern Ireland has had a busy and successful 1999 with continued support from our membership and a full and active committee.

We have had a varied programme, which has provided a broad range of evening lectures, practical workshops, patient demonstrations and weekend courses. These included an introductory normal movement course, weekend workshops on the upper and lower limbs and muscle imbalance for the lower quadrant with David Fitzgerald

of the Dublin Physiotherapy Clinic. In addition, for the first time in Northern Ireland we held courses on the Assessment and treatment of the adult with high and low tone.

Unfortunately we were unable to run a planned 3-day splinting course, but hope to run this in the coming year. We have enjoyed input from both physiotherapists and from other disciplines through our evening lectures and patient demonstrations which have sparked discussion and interest amongst the membership. Our programme has been finalised for the 2000 and promises to challenge us further in our clinical practice and research. We hope to continue to increase our membership and draw from throughout Northern Ireland. Many thanks to our existing membership for their continuing support.

■ **NORTH TRENT**

Steve Cheslett
Regional Representative
Tel: 01709 561399

1999 was generally a successful year for ACPIN in North Trent with an increase in membership to 38 and generally well attended events, which took place approximately every other month.

Events included the AGM which was combined with a lecture on Neuroplasticity and Chronic Pain. This drew a good audience of both members and non members. Meetings also included a lecture by Pauline van Vliet on 'The Carr and Shepherd Approach' and a one day course on 'Lower limb functional anatomy and strapping' by Karen Rowlands and Steve Hodgson.

Following a summer break the autumn brought an evening presentation by local clinicians on 'Recent developments in the management and treatment of Parkinsons Disease', including Conductive Education.

The Committee has seen several changes during the year but have been very busy planning and organising a comprehensive programme for the new Millennium, with a good mix of evening and full day courses.

Many thanks to all the members who have contributed during the last year and to the guest speakers and clinicians who have made the events possible!

Our programme for 2000 includes a lecture on Dyspraxia and day courses on the upper limb, including strapping, postural control with Nigel Lawes; and ataxia and the cerebellum with Jon Marsden.

■ **OXFORD**

Nicky Sharman
Regional Representative
Tel: 01296 315000 ext 5919

1999 provided us with a busy and varied programme for Oxford. We have had evening lectures every four to six weeks and an excellent splinting course which was held in October. This course has provided fresh ideas both for treatment and further lectures. Our recent lectures have ranged from 'MS', 'CT Scans made easy', 'Neurosurgery', 'Perception and cognition within normal movement' and a critical appraisal of an article.

The Oxford committee has undergone a major reshuffle in the recent months. I would like to express our thanks to those members stepping down and to

welcome all those who are taking up the challenges of their new posts! Louise Gatehouse, the previous regional representative, has moved on to the Executive Committee, although she still remains an active member at regional level (especially as I settle into her old post!)

I wish to express our thanks to everyone who has supported the region over the last year. Our numbers have increased to nearly fifty members and the evening lectures are well attended. However, we are always keen to involve new members and are enthusiastic about fresh ideas for the year ahead.

The provisional Programme for 2000 includes: a half day course on Gait Analysis; the use of the treadmill in Stroke patients; and ATTP overlap.

■ **SCOTLAND**

Emma Forbes
Regional Representative
Tel: 01786 473 499

The AGM was held in Stirling Royal Infirmary in May and incorporated a problem solving workshop and networking sessions on CVA, MS and Head Injury. This was attended by 20 people and two new members were recruited to the committee.

The study evening in June titled from 'Russia with Love' was to give us an insight to physiotherapy in Russia. This unfortunately had to be canceled due to a lack of response from our members.

In November we ran a study day on Parkinson's Disease and Seating issues in conjunction with the Neuroscience Nurses Group. This was a great success and we hope to run further

joint study days in the future.

At our committee meeting in December we had a volunteer to join our committee so we now have eight members.

The programme for 2000 includes a meeting in May on muscle imbalance with various speakers and the AGM, and in November a meeting on measurement in neurology.

■ **SOUTH TRENT**

Linda Cargill
Regional Representative
Tel: 01332 340131 ext 5632

1999 has been a busy and successful year for the region, with membership at 61.

We offered eight events over the year in either evening lecture or day course format. Particular interest was gained for the 'Movement Science Approach' led by Paulette van Vliet, 'Normal Movement of the Upper Limb' with Erica Malcolm and 'Gait Analysis' which was held in a gait laboratory with Fran Polak.

There have been a number of changes on the committee over the year. We welcome Joanna Robertson as the new Chair, and we do thank everyone for their hard work. We are always keen to attract new members to the committee, and would particularly welcome anyone from the Leicester and Derby regions.

As always we welcome feedback on the programme, and how South Trent ACPIN is run.

The programme for 2000 includes evening meetings on the 'Role of the assistant in neurological practice'; 'Communication with Stroke Patients' and day courses on sensory aspects of balance.

■ **SOUTH WEST**

(FORMERLY BRISTOL)
Liz Britton
Regional Representative
Tel: 0117 918 6565

The first big change for this year was the re-naming of our regional group from Bristol ACPIN to South West ACPIN. It was felt by members at the AGM that this title more accurately reflected the catchment that we cover.

Our ACPIN year started very successfully with our AGM entitled 'Hands off - adjuncts to neurophysiotherapy'.

We had a mixed programme but found it difficult at times to arrange speakers. We promise to try harder in 2000! The highlights of the programme included 'Hydrotherapy in neurology', 'Biomechanics of the foot', and a motor-science follow up day. Evening lectures, which are usually less well attended, included a talk on 'Dysphasia' by a speech therapist and a lecture on 'Multiple Sclerosis'.

The committee are keen to pursue the idea of trying more half day workshops rather than evening lectures and would welcome your response to this idea.

Other items on our agenda include the setting up of our own web-page as a method of improving communication.

Bristol has also been picked as a venue for a course entitled 'Spasticity in the community'. This is a venture run nationally by National ACPIN and sponsored by Athena Neuroscience. Further details will be published in *Frontline*.

My annual report would not be complete without the plea for more committee members and for those of you who feel they are not receiving our

posters to contact me as I try to keep updating our mailing list. We look forward to seeing you at one of our courses this year. This year's programme includes talks by Paulette van Vliet on 'Motor Science Gait'; 'Life Beyond Normal Movement' (Sue Edwards); and a day course on splinting with Sue Edwards; also a half day workshop on 'Parkinson's Disease' with Gay Moore.

■ SUSSEX

Helen Foster
Regional Representative
Tel: 01703 777222 bleep 2547

Sussex ACPIN has had another successful year. Membership has been stable despite difficulties caused by the CSP membership department. Financially the region is in good health and has used its funds to organise training and education for its members. Attendance at courses has as always been variable.

The programme for 2000 is provisional (members are asked to contact the secretary or the Chair for details) and includes: a splinting course; a lecture on 'Acupuncture in Neurology'; the Guillain Barre Support Group; 'Nags & Snags in Neurology'; and Pilates.

■ WESSEX

Ros Cox
Regional Representative
Tel: 01703 777222 ext 4562

1999 has again been a year of changes for Wessex ACPIN. The Chairperson Clare Blaxill has gone back to Perth with her family. We thank her for her hard work and wish her all the best in Australia. Helen Foster has taken over as Chairperson, and now has to juggle a baby

into her busy life. Ros Cox became Regional Representative from previously being secretary, so let's hope she doesn't become pregnant as well! Jo Nisbett has stepped in as Secretary. Carol continues to hold the purse strings.

Despite having some very good speakers the lectures have not been well attended this year. Unfortunately the Splinting Course organised in Salisbury had to be cancelled. We have therefore sent out a questionnaire to the Hospital Representatives and members to ascertain why. This has highlighted some problems that the committee is currently dealing with. So we are hoping for improved attendance in year 2000. We are now keeping a register of people attending, so those members who have attended most regularly, can have priority for the more popular courses.

The October Strapping Study Day was very popular and had good feedback and the Moving and Handling Study Day run in conjunction with Southampton University Hospital was very informative. It has highlighted the need for risk assessment and has motivated therapists to review their Moving and Handling Policy.

Wessex ACPIN Membership numbers have increased this year to 62, and we would like to openly invite all members to attend the committee meetings, which are held an hour before the evening lectures.

The programme for 2000 includes: a 'Forum on different approaches to Stroke Treatment'; a Strapping Study Day; a workshop on the 'Assessment and treatment of individuals with balance impairments'; a study day on the 'Management of Spasticity'; and

lectures on Perceptual Testing and Sensory Inattention.

■ WEST MIDLANDS

Katie Marsland
Regional Representative
Tel: 0121 766 6611 ext 7910

1999 has been a much better year for our region. The move from evening lectures to study days has proved successful and appears to cater better for members. The timetable for the year included study days on Ataxia, Older CP, Neglect and Neuroplasticity. The feedback from these courses was generally good, although numbers of participants was not always as high as we would have liked. We also organised a junior introductory day, but this had to be cancelled due to lack of interest.

Plans for next year include a follow up (more practical) day on Ataxia and an advanced workshop with Lynne Fletcher. The aim is to continue with the study days every two to three months.

The committee has been rather thin on the ground due to maternity leaves, so if anyone is interested in joining please contact Katie Marsland on 0121 624 1584. This is your region, and we would love to have a committee representing the region, including hospitals in the more outlying areas.

■ YORKSHIRE

Sally Bowes
Regional Representative
(from March 2000)

Yorkshire ACPIN has had another successful year with membership growing to 97 and even some new volunteers for the hard working committee!

Lectures have taken place in the evenings, at weekends and during the working week. This format seems to suit the majority of members and so will continue into 2000.

Events that were particularly well attended included the study day on muscle imbalance when our speaker Liz McKay blended theory and practice to produce an inspiring and enjoyable day. Equally popular was an evening lecture by Alan Bass on the management of acute head injury. The evening provided much food for thought by challenging the traditional nursing and physiotherapy management of these patients.

The committee would like to thank all who have contributed to a successful 1999 lecture programme, particularly some local speakers who regularly give up their time to support Yorkshire ACPIN.

Looking forward to the coming months a variety of speakers have been approached to cater for a broad range of interests. The programme is not yet fully confirmed but includes experts in their field such as Paulette van Vliet (Movement science) and Janice Champion (gymnastics).

Also planned is a lecture on Parkinson's Disease and Multi-System Atrophy, and a weekend course on Neurodynamics.

The committee is, as ever, on the lookout for new ideas and members. Please feel free to approach any of the committee with your ideas and opinions.

LETTERS

BENCHMARKING FOR STROKE

Dear Colleagues,
We are currently in the process of setting up an Acute Stroke Unit at Southampton General Hospital. The 22 patients stay with us an average of 10 days (range 6 - 36). The patients are aged 18 upwards. We would be very grateful to hear of any similar Stroke Assessment Units who could help us with a benchmarking project.
Yours sincerely

Helen Foster MScP
Tel: 01703 777222 Bleep 2547
email: ion.foster@
gbr.xerox.com
Southampton University
Hospitals Trust

STROKE CONFERENCE REPORT

Dear Colleagues,
The Stroke Conference that took place in April 1999 has now had the summaries compiled. It has taken a while for the speakers to agree what should go in to the summaries, but this is now complete. If there are any ACPIN members who would like a copy, please contact me or Lina McDonnell at: CHSS, George Allen Wing, The University, Canterbury, Kent CT2 7NF. Please enclose a cheque for £3.00 payable to UNIKENT.
Best wishes,

Dr Cecily Partridge

APOLOGY NEUROLOGICAL PHYSIOTHERAPY – EDITOR: MARIA STOKES

A review of the above book was published in the Autumn 1999 issue of *Synapse*. The opening paragraph of the review stated that 'The author of this book claims it to be "A new, dynamic textbook that every student should own..."', and goes on to comment that this is an 'extravagant claim'. *Synapse* would like to point out that the author DID NOT make this claim. This was in fact the statement made by the publishers in their sales pitch on the back cover, and the author had no control over what was written, and was unaware of this statement prior to publication.

Neurological Physiotherapy is certainly a book that has received a number of very positive reviews, and we wish to apologise to Professor Stokes for any embarrassment caused by this error.

Ros Wade
on behalf of the *Synapse*
committee

ACPIN are saddened to announce the recent death of Moira Banks. She was a committed ACPIN member and former Regional Representative for Scotland. Our sympathy goes to her family.

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 - Advances in rehabilitation
 - Neuro-plasticity
- Implications for health policy, resources and future planning

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Course tutor: Margaret Mayston PhD MCSP

Physiology Department,
University College London &
the Bobath Centre, London

The course will provide physiotherapists working with neurological movement disorders (adult and paediatric) with a theoretical basis for clinical practice. The course will also include a major skills component to enable therapists to gain greater expertise in the management of clients with neurological disorder. It will enhance the physiotherapists' awareness of other aspects of client management and will provide them with a framework to develop evidence-based practice. The full MSc option provides the opportunity to carry out an in depth investigation of a particular area of interest. The course is being presented in association with The Bobath Centre, London, giving participants the opportunity to gain a basic Bobath qualification in addition to the MSc.

For further details and an application form please contact:

Mrs Fiona Cook
MSc Administrator
Institute of Human Performance
RNOHT
Brockley Hill
Stanmore
Middlesex
HA7 4LP

The Management of Spasticity in the Community

MAY AND JUNE 2000
REGIONAL STUDY DAYS

Last September, ACPIN was approached by Ian Ellis Director of Athena Neurosciences Business Unit, to co-host a series of regional study days on the theme of 'The management of spasticity in the community' with the emphasis on neurophysiotherapy and Multiple Sclerosis. Following much debate ACPIN decided that this was an excellent chance to promote neuro-physiotherapy.

Six regions volunteered to host the days, and the dates are as follows:

- Liverpool 26th April
- Stirling 22 May
- Poole 5th June
- Bristol early June
- Norwich 30 June
- Kent date to be confirmed

Later in the year the course will also be available in London and Northern Ireland.

All of the regions have been actively involved in planning the programme in conjunction with Athena Neurosciences. A stimulating day has been organised incorporating a Medical Update as introduction, and topics such as neurophysiology, seating and posture, and neurophysiotherapy with a case study example.

The aim of each day being to provide the opportunity for acute and community based physiotherapists to join forces to expand their knowledge of spasticity management, highlighting problems experienced in primary care.

The study days will include refreshments and lunch. All ACPIN members will be able to attend free of charge, but places will be limited. The whole venture has been sponsored by Athena, to whom we are extremely grateful for such an invitation.

For further information please contact: Lucie Flint at Athena Neurosciences, Letchworth SG6 2HU or by fax on 01462 707273.



20-22 October 2000

EXPANDING HORIZONS

2000 Congress and Exhibition of the Chartered Society of Physiotherapy

International Convention Centre, Birmingham

REGISTRATION FORM

PLEASE USE BLOCK CAPITALS

Title Mr/Ms/Mrs/Miss/Dr/Prof (DELETE AS APPROPRIATE)

First name..... Surname

Job Title (eg Senior 1P.T, senior lecturer or private practitioner).....

Address.....

Town/Country Post code.....

Telephone number..... Fax

THE ABOVE INFORMATION WILL APPEAR ON THE DELEGATE LIST AND YOUR NAME BADGE.

Do you have any dietary/special requirements? Would you like details about creche facilities?

If YES, please detail

IF YOU REGISTER BEFORE 15 SEPTEMBER, YOU WILL RECEIVE A COMPLIMENTARY SET OF BUSINESS CARDS

First name..... Surname

Job Title Town/city(eg London or Glasgow).....

THE ABOVE INFORMATION WILL APPEAR ON YOUR BUSINESS CARD.

A · REGISTRATION DETAILS

Are you a:

PLEASE TICK ONE BOX ONLY

- CSP member
- non CSP member
- Physiotherapy student
- Retired/unwaged CSP member
- Free-paper speaker
- SIG speaker
- Exhibitor.....
- Exhibition visitor only (NO FEE)
exhibition will be open on Friday and Saturday only

B · SPECIFIC INTEREST GROUP PROGRAMMES

If you are registering for the conference sessions please state which programme you will be **mainly** attending (for room allocation).

PLEASE TICK ONE BOX ONLY. You can swap between sessions.

- acupuncture
- learning disabilities
- occupational health
- orthopaedics
- older people
- mental healthcare
- neurology
- pain
- reflextherapy
- sports medicine
- therapeutic riding
- undecided

Are you a member of a SIG
YES NO
if YES which one?



THE CHARTERED SOCIETY OF PHYSIOTHERAPY
The 2000 Congress and Exhibition
20-22 October . International Convention Centre Birmingham

C · REGISTRATION FEES PLEASE SEE NOTES ABOUT BOOKING

Full registration to include all daytime catering as specified on the programme, entry to all conference sessions and trade exhibition (open Friday and Saturday only) and VAT at the current rate. Please note the delegate rates are NOT interchangeable. All fees are strictly as stated below.

		PLEASE TICK BOX	
CSP MEMBERS	Full registration	BEFORE 31 MAY 2000*	£135.00 <input type="checkbox"/>
		1 JULY - 31 AUGUST 2000*	£165.00 <input type="checkbox"/>
		AFTER 1 SEPTEMBER 2000*	£190.00 <input type="checkbox"/>
	Day delegate rate (half day rates are not available)	£90.00	<input type="checkbox"/> state which day
NON CSP MEMBERS	Full registration	UNTIL 1 OCTOBER 2000*	£165.00 <input type="checkbox"/>
	Full registration	AFTER 1 OCTOBER 2000*	£200.00 <input type="checkbox"/>
	Day delegate rate	*DATE AS POSTMARKED	£99.00 <input type="checkbox"/> state which day
DISCOUNTED RATES			
PHYSIOTHERAPY STUDENTS	(please attach a letter from your physiotherapy school)		
	Full registration		£65.00 <input type="checkbox"/>
	Day delegate rates		£30.00 <input type="checkbox"/> state which day
RETIRED CSP MEMBERS/UNWAGED	Full registration		£70.00 <input type="checkbox"/>
	Day delegate rates		£50.00 <input type="checkbox"/> state which day

D · SOCIAL EVENTS AND OVERNIGHT ACCOMMODATION**SIG SUPPERS**

Would you like to receive details on any of the suppers being organised by the groups in section B.

YES NO

if YES which ?

E · PAYMENT DETAILS

Registration fee	£	all cheques to be made payable to the Chartered Society of Physiotherapy
Total	£	payable in pounds sterling only Inclusive of VAT (reg. VAT No. 232323800)

CREDIT CARD PAYMENTS VISA/MASTERCARD/ACCESS are accepted

Card numberExpiry date

Card holders signatureAmount to debited

ACCOMMODATION INFORMATION

A list of hotels will be sent to you. Please make reservations via the Birmingham Convention and visitor Bureau. All the information will be on the booking form.

BOOKING CONDITIONS PLEASE NOTE

- Please enclose full payment to secure your booking - Invoices possible for group bookings only (3 or more)
- All fees quoted are inclusive of VAT at the current rate of 17.5%
- Please note that delegate fees do not include travel or accommodation or social events
- Please use one registration form per person - please photocopy this form if necessary. Delegates are advised to take a copy of their registration form for their own records.
- All cancellations will be refunded in full or part up until the closing date but are all subject to a £15.00 fee, however substitute delegates are welcomed at no additional charge
- A receipt will be sent to acknowledge payment- Invoices are not available after the closing date

CLOSING DATE FOR APPLICATIONS IS 2 OCTOBER 2000 · BUT PLEASE REGISTER AS SOON AS POSSIBLE

Any queries regarding your booking, please contact: The Events Unit · CSP

14 Bedford Row, London WC1R 4ED · Tel: 020 7306 6621/2 · Fax: 020 7306 6623 · E-Mail durhams@csphysio.org.uk

Please tick this box if you do not wish to receive separate mailings of commercial nature eg. from CSP exhibitors/sponsors

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

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