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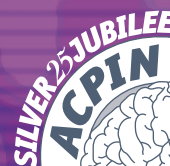
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Spring 2006

# Syn'apse

- ▶ *Does the acquisition of improved postural stability result in improved selective functional activity?*
- ▶ *The use of the Bobath concept to facilitate single leg stance and the influence of this on gait in patients following stroke*
- ▶ *The lived experiences of physiotherapists working with people with progressive multiple sclerosis: a qualitative study*



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

## Contents

<b>From the Chair</b>	2
<b>Editorial</b>	
The Constant Gardener	3
<b>Articles</b>	
• Does the acquisition of improved postural stability result in improved selective functional activity?	5
• The use of the Bobath concept to facilitate single leg stance and the influence of this on gait in patients following stroke	11
• The lived experiences of physiotherapists working with people with progressive multiple sclerosis: a qualitative study	16
<b>Articles in other journals</b>	18
<b>Sharing good practice</b>	
An established multidisciplinary in-service development education programme working across three different hospitals	20
<b>ACPIN news</b>	22
<b>Other news</b>	26
<b>Research forum</b>	28
<b>ACPIN silver jubilee national residential conference</b>	
<i>Stroke: Past, present and future</i>	32
<b>Reviews</b>	
• BOOK Science based rehabilitation: Theories into practice	40
• COURSE Illuminating the way ahead: Working together to improve MS care	41
• COURSE Splinting with abnormal tone	41
<b>Regional reports</b>	42
<b>Letters</b>	46
<b>Guidelines for authors</b>	47
<b>Regional representatives</b>	48

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## From the Chair

**Nicola Hancock** BSc (Hons) MCSP SRP  
ACPIN Chairperson

Welcome to the Spring 2006 edition of *Synapse*.

As usual, sitting down to write *From the Chair* provides me with an excellent opportunity to reflect on the work of the Executive and National committees on your behalf and think about the coming months. I don't know about all of you, but I am very good at taking on work and absolutely useless at finding the time to write down and reflect on projects. Evidence of Continuing Professional Development will, quite rightly, become increasingly important as the Health Professions Council examines our professional status more closely, but I am not sure they will accept copies of this twice-yearly page stuck in my CPD diary!

We remain involved with many excellent projects, with a considerable number of Executive Committee members representing ACPIN at other groups and working parties. We have recently been involved in the consultations for the NSF for Parkinson's disease, although much of this work was led by AGILE, with whom we have formed some increasingly close links. AGILE and ACPIN co-represent the CSP and their own groups at the Royal College of Physicians Intercollegiate Stroke Working Party. From this group, we have developed the *Physiotherapy Specific Stroke Guidelines*, derived from the National Clinical Guidelines for Stroke (RCP June 2004) and you should receive a free copy of these with this edition of *Synapse*. I hope that you will agree that this is an excellent, relevant document and further copies can be purchased from the CSP at £5.00 each. ACPIN part-funded their production and there were some close negotiations to ensure that every member could receive one copy free of charge. If you do not work directly in Stroke care,

please do pass the copy on to someone on your local Stroke team.

Plans for Congress 2006 have proceeded less than smoothly. The CSP were unfortunately extremely late in making formal decisions about this year's event, and despite our best efforts, ACPIN have been informed that we will not be able to host the two-day programme that we were hoping for. The event this year is to be 'themed' around specific topics rather than each CIG chairing their own programme. The theme to which ACPIN will be contributing is 'Managing long term conditions' and we will be providing speakers for our main session, which will now be all day on Friday 13th October. As this goes to press, I cannot provide you with a confirmed programme, but can tell you that we have approached some highly renowned speakers on MS, MND and PD and await their confirmations. The event, although shifting focus slightly, should be excellent and will remain the flagship for the CSP. Many ACPIN members will want to look at Saturday's programme as well, where other groups will be contributing speakers to the long term conditions topic. I do hope you can make it. Keep an eye on [www.acpin.net](http://www.acpin.net) and *Frontline* for updates.

The national roll-out for iCSP should have occurred by the time this journal reaches you – we have been closely involved with this one from the start and are looking forward to having the site up and running. I am indebted to those of you who have agreed to act as moderators and would particularly like to thank Julia Mackenzie for acting as lead. Our executive committee link will be Julia Williamson.

Membership continues to thrive and in the first couple of months of the membership year we are up to

900, putting us well on target for the usual 1300-1400 by the year's end.

Forms can be downloaded from [www.acpin.net](http://www.acpin.net).

As Synapse reaches you, and having written this introduction back in February, I am hoping that we have just hosted an excellent residential conference and AGM, 'Stroke: Past Present and Future', our main silver jubilee event. I know that it is becoming increasingly difficult for many of you to access funding for such events, due to the number of Trusts with enormous debts, but I thank you for your continued support. It saddens me to hear that many Trusts have ceased funding external courses, or are severely limiting staff attendance. This demonstrates considerable short-sightedness, as poor investment in staff education contradicts what should surely be the aim of a modern health service – well educated, supported and motivated staff providing high standards of evidence-based care.

However, for all those committed ACPIN members working in the NHS and elsewhere – keep up the good work, keep in touch and keep active in your local ACPIN groups. I value your comments and welcome new ideas – keep them coming.

Best wishes as ever,

Nicola



# The Constant Gardener

Sue Mawson MCSP BSc (Hon) PhD  
ACPIN President

Sadly drug company research has received very bad press of late with the tragic events unfolding at the Parexel private clinic attached to Northwick Park Hospital last week. Six men involved in a phase I randomised controlled clinical trial of a drug known as TGN1412 suffered total organ failure collapsing within minutes of being administered the drug. The authorities claim that proper procedures were followed and that earlier laboratory and animal testing showed no untoward problems. The makers of TGN1412, a German company called TeGenero is one of many of a new breed of small bio-tech firms hunting for the miracle cure. Such research is hugely expensive and like most small companies TeGenero had to raise £9m from venture capitalists and other investors in order to develop their lead product, TGN1412. Where once the testing of new drugs was the preserve of academia, now medical research is dominated by commercial interest.

How poignant that *The Constant Gardener* a film adaption of the Le Carre book should have been released so recently with haunting suggestions about the power of pharmaceutical companies:

*'President Arap Moi's Kenya is a country in the grip of AIDS, while political machinations maintain a deadly status quo. When the British Diplomat, Justin Quayle's wife is killed, his investigation of her murder leads him into a murky web of exploitation involving Kenyan greed and a pharmaceutical company eager to promote its 'wonder cure' for tuberculosis. As Quayle looks deeper into the company which his wife had been investigating, all he has carefully built around him begins to crumble.'*

Nearer to home a similar story reported in a number of national

papers (*Observer*, 2005, *Times Higher*, 2006) and in the *Slate Magazine*, the on line branch of the Washington Post, suggests inappropriate involvement in research by the drug company Procter & Gamble. For several years a senior medical professor at a UK University had been complaining about scientific misconduct in a research study funded by the USA based Procter & Gamble Pharmaceutical Company to investigate the effectiveness of the drug *Actonel* in reducing fracture rates in women with osteoporosis. The researcher claimed that the company had denied him access to key data and then tried to ghost write his analysis. Whilst the researcher was refused permission to perform his own independent analysis on the data he was allowed to visit the Procter & Gamble office to view the results. In one graph the researcher noticed 40% of the patient data was missing. The researcher reportedly suggests that inclusion of the data would have disproved the drug companies 'key message' about the effectiveness of their drug. Procter & Gamble strongly denies the researchers claims stating that it is 'standard industry practice' not to hand over all data to academics (Revill, 2005). The allegation is currently being investigated by the body for testing and licensing drugs, The Medicines and Healthcare Products Regulatory Agency (MHRA).

The author of the article comments that some universities have complex and increasingly compromising relationships with pharmaceutical companies. In 2001, the editor of a number of prominent medical journals warned that 'growing industry interference with academic research was threatening the objectivity and trustworthiness of medical research' (Washburnton 2005). Unfortunately in

subsequent years universities and medical schools have become increasingly dependent on drug company funding with 80% of clinical research privately funded. Washburn suggests that drug companies have demanded greater control than ever over the research process, 'making it easier for them to obscure or delete negative results from published academic papers'. In December of last year the *New England Journal of Medicine* accused Merck a large pharmaceutical company of failing to report three patient deaths in a randomised controlled trial that led to FDA approval of the painkiller Vioxx. The drug was subsequently withdrawn from the market last year because of association with heart attacks and stroke.

This is sadly not a new problem, following the randomised controlled trial (RCT) of the drug *Distaval* better known as thalidomide, the drug was marketed in 1958 and used in early pregnancy as a sedative and anti-emetic. On 2 December 1961 Distillers Company Ltd (the pharmaceutical company marketing the drug) wrote a letter to the editor of the *Lancet* stating that:

*'having just received a report from two overseas sources possibly associating thalidomide with harmful effects on the foetus in early pregnancy ... we feel that we have no alternative but to withdraw the drug immediately from the market pending further investigation.'* Hayman, Managing Director Distillers Company Ltd, *Lancet* (1961)

The two overseas sources were in fact, single case studies subsequently published as brief letters in the *Lancet* (Mc Bride, 1961; Lenz, 1962; Pfeiffer and Kosenow, 1962). These medical practitioners noticing an increasing incidence in hypoplastic and aplastic deformities in babies used single case information to establish a link between the drug taken during the early stages of pregnancy. There followed two further case studies (Williams and Dumoulin, 1962; Scott Russell and

McKichan, 1962) providing further evidence of the effects of the drug. Sadly Lenz (1962) estimated that since the drug was marketed in Germany in 1959 and subsequently withdrawn in 1961 an estimated 3,000 babies may have been born with defects attributable to it.

No one will know how the original RCT could have failed to detect such severe side effects. One possibility was that the numbers of subjects in the trial was too small to have any worthwhile chance of detecting any undesirable or unwanted side effects, which by definition occur relatively infrequently. In addition inclusion in the trial could have introduced bias, as exclusion and inclusion criteria will have potentially removed certain variables, which, in combination with the intervention may produce unwanted side effects. Did the drug company 'lose' data, as they appear to have done in the case of Procter & Gamble?

It is interesting that during the RCT of *Distaval* the decision to stop the research because of side effects did not occur during the trial as data collection processes were incomplete. However following licensing, the decision-making process to withdraw the drug from the market was based on what amounted to single case study information.

Whilst it might be suggested that drug company control and the commercial nature of product design may have adverse effects on both the rigour of the research and the accuracy of the results published the very nature of the methodology used to investigate the effectiveness of drugs may be problematic when used in health care research and particularly when used to try and establish the effectiveness of not a drug but a complex therapeutic intervention.

Toynbee (1996) highlights the increasing dilemma facing researchers using RCT. She suggests in the article that Professor David Machin, a chief

statistician for the Medical Research Council, believes that many trials are collapsing as patients do not want randomising into a control group rather than receiving treatment, particularly where this involves life-threatening conditions such as cancer and AIDS. In many instances practitioners both medical and paramedical, have informal knowledge of effective interventions and to withhold this information has, suggests Toynbee, ethical implications.

*'Randomised clinical trials of new medicines presents a dilemma for doctors, who want results, and patients, who want to be cured.'* Toynbee (1996)

The very nature of both stroke as a disease and the complexity of rehabilitation for people who have had a stroke creates a major problem for the researcher. The scope and level of impairment may vary following a stroke, as may the timing and frequency of interventions be they drug therapies or physical therapies. The psychological effects of having a stroke, the effects of carry over and the role of the extended

care team are all factors that potentially affect the ultimate outcome of treatment.

Whilst certain authors (Ernst, 1990; Dombovy et al., 1986) have suggested that randomised controlled trials (RCT) are the only scientific way of providing evidence of effective interventions, the evaluation of stroke rehabilitation in this way would be inappropriate for a number of fundamental reasons. In the 'Focus on' article in the autumn edition of *Synapse*, I will be discussing the methodological problems of using RCTs to investigate the effectiveness of complex interventions suggesting how the design of the RCT can be improved in order to overcome some of the problems inherent in this experimental methodology.

*'Unfortunately, from a research point, most rehabilitation research is much more complex than the majority of medical research, no matter how high-powered and 'scientific' the latter appears to be.'* Andrews (1991).

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# Does the acquisition of improved postural stability result in improved selective functional activity?

## INTRODUCTION

The hypothesis for this case study states that the acquisition of improved postural stability results in improved selective functional activity.

Evidence suggests (Whalley-Hammell 1995) that over the past thirty years, as a result of improved acute management there has been a reduction in mortality associated with tetraplegia, along with an increase in the proportion of incomplete injuries.

Disability following incomplete SCI arises primarily as a result of weakness and/or spasticity, through both neural and mechanical mechanisms (Bromley 1998). Consequently, it has been suggested (Edwards 1996) that incomplete SCI patients demonstrate degrees of motor recovery and functional improvement, which appear to be influenced by rehabilitation using a normal movement approach.

Postural reactions are complex and integrated at many levels of the central nervous system (CNS) (Shumway-Cook and Woollacott 1995). Movement begins from an intention or stimulus, which feeds forward directly to postural muscles allowing postural control to precede selective movement (Mulder 1991). As the movement evolves, feedback via the ascending pathways, to the thalamus, cerebellum and basal ganglia allows 'on-line' modification and refinement of movement and postural control. Movement systems predict postural disturbances and recruit anticipatory forces to minimise the predicted displacement.

The aim of this case study is to determine whether using a normal movement approach to treatment of a patient with an incomplete SCI would result in improved postural stability and improved selective functional activity.

## PATIENT INTRODUCTION

The patient, Mr R, used for this study is a 69 year old male who sustained a C3 incomplete, ASIA D SCI (see *Appendix 1*) following a fall on 19 December 2002. He underwent cervical decompression C3 – T1 on 23rd December 2002. Motor function was more affected in his upper limbs (UL) than his lower limbs (LL). He was therefore diagnosed with central cord syndrome.

Central Cord Syndrome (CCS) is a syndrome of incomplete tetraplegia, which is characterised by disproportionately more UL motor impairment than LL motor impairment (Elliot et al 1990). Neurological

recovery usually occurs earliest and to the greatest extent in the lower extremities and is followed in sequence by the bladder, upper extremities and finally the hands (Schneider et al 1954). Elliot et al (1990) observe that (as is the case with Mr R), CCS frequently occurs amongst older people with cervical spondylosis who sustain hyperextension injuries, during falls.

CCS is thought (Jimenez et al 2000) to occur as a result of a primary injury involving the large fibres of the lateral corticospinal system (CST), which can occur in the absence of motor neurone loss supplying hand musculature. The CST is essential for the independent and synchronised activity, which enables reach and manipulation (Porter & Lemon 1993, Bremner et al 1991).

Patients with central cord syndrome are likely to demonstrate abnormal movement patterns at the shoulder due to the imbalance of muscle activity (Roth et al 1990). UL control is complex. Movements of the shoulder joint are dependent upon the integrity and responsiveness of the shoulder girdle, trunk, pelvis and lower limbs. Thus it can be postulated that there is a correlation between postural control and freedom of upper limb movement (Mackay 2003).

Leonard (1998) states that postural stabilisation appears to be a prerequisite for accurate UL movement. Several researchers (Horak et al 1984, Badke MB and Difabio RP 1985, Lee WA et al 1987 and Layne CS and Abraham LD 1991 cited in Garland et al 1997) have studied the anticipatory postural adjustment associated with forward arm flexion in the sagittal plane of the shoulder. If effective, the anticipatory feature of the motor system prevents displacement of the individual's centre of mass with respect to the base of support. For example Right UL elevation is preceded by left multifidus contraction.

During this case study, the author hopes to demonstrate the application of the relevant theory to the assessment and treatment of Mr R to test the hypothesis.

## ASSESSMENT AND TREATMENT

Mr R was discharged home from hospital on 28th March 2003. He attended his first outpatient therapy appointment on 2nd April 2003. Consent to treatment, and photography were gained. Mr R agreed to be the subject of this case study.



**PMH** Nil of relevance

**DH** Nil prior to injury.  
Currently taking Ibuprofen intermittently for neck and shoulder pain.

**SH** Mr R is a company director and is keen to get back to work. He lives with his wife in a house with stairs.

During the initial assessment, Mr R's main problems were identified as follows:

- Reduced selectivity of trunk activity (left > right).
- Reduced postural control/core stability.
- Reduced selectivity of head movement.
- Weakness in UL bilaterally (C6–T1 Asia grades 2 & 3).
- Reduced left upper quadrant key point alignment.
- Unable to dissociate U/L from trunk.
- Unable to dissociate forearm from upper arm secondary to increased biceps activity.
- Reduced selectivity of hand function.

Mr R had developed a stereotypical pattern of glenohumeral (GH) medial rotation and abduction in order to enable him to move his left upper limb. He had a short, over-active pectoralis major. His scapula was protracted, and winged medially and at the inferior angle, due to weakness in serratus anterior, subscapularis and lower fibres of trapezius. Consequently left GH flexion was limited to 80°.

Mr R had no passive or active lateral rotation at the left GH joint (right = 45°). He also had reduced range of elbow extension (left = -30°, right = -20°), secondary to muscle imbalance between biceps and triceps. He had a subluxed left wrist.

Pre-intervention Mr R's upper limb function was limited (left > right). He was able to eat using a spoon and fork in his right hand. He was able to use his left hand to stabilise his plate, but was unable to use utensils in this hand. He was unable to dress his upper body. He required assistance to wash and comb his hair.

Mr R was independently mobile without the use of walking aids. He was able to safely negotiate a flight of stairs.

Mr R determined the following goals as priorities.

## GOALS

### Short-term goals

- To be able to dress upper body in sitting.
- To be able to take shoes and socks off, independently in sitting.

### Long-term goals

- To be able to eat independently using a knife and fork.
- To dress upper body in standing.

## INTERVENTION

The author treated Mr R three times a week for one month as an outpatient. The aim of treatment was to improve underlying postural control, in order to improve upper limb selectivity.

The malalignment and weakness in Mr R's ULs interfered with his overall posture. Work to improve UL alignment, soft tissue length and strength was important in preparation of the ULs, to reduce their interference with Mr R's trunk alignment, prior to working to improve stability and selectivity around the shoulder girdle.

In sitting Mr R used middle fibres of trapezius and latissimus dorsi (LD) (right > left) to achieve trunk extension. By placing the ULs out of their stereotypical patterns, Mr R was able to gain improved alignment in extension and lumbar selectivity. The improved trunk and shoulder girdle (SG) alignment, in turn fed into the ability to free his UL for selective activity.

On the basis of improved SG alignment, Mr R's patterning and range of GH flexion (110°) improved. Once triceps alignment improved, Mr R's strength according to the Oxford Motor Grading Scale improved from a grade II to a grade III. Mr R was able to use new triceps activity to actively lengthen biceps, thus reducing the soft tissue changes at the elbow.

The CCS is responsible for dexterity and precision in relation to control of the hand in functional activities. Hand to mouth activities and stereognosis were used in attempt to influence cortico-spinal pathways.

Geiger, R et al (2001) and Shumway-Cook (1995) observed that balance retraining is context or task specific. Throughout treatment components of upper body dressing, in functional postural sets, were incorporated to re-educate dynamic balance control.

Standing challenged Mr R's postural stability and demonstrated a degree of postural sway, which was not evident in sitting. Use of standing and single leg stance was introduced as a treatment progression.

## METHOD

To determine the effect of the intervention the following outcome measures were selected:

- Ability to don and doff sports shirt in sitting, plinth height 52 cm (not including buttons).
- 10 metre timed walk.
- Degrees of postural displacement, in sitting, during donning/doffing of shirt (hip to trunk angle) as measured with a standard goniometer.

The latter outcome measure has not been validated, however due to time constraints, was selected to provide an objective measure of hip flexion thus determining relative changes of trunk to thigh position during activity.

During the initial assessment Mr R was unable to



- Left UL abducted away from trunk.
- Left GH complex medially rotated (MR) – relative protraction left SG – apparent driving forward into rotation left side of trunk resulting in right thoracic rotation.
- Altered head alignment left rotation (LR) and right lateral flexion (LR 55°, RR 45°).
- Bilateral flexed elbows.
- Subluxed, oedematous left wrist (deformity from # 18 years ago).
- Weight bearing R>L – Left SG / Upper quadrant collapsing down on trunk.

Figure 1



- Right UL ROM and selectivity greater than left.
- Left UL marked MR.
- Right thoracic rotation and marked backward displacement of trunk.

Figure 2



- Final movement to get garment over head results in greater displacement of COG out of BOS.
- Holds left UL in flexion/MR pattern, not free for selective activity, not assisting in function.
- Displacement of COG is so extensive it results in raising right heel off the floor, secondary to increased activity in right hamstrings and hip flexors in attempt to stabilise.

Figure 3

doff his top independently and required the assistance of one person. In attempting the task the backward displacement of the trunk was marked and both feet left the floor. Mr R required assistance to regain his balance.

The 10m-timed walk took Mr R 16 steps in six seconds.

Within six treatment sessions Mr R was able to don and doff his sports shirt independently (see *Figures 2 and 3*). Hip to trunk angle was measured as 130° with a standard goniometer.

Once Mr R was able to dress and undress his upper body, the first outcome measure was altered to measure time taken to don and doff his sports shirt in sitting (excluding buttons).

## RESULTS

At the end of the twelve treatment sessions the outcome measures were retested.

1. Mr R was able to independently undress his upper body in 19 seconds (see *Figures 4 and 5*) and dress his upper body in 45 seconds. He was able to fasten one button in four seconds;
2. 10m timed walk took 14 steps in six seconds indicating an increase in stride length;
3. Hip to trunk angle is 110° as measured with a standard goniometer (see *Figure 4*), indicating reduced backward displacement of the trunk.

Mr R achieved his first short term goal, and was able to take his shoes and socks off independently in sitting, with the exception of the left sock, for which he required minimal assistance.

Mr R's increased independence in dressing reduced the input required from carers, which subjectively improved his self-esteem. He felt able to return to work for a few hours a day. In hindsight it would have been interesting to have used the SF36 (Short Form 36) – a



- Maintains COG over BOS whilst reaching UL to head.
- No backward displacement of trunk.
- Bilateral UL alignment improved when compared with Figure 2, appropriate meeting in mid line.
- Initiates Cx flexion prior to bringing shirt over head.
- Both feet remain on floor

Figure 4



- Ability to maintain COG over BOS allows improved UL selectivity bilaterally as compared with Figure 3.
- No backward displacement of trunk.
- Feet remain on floor, indicating that LL compensatory strategy has reduced.

Figure 5

## ASIA CHART

## ASIA IMPAIRMENT SCALE

- ☐ **A = Complete:** No motor or sensory function is preserved in the sacral segments S4-S5.
- ☐ **B = Incomplete:** Sensory but not motor function is preserved below the neurological level and includes the sacral segments S4-S5.
- ☐ **C = Incomplete:** Motor function is preserved below the neurological level, and more than half of key muscles below the neurological level have a muscle grade less than 3.
- ☐ **D = Incomplete:** Motor function is preserved below the neurological level, and at least half of key muscles below the neurological level have a muscle grade of 3 or more.
- ☐ **E = Normal:** motor and sensory function are normal

## CLINICAL SYNDROMES

- ☐ Central Cord
- ☐ Brown-Sequard
- ☐ Anterior Cord
- ☐ Conus Medullaris
- ☐ Cauda Equina

Appendix 1

quality of life measure, to measure this as an outcome in relation to Mr R's quality of life.

## IMPLICATIONS FOR PRACTICE.

The outcome measures suggest an improvement in both postural stability and selective activity (see Figure 4). Whilst undressing his upper body, Mr R became able to maintain his centre of gravity (COG) over his base of support (BOS) whilst reaching his upper limbs up to his head. There was no backward displacement of the trunk and both feet remain on the floor. His upper limb alignment improved as compared with Figure 3 where the left upper limb was held in flexion and medial rotation, and was unable to assist in function.

Janssen-Potten et al (2000) note that persons with complete, high spinal cord injury do not have enough residual muscle capacity to counteract the force of gravity, nor control a shift in body mass larger than their arms. In their study looking at forward reach in relation to chair configuration in SCI patients, Janssen-Potten et al (2000) observed that patients with high SCI stabilise the spine through bilateral activation of latissimus dorsi (LD). The fact that the LD can be used for spinal stabilisation is corroborated by the findings of Ito et al (1976).

Individuals with SCI use the pectoralis major (PM) and serratus anterior (SA) to stabilise the shoulder girdle in order to enable the LD and trapezius to support the erect position of the trunk. Janssen-Potten et al (2000) observed that if the chair backrest was tilted back by 12° to offer greater stability to the patient, it resulted in a decrease in SA activity in patients with SCI. Thus, an increased ability to control displacement of the arms and trunk during reach.

Mr R, despite having some abdominal and lumbar extensor activity, demonstrated the altered alignment and muscle patterning described by Janssen-Potten (see Figures 1, 2 and 3). These authors demonstrated that in patients with complete SCI, postural adjustments in seating gave rise to improved sitting balance and increased ability to control displacement of upper limb and trunk during reach. Their study had a relatively small number of participants (20) and was not a randomised controlled trial. However the results could be applied cautiously to suggest that Mr R, who had an incomplete SCI, with inherent potential to improve postural control as core stability and trunk alignment improved, would consequently also develop

## ASIA STANDARD NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY

R      L		<b>MOTOR</b>	LIGHT TOUCH      PIN PRICK		<b>SENSORY</b>
		KEY MUSCLES			KEY SENSORY POINTS
C2			C2		<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> 0 = absent  1 = impaired  2 = normal  NT = not testable </div>
C3			C3		
C4			C4		
C5		Elbow flexors	C5		
C6		Wrist extensors	C6		
C7		Elbow extensors	C7		
C8		Finger flexors (distal phalanx of middle finger)	C8		
T1		Finger abductors (little finger)	T1		
T2			T2		
T3			T3		
T4			T4		
T5			T5		
T6			T6		
T7			T7		
T8			T8		
T9			T9		
T10			T10		
T11			T11		
T12			T12		
L1			L1		
L2		Hip flexors	L2		
L3		Knee extensors	L3		
L4		Ankle dorsiflexors	L4		
L5		Long toe extensors	L5		
S1		Ankle plantar flexors	S1		
S2			S2		
S3			S3		
S4-5			S4-5		
		<input type="checkbox"/> Voluntary anal contraction (Yes/No)			<input type="checkbox"/> Any anal sensation (Yes/No)
<b>TOTALS</b> <input type="checkbox"/> + <input type="checkbox"/> = <input type="checkbox"/> <b>MOTOR SCORE</b> (MAXIMUM) (50) (50) (100)		<b>TOTALS</b> <input type="checkbox"/> + <input type="checkbox"/> = <input type="checkbox"/> <b>PIN PRICK SCORE</b> (MAXIMUM) (56) (56) (112)		<input type="checkbox"/> + <input type="checkbox"/> = <input type="checkbox"/> <b>LIGHT TOUCH SCORE</b> (MAXIMUM) (56) (56) (112)	

<b>NEUROLOGICAL LEVEL</b> <small>The most caudal segment with normal function</small>	<b>COMPLETE OR INCOMPLETE?</b> <input type="checkbox"/> <b>COMPLETE</b> <input type="checkbox"/> <b>INCOMPLETE</b> (Any sensory or motor function in S4-S5)	<b>ZONE OF PARTIAL PRESERVATION</b> <small>Caudal extent of partially innervated segments</small>	<b>ASIA IMPAIRMENT SCALE</b> <input type="checkbox"/> <b>A</b> <input type="checkbox"/> <b>B</b> <input type="checkbox"/> <b>C</b> <input type="checkbox"/> <b>D</b>
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<b>SENSORY</b> <input type="checkbox"/> <input type="checkbox"/> <b>R      L</b>	<b>MOTOR</b> <input type="checkbox"/> <input type="checkbox"/> <b>R      L</b>
--	--

**2000 Rev.**

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improved selectivity of upper limb activity.

The selective functional activity of upper body dressing improved greatly over the study period. Mr R became able to dress his upper body independently in sitting (52 cm plinth height) and dexterity improved such to enable him to undo and do up buttons.

The author chose the 10 metre timed walk and measurement of hip angle in sitting during upper body dressing to objectively test Mr R's postural stability. In hindsight, despite improvements in both measures, the author feels that the measurement of hip angle is not the best way to measure backward displacement and postural stability. For future testing the author would consider using a balance performance monitor under the pelvis and feet to give objective data regarding perturbations of balance during upper trunk dressing.

### SUMMARY

Postural stabilisation appears to be a prerequisite for accurate upper extremity movements (Leonard, 1998). The patient presented in this study, showed improvements in upper limb function following trunk stability work. With the limited amount of patient data from this

single case study it could therefore be suggested that the acquisition of improved postural control does result in improvements in selective functional activity.

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# The use of the Bobath concept

## to facilitate single leg stance and the influence of this on gait in patients following stroke

### INTRODUCTION

Following stroke, the improvement of gait has been ranked by patients as one of their most important goals (Hesse 2003) and is a significant factor in social and vocational re-integration. Consider, for example the importance of gait velocity in tasks such as crossing the road, for which a walking speed of 0.8m/s is required for safe crossing at a traffic light (Hesse 2003). In a study of 168 people with gait problems following stroke Green et al (2002) found an average walking speed of 0.4m/s.

A strong relationship has been found between walking and balance tasks (Pyoria et al 2004) and also between balance, gait speed and independence (Bohannon 1987 cited Nichols 1997). However, there is currently a limited body of evidence relating to the rehabilitation of gait and balance and hence function and independence in stroke patients. No single approach has been shown to have a superior outcome (Teasell et al 2003, Edwards 1996, Smith et al 1999). A significant proportion of physiotherapists working in the UK today base their treatment on the Bobath Concept. The individual nature of the Bobath approach and the unique interaction between the therapist and patient make it difficult to scrutinise, this has resulted in its omission from studies such as those mentioned above. This paper, based on two case studies, investigates the influence of the facilitation of single leg stance using the Bobath approach to treatment on balance and gait parameters in adults following stroke. Treatment was carried out over a four week period and outcome measures used were the Berg Balance Scale, timed single leg stance and timed ten metre walk.

### WHAT IS SINGLE LEG STANCE?

Single leg stance (SLS) is the support of the whole body weight on a single limb in a standing position. Successful SLS involves integration of the left and right sides of the body and appropriate feed-forward postural control. It is dependent upon an intact hip abductor mechanism to initiate lateral shift of the centre of mass (COM) and to counterbalance the bodyweight in SLS. The mechanism consists of gluteus medius, gluteus minimus, tensor fascia lata, superior gluteus maximus and passive tensions in the iliotibial band and fascia lata. The hip abductor mechanism is active in stabilising the contralateral pelvis creating a compressive force on the non-weight bearing leg of 1.5 times body weight (Sims

1999). In normal subjects the momentum of transfer of COM accelerates and then brakes before lift off of the flexing limb for SLS (Pai and Rogers 1993). Gluteus medius of the flexing limb and the adductors of the stance limb accelerate this movement. Gluteus medius of the stance limb and the adductors of the flexing limb are active in late propulsion and onset of breaking to control and maintain an appropriate COM (Pai 1993). Pai et al. (1994) found that limb loading asymmetry and difficulty redistributing weight over base of support contributes to gait problems in stroke patients. In a study of SLS in 14 stroke patients it was found that 80% of attempts to achieve SLS on the affected side and 52% of attempts on the unaffected side were unsuccessful. Pai et al. (1994) found a correlation between ability to perform SLS and motor function and balance scores. It may therefore be hypothesised that there is an association between SLS, gait and balance.

Following stroke there has been found to be either a delay in recruitment or co-contraction of agonist and antagonist muscles of the affected side plus compensatory overactivity of the unaffected limb (Kirker 2000). Such compensatory strategies are used for deficient postural control (Shumway-Cook and Woollacott 2001). If the COM is not shifted appropriately the abductor mechanism is less effective (Pai and Rogers 1990 cited Pai et al 1994). Reduced alignment in standing further contributes to weakness of the hip abductor mechanism (Simms 1999). The stroke patient may therefore be unable to achieve and maintain an appropriate shift of COM for SLS (Pai et al 1994) and so the appropriate preparatory postural response is not achieved and attempted SLS is unsuccessful (Pai et al 1994). The impact of this reduced motor and postural control is seen in compensatory strategies for gait. These include decreased velocity, cadence and stride length. Increased double limb support is seen with unequal stance and swing phases as a result of balance deficiencies and a reduced ability to move the body over an unstable limb (Von Schroeder et al 1995).

The majority of research supports the clinical value of addressing both the paretic and non-paretic limb in treatment following stroke. The initiation and maintenance of weight transfer requires ipsilateral and contralateral muscle activity as described above and studies have found that weight transfer to both the paretic and non-paretic side is affected following stroke

(Pai et al 1994). In a study of 49 patients, three spent more time on the paretic leg and less on the non-paretic leg during gait cycle (Von Schroeder et al 1995). Pai et al (1994) also found that ground reaction force was reduced in the paretic limb and therefore ability to propel weight to the unaffected side was compromised. The hip abductor musculature of the flexing leg is important in propelling the centre of mass. Additionally, SLS on the non-paretic side requires stabilisation of the pelvis on the affected side in order to maintain SLS. Kim and Eng (2003) found a bilateral reduction in muscle torque affecting both the paretic and non-paretic limb and recommended the treatment of both limbs following stroke.

### CASE STUDIES

The Bobath Concept was applied to the treatment of two patients and structured according to hypothesis-orientated practice (see *Tables 1* and *2*, right). Both patients were ambulatory but had ongoing mobility goals. They were more than three months post stroke and therefore outside the period during which the majority of spontaneous recovery is thought to occur (Jorgensen et al 1995 cited Smith et al 1999, Von Schroeder et al 1995). Both patients felt their mobility had reached a plateau.

Treatment initially addressed the patient's paretic side in Case Study 1 and the patient's non-paretic side in Case Study 2. Selection of side for treatment was based on individual assessment and was directed towards the side to which the patient had greatest difficulty making postural adjustments. For both patients this was the side most significantly lacking cooperative alignment. In both case studies it was the left side which was addressed first, treatment later progressed to encompass the right side.

#### Case Study 1

Mrs S, 56 years old, was a librarian and previously enjoyed walking and an active social life. She had a large right medial collateral artery infarct twelve months before the commencement of this case study. She had a three month period as an inpatient at a local stroke rehabilitation unit and continues to be treated as an outpatient. Mrs S has now retired from work as a result of problems secondary to her stroke. She is mobile indoors with a stick and uses a wheelchair outside which her partner pushes. Her main mobility goal was to be able to walk outside with a stick.

**Selection of side for SLS** Mrs S was oriented to the right (non-paretic) side and not able make postural adjustments to the left (paretic) side. It was felt initially that her main problem was inability to transfer weight to the left, therefore treatment began with facilitation of

### MRS S – TREATMENT INTERVENTION





HYPOTHESIS	TREATMENT
<p><b>1</b> Increasing the activity of the distal key point of the foot will increase orientation to the left (paretic) side and alignment of the distal key point.</p>  <p><b>Before treatment</b> The left foot is poorly aligned. There is reduced interaction of the left foot with the floor and no weight bearing through the heel.</p>	<ul style="list-style-type: none"> <li>• Mobilisation of tight structures around the left foot and ankle.</li> <li>• Activation of the left foot and ankle in sitting.</li> <li>• Alignment and activation of left foot, ankle and calf complex in stepping.</li> <li>• Facilitated weight transfer to the left in standing.</li> </ul>  <p><b>After treatment</b> Improved spontaneous alignment of the distal key points and increased activity and interaction of the left foot with the floor.</p>
<p><b>2</b> The reduction of left (paretic) hamstring over activity will increase the selectivity of movement around the pelvis by allowing access to other components of the hip abductor mechanism.</p> 	<ul style="list-style-type: none"> <li>• Active lengthening of the left hamstrings in crook lie.</li> <li>• Facilitation of left gluteal muscles and selective hamstring activity in side lie (see picture below)</li> <li>• Facilitation of left gluteal activity with the left leg over edge of bed and the foot on a mobile surface (gymball).</li> </ul>
<p><b>3</b> Increased somatosensory input will facilitate the development on an intact body schema and so increase postural control and alignment.</p> 	<ul style="list-style-type: none"> <li>• Activities in left single leg stance with facilitation at pelvis (rolling ball with non weight bearing foot, stepping to side and back to SLS).</li> </ul>

Table 1

single leg stance on the left (paretic) side. This was the focus of five one hour treatment sessions over a period of two weeks. The progression of treatment is illustrated in Table 1 (left) by the development of new hypotheses as the patient responded to treatment.

Following this, treatment continued for a further four one-hour sessions over a two week period. The focus changed to the facilitation of SLS on the right (non-paretic) side and followed similar principles to those above.

### Case Study 2

Mr H (44 years old) is an engineer. His job consisted of 50% manual work and 50% desk based work. He lives with his wife and four year old daughter. He had a large left cerebral haemorrhage five months prior to the commencement of this case study. He was an inpatient at a local stroke rehabilitation unit for three months and has had ongoing outpatient physiotherapy since discharge home. Mr H was independently mobile over short distances at the beginning of the sessions. His goal was to be able to walk outside at the same pace as his wife and daughter without standing out in a crowd.

**Selection of side for SLS** Mr H had a right hemiparesis but was unable to accept weight on his left (non-paretic) side and was not co-operatively aligned on the left. Treatment was directed towards facilitation of single leg stance on the left (non-paretic) side initially. This was carried out in four one hour treatments over a two week period. The progression of treatment is illustrated in Table 2 (right) by the development of new hypotheses as the patient responded to treatment.

Following this treatment continued according to the above principles on the facilitation of SLS on the right (paretic) side for three one hour treatments over a one week period.

### RESULTS

In both case studies balance and gait parameters improved. This is illustrated in *Figures 1* and *2* overleaf.

### Gait Velocity and Cadence

Normal adult gait velocity is approximately 1.46m/s and cadence is 112.5steps/minute (Craik 1989 in Shumway-Cook and Woollacott 2001).

- Mrs S doubled her gait velocity from 0.2m/s to 0.4m/s and her cadence increased from 32 to 50steps/min. She has commenced walking short distances outside with a stick.
- Mr H made significant improvements in his gait velocity from 0.7m/sec to 1.25m/sec and in his cadence from 87steps/min to 120steps/min. He achieved his mobility goal and is now able to walk outside and keep pace with his family without feeling



MR H – TREATMENT INTERVENTION	
HYPOTHESIS	TREATMENT
1 Increased activity at the distal key point of the left (non-paretic) foot will increase postural stability and orientation.	<ul style="list-style-type: none"> <li>• Activation and mobilization of the left foot.</li> <li>• Facilitation at the pelvis of left single leg stance.</li> </ul>
2 Accessing the proximal key point of the pelvis to increase abdominal and gluteal activity will increase core stability and postural control and hence access to hip and ankle strategy.	<ul style="list-style-type: none"> <li>• Pelvic tilt in crook lie with facilitation at pelvis.</li> <li>• Lower limb activity in side lie on a stable base (closed chain).</li> <li>• Facilitation of pelvic tilt in prone stand.</li> </ul>
3 Selective activation of left (non-paretic) hip extensor activity and stability in a functional range will facilitate alignment and activation of hip abductor mechanism in standing.	<ul style="list-style-type: none"> <li>• Involvement of the left (non-paretic) upper limb to reduce fixing and facilitate trunk extension in side lie with facilitation at the left heel and proximal hamstrings (picture below).</li> </ul> 
4 Increased somatosensory input will facilitate the development on an intact body schema and so increase postural control.	<ul style="list-style-type: none"> <li>• Activities in left single leg stance with facilitation at the pelvis (rolling ball with non weight-bearing foot, stepping to side and back to SLS)</li> <li>• Repeat SLS and rolling ball with non-weight bearing foot with eyes closed.</li> </ul>
5 Functional integration of right side whilst in SLS on left will dissociate the right and left lower limbs and facilitate alignment and stability on the left.	<p>SLS on left (non-paretic) side, kicking ball with right (paretic) foot (see picture below).</p> 

Table 2



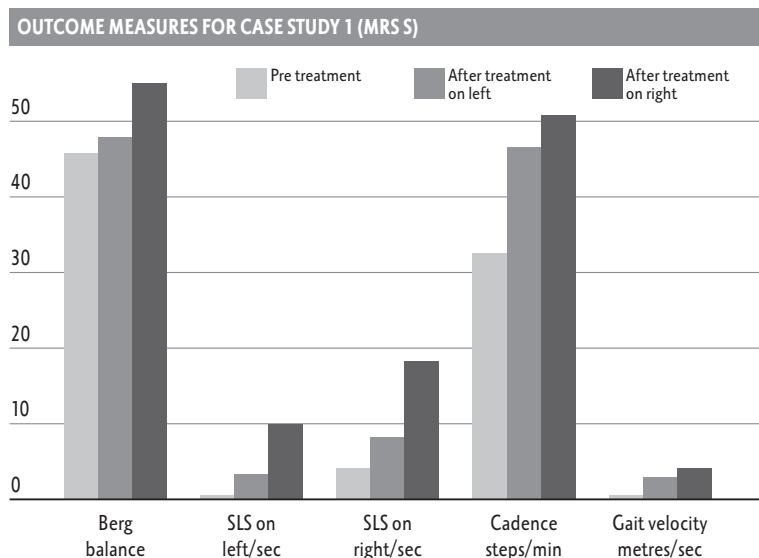


Figure 1

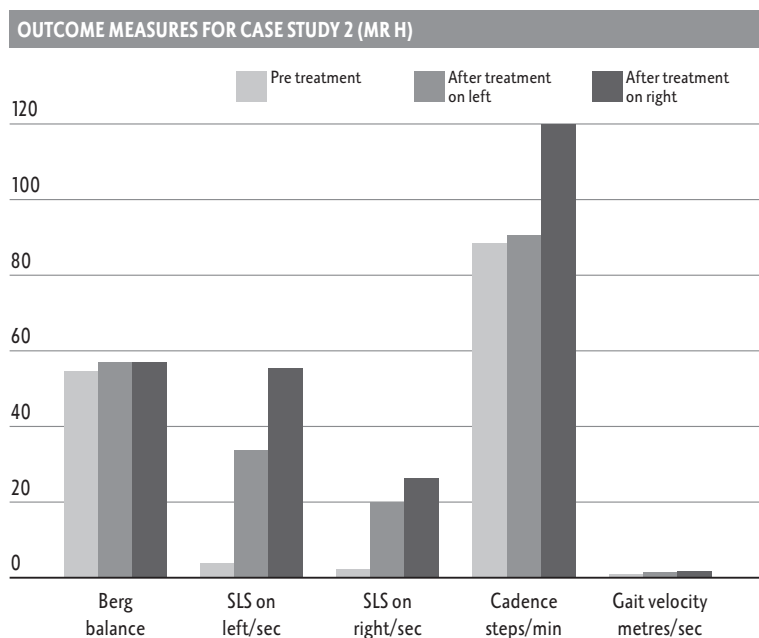


Figure 2

his gait is conspicuously altered.

#### Balance parameters

Mrs S increased her Berg Balance Score by 9 points. Mr H achieved maximum score in his Berg Balance Scale after treatment of his left leg, this remained the same when treatment was completed.

Both subjects achieved improvements in their ability to achieve and maintain SLS on the paretic and non-paretic leg.

#### Selection of leg for treatment

In both case studies an improvement in balance and gait parameters was noted after treatment of the paretic and non-paretic leg.

## DISCUSSION

The results support the hypothesis that facilitation of SLS by application of the Bobath Concept to treatment improves balance and gait parameters in stroke patients. It is also congruent with the main body of literature which suggests that treatment of strokes should focus on both the paretic and non-paretic side and should be tailored to address the unique deficits of the individual (Kim and Eng 2003, Von Schroeder et al 1995, Pai et al 1994). However, I was unable to find any other research relating directly to the hypothesis. This piece of work may be considered as a pilot and would benefit from being expanded into a more rigorous study in order to provide data comparable with that for other techniques such as treadmill training, strength training, functional electrical stimulation and splinting.

The difference between the ability to maintain a SLS and the ability to achieve bipedal to SLS would benefit from further investigation. In view of function, particularly for gait, the ability to achieve bipedal to SLS may be more significant than simply an ability to stand on one leg.

It has been suggested that most people have achieved maximum function by three months after stroke (Jorgensen et al 1995 cited Smith et al 1999, Von Schroeder et al 1995). Both patients were more than five months post stroke and had reached a plateau with respect to their mobility. They were undergoing no other treatment, no changes to medication and no changes in lifestyle or daily activities. It is believed, therefore, that the changes seen were significantly more likely to be due to treatment input than spontaneous recovery.

The selection of side for SLS was based on an assessment of the patients' deficits. The paretic limb was addressed first in Case Study 1 and the non-paretic limb first in Case Study 2. The outcome measures improved after facilitation of each leg in each case study. This may be because it is difficult to truly target one side of a patients' body which is being considered as an integrated and functional whole and hence the treatment cannot be described as simply addressing the left or the right. The outcomes may reflect the result of a period of treatment affecting the integrated whole. Alternatively, it may reflect that timely intervention directed at the appropriate side may result in improved outcomes. Further investigation would be necessary to clarify this point.

The outcome measures selected for this study have been used in other published research projects facilitating the comparison of these results with other current literature. Hesse (2003) and Pyoria et al (2004) reported that the 10m walk is a useful means of monitoring patients' recovery. Measurements of cadence and

velocity have also been used in other studies (Woolley 2001) hence this study is in keeping with the current literature in its use of outcome measures.

The patient was informed of any changes in outcome measure. This was felt to be important in encouraging patient ownership of treatment and increased motivation and attention to treatment. However it is important to note the possibility of an improvement in outcome measures being attributed to the patient learning the tests. Outcome may also be affected by the patient becoming more determined to achieve a greater score for themselves or in an attempt to please the therapist. The possibility of a Hawthorne Effect cannot be excluded, improvements may be as a result of the attention paid to the patient during treatment rather than the treatment itself.

A small study such as this inevitably serves to raise more questions than it answers. This may be considered a useful contribution in the field of neurophysiotherapy treatment where formulating the right research questions is a vital precursor to the development of a scientific body of evidence to support the work we do.

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# The lived experiences

## of physiotherapists working with people with progressive multiple sclerosis: a qualitative study

The aim of this study was to explore physiotherapists' lived experiences of working with people with progressive Multiple Sclerosis (MS). Specific aims included the exploration of physiotherapists' feelings and emotions when working with people with a progressive condition and how this felt in the light of that much of the practice of physiotherapy has an emphasis of returning people to full health and fitness. Hope is an integral part of the caring role (Cutcliffe 1995), and the study aimed to explore how physiotherapists instil a feeling of hope when they are working with people with a deteriorating condition. The final aim was to examine how physiotherapists coped with working with this group and what strategies they used. Interpretative phenomenological analysis (IPA) was the chosen methodology as it allowed the researcher to enter the participants' world in order to understand how participants make sense of their experiences (Smith & Osborn 2003, Smith 1996).

Semi-structured interviews were completed with seven physiotherapists with experience of working with people with progressive MS. Each interview was transcribed and through the process of transcript analysis four master themes emerged from the data. These are summarised below:

1. **Managing transitions** This theme described how the participants managed the deteriorating nature of MS. This was often a stressful time for the participants. They described needing support from colleagues, family and friends to support them during this challenging period. The participants felt pressure to deliver results and often felt frustrated and inadequate.
2. **Fighting the battle** This theme recognised that the participants often had difficulties accepting the limitations of physiotherapy. This was supported by the feeling that participants wanted to make a worthwhile contribution to their patients' lives. Participants experienced the need to instil hope and this was important not only to maintain their patient's motivation but to demonstrate their own caring.
3. **Crossing boundaries** This theme explored how the participants struggled to set and maintain boundaries around their home and work lives. Their two worlds were intrinsically linked and experiences from their work lives also shaped attitudes to disability. Work experiences also informed

decisions about the participants' own future health and the care that they personally would like to receive. All the participants recognised the fragility of life. In order to cope with these feelings of vulnerability they felt a need to escape using a variety of different coping strategies.

4. **Building relationships** This final theme explored the deep and respectful relationships that the participants experienced with people with MS. These relationships often offered a sense of personal reward and pride but could also be challenging. Managing people with cognitive difficulties or when having to reduce physiotherapy input placed strain on the relationship. Support from colleagues, whatever the discipline, was crucial in supporting the participants during difficult times.

The findings of this study offered a rich insight into the participants' worlds. Three issues were highlighted as being of relevance to the profession. Firstly, participants in this study lacked confidence in their skills in counselling and supporting people with progressive MS. Secondly, varying degrees of work-related stress were described by the participants. The implementation of the NSF for long-term conditions (DoH 2005) may require physiotherapists to take on new roles and this has the potential to increase work-related stress (Miller 2000). Finally, all the participants showed a strong commitment to the concept of client-centred care (Cott 2004) and demonstrated varying degrees of success of incorporating the biopsychosocial model into clinical practice. These are all potential areas for further research.

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# Articles in other journals

## ■ AMERICAN JOURNAL OF PHYSICAL MEDICINE AND REHABILITATION

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- Hsu W et al Ankle muscle activation during functional reach in hemiparetic and healthy subjects pp749-756.
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### Vol 85, No 1

- Autti-Rämö I et al Effectiveness of upper and lower limb casting and orthoses in children with cerebral palsy: an overview of review articles pp89-104.
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- Pizzi A et al Application of a volar static splint in poststroke spasticity of the upper limb pp1855-1860.
- Stokic D et al Comparison of clinical and neurophysiologic responses to intrathecal baclofen bolus administration in moderate-to-severe spasticity after acquired brain injury pp1801-1807.
- Testa J et al Outcome after traumatic brain injury: effects of aging on recovery pp1815-1824.
- Walker W et al Headache after moderate and severe traumatic brain injury: a longitudinal analysis pp1793-1801.

### Vol 86, No 10

- Hale L, Piggot J Exploring the content of physiotherapeutic home-based stroke rehabilitation in New Zealand pp1933-1941.

### Vol 86, No 11

- Bhandari V et al Racial disparities in outcomes of inpatient stroke rehabilitation pp2081-2087.
- Guillaume D et al A clinical study of intrathecal baclofen using a programmable pump for intractable spasticity pp2165-2172.
- Harris-Love M et al Exploiting interlimb coupling to improve paretic arm reaching performance in people with chronic stroke pp2131-2138.
- Hass C et al Gait initiation and dynamic balance control in parkinson's disease. pp2172-2177.
- Kilmer D et al Impact of a home-based activity and dietary intervention in people with slowly progressive neuromuscular diseases pp2150-2157.

- Ng Y et al Clinical characteristics and rehabilitation outcomes of patients with posterior cerebral artery stroke pp2138-2144.

### Vol 86, No 12

- Goverover Y et al The relationship between subjective and objective measures of everyday life activities in persons with multiple sclerosis pp2303-2308.
- Haran M et al Health status rated with the medical outcomes study 36-item short-form health survey after spinal cord injury pp 2290-2296.
- Sarajuuri J et al Outcome of a comprehensive neurorehabilitation program for patients with traumatic brain injury pp2296-2302.
- Selles R et al Feedback-controlled and programmed stretching of the ankle plantarflexors and dorsiflexors in stroke: effects of a 4 week intervention program pp2330-2336.
- Wayne P et al Acupuncture for upper-extremity rehabilitation in chronic stroke: a randomised sham-controlled study pp2248-2256.

### Vol 87, No 1

- Beninato M et al Determination of the minimal clinically important difference in the FIM instrument in patients with stroke pp 32-39.
- Brehm M et al Energy demands of walking in persons with postpoliomyelitis syndrome: relationship with muscle strength and reproducibility pp 136-140.
- Frankel J et al A follow up study of older adults with traumatic brain injury: taking into account decreasing length of stay pp 57-62.
- Groot-Driessen D et al Speed of finger tapping as a predictor of functional outcome after stroke pp 40-44.
- Lechner H et al Relationship between self and clinically rated spasticity in spinal cord injury pp 15-19.

- Lighthall Haubert L et al A comparison of shoulder joint forces during ambulation with crutches versus a walker in persons with incomplete spinal cord injury pp 63-70.

- Nakazawa K et al Enhanced stretch reflex excitability of the soleus muscle in persons with incomplete rather than complete chronic spinal cord injury pp 76-81.

- Page S, Levine P Back from the brink: electromyography-triggered stimulation combined with modified constraint-induced movement therapy in chronic stroke pp 27-31.

- Pang M et al A community-based upper-extremity group exercise program improves motor function and performance of functional activities in chronic stroke: a randomized controlled trial pp 1-9.

- Wijk I et al Change in mobility activity in the second year after stroke in a rehabilitation population: who is at risk for decline? pp 45-50.

- Zeilig G et al Heterotopic ossification in Guillain-Barre Syndrome: incidence and effects on functional outcome with long term follow up pp92-95.

## CLINICAL REHABILITATION

### Vol 19, No 6

- Carda S, Molteni F Taping versus electrical stimulation after botulinum toxin type A injection for wrist and finger spasticity. A case-control study pp621-626.
- Desrosiers J et al Effectiveness of unilateral and symmetrical bilateral task training for arm during the subacute phase after stroke: a randomized controlled trial pp581-593.
- Lynch D et al Continuous passive motion improves shoulder joint integrity following stroke pp594-599.
- Turton A, Britton E A pilot randomized controlled trial of a daily muscle stretch regime to prevent contractures in the arm after stroke pp600-612.

**Vol 19, No 7**

- Cooper A et al *Electromyography characterisation of stretch responses in hemiparetic stroke patients and their relationship with the modified Ashworth scale* pp 760-766.
- Gabr U et al *Home based electromyography-triggered stimulation in chronic stroke* pp737-745.
- Graesel E et al *Intensification of the transition between inpatient neurological rehabilitation and home care of stroke patients. Controlled clinical trial with follow up-assessment six months after discharge* pp725-736.
- Koyama T et al *A new method for predicting functional recovery of stroke patients with hemiplegia: logarithmic modelling* pp779-789.
- Lim I et al *Effects of external rhythmical cueing on gait pattern in patients with Parkinson's Disease: a systematic review* pp695-713.
- Lyons K et al *Inferring personality traits of clients with parkinson's disease from their descriptions of favourite activities* pp799-809.
- Meijer R et al *The stroke unit discharge guideline, a prognostic framework for the discharge outcome from the hospital stroke unit. A prospective cohort study* pp 770-778.
- Mehrholz J et al *Reliability of the modified Tardieu scale and the modified Ashworth scale in adult patients with severe brain injury: a comparison study* pp751-759.
- Platz T et al *Impairment-oriented training or Bobath therapy for severe arm paresis after stroke: a single blind, multicentre randomised controlled trial* pp714 -724.
- Sackley C et al *The intra-rater reliability of the balance performance monitor when measuring sitting symmetry and weight-shift activity after stroke in a community setting* pp746-750.

**Vol 19, No 8**

- Caglar A et al *Effects of home exercises on motor performance in patients with parkinson's disease* pp870-877.
- Carson S et al *Hyperbaric oxygen therapy for stroke: a systematic review of the evidence* pp 819-833.
- Forsberg A et al *Disability and health-related quality of life in Guillain-Barre Syndrome during the first 2 years after onset: a prospective study* pp900-909.
- Schuhfried O et al *Effects of whole-body vibration in patients with multiple sclerosis: a pilot study* pp 834-842.

**Vol 20, No 1**

- Brichetto G et al *Evaluation of physiotherapy in parkinsonian patients with freezing of gait: a pilot study* pp31-35.
- English C et al *The sensitivity of three commonly used outcome measures to detect change amongst patients receiving inpatient rehabilitation following stroke* pp 52-55.
- Forbes A et al *Health problems and health-related quality of life in people with multiple sclerosis* pp 67-78.
- Yang Y, Norman K *Effects of visual and auditory cues on gait initiation in people with parkinson's disease* pp36-45.
- Yozbatiran N et al *Electrical stimulation of wrist and fingers for sensory and functional recovery in acute hemiplegia* pp4-11.
- Worthington A, Oldham J *Delayed discharge from rehabilitation after brain injury* pp79-82.

**DISABILITY AND REHABILITATION****Vol 20, No 20**

- Barker R, Brauer S *Upper limb recovery after stroke: the stroke survivors' perspective* pp 1213-1224.
- Katz N et al *Interactive virtual environment training for safe street crossing of right hemisphere stroke patients with unilateral spatial neglect* pp1235-1244.

- Lee S et al *Deep vein thrombosis and pulmonary embolism in an ambulatory chronic stroke patient* pp1253-1260.

**Vol 27, No 17**

- Isaksson G et al *Womens perception of changes in the social network after a spinal cord injury* pp1013-1022.
- Pakenham K *The positive impact of multiple sclerosis (MS) on carers: associations between carer benefit finding and positive and negative adjustment domains* pp985-998.
- Verheyden G et al *Discriminant ability of the trunk impairment scale: a comparison between stroke patients and healthy individuals* pp1023-1028.

**PHYSICAL THERAPY****Vol 85, No 12**

- Behrman A et al *Locomotor training progression and outcomes after incomplete spinal cord injury* pp1356-1371.
- Lovering R et al *The muscular dystrophies: from genes to therapies* pp1372.

**PHYSIOTHERAPY RESEARCH INTERNATIONAL****Vol 10, No 3**

- Baker K, Charlton P *The effect of physiotherapy and orthotic intervention 40 years after stroke* pp 169.
- Foongchomcheay A et al *Use of devices to prevent subluxation of the shoulder after stroke* pp134-145.
- Stack E et al *Postural instability during reaching tasks in parkinson's disease* pp146-153.
- Won Oh D et al *Physiotherapy strategies for a patient with conversion disorder presenting abnormal gait* pp 164-168

**Vol 10, No 4**

- Husain H, Kelleher S *Community rehabilitation for a patient with incomplete spinal cord lesion* pp227-232.

**PHYSIOTHERAPY THEORY AND PRACTICE****Vol 21, No 3**

- Laufer Y et al *Postural control of patients with hemiparesis: force plate measurements based on the clinical sensory organisation test* pp163-172.
- Vos-vromans D et al *The responsiveness of the 10 metre walking test and other measures in patients with hemiparesis in the acute phase* pp 173-180.

**Vol 21, No 4**

- Hakim R et al *A modified constraint induced therapy (mCIT) program for the upper-extremity of a person with chronic stroke* pp243-256.

## SHARING GOOD PRACTICE

The **Clinical Practice and Audit Group** have facilitated the idea of a new regular feature to appear in *Synapse*. Entitled **SHARING GOOD PRACTICE** it aims to help spread the word amongst like minded ACPIN members about either innovative practice, service developments or successful audits. The format is roughly a question and answer session, covering the salient points of the topic, with a contact name for readers to pursue if they wish.

As with all articles in *Synapse*, we are totally reliant on our members contributing material that they feel is of interest to others. So if you have something that has been very successful in your area, and that you are happy to share, then contact Louise Dunthorne at

[louise@peterdunthorne.com](mailto:louise@peterdunthorne.com)

Meanwhile I hope you find the following entry interesting. Many thanks to **Jill Fisher** for being the first volunteer to submit a piece!

For further information contact  
Liz Walker at:  
[lizwalkerseventy7@yahoo.co.uk](mailto:lizwalkerseventy7@yahoo.co.uk)

# An established multidisciplinary in-service development education programme working across three different hospitals

The two-day introductory course is run twice a year and is for any staff who have begun working in the area of stroke and want to gain a general understanding of the roles of the other professionals working in stroke.

### *What is the main goal of the scheme?*

The goal is to educate the staff who work within stroke care to help improve patient care.

### *Who attends the course?*

There are 20 places on the course and it works out as roughly half health care assistants with the rest often made up of professionals, mainly staff nurses that are newly qualified or new to stroke care, and junior physiotherapists and occupational therapists that are on rotation.

### *The main attendees for the course are from:*

Acute Stroke units in two different hospitals (St James and the Leeds General Infirmary), and two stroke rehabilitation wards in a third hospital (Chapel Allerton Hospital). The wards are all from within the same trust and follow the same stroke pathways. Some staff rotate between the units, the course promotes networking between the units. The course however, is open to staff from any other wards in the hospital, which may include the elderly or medical wards and the neurosurgery wards at LGI. Also intermediate care staff attend the sessions.

### *What is the length of the course and what areas does the teaching cover?*

The course is over two days and these are the subsections that are covered:

- Overview of stroke services – led by consultant
- Nutritional needs of the stroke patient – led by dietician
- Movement recovery after stroke – led by physiotherapist
- Positioning and therapeutic handling

including transferring – led by physiotherapist

- Cognitive and perceptual deficits – led by occupational therapist
- Use of activity as therapy/personal care following stroke – led by occupational therapist
- Communication and swallowing problems following stroke – led by speech and language therapist

The course has a high practical element carried out on the rehab wards, with other parts carried out in the lecture theatre.

### *Who organises the course?*

The course is run by an acute and rehab ward jointly, with the wards that most staff are attending from taking it in turns in organising the course.

### *What are the difficulties with the service provided?*

It does take time away from clinical time to organise. However saying that, I have only organised it once and as the course is fairly structured it should take less time to organise as paperwork, etc is saved on the computer.

### *What resources other than time are required?*

Other resources are the hiring of a lecture room at CAH and laptop etc, that are free for NHS staff and the practical session is on the stroke rehabilitation wards. The course is practical at times so it needs therapy equipment and SALT tools such as thick and easy for swallowing and yogurts.

### *What are the benefits of the course?*

The course does help to provide education for the staff working with stroke patients and I think this is evident on the stroke ward I work on. Staff are more aware of the different roles that each play on the wards and I feel that they are more skilled at handling and transferring patients in a safe manner. Staff are very good at using hoists and stand aids and do take advice from the therapist, but I have never

done an audit to see if stroke care is better on the wards mentioned. I am just going on experience.

*What feedback do you get about the course?*

After every course we do get generally good feedback. Some of the comments made are requesting patient demonstrations which would not be feasible with 20 people

watching, but we are considering using video clips to show patient transfers and positioning which are the practical areas the physiotherapists cover.

*Any Problems?*

I guess one problem on the wards is that bank staff, who are increasingly being used, are not always as well educated in stroke and at the moment are not invited on the two-day course though they will be invited in the future. This could cause problems as the course already gets well subscribed.



# UCL

## MSc in Advanced Physiotherapy

**Neurophysiotherapy** • One year full time or up to 5 years part time

**Programme Coordinator: Dr Margaret Mayston**

### Aims:

- Provide an education in the areas of modern biological and medical sciences relevant to physiotherapy.
- Provide an experience of research work that culminates in the presentation of a project.
- Enable the students to explore and develop a broad range of advanced physiotherapy skills both in supportive learning environment and on clinical placements.

The masters course will facilitate the furthering of evidence based practice and encourage the students to develop their roles as extended practitioners. The philosophy of this course is to integrate the clinical and academic components with the emphasis on patient management.

**Neurophysiotherapy:** The study of and qualification in the Bobath Approach, Control of Movement, Development of Motor Control, Interprofessional practice, Becoming an Effective Practitioner.

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**[www.archway.ac.uk/Activities/Departments/SHHP/](http://www.archway.ac.uk/Activities/Departments/SHHP/)**



# ACPIN news

## ACPIN AGM 2006

17th March 2006.  
Hilton Hotel, Northampton

## MINUTES

Opened at 12.35pm

### 1. Present

Ros Cox, Mary Cramp,  
Louise Dunthorne, Emma Forbes,  
Nicola Hancock, Cherry Kilbride,  
Sue Mawson, Louise Rogerson,  
Jackie Sharp, Jo Tuckey,  
Julia Williamson

### 2. Apologies

Louise Gilbert, Jo Kileff, Anne Rodger,  
Fiona Robertson, Pam Thirlwell

### 3. Minutes of AGM 2005

Accepted as accurate record of  
events. Proposed – Emma Procter,  
seconded – Jane Bailey.

### 4. President's address

Sue Mawson

### 5. Chair's address

Nicola Hancock

### 6. Treasurer's Report

Jackie Sharp.

Accountants voted in by a majority  
vote.

### 7. Election of re-standing

#### Executive Committee members:

- Jackie Sharp *Hon Vice Chair*  
Proposed – Nicola Hancock,  
seconded – Chris Manning  
majority vote.
- Emma Forbes *PRO*  
Proposed – Ros Cox  
seconded – Sandy Chambers  
majority vote
- Louise Rogerson *Hon Minutes*  
*Secretary*  
Proposed – Jo Tuckey  
seconded – Cherry Kilbride  
majority vote

### 8. New Executive Committee member

- Siobhan Mac Auley  
Proposed – Sally de la Fontaine  
seconded – Louise Rogerson  
majority vote

### 9. AOB

None

Meeting closed at 12.58pm.

## PRESIDENT'S ADDRESS

**Sue Mawson** MCSP Bsc (Hons) PhD

It has given me great pleasure to be instrumental in bringing Professor Shirley Stockmeyer to this ACPIN Jubilee Conference. I first heard Shirley talk in 1999 when we bought her to the UK from the USA to teach on our Neurological Rehabilitation Masters at Sheffield Hallam University. I realised immediately the significance of her work, her unique ability to interpret Kuypers medial and lateral descending systems and parallel-distributed model of motor control. By expanding Kuypers findings into a posture and movement model that links anatomical structure in the CNS with muscle architecture, muscle physiology and muscle function Shirley has provided us with a theoretical basis for treatment that underpins a number of current therapy approaches. Shirley has agreed to publish her work in an abridged format in the Autumn edition of *Synapse* so ensuring her intellectual ownership of this model and acknowledging the contribution to knowledge made by ACPIN in bringing her work to the UK audience.

I was going to talk to you today about the new NHS Research and Development strategy document, *Best Research for Best Health* published earlier this year by the Department of Health but realised that whilst this



Members of the **ACPIN Executive Committee** present at the conference (back row left to right) Sue Mawson, Emma Forbes, Nicola Hancock, Jackie Sharp, Jo Tuckey, Cherry Kilbride, Julia Williamson and Mary Cramp (front row) Louise Rogerson, Louise Dunthorne and Ros Cox.

strategy document may have major implications for research in the NHS this might put you all to sleep so I decided to tell you instead about my recent experiences at the 4th World Congress for Neurological Rehabilitation in Hong Kong a couple of weeks ago. Unfortunately, not 'memoirs of a geisha girl', but relevant to our current ACPIN theme of 'evidence base' and relevant to our future as a research based profession.

The conference was excellent in many ways: good networking, exciting with cutting edge lectures on stem cell research with stroke patients, the impact gene configuration has in recovery from TBI. The question is, how many of these keynote lectures were delivered by a physiotherapist? One, Dr Gert Kwakkel from the Netherlands who I am delighted to say will be presenting his work here at our conference tomorrow. The main programme, even when the lectures were about evidence of effective rehabilitation, was delivered by neurologists who it has to be said frequently appeared to lack the underlying knowledge of the rehabilitation process. It felt as if neurologists were trying to take over the rehabilitation domain, our domain, we do the rehabilitation, we study rehabilitation at undergraduate, Masters and Doctoral level, we have a huge knowledge base about what does and doesn't work for our patients and we understand and know what our patients need from the rehabilitation team. So why weren't we there?

This is a difficult question that is probably related to a number of issues, our lack of publication, lack of research funding in the UK, lack of representation at senior level in the World Federation for Neurological Rehabilitation (WFNR) who organise this event. A further issue relates to the major funding problems within the NHS and with our own PCTs eg in Sheffield, my Trust, £27 million in deficit and having to save £60 million over the next three years. The result of this financial situation is cutbacks in staff development with less physiotherapists undertaking higher degrees, less opportunity to undertake research, lack of study leave which would enable physiotherapists to go to conferences and present, learn or simply network at an international level.

This is the problem and in my view it will have far reaching consequences for the future of our profession. So what can we do?

1. Be financially innovative (inventive accounting) run courses but ring fence the profits, bid collaboratively but add 40% over heads. NHS bids do not require the crippling 'full economic costings' imposed on universities from September 2005 by the government, this makes NHS collaborators very attractive to the research councils. Learn about the new funding streams available through the new *Best Research for Best Health* research strategy.
2. Think about doing a professional doctorate rather than a traditional

doctorate. The professional doctorate, available at a number of universities, is a work-based inquiry designed to specifically develop the individual's capacity to work within a professional context. The programmes meet the professional development needs of senior practitioners and managers in health and social care settings. They address both organisational needs and professional development needs for the individual so making them more attractive to the employing organisation. Perhaps we should be radical here at our Jubilee Conference and suggest that ACPIN funds three professional doctorates over the next ten years. We have a research bursary, which no one applies for, so why not use that money to pay for a clinical specialist or senior manager in neurology to undertake a professional doctorate, the cost is little more than the current bursary and over a ten year period we could make a significant difference to knowledge, evidence and visibility or neurological rehabilitation.

3. Go to international conferences, they are stimulating and exciting. In light of the current financial state of the NHS should ACPIN consider sponsoring a presenting delegate to go to an international conference. It's the World Physical Therapy Conference in Vancouver, Canada this June. UK neurophysiotherapists should be there both as delegates and presenters. Don't forget national conferences with the Stroke Forum Conference in Harrogate in December of this year ([www.strokeforum.org](http://www.strokeforum.org)).
4. Join the World Federation of Neurological Rehabilitation, (WFNR) ([www.wfnr.co.uk](http://www.wfnr.co.uk)) Submit abstracts for the 5th World Congress for Neurological Rehabilitation meeting in Rio de Janeiro, Brazil, 24th-27th September 2008 ([www.sarah.br/wfnr-rio2008](http://www.sarah.br/wfnr-rio2008)).
5. Join with your local Physiotherapy

Research Network (PRN) hub. It's only by creating a critical mass of clinical specialists in neurological rehabilitation with research experience and publications that we can begin to have a voice at International level.

My final message is don't let neurologists tell us about neurological rehabilitation! See you in Rio.

## CHAIR'S ADDRESS

**Nicola Hancock** BSc Hons MCSP

Welcome again to our AGM for 2006. This address provides me with the chance to inform you of both our activities in the past year and what is planned for the next, so perhaps you will indulge me with a few more minutes of your time.

ACPIN's aims include the facilitation of information exchange between members, the promotion of educational developments, encouraging research activity, ensuring ongoing communication with the CSP, promoting networking with other related organisations and participating in appropriate guideline setting. On reflection, we seem to have contributed in some way to most, if not all, of these during this year.

It seems appropriate at this conference in particular to inform you firstly of our work in collating and publishing the *Physiotherapy Concise Guidelines for Stroke*, which I am happy to be launching at this event. I act as your representative on the Royal College of Physicians Intercollegiate Working Party for Stroke, alongside Dr Sheila Lennon for the CSP and Christine Fitzpatrick representing AGILE, and I acknowledge them both for their commitment to this committee and its work. I hope that you will find the new concise document a useful tool, drawn as it is from the 2004 RCP stroke guidelines. Copies will be circulated free of charge to all ACPIN members in Spring 2006 *Synapse* and other CSP members can purchase them directly

from the CSP for £5.00

We continue to be frequently asked for expert input to many other working parties and for example, have spent time this year progressing work on the NSF Long term conditions and commenting on the NSF for Parkinson's Disease, a document into which AGILE have had an enormous input. Executive committee members also work alongside the CSP on such groups as the CSP research network.

It has been clear this year that whilst ACPIN remains, I hope, at the centre of neurology and physiotherapy, there is huge enthusiasm within our membership and beyond for extended support networks and specialist groups. For example, we have worked this year with TiMS, the newly formed Therapists in Multiple Sclerosis Group and the UK Adult Spasticity Forum, who have made significant progress towards guidelines for injectors, alongside discussions of a re-write of the RCP Botox guidelines to include physiotherapy specific aspects.

We are delighted to have been invited to be a partnership organisation of the UK Stroke Forum and look forward to their major Conference on Stroke in Harrogate on December 6th-8th this year. My thanks to Professor Ann Ashburn for representing ACPIN on the group and Ros Cox for her support from the committee. It is hoped that ACPIN will have plenary sessions at this event, I hope many of you can make it.

We held a very successful Congress programme back in October, on 'Cognition and Behaviour', a challenging title which was well received and despite overall low numbers for the CSP membership, ACPIN was as ever, proudly represented. Our fringe meeting with Chartered Physiotherapists in Mental Health, fuelled by the rapidly depleted wine table outside the room, proved to be the usual talking point and ideas for future links are underway.

However, I am saddened to say

that Congress for 2006 has so far provided us with some remarkable stresses, all of which have been completely beyond the control of our own committee. We were informed at the end of 2005 that the format would be changing considerably and moving away from specific CIG programmes onto given topics, and that ACPIN would be asked to be involved in something on long-term conditions. We then heard nothing more from the CSP about the specific format until the end of January, bearing in mind that we usually have our speakers booked up to a year in advance. To further add to our difficulties, we were then advised that we would only be able to provide speakers for one day, Friday 13th. But, don't despair, thanks to some incredible work by the committee and in particular by Jo Tuckey, we have an excellent series of speakers in place on the NSF itself, MS, PD and MND and I would urge you to come along. At least by having the one day programme, we can all enjoy lectures organised by other teams on the Saturday. It is frustrating for this event that we are beholden to the organisational skills of others...

Whilst on CSP events, you may already know by now that ARC 2006 has been cancelled. We had three motions prepared and even someone ready to speak, but we have been informed that the CSP have a £1,000,000 deficit in *Frontline* advertising and have to make some savings. ARC is sadly a casualty of this.

Interactive CSP will be finally launched nationally on March 30th, initially to existing users and then to the wider CSP membership and the ACPIN moderator team is in place. Sincere thanks to all of you involved in moderating our site and in particular to lead moderator Julia Mackenzie and Julia Williamson from the committee. Do log on and get registered, it is an excellent information exchange and will be developing alongside the ACPIN website.

Membership is flourishing, over 900 already this year and increasing all the time. *Synapse*, our biannual journal, is a point of great pride and I thank Louise Dunthorne and our graphic designer Kevin Wade for all the hard work.

My thanks at this point also to the regional representatives, who do a sterling job in linking between the regions and the national committee. Their input is of enormous value to the overall work of ACPIN and despite the availability of electronic communication (even in my home county of West Norfolk!) I really enjoy our national meeting days, with their packed agendas and buzzing atmospheres.

The Executive Committee has remained stable this year, excepting the arrival of three junior members, William to Anne Rodger, Sophie to Jo Kileff and Zac to Louise Gilbert. Congratulations to them all.

I thank each and every one of the executive for their tremendous support and commitment. When another of the avalanche of NHS and clinician-bashing tabloid press articles is brought to my attention, I would dearly love to invite the journalist up to one of our meetings, or indeed into this room, to see for themselves the incredible dedication of therapists, largely in their own time, who commit to progress our profession and speciality.

I also thank our President Sue Mawson for her input this year. I now leave every committee meeting thinking what a truly inspired choice Sue was, she brings so much experience and informed comment to every debate.

As a clinician and team leader in stroke care, I cannot close without subjecting you to some of my own thoughts on this topic. Current policy increasingly dictates that patients sustaining stroke are moved from acute units within hospital trusts to community services at the earliest opportunity; if they even make it to hospital units in the first place, of course. At first glance, this would

seem reasonable, as many patients and carers may prefer support at home from specialist teams, and there is no reason why this should not be extremely successful with appropriate investment in such teams. However, I suspect the reality may actually be little to do with patient and carer choice and more to do with a desperate attempt to make 'length of stay' statistics more appealing to managers responsible for over-stretched budgets. As we will no doubt hear later in this conference programme, well-structured highly skilled community teams can and do work in the best interests of stroke survivors and I know that many of you here today dedicate yourselves to such teams. But edging patients out of stroke unit beds at the earliest opportunity without the forethought to ensure such teams are in place and properly resourced and supported is simply unacceptable, for the patients and families and for stressed staff. A recent report by the Picker institute on behalf of the Healthcare

Commission stated that one third of stroke survivors questioned, about 1,200 people, were unhappy with follow-up care, describing it in such terms as 'fair', 'poor' or 'very poor'. A government minister, interviewed in *The Times* the next day, was delighted that this meant that two-thirds of survivors were actually happy. To expect 100 percent happiness is utopian, but one third of stroke survivors represents 30,000 people in the UK each year, a sobering statistic for our optimistic minister.

Thank you for listening.

## TREASURER'S REPORT

Jackie Sharp

I will now present a summary of the financial accounts for national ACPIN for the year end 31st December 2005.

This year the accounts show a reduction in the total income for 2005 compared to 2004 and an increase in the total expenditure.

INCOME		
	2005	2004
	£	£
Course fees	13,634	24,392
Membership	31,175	31,621
Capitation	2,490	5,358
Manual Handling	146	207
Synapse	220	60
Database	168	205
Bank interest	831	611
<b>Total</b>	<b>48,664</b>	<b>62,454</b>

Figure 1

EXPENDITURE		
	2005	2004
	£	£
Courses	16,484	16,819
Synapse	7,982	8,587
Travel	7,001	3,765
Administration	6,914	5,973
Capitation	5,060	5,144
Website	1,316	1,398
Research bursary	(179)	734
Stroke Guidelines	1,067	0
Accountants, bank charges, and sundries	1,454	1,418
<b>Total</b>	<b>47,099</b>	<b>43,838</b>

Figure 2

COURSE INCOME AND EXPENDITURE			
	Income	Expenditure	Surplus/(Deficit)
	£	£	£
March 2005			
Pain	9,415	8,971	444
October 2005			
CSP Congress	4,219	7,353	(3,134)

Figure 3

## BALANCE SHEET AT 31 DECEMBER 2005

### Capital and reserves

	£
Reserves brought forward at 1 January 2005	35,060
Surplus/(deficit) for the year	1,565
Reserves carried forward at 31 December 2005	36,625

Figure 4

The total income (Figure 1) was reduced by £14,010. This was due to less conference income. The Spring conference held in March on the topic of 'Pain' created an income of £9,415 compared to £16,052 from the 'Exploring Gait' conference in 2004. The CSP Congress income of £4,219 was significantly less than the £8,190 from ACPIN's Autumn conference in 2004.

There was a minimal drop in membership income and a slight increase in income from advertisements in *Synapse*.

The capitation received from the CSP was considerably less than last year because in 2004 the CSP caught

up with a payment owed to ACPIN from 2002.

We have continued to make a small income from charging for copies of the *Manual Handling Guidelines* and our database.

Expenditure (Figure 2) for 2005 was up compared to 2004. This was due to an increase in overheads.

In last year's report I noted that there had been a 20% drop in the number of expense claims submitted and attributed this to less attendance at the executive and national ACPIN committee meetings. This year there has been a 10% increase in expenses submitted from last year and an increase in the average travel expense

claim from £62.79 to £80.19, reflecting higher transport costs.

*Synapse* appears to have been less expensive to produce this year but last year's *Synapse* expenditure included the production and distribution of the ACPIN Survey of Neurological Physiotherapy Services. This survey was not repeated in 2005 but an additional expenditure for this year has been the printing of the *Physiotherapy Concise Stroke Guidelines*, a cost shared with the CSP and AGILE.

Figure 3 divides the course income and expenditure up between the two conferences that ACPIN hold a year. You may remember that in 2003 we were able to bring both conferences in on budget after a number of years of losses, but in 2004 we deliberately aimed to make a profit on both courses for one year in an attempt to increase ACPIN's reserves. This year we were successful in bringing the Spring conference in on budget with a small profit of £444. The CSP congress however made a loss of £3,134. As I have reported before, this is a difficult conference for ACPIN to budget for as we rely on an income in the form of a capitation fee from the CSP. There was a much lower attendance at Congress overall this year and as I'm sure you are aware, it ran at a loss for the CSP.

The balance sheet (Figure 4) on the 31st December 2005 showed a profit of £1,565, and we were able to carry forward reserves of £36,625 into 2006.

### Copies of Accounts 2005

Full copies of the ACPIN accounts are available on request

### Vote for Accountants

Vote to retain the current accountants for 2006: Langers, 8-10 Gatley Road, Cheadle, Cheshire, SK8 1PY.

## DELEGATE REPORT

**Will Winterbotham** Addenbrookes NHS Trust, Cambridge

Sunday evening and I am reflecting on this weekend's residential ACPIN conference in Northampton. This is

an annual event and this year marks 25 years of ACPIN. I have been to a few of these in the past, as well as various ACPIN study days and I cannot remember a conference I have enjoyed more.

The first thing I could tell you about is the venue. The Hilton Hotel is a great place to spend a few days; large comfortable rooms, health club and bar. I'm used to discussing the day's lectures on a smelly crowded tube, this time it was the sauna and jacuzzi, tough I know but you have to soldier on. The food was delicious and for me impossible to refuse, although in retrospect eleven courses over two days may have been a bad idea. It is also probably a bad idea to dwell on the impromptu 'i-pod disco' or karaoke queen (dodgy wrist, great voice). Fortunately Nicola Hancock was on hand to lend a cool and sober head to the proceedings.

Apart from a relaxing weekend away from the kids, the second reason I went to Northampton was of course the lectures. Most conferences, let's face it, have a few speakers who fail to capture the imagination, and my capacity to nod off after lunch is legendary. This however was not one of those conferences. All the speakers were excellent; nationally and internationally recognised experts in their field, and we were treated to a series of informative, inspiring and lastly very moving presentations. The highlight for me was Professor Stockmeyer, who succeeded in bringing together anatomy, physiology, function and treatment into such a logical and simple model that it was like a light bulb turning on in my mind.

I am still not sure how the organisers managed to pull off such a high quality conference in such luxurious surroundings, but I'm glad they did and am looking forward to the next one. My strong advice is that if you missed this one you don't miss the next.

## CLINICAL PRACTICE AND AUDIT SUB-GROUP

**Louise Dunthorne**

Work was completed on revamping the ACPIN welcome leaflet which you should all have received when you renewed your membership this year. I'm sure you will agree it is an improvement, however we shall probably amend it again, by omitting the regional representatives details. This is only because these details change so rapidly that the leaflet may be outdated for the majority of the year. Instead we shall encourage people to use the web-site to find that information as this can be updated more regularly.

The group has also worked on developing a new feature in *Synapse*, which gives people the opportunity to share good practice (see pp20-21) – either service development or audits that they have developed in their area, which they feel have worked well and may be of value to other members. Many thanks to Jill Fisher for compiling the 'first run' in this issue! We hope it will become a regular feature, and we do encourage any members to write in with their innovative practice. The feature will follow a similar format of 'questions/answers' as the one in this edition, so do contact me for more information. (louise@peterdunthorne.com)

Finally we have been asked to investigate the issue of training for care workers in positioning and therapeutic handling, with reference to NSF in Long Term Conditions. If anyone has any guidelines or protocols on training care workers, please do contact me so we can begin to gather information on how this issue is being addressed.

## COMMUNICATION SUB GROUP

**Emma Forbes** ACPIN PRO

Aims for 2006:

- Promote ACPIN, neurophysiotherapy and the Silver Jubilee conference nationally through the media
- Improve links with the relevant groups eg International CIG's, NANOT, Stroke Association
- Promote the benefits of being a member of ACPIN.

## RESEARCH SUBGROUP

**Mary Cramp** School of Health and Biosciences, University of East London, Romford Road, Stratford, London E15 4LZ  
email mary.cramp@talk21.com

One of our ongoing aims is to promote and support research activity within the membership. One disappointment to us in the last six months has been the lack of uptake of the ACPIN research bursary. When the bursary was initially introduced, it was worth up to £400 but we decided to increase the maximum award to £800 to make it more worthwhile and we will continue to review the terms and conditions to ensure that it is an attractive proposition for members. Another activity we would like to encourage is reporting of the research conducted by ACPIN members. While writing for *Synapse* provides one means of communication, we also want to promote research communication at our conferences. We were pleased to have poster presentations at the March conference and we look forward to further developing this. It is useful to have the opportunity to discuss your research with fellow professionals less formally. If you are involved in research, whether on a small scale or large scale, please bear in mind that we will be calling for poster presentations at future conferences. Please contact me if you have any questions.



## Other news

### THE CSP LIBRARY AND INFORMATION SERVICE

**Andrea Peace** Library and Information Services Manager, The Chartered Society of Physiotherapy

#### BACKGROUND TO SERVICE

The CSP Library and Information Service (LIS) aims to provide access to, and support the development of, the evidence base underpinning physiotherapy. For practitioners working in the private sector, not-for-profit organisations, or private healthcare we operate as the primary Library and Information Service in the field; for CSP members working in the NHS or in higher education we act as a backup to local library resources. The following article sets out the support LIS can provide ACPIN members.

#### SERVICES AVAILABLE

##### General Enquiry Service

Our team of expert information specialists are on hand to help answer any information-related enquiries you may have. Please feel free to contact us for help.

We publish a range of information papers to assist members with their work or studies eg using the Internet; citation styles; finding published information; donating physiotherapy learning materials and equipment. All these publications are freely available to members via the CSP website.

##### Literature searching support

If you need information to back up decision making regarding treatment choices, need to find the evidence to support your masters assignment, or want to improve the impact of a report you are writing you will need to undertake a literature search to find the best available evidence.

LIS has recently published the *CSP Guide to Literature Searching*. This takes

members through the process of conducting a good quality literature search step by step.

LIS also makes available online access to the AMED (Allied and Complementary Medicine) database via the CSP website, for members who find library access difficult. This database provides references with abstracts to articles taken from physiotherapy journals: it does not contain full text articles. Please note – you have to be logged into the CSP website as a member to access both the *CSP Guide to Literature Searching* and the AMED database.

There are several other free bibliographic databases available to search that will be of interest to ACPIN members:

- **Cochrane Library**  
Covers systematic reviews, controlled trials, economic evaluations, and technology assessments.  
[www.nelh.nhs.uk/cochrane.asp](http://www.nelh.nhs.uk/cochrane.asp)
- **PeDRO (Physiotherapy Evidence Database)**  
Indexes systematic reviews, randomised controlled trials, and clinical guidelines, and gives each entry a quality rating out of ten.  
[www.pedro.fhs.usyd.edu.au/index.html](http://www.pedro.fhs.usyd.edu.au/index.html)
- **Pubmed**  
This is the free version of the MEDLINE database, and has a very wide coverage in terms of subject matter.  
[www.ncbi.nlm.nih.gov/entrez/query.fcgi](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi)

Details of other free bibliographic databases can be found via the CSP website.

If you do not want to, or do not feel able to undertake a search yourself, then LIS offers CSP members' two literature search services to help locate books, reports, journal articles, theses and

dissertations, conference proceedings and websites on subjects of relevance.

Our free literature search service provides search results from the CSP library catalogue (unfortunately this is not available to search via the web) and one of the commercial bibliographic databases to which we subscribe eg CINAHL, Embase etc. Alternatively, we offer a full service where we search all databases available to us (charges apply). See our web pages for more details.

#### Accessing journal articles

Having undertaken a literature search, you may wish to get hold of the full text of the most relevant journal articles highlighted in your search results.

A list of the one hundred and eighty journals to which we subscribe is available on our website; this also includes approximately seventy full text journals that are available for free via the Internet. Some free full text journals of potential interest to ACPIN members include:

- *Advances in Clinical Neuroscience and Rehabilitation* (2001 onwards)  
[www.acnr.co.uk](http://www.acnr.co.uk)
- *Journal of Neurologic Physical Therapy* (Sept 2003 onwards)  
[www.findarticles.com/p/articles/mi\\_qa4108](http://www.findarticles.com/p/articles/mi_qa4108)
- *Neurology Report* (1999 to 2003)  
[www.findarticles.com/p/articles/mi\\_qa3959](http://www.findarticles.com/p/articles/mi_qa3959)
- *Stroke* (1995 onwards)  
<http://stroke.ahajournals.org>

If the articles you want are not freely available via the Internet, then we have a photocopying service for items held within the CSP Learning Resource Centre collection (LRC). If the item(s) you require are not held at the CSP, we can obtain articles from the British Medical Association Library or British Library (charges apply for all copying services). Please note – all copying must adhere to the limitations set out in UK copyright law.

#### The Learning Resource Centre (LRC) collection

Finally, we aim to collect literature on all therapies and techniques practised by physiotherapists. The collection also covers general health and safety issues, general management information, health management policy for the four UK countries, materials focusing on continuing professional development, research methodology, statistics, the history of physiotherapy, outcome measures, clinical guidelines and standards. A collection of theses and dissertations written by members are available for loan; details of individual titles of interest are available via our website.

#### OTHER ONLINE RESOURCES OF INTEREST

##### • Internet for Allied Health

A web-based tutorial designed to help improve Internet information literacy and IT skills; a great starting point if you know nothing about the Internet: [www.vts.rdn.ac.uk/tutorial/allied](http://www.vts.rdn.ac.uk/tutorial/allied)

##### • Nursing, Midwifery and Allied Health Professions Gateway (NMAP)

This site includes high quality Internet resources relevant to physiotherapy and rehabilitation. This is a good starting point if you are struggling to find quality resources when using a search engine like Google: <http://nmap.ac.uk/>

#### HOW TO CONTACT THE LIS TEAM WITH YOUR QUERY

The LIS opening hours are as CSP office hours (Monday-Friday 9am to 5pm). Access to the CSP LRC is by appointment only.

- Tel: 020 7306 6666
- Direct fax: 020 7306 6629
- Email: [enquiries@csp.org.uk](mailto:enquiries@csp.org.uk)
- Web: [www.csp.org.uk/lis](http://www.csp.org.uk/lis)
- Post: Library & Information Services, The CSP, 14 Bedford Row, London, WC1R 4ED

## COMPREHENSIVE MS GUIDE FOR PRIMARY CARE PROFESSIONALS IS LAUNCHED

**David Harrison** Harrison Bergman Limited

The first comprehensive guide to multiple sclerosis for GPs and primary care teams, including practical resources to help with the assessment and review of patients, has been published by the Multiple Sclerosis Society.

NICE's clinical guideline on the management of MS and the more recent *National Service Framework for People with Long-term Conditions* both emphasise the crucial role of the primary care professional in the lives of people affected by the disease.

A guide to MS, available in both book form and on the internet, covers all the major issues in MS care, from diagnosis through current and emerging therapies to continuing care and support for people with complex needs. It includes interviews with healthcare professionals and people living with MS.

In a foreword, Professor David Colin-Thomé, National Clinical Director for Primary Care, describes the guide as 'a mix of basic information and practical tools'. He highlights the role played by practitioners with a special interest in improving many areas of primary care. 'Although GPs with a special interest in MS are few in number, they make a major contribution to quality care. They are in a key position to coordinate care and can take a broad-ranging, holistic approach. The new GMS contract provides a major opportunity for practices to provide an enhanced service for MS.'

Dr Andy Dowson, a GP who is chairman of the Primary Care Neurology Society, said, 'With the

launch of this excellent new publication, the MS Society is clearly demonstrating its continuing support of primary care services. It provides a very useful guide to any GP who is keen to learn more about how they can become involved in delivering high quality care to people with MS.'

Sharon Haffenden, the MS Society's director of research and services, said, 'We have designed the guide to be a key resource for GPs who plan to deliver the enhanced service and for the growing number with a special interest in the disease, but it will be equally valuable to those who may see only the occasional patient with MS.'

We know that people with MS value the advice and help they receive from their GPs and in the future primary care professionals will become increasingly pivotal in providing the quality MS care which the Government's health and social care policies are aiming to deliver.'

Mrs Haffenden said the MS Society was marking the launch of the guide by offering ten start-up grants of up to £1,000 for practices taking up the national enhanced service. 'The grant can be used by practices for resources, as well as for training, development and innovations in their MS services,' she said. 'For details, email [education@mssociety.org.uk](mailto:education@mssociety.org.uk) outlining how your practice would spend £1,000 to improve the care of patients with MS and confirming you have taken up the national enhanced service or are in the process of doing so.'

A guide to MS is available, price £10 including post and package, from the MS Society, MS National Centre, 372 Edgware Road, London NW2 6ND, or on [www.mssociety.org.uk](http://www.mssociety.org.uk), where the practical resource assessment and review tools can also be downloaded.

## UK ADULT SPASTICITY PHYSIOTHERAPY FORUM

**Steve Ashford** Clinical Specialist & Research Physiotherapist, Regional Rehabilitation Unit, Northwick Park Hospital (On behalf of the Guideline Development Group)

### Botulinum Toxin (BTX)

#### Physiotherapy Specific guideline

Significant progress has been made with this project. A detailed search of the literature in this area has been undertaken using a planned search strategy. Unfortunately a full systematic search proved impractical due to constraints of time and resources. The literature search has now been completed and the literature is currently being reviewed. A guideline development plan has now been further established and a development group has been formed with the financial support of Allergan (manufactures of BOTOX<sup>®</sup>) through a firm of medical writers 'Connect Medical'.

To those ACPIN members who have done work inputting to individual sections, this is being incorporated into this process (many thanks for your practical support and help). The current process allows the development group full control of the process and by using a medical writer is one step-removed from Allergan thus reducing any perceived bias. The guideline development group has been identified and have met, with the result that writing the guideline is now well underway.

Discussions have also taken place with the Royal College of Physicians (RCP) regarding a re-write of their existing multi-disciplinary guidelines to include physiotherapy specific aspects. There has been initial agreement to move forward with this and agreement that both Allergan (manufactures of BOTOX<sup>®</sup>) and Ipsen

(manufactures of Dysport<sup>®</sup>) would provide financial support.

A number of discussions have also taken place with the Chartered Society of Physiotherapy (CSP) regarding their support for the guidelines process. The CSP have provided much practical support and advice already, which has been useful in informing the development process. The CSP would be generally supportive of a guideline, which is done in conjunction with the RCP, and are likely to provide more formal support at this stage.

I hope you can therefore see that a significant amount of progress has been made with this project and hope this will lead to a guideline, which is informative and useful to us all.

# Research forum

In the last issue of *Synapse*, we outlined a number of national developments related to research in the healthcare service and physiotherapy. Dr Philippa Lyon, National Physiotherapy Research Network (NPRN) Research Officer, has kindly provided some further information about the NPRN along with contact details of hub facilitators in this issue.

National development continues and the publication of a new national health research strategy, *Best Research for best Health*, by the Department of Health is one of the latest developments. Some of the key points from this document are also outlined here.

Finally just in case you have forgotten, we are republishing details about the ACPIN research bursary. The next deadline for submission of applications is 1st June 2006.

## SUPPORTING AND ENCOURAGING RESEARCH: THE NATIONAL PHYSIOTHERAPY RESEARCH NETWORK (NPRN)

- are you interested in developing as a researcher?
- do you want to get in touch with other researchers who are interested in the same topics?
- do you need advice about how to build on your research skills and experience?

The National Physiotherapy Research Network (NPRN), supported by the CSP for a five year period, has been established to encourage and facilitate physiotherapy related research across the UK, and to support the integration of research into practice. Drawing on goodwill, self-help and mutual peer support, the NPRN has developed 18 regional 'hubs' underpinned by a multi-professional and clinically relevant ethos. The aim of the NPRN is to enable individuals to gain access to support and advice, helping them to build up the skills, knowledge and expertise they need.

The regional hubs enable links and collaborations to be made between a range of clinicians (including private practitioners and consultant physiotherapists), managers, academics, students and the Allied Health Professionals (AHPs). The hubs are facilitated by senior university researchers, all of whom have good networking skills and clinical contacts. These facilitators act as points of advice and referral on research matters. Through the hubs, individuals or groups with research needs and

FACILITATOR	HUB	EMAIL
Dr Caroline Alexander	London	c.alexander@ucl.ac.uk
Dr Gill Baer	Edinburgh	gbaer@qmuc.ac.uk
Dr Maggie Bailey	Keele	m.j.bailey@physio.keele.ac.uk
Dr Mindy Cairns	Hertfordshire	m.cairns@herts.ac.uk
Dr Fiona Cramp	Bristol	fiona.cramp@uwe.ac.uk
Dr Susan Coote	Limerick	s.coote@ul.ie
Dr Angela Glynn	South East	a.glynn@bton.ac.uk
Dr Emma Stokes	Dublin	estokes@tcd.ie
Dr Paula Kersten	Southampton	p.kersten@soton.ac.uk
Dr Chris McCarthy	Midlands	c.j.mccarthy@warwick.ac.uk
Dr Alasdair MacSween	Aberdeen	a.macsween@rgu.ac.uk
Dr Sue Mawson	Sheffield	s.j.mawson@shu.ac.uk
Dr Sheila Lennon	Northern Ireland	s.lennon@ulster.ac.uk
Dr Lorna Paul	West of Scotland	l.paul@gcal.ac.uk
Dr James Selfe	Central Lancashire	jselfe1@uclan.ac.uk
Ms Charikleia Sinani	Leeds	c.sinani@leedsmet.ac.uk
Dr Carol Shacklady	Greater Manchester	c.shacklady@mmu.ac.uk
Dr Robert Van Deursen	Wales	vandeursenr@cardiff.ac.uk

Table 1

questions can be put in contact with others interested in similar areas, and sometimes be offered training, support or mentoring.

Each of the NPRN's hubs is evolving in its own way, according to the local circumstances and expertise in the respective regions. Over the last few months, a number of the hubs have held launch events, giving them the opportunity to promote the benefits they offer. Some hubs are already offering workshops for novice researchers; some have established firm links with other research support groups and organisations, such as charitable trusts, existing university networks and NHS Research and Development Support Units; and others have concentrated on learning needs analyses or identifying sources of research funding.

In addition to the work being carried out by the regional hubs, NPRN is aiming to link closely with the Clinical Interest Groups (CIGs) through their research officers, to share good practice in research training, and further build the research culture across all CIGs. The NPRN also has representation from the Physiotherapy Research Society, Physio First, the consultants' group

and ACPM. The NPRN is also exploring possible working relationships with a range of national research bodies including, importantly, charities such as the Multiple Sclerosis Society.

The NPRN is designed to be inclusive: it is open to the widest possible range of individuals, whatever their specialism or level of research experience. There is no formal requirement to go through an application process or become an official 'member' of the network. Anyone interested in finding out more about activities, interests and opportunities in their area can contact their nearest regional hub (see Table 1 above). This information is now also available on the NPRN page of the CSP website, at:

[www.csp.org.uk/director/effectivepractice/research/nprn.cfm](http://www.csp.org.uk/director/effectivepractice/research/nprn.cfm)

For general information and advice about the NPRN, you can also contact the NPRN Research Officer, Dr Philippa Lyon, who is based in the Clinical Research Centre for Health Professions in the University of Brighton. Philippa works full-time in support of the NPRN, and can be contacted on 01273 643945, or by



email: p.lyon@bton.ac.uk.

### BEST RESEARCH FOR BEST HEALTH

#### A new national health research strategy

The Department of Health published the above document in January 2006 in which it outlines the research strategy for the health service for the next five years. The overall vision underpinning the strategy is 'to improve the health and wealth of the nation through research' and the mission statement asserts to 'create a health research system in which NHS supports outstanding individuals, working in world-class facilities, conducting leading-edge research, focused on the needs of patients and the public'. Five strategic goals have been identified to achieve this vision and mission.

1. Establish the NHS as an internationally recognised centre of research excellence.
2. Attract, develop and retain the best research professionals to conduct people-based research.
3. Commission research focused on improving health and social care.
4. Strengthen and streamline systems for research management and governance.
5. Act as sound custodians of public money for public good.

The document further details how the above strategic goals will be addressed and identifies objectives to enable achievement of each goal. Some key points of interest include the establishment of a National Institute for Health Research in England and expansion of clinical research networks, research funding arrangements and building research capability.

The National Institute for Health Research in England (NIHR) will be established as a virtual body to complement the existing institutes of National Institute for Health and Clinical Excellence (NICE) and NHS Institute for Innovation and Improvement (NIII). It is viewed that these three institutes form a

#### MODEL FOR NATIONAL INSTITUTE FOR HEALTH RESEARCH

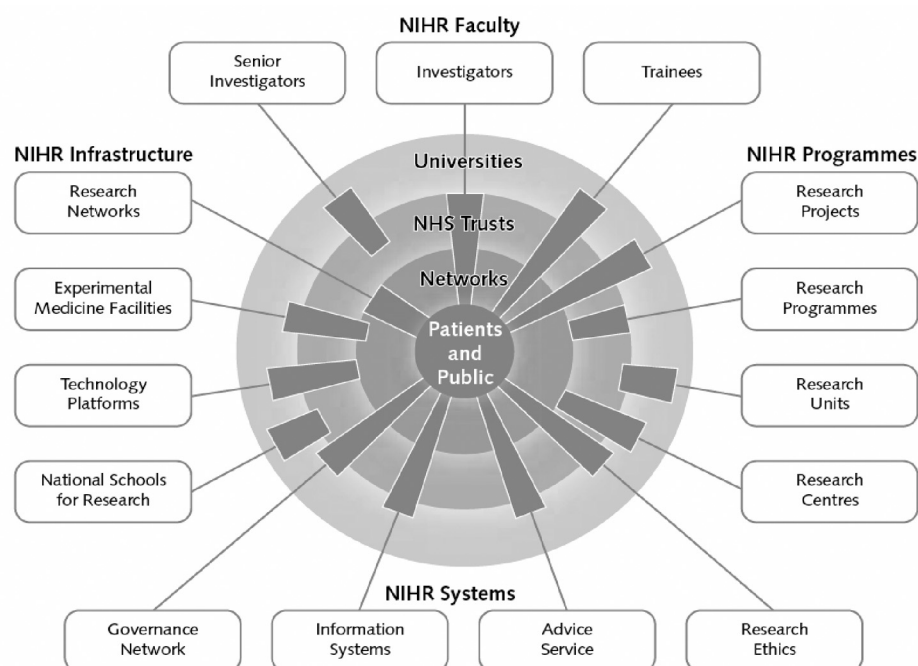


Figure 1 Department of Health, 2006

framework for innovation (NIHR), evaluation (NICE) and implementation of healthcare (NIII). Membership of the NIHR will not be open but by invitation and membership categories will exist. There are further plans to create a National School for Primary Care research.

One key change signalled in the new health research strategy is the research funding mechanisms. The plan is that funding will be allocated on a population-basis to ensure resources will be distributed across England and funding will be channelled through four main routes: projects, programmes, units and centres. Funding will be available in open competition to researchers and 'organisations that are truly outstanding in international research terms'. Funding for researchers should be 'related to daily practice' and 'developed by them with appropriate high-quality academic input' and 'is expected to build on evidence from systematic reviews to ensure safety and value for money'!

To build capability within the NHS, there are plans to provide career scientist awards, post-doctoral awards and researcher development

awards. While it is stated that support will be provided for academic training paths of all healthcare professionals and other key disciplines involved in health and social care research, development funding will be targeted to key areas of NHS priority. Primary care and public health are given as examples. One useful resource for all will be the establishment of a national advice service to assist researchers.

The model for the NIHR provided by the Department of Health (see Figure 1 above) gives an overall view of the framework and research strategy. It is stated in the document that a 'key aim of all NHS network will be to support and conduct randomised controlled trials and other well-designed studies for commercial and non-commercial sponsors' and 'we believe that all patients and professionals across England should be able to participate in appropriate clinical studies when they wish to'.

The research strategy for the next five years may offer opportunity to develop and expand research within the NHS but there are also some issues that ACPIN members should think about, being physiotherapists

interested in the provision and delivery of services for those with neurologically-based problems.

- Will the current inequality of research capability in healthcare professions be addressed?
- While there is an established clinical research network for Stroke, will the framework enable support for research in other neurologically-related areas?
- Will there be recognition of the value of wide-ranging and innovative research methodologies in rehabilitation research?

To ensure that your needs are addressed, we suggest that you are aware of these national developments and developments in your local area. The full document is available on the Department of Health website and updates and implementation plans will be posted to the website as the strategy is implemented ([www.dh.gov.uk/researchstrategy](http://www.dh.gov.uk/researchstrategy)).



## ACPIN RESEARCH BURSARY 2006/2007

ACPIN is offering research bursaries to members. The purpose of the award is to encourage research activity among the membership and to assist members undertaking research as part of their current workload or undertaking research as part of an educational course. Bursaries of up to £800 are available to cover research-related costs.

### Awards

- The maximum award allowable is £800.
- Awards will be made to cover research-related costs in relation to a specific project eg equipment; materials/consumables; specialist software; travel expenses.
- Awards will not be granted to cover the following: course fees; computers, staff time (secretarial support of data entry; therapy time etc).

### Eligibility

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

### Application Procedure

- Applications for the award must be submitted on the standard application form which can be obtained from Mary Cramp, Hon Research Officer (email: m.c.cramp@uel.ac.uk.)

- Applications will be considered twice annually. Completed application forms should be received by 1st December or by 1st June for consideration at the National Committee meetings in January and July respectively.
- An application once submitted may only be re-submitted upon invitation.

Applications will be considered in competition bi-annually. Completed applications will be considered and graded independently by members of the Research Subgroup, ACPIN National Committee.

Recommendations for awards will be reviewed by an independent expert referee. Awards will not be given automatically for each competitive round. Applicants will be informed of the decision of the committee within two months of the application deadline. The decision of the Committee is final.

### Terms and conditions

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

### Outline of the Application Form

The application form is a two page document. On the first page you are asked for contact details, the title of your proposed research, a brief summary of your research, duration of your project, details of the support requested etc. The second page should contain details of research including a brief background, aim/purpose, plan of investigation and justification of support. An electronic copy of the application form can be obtained by contacting Mary Cramp by email to m.c.cramp@uel.ac.uk.

# UNIVERSITY OF BIRMINGHAM

## School of Health Sciences

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A dynamic and developing range of postgraduate programmes is offered for Health professionals across all levels of professional experience. These aim to support effective continuing development (CPD) through flexible learning and personal mentoring. Part time and full time courses are available.

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This module / certificate is currently being developed for a planned September 2006 start date (subject to approval). It is designed for those working in extended scope roles or those working towards application for extended scope roles. Please contact us for information and an update on recruitment availability.

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Why not try a single Masters level module? We have a wide range of modules available including specialist, research, and learning and teaching modules.

For further information on any of these programmes or individual modules, please contact our Programme Admissions tutor Mr Clive Liles 0121 415 8606 e mail [c.r.liles@bham.ac.uk](mailto:c.r.liles@bham.ac.uk)

Full details of programmes and individual modules are available on the School of Health Sciences website:

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# STROKE

## PAST PRESENT & FUTURE

### ACPIN SILVER JUBILEE NATIONAL RESIDENTIAL CONFERENCE & AGM

**FRIDAY AND SATURDAY  
17TH -18TH MARCH 2006**  
THE HILTON HOTEL COLLINGTREE  
NORTHAMPTON

#### LECTURES 1 & 2

## Neuroscience basis for treatment in stroke

**Professor Shirley A Stockmeyer** MA PT

**An overview** of a Posture and Movement Model with the neuroscience basis for dual control systems. Neuroanatomical information will be organised around Kuypers medial and lateral descending systems and a parallel-distributed model of motor control. Neurophysiological findings will identify the differences in the role of sensory input and types of contraction in posture and movement.

## Clinical applications of the model to stroke

**Professor Shirley A Stockmeyer** MA PT

**A posture and movement** model gives rise to therapeutic principles that apply basic neuroscience findings to intervention. Examples will be given of those principles as applied to the impairments of stroke. Specific treatment sequences and their rationale will illustrate the use of the model in planning and progressing intervention.

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**Shirley Stockmeyer earned a BS degree from Russell Sage College and an MA degree from Stanford University, both degrees in the field of physical therapy. She will be receiving the DPT degree from Franklin Pierce College in May 2006.**

**Her clinical work has been with children and adults with neurologic disorders. She has held faculty positions at The Medical College of Virginia, Boston University, Northeastern University and is presently a Professor of Physical Therapy at Franklin Pierce College in Concord, New Hampshire, USA. In recent years she has been a visiting lecturer in the Movement Science program at Sheffield Hallam University.**

**Throughout her career she has been interested in the integration of basic sciences with clinical practice and has been developing a therapeutic theory with principles derived from neuroscience applied to clinical problems.**

**She is a member of the Theory Committee of the Neuro-Developmental Treatment Association who wrote the book *Neuro-Developmental Treatment Approach: Theoretical Foundations and Principles of Clinical Practice* edited by Janet Howle.**

## LECTURE 3

# Advances in the medical management of stroke

**Professor Martin M Brown MD FRCP**

**The management** of acute stroke requires an accurate diagnosis of the underlying anatomy, pathology and mechanism. Advances in imaging, particularly magnetic resonance imaging (MRI), diffusion-weighted imaging (DWI) and magnetic resonance angiography (MRA) are facilitating early diagnosis and exclusion of stroke mimics. Early medical therapy concentrates on establishing reperfusion, preserving penumbra (ischaemic brain that has not yet infarcted) and preventing recurrence. Thrombolysis using alteplase (recombinant tissue plasminogen activator) is effective in up to one in six patients treated, but requires treatment to be started by an experienced team within three hours of onset. Ongoing trials are assessing whether the treatment window can be extended up to six hours. Devices are also being developed to mechanically extract clots from arteries in the brain. Introduction of these treatments requires the development of acute stroke units and ambulance protocols for the rapid admission of suspected stroke patients. Neuroprotective drugs have generally been disappointing, but the recent trial has suggested that a new free radical trapping agent may be effective. It is likely that measures to maintain physiological homeostasis, eg fluid and energy replacement and early treatment of infections, are beneficial. Occasionally, surgical hemicraniectomy is required to relieve cerebral oedema resulting from malignant middle cerebral artery infarction. Prevention of early recurrence requires aspirin to be given within 48 hours for ischaemic stroke, benefiting about 10 in 1000 patients treated. Early routine anticoagulation with heparin is not beneficial. Long term stroke prevention requires treatment tailored to the mechanism of stroke. Patients with atrial fibrillation require long term anticoagulation with warfarin. In those without indication for warfarin, dipyridamole can be added to aspirin, or an alternative antiplatelet agent, clopidogrel, substituted. Treatment to lower blood pressure, even in those whose blood pressure is normal, is very important. Almost all patients should be treated with a statin to lower their cholesterol. Ultrasound screening will detect patients with severe carotid stenosis, needing endarterectomy or the new alternative of carotid stenting, which is being investigated in clinical trials. The development of the National Stroke Research Network should bring further therapeutic advances in the future.

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**Professor Brown was appointed to the Foundation Chair of Stroke Medicine at the Institute of Neurology, University College London, in 1999. He is also Consultant Neurologist at the National Hospital for Neurology and Neurosurgery, Queen Square.**

**During his training he held a fellowship at the University of Western Ontario, London, Canada and before moving to Queen Square was Senior Lecturer and then Reader in Neurology at St George's Hospital Medical School.**

**He has set up an Acute Brain Injury Unit for Stroke and Head Injury, and a One Stop Neurovascular Clinic at the National Hospital.**

**His research interests include clinical trials, carotid atherosclerosis, service provision, and MRI in Stroke. He is a past President of the British Association of Stroke Physicians.**

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**Pam Enderby is a speech and language therapist and Professor of Community Rehabilitation in the Institute of General Practice & Primary Care, University of Sheffield. She has been Chair and Vice President of the Royal College of Speech and Language Therapists (1994-1995 and 1995-1996), President of the Society of Research in Rehabilitation (1994-1996) and Dean of the Faculty of Medicine, University of Sheffield (2000-2003). She has been involved in promoting interprofessional practice, research and learning. She has led research programmes into various aspects of therapy, particularly related to models of delivery, effectiveness and outcomes of rehabilitation, and has published broadly.**

**LECTURE 4**

## Evidence to inform community based stroke services

### Professor Pam Enderby

**This paper** will give an overview of relevant literature related to the provision of community based stroke services. Rehabilitation has generally been thought of as a package with little details regarding the ingredients of care and therapy.

Community therapy has a role in prevention, acute treatment, rehabilitation, secondary prevention and long-term care. By examining the literature related to these particular approaches, we can identify good practice supported by a variety of different approaches for establishing evidence based practice.

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**LECTURE 5**

## Key rehabilitation messages from current RCP stroke guidelines

### Dr Tony Rudd

**Less than 20 years ago** stroke care in the United Kingdom was chaotic; there were few centres of excellence and the evidence base on which treatment was delivered was thin. A huge amount of progress has been made in transforming care, particularly around organisation of care. The Stroke Unit Trialists', have had the greatest impact on improving service delivery and more recently trials of early supported discharge have also highlighted the importance of well organised care involving multidisciplinary teamwork. Research into stroke has grown, yet remains a long way behind cardiology and cancer in terms of available funding. Rehabilitation research has not progressed as fast as acute care, but despite this there are many good quality studies that do provide a framework for delivering services. Progress is dependent upon a better understanding of the

science of stroke recovery and therefore basic scientists need to collaborate with clinicians to target possible new interventions. The lecture will identify those areas where guidelines are clear and should be delivered by all and those areas where participation in research is the only sensible alternative.

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**Dr Tony Rudd was appointed Consultant Physician in the Department of Medicine for the Elderly at St Thomas' Hospital in 1988 and since 1992 has been the lead physician for stroke. He has chaired the Royal College of Physicians, London Intercollegiate Stroke Working Party since 1995. The group has been responsible for the National Clinical Guidelines for Stroke and the National Sentinel Audit of Stroke. He is President of the British Association of Stroke Physicians and a Trustee of the Stroke Association.**

change. From a very lowly position in 1998, in 2004 the stroke unit achieved the highest score in the National Sentinel Stroke Audit (CEEu, 1998/2004), and in 2005 won the prestigious Health Service Journal (HSJ) national award for Clinical Redesign.

As there continues to be a preference in the stroke literature for reporting outcomes without examining associated processes, this study makes an original contribution to the stroke literature through the systematic exploration of the processes involved in development, implementation, and creation of sustainable excellence in a new Stroke Unit.

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**Cherry Kilbride qualified as a physiotherapist in 1985 and until January 2006, when she joined Brunel University as a lecturer in physiotherapy, she has worked within the NHS.**

Cherry has a strong interest in the field of neurology, particularly stroke and head injury and has always maintained a clinical caseload, even when head of department at the Royal Free Hospital, where she worked for eleven years before joining Brunel.

In 2001, Cherry registered for a part time PhD at City University London and hopes her thesis, which explores how the evidence for stroke is implemented in practice will be ready to submit this summer!

## LECTURE 6

# Implementing evidence for stroke: the missing link

**Cherry Kilbride**

**Systematic reviews** of research evidence demonstrate Stroke Unit care improves patient outcomes (SUTC, 1997/2004), government policy sets out a timetable for implementation (DH, 2001) and national stroke guidelines (IPSW, 2004) indicate what care should look like but nothing explains how to put this into practice at a local level.

This session reports selected findings from a two-year multi-professional action research study that systematically documented and analysed processes involved in the implementation of a new inpatient stroke service in a London teaching hospital. Findings demonstrated positive change over time with four main themes emerging; that of building a team; developing practice based knowledge and skills in stroke; valuing the central role of the nurse in stroke care and creating an organisational climate for supporting

## LECTURE 7

# Effects of augmented exercise therapy after stroke: What is the evidence?

**Dr Gert Kwakkel**

**The presentation** addresses four relevant issues related to the impact of intensity of practice after stroke. Firstly, the presentation describes the evidence that exists for a dose-response relationship in stroke rehabilitation. Secondly, the relevance of an appropriate patient selection for a meaningful intensive practice is explored. Thirdly, how does exercise training affect the pattern of functional recovery and fourthly, which mechanisms are responsible for the non-linear pattern of functional recovery after stroke?

For addressing the current evidence of a dose response relationship, articles from MEDLINE, CINAHL, Cochrane Central Register of Controlled Trials, PEDro, DARE and PiCarta and references presented in relevant publications were examined. Studies that satisfied the following selection criteria were included:

1. Patients had a diagnosis of stroke
2. Effects of intensity of exercise training were investigated
3. Design of the study was a randomised controlled trial (RCT)

For each outcome measure the estimated effect size (ES) and the summary effect size (SES) expressed in standard deviation units (SDU) were calculated for ADL, walking speed and dexterity, using fixed and random effect models. Correlation coefficients were calculated between observed individual effect sizes on ADL of each study, additional time spent on exercise training and methodological quality. A cumulative meta-analysis (random effects model) adjusted for the difference in treatment intensity in each study was used for the trials evaluating the effects of AETT provided. Twenty of the 31 candidate studies, involving 2,686 stroke patients, were included in the synthesis. The methodological quality ranged from 2 to 10 out of the maximum score of 14 points. The meta-analysis resulted in a small, but statistically significant SES with regard to ADL measured at the end of the intervention phase. Further analysis showed a significant homogeneous SES for 17 studies that investigated effects of increased exercise intensity within the first six months post stroke. No significant homogeneous SES was observed for the three studies conducted in the chronic phase. Cumulative meta-analysis strongly suggests that at least a 16 hour difference in treatment time between experimental and control groups provided in the first six months after stroke is needed to obtain significant differences in ADL. A significant SES supporting a higher intensity was also observed for instrumental ADL and walking speed, whereas no significant SES was found for dexterity.

The current evidence strongly supports the hypothesis that augmented exercise therapy has a small, but favourable effect on ADL, particularly if therapy input is augmented by at least 16 hours within the first six months post stroke. This meta-analysis also suggests that clinically relevant treatment effects may be achieved on instrumental ADL and gait speed. Although there is strong evidence that early augmented exercise therapy time (expressed as time dedicated to practice) may enhance functional recovery, there is a discrepancy between the evidence for the benefits of intensive practice, on the one hand, and, the implementation of intensive rehabilitation treatment programmes in the current health care system on the other. In addition, longitudinal studies show that almost all stroke patients experience at least some predictable degree of functional recovery in the first six months post stroke. However, the non-linear pattern as a function of time is not well understood. Several mechanisms are presumed to be involved, such as recovery of penumbral tissues, neural plasticity, resolution of diaschisis and behavioural compensation strategies. Rehabilitation is believed to modulate this logistic pattern of recovery, probably by interacting with these underlying processes. However, prediction models that are adjusted for the effects of time after stroke onset suggest that outcome is largely defined within the first weeks post stroke, although functional improvement has been found to extend beyond six months post stroke. In addition, kinematic studies show that functional improvement is more than recovery from impairments alone, suggesting that patients are able to improve in terms of gait or dexterity deficits using behavioural compensation strategies.

Therefore, understanding the impact of task-dependent cortical activation patterns in non-invasive methods requires not only information derived from longitudinal studies pertaining to functional outcomes, but also a better understanding of what is kinematically learned during the acquisition of new skills.

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**Dr Gert Kwakkel is senior researcher at the rehabilitation centre 'de Hoogstraat' and one of the staff members at the department of rehabilitation at the University Medical Centre (UMC) of Utrecht. In addition, he is senior researcher at the department rehabilitation of VU University Medical Centre Amsterdam and part time lecturer 'epidemiology' at the Faculty of Human Movement Science in Amsterdam.**

**He studied physiotherapy from 1978 to 1982, became movement scientist in 1993 and received his PhD at 1998 on the basis of his thesis called: Dynamics of functional recovery after stroke.**

**His field of interest is related to longitudinal studies investigating the impact of functional change in chronic Diseases such as Cerebrovascular Disorders, Parkinson's Disease and patients suffering from Multiple Sclerosis.**

## LECTURE 8

## Evaluation of service redesign and the consultant therapist role in stroke

**Rhoda Allison**

**The NHS Plan** for England (DoH 2000) set out a commitment to develop AHP consultant posts, and stated that the purpose of the role would be to develop clinical care, and to improve patient outcomes. The role consists of four key functions: expert clinical practice, clinical leadership, research and evaluation, and training and education. AHP consultant roles have now been in place for at least four years, but so far there has been little formal evaluation of their impact.

This session will describe how a Consultant Therapist in Stroke role was developed alongside a Stroke service review in the light of the NSF for Older people (2001). It will discuss how the role and associated changes have been evaluated retrospectively using the Integrated Service Improvement Programme template.

Key features of the role have been to improve the interface between primary and secondary care, leadership of a stroke rehabilitation unit in a community hospital, and development of community stroke rehabilitation. These changes have led to the realisation of several benefits, including reduced length of stay in the acute hospital and high levels of patient feedback. The 2004 National Sentinel Audit for Stroke rated the service fifth of all the Trusts in England.

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**Rhoda Allison is a physiotherapist who was appointed Consultant Therapist in Stroke in Teignbridge PCT in 2004. Her role involves clinical leadership of stroke rehabilitation in the local acute trust, three PCTs and two Social Services organisations.**

## LECTURE 9

## The things that the client says he wants and what he really wants

**John Horan**

**John Horan** spoke about his personal experience of stroke services.

John Horan has appeared in many important discrimination and human rights cases, both domestic and international. His extensive experience in discrimination includes goods and services, public authorities and education. He has a particular interest in employment law and his experience covers: internal hearings, contract drafting, and confidential information as well as court appearances.

He appeared unled for the successful police authority and against Lord Lester of Herne Hill QC and Geoffrey Wadsworth QC in the seminal case of *Woolgar v Sussex Police*. He practises in human rights cases involving public authorities.

On the last day of the Millennium, he had a stroke. He returned to practice full time and in 2003 won the Bar Pro Bono prize.

He is trustee of Different Stroke and The Disability Law Service and talks regularly to lawyers, medical professionals and the disabled.

### RECENT/IMPORTANT CASES

**Mark Warner Ltd v Aspland** (EAT: Grievance Procedures)

**Trinity Cross** (HC Trinidad: applying international principle in domestic religious discrimination case)

**Ryanair v Ross** (CA: DDA goods and services)

**Burns v Consignia** (EAT: judgements)

**Wheeler v Qualitydeep Ltd** (CA: illegal contracts)

**Thorpe v Dul** (modern apprentices)

**Woolgar v Sussex Police** (CA: confidentiality in the context of regulation by professional bodies)

## POSTER PRESENTATION 1

## Investigating the effect visual field restrictions have on postural sway in bipedal stance, using a life size moving visual image

**Michelle de Carle assisted by Karen Bird**

Faculty of Health and Well Being, Sheffield Hallam University

**Introduction** The balance process is extremely complex, consisting of the amalgamation and efficient functions between proprioceptive, vestibular and visual systems. Vision provides an abundance of feed-forward information regarding the environment



and the surrounding potential hazards.

Throughout clinical placement experience, restricted vision contributed to patients' poor environmental awareness leading to accidental injury. This questions whether a particular visual field contributes to increasing postural sway. The literature reviewed lacks information regarding how visual field restrictions and a realistic moving visual image (object motion) affect postural standing balance.

**Method** Twenty volunteers (three male and seventeen female with mean age 24), from various Health & Well Being degree courses, replied to an email and passed three preliminary tests. Balance was recorded over 30 seconds, under seven visual field restricting conditions, using a balance performance monitor. Visual Impairment North East (VINE) supplied the visual field restricting glasses. The image displaying object motion, consisting of life sized people walking within a busy crowd towards and away from the observing subject, was projected onto a white concave screen extending beyond the subjects peripheral vision.

**Results** Bilateral peripheral visual field restriction significantly increased postural sway ( $t = 2.002$ ) at 0.05 significance. Therefore, peripheral vision appears to play a key role in maintaining postural stability when subjects perceive object motion.

**Conclusions** Simulated environments could pave the way for assessing and treating a number of pathologies. In the clinical setting patients are rarely well prepared for daily external perturbations that occur in the hectic surrounding environment. Theoretically the concept could increase subjects' awareness and self confidence, and decrease anxiety and fatigue through practice, prior to integration into society.

Abstract of Dissertation submitted in partial fulfilment of BSc Honours Physiotherapy, January 2005.

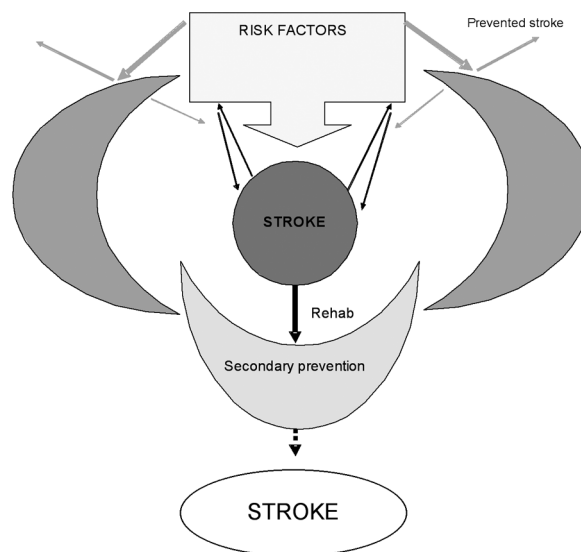
## POSTER PRESENTATION 2

# Is there a role for primary stroke prevention within a community stroke team?

**Deirdre Stark** MCSP and **Norah Bessant** MCSP

Community Stroke Rehabilitation Service, Eastbourne Downs PCT

**Introduction** Eastbourne Downs PCT serves a population of 180,000 of which approximately 500 per year will present with a stroke. The community stroke team see around 50% of these patients for treatment and secondary stroke prevention. Primary stroke education may be an additional appropriate use of the team's services and result in improving public health and reducing NHS costs. ('In the USA the estimate of preventable strokes could be as high as 80%' Gorelick 2003.)



**Method** The team has a policy of taking a 'reduce the risks of stroke' education service into the community, visiting public places such as supermarkets and social centres. These sessions involve free blood pressure readings, advice on reducing the risk of stroke, along with providing poster information in appropriate settings. It is intended to educate and prompt the public and empower them to take responsibility for their own health.

**Results** In one such intervention, three staff saw over 200 members of the public during one day. Twelve were referred for further investigation due to hypertension and three due to hypotension. All were provided with information regarding health education and appropriate public facilities. We developed the model (see graphic) to demonstrate how reduction of risk factors may reduce primary and secondary strokes.

**Conclusion** Community stroke teams may be effectively and inexpensively mobilised to encourage the public to adopt primary preventative treatments. Further research and audit of figures is proposed. As Howard (2005) comments, 'Stroke preventative treatments are well understood and widely available ... it is only the application ... that is lacking.'

## POSTER PRESENTATION 3

# Evaluation of the Bobath approach used to re-educate gait in stroke patients

Jakko Brouwers<sup>1</sup> and Sue Richardson<sup>2</sup>

<sup>1</sup> Rookwood Hospital, Cardiff and Vale NHS Trust

<sup>2</sup> Physiotherapy Education, Cardiff University

**This research** used both qualitative and quantitative methodology to explore rationale and theoretical beliefs behind the Bobath approach used to re-educate gait with three stroke patients. It compared the findings to literature describing the approach in an attempt to identify changes to the concept and the approach over the years since last publication.

Treatment video data and gait analysis data were presented to participants of three focus groups, consisting of experienced specialist physiotherapists with working experience of the Bobath approach. Focus group discussions were recorded and transcribed. Transcripts were analysed using an inductive approach to thematic analysis. No earlier research was found to have explored these issues in this format.

The Bobath concept is still regarded as a very valuable approach to treatment. In this study however, it has undergone changes in rationale and even in the underlying concept, especially in relation to inhibition of spasticity, the role of preparatory work and muscle weakness.

The study has shown that there is a need, now more than ever, to produce and publish a revised, officially accepted, evidence based version of the Bobath concept to replace the last publication by Berta Bobath, in 1990.

Completed in fulfilment for MSc in Physiotherapy.

# STOP!

all SYNAPSE readers: whether current members or those just borrowing!

Are you an ACPIN member this year? If not, why not join today?

If you are a member already, are you an active member? Are you getting the most out of your membership?

What can ACPIN do for you? Well, with maybe a little input from you, you'll get a whole lot more back. It's all a question of balance!

Help keep your ACPIN balanced!

**This is what you can gain from being an active member of ACPIN**

## CPD OPPORTUNITIES

- Subsidised courses and study days (important in these days of changing patterns of funding).
- Enhancement of your CPD with learning from lectures, study days and reflective practice.
- Opportunities for application for funding for Congress, ARC, Conference and lectures.
- Information in advance on forthcoming national courses.

## ACPIN IS WORKING FOR YOU!

The 18 local regional committees and National Committee undertake to achieve ACPIN's aims:

- To promote the exchange of ideas, the educational development and the participation in research of members.
- To promote communication with the CSP and other organisations about neurology and physiotherapy.
- To encourage and participate in guideline-setting within neurology.
- To be financially accountable.

## LINKS TO RESEARCH

- Opportunities to make local, national and international contacts.
- Network with other colleagues.
- Learn about research and guidelines being developed nationally and regionally.
- Contribute to *Synapse* with any of the above, local audits, or innovative service developments; discuss your ideas with the *Synapse* coordinator today!

## SYNAPSE

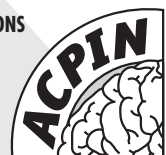
- Your own copy of *Synapse* including article and book reviews, calendar of events, regional reps reports and a newsletter.
- Discover how ACPIN is developing and being involved in the neurology specialty, eg the UK Stroke Forum.

## GET INVOLVED IN YOUR LOCAL COMMITTEE

- Support your regional committee. Remember every member is welcome to participate and be involved in your regional issues.
- Suggest and maybe host and organise local courses, study days or lectures.

## OTHER REASONS

Social events.



**Expand your horizons and be part of the bigger picture !**

# Reviews

## articles, books, courses

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

### B SCIENCE BASED REHABILITATION: THEORIES INTO PRACTICE

Refshaug e K, Ada L and Ellis E (2005)  
Butterworth Heinemann

Book review by **Emma Blair**

The first edition of this book is a collection of ten interesting chapters focusing on various aspects of rehabilitation.

It is easy to read and highlights the changes within physiotherapy over the last 30 years, providing insight into the profession today.

The book is designed to highlight the contribution to clinical practice of professors Carr and Shepherd and draws on many theoretical concepts.

- Chapter 1 **Bridging the gap between theory and practice**  
R Shepherd and J Carr  
The opening chapter reflects on the motor learning concept and its development within clinical practice. It highlights the need for change and ongoing adjustments within physiotherapy practice. It is suggested that biomechanics, exercise science and motor learning should be part of the core knowledge for undergraduate physiotherapists.
- Chapter 2 **We only treat what it occurs to us to assess: the importance of knowledge based assessment.** J Bernhardt and K Hill  
Assessment is a vital part of rehabilitation and this chapter explores how research and knowledge contributes to what physiotherapists should assess and how this impacts on clinical

practice. It focuses on two areas: improving assessment of the UL after stroke and balance dysfunction. The problem of describing movement disorders is also explored. What physiotherapists choose to assess is based largely on background knowledge and what is treated depends on what is assessed. Overall it highlights the importance of keeping up to date with research.

- Chapter 3 **The quest for measurement of infant motor performance** S K Campbell  
This chapter looks at plasticity, intervention and measurement and debates the Test of Infant Motor Performance (TIMP). It describes the development and validity of TIMP and its' application to clinical practice.
- Chapter 4 **Muscle performance after stroke** D J Newham  
Muscle performance, the effect of stroke and the role in rehabilitation is focused on in this chapter. It reviews current knowledge on plasticity and discusses how rehabilitation optimises function following stroke. It also investigates muscle strength focusing on the non-neural components of tone. Although this chapter discusses muscle performance in detail it also highlights that further study is required on the role of muscle performance after stroke.
- Chapter 5 **Changing the way we view the contribution of motor impairments to physical disability after stroke** L Ada and C Canning

This chapter looks at understanding positive and negative features of spasticity, primary and secondary impairments and disability. It provides some interesting and valuable references. The importance of spasticity, weakness and loss of dexterity are discussed as contributing factors to disability.

- Chapter 6 **How muscles respond to stretch** R Herbert

Carr and Shepherd's view on how biomechanics, psychology and muscle biology influence physiotherapy practice are discussed here. The chapter is divided into four parts:

- Discussion of elastic properties of resting muscles.
- Viscous or time dependent responses.
- Adaptive responses.
- Clinical studies of the effects of muscle stretching.

There are a lot of good evidence based discussions here to contribute to clinical findings.

- Chapter 7 **Cardiorespiratory fitness after stroke** S L Kilbreath

G M Davis  
It is suggested that deficits of cardiorespiratory fitness have not been recognised as an impairment warranting priority treatment by physiotherapists. Fitness, exercise programs and exercise prescription are all analysed and future directions for exercise training are suggested.

- Chapter 8 **Training gait after stroke, a biomechanical perspective** S J Olney

This is an enthusiastic chapter highlighting the importance of biomechanics. It aims to provide an overall understanding of the patterns of the biomechanical variables of moments, energies and powers through the gait cycle of people affected by stroke. It is clinically relevant, easy to read and answers many important questions regarding gait and considers the biomechanical issues relevant to gait training after stroke.

- Chapter 9 **Assessment and training of locomotion after stroke: evolving concepts**

F Malouin and C L Richards

This chapter follows on appropriately from chapter 8 and reviews studies that have contributed to the task orientated approach to gait training for people after stroke. It considers strength, endurance and treadmill training. It also looks at adjuncts to training, for example mental imagery.

- Chapter 10 **Strategies to minimise impairments, activity limitations and participation restrictions in Parkinsons Disease** M Morris,

V Jayalath, F Huxham, K Dodd and J Oates

The final chapter explores ways in which Parkinsons Disease leads to impairment of body structure and function, limitations in activities of daily living and restriction of participation in societal roles.

### Summary

Overall this textbook provides a detailed and clear insight into physiotherapy as a science. It acknowledges the different concepts within neurological physiotherapy and aims to illustrate how the profession has developed. It presents physiotherapists with challenging evidence to contribute to their clinical reasoning.

It is generally aimed at the postgraduate physiotherapist but would be of interest to students and is well worth a place on a department bookshelf.

## ILLUMINATING THE WAY AHEAD: WORKING TOGETHER TO IMPROVE MS CARE

MS Trust Annual Conference  
November 2005, Blackpool

Course review by **Christine Singleton**, Clinical Specialist (FES) and West Midlands Regional Spasticity Project Manager, West Midlands Rehabilitation Centre

As a physiotherapist with a special interest in Multiple Sclerosis, I have attended the MS Trust Annual Professional Conference for several years. It is really encouraging to see that with each year, the number of physiotherapists in attendance is increasing and 2005 was the best yet! If you have a special interest in MS, or would like to develop your knowledge of managing this complex condition, I would strongly recommend that you consider attending this conference in the future.

### Programme

The 2005 two-day educational programme provided new clinical knowledge, up-to-date research information and practical management strategies, alongside an exploration of the political context within which we all strive to provide MS services. The balance of plenary sessions and optional seminars enabled me to tailor the programme to meet my own particular learning needs. I came away from the conference with new ideas both for managing the impact of MS on people's lives and developing innovative services.

### Programme Highlights from 2005

The therapists in MS (TiMS) group worked with the MS Trust to ensure that the 2005 programme provided challenging and relevant sessions for therapists. I particularly enjoyed an excellent extended session on ataxia management, involving a lead expert in this field, Dr Jon Marsden (Institute of Neurology, London), alongside

several therapy clinicians who shared both their practical and research expertise in Ataxia. Pain and complex spasticity management were also of particular relevance to physiotherapy. Access to information outside of the traditional 'physiotherapy' areas and the knowledge of other professional groups, was also particularly valuable. The complex nature of MS demands that clinicians understand an extremely wide range of topics and I found sessions on fatigue management, stem cell research and disabled parenting broadened my knowledge considerably.

There was also an opportunity to present MS related research and I was delighted to see physiotherapists presenting research on functional electrical stimulation, lycra splinting and exercise.

### Networking and support

Over 350 allied health professionals and nurses from around the UK attended and I found great benefit in meeting professionals from different services and professional backgrounds. Many ideas and challenges were shared, across professional boundaries, reflecting the way in which MS care should be approached in practice.

### Further information

The 2006 MS Trust Annual Conference will take place in November and I have already approached my manager to secure funding to attend! If you have a special interest in MS, then I recommend that you contact the MS Trust to request a 2006 registration pack for further details.

To obtain a 2006 registration pack please contact: Lucie Flint by telephone on 01462 811239 or email: [education@mstrust.org.uk](mailto:education@mstrust.org.uk)

If you are interested in presenting MS related research, please contact the Education Team at the MS Trust on 01462 476704 or at [education@mstrust.org.uk](mailto:education@mstrust.org.uk)

## SPLINTING WITH ABNORMAL TONE

30th and 31st of August 2005  
Moseley Hall Hospital, Birmingham  
Tutor: Lydia Dean in association with Somek and associates

Course review by **Fiona Wallace**, Senior Physiotherapist, Heart of England Foundation Trust

Splinting with abnormal tone was a two day course attended by 20 delegates. This practically based course was informative and thought provoking.

The learning objectives of the study day were to enable the delegate to:

- Be able to discuss the role of splinting in the management of the hand with abnormal tone.
- Be able to discuss and demonstrate the benefits and application of thermoplastic materials as part of intervention for the management of abnormal tone in the hand.
- Be able to use thermoplastic splinting materials to fabricate splints.
- Be able to undertake an assessment of the hand that presents with abnormal tone and provide the clinical reasoning for splinting prior to fabrication of any splint.
- Be able to assess and splint patients with abnormal tone.

The first day comprised of a discussion about the main theories involved in splinting of neurological patients. This was followed by a lively debate about the effectiveness and evidence base associated with splinting. We then had the opportunity to produce some of the most frequently manufactured thermoplastic splints used in the management of abnormal tone. This was achieved under the careful supervision and guidance of an experienced clinician, whom in spite of the absence of the second course leader was extremely patient and very helpful.

The second day involved theoretical and practical case studies.

The clever use of case studies related theory to clinical practice. Delegates had the chance to use the splint making skills they had acquired the previous day and relate it to specific neurological conditions using live models. This was extremely beneficial as it allowed time to consolidate practical skills with the course advisor on hand for advice and help with clinical reasoning.

Although the cost of the course initially appeared high at £200, it was clear to see during the course that this related to the material used throughout the two days. The handouts received were of a very high quality, being both well presented and informative. Following the course it was felt that there had been a good balance between practical and theoretical elements helping to address the daunting subject of splinting. Overall it was a thoroughly enjoyable two day course.



# Regional reports

## ■ EAST ANGLIA

Sesa Ishaya

Regional Representative

East Anglia area is alive and well. As well as one can be in this current state of the NHS. Our region has been affected in many ways with closures of a rehab unit, lack of educational funds, restructuring etc. We have coped with this by supporting one another at our committee meetings, sharing information, brain storming and changing the way we do things. Two of our courses had to be cancelled not due to lack of interest but lack of funds. So we have changed our format to a less expensive one.

In November, Sue Edwards spent a day at Addenbrookes working with staff and clients and gave a lecture at the end of that day on 'Exercise, cardiovascular fitness and gait-considerations for retraining' that was free to all ACPIN members. Thank you Addenbrookes.

Ipswich Hospital has harnessed the expertise in their neurology department and has hosted a Vestibular Rehabilitation Study Day, again free to all ACPIN members.

A presentation on the use of lycra is in the near future.

The camaraderie and support we offer each other is sure worth the small fee we pay to belong to ACPIN. We hope more people join our committee and experience that none of us are alone no matter where you work.

## ■ KENT

Janice Champion

Regional Representative

Our membership numbers for 2005 were the highest Kent has seen for a long time and this has resulted in more Committee members and well attended meetings. The 'Lower Limb' study day held at the East Kent

Neuro- Rehabilitation Unit, Buckland Hospital, Dover in October was very successful and comprised of a selection of lectures including anatomy and biomechanics, FES, The use of treadmills (with a practical demonstration!) and outcome measures.

Our programme for 2006 will start with a study day to be held on 3rd February in Maidstone titled 'Cerebral Palsy in Adult Life' led by Christine Barber, Director of Therapy Services at the Bobath Centre, London.

The AGM will be held on 15th March at the Kent and Canterbury Hospital and Craig Hayle who is an Orthopaedic ESP will be reviewing 'Current concepts of spinal management in physiotherapy'. This will be an evening lecture combined with the AGM with the enticement of a buffet supper to encourage attendance!

The programme for the rest of 2006 is still in the planning stage but any ideas from members for future courses are always welcome.

## ■ LONDON

Sandy Chambers

Regional Representative

Happy New Year to all from your London ACPIN Committee. I am pleased to report that 2006 looks to be an excellent year.

Your AGM was held on 18th January and was exceptionally well attended. We can report a sound bank balance, a growing committee, and exciting plans for courses and lectures over the coming year.

The committee says a reluctant farewell to our Chair, Louise Platt, who has served London ACPIN for four years. Lou's good humour and energy have steered us faithfully and we will miss her. We now have a vacancy for Chair and, while we will

cover the duties within the committee, we are seeking nominations from the membership for the post.

We welcome new committee members Gita Ramdharry (secretary), Leigh Forsyth, Gemma Cooke and Cathy Donaldson. They have jumped right in to keep the good work going. Please let any of us know if you would like to participate in the committee in any way – the more, the merrier.

The programme for next year, begun with the AGM, promises to be very interesting and diverse.

- May 2006 *Peripheral Neurological Conditions* (Study half-day).

- September 2006

*Neurorehabilitation: From the Past to the Future* with Prof Ray Tallis (Evening lecture).

- November 2006 *Ataxia* (Study day).

Please look out in *Frontline* for exact dates and venues near the time. If your workplace does not receive flyers to remind people about the London ACPIN courses, please let myself or any of the committee members know.

## ■ MANCHESTER

Nina Smith

Regional Representative

A very belated Happy New Year from Manchester ACPIN! There are two vacancies on the committee at present, so if you would like to join us just let us know.

There has been a major revision to the lecture programme this year in response to fluctuating attendance rates, to take account of the national picture, and to enable a day course to be run by the ACPIN Committee for the first time. The programme for 2006 has been planned to emphasise skills that are transferable to other conditions and to incorporate broader aspects of physiotherapy intervention, such as MSK techniques and reconditioning. We hope the changes will be met with a positive response and always welcome feedback from the membership.

## Programme for 2006

- May *Spinal Cord Injury* (Workshop).
- July *Strength training of the Shoulder*
- September *Physically Challenging the Patient* (Day course).
- November *MSK techniques for joint mobilisation with Neurological Patients*

Poster displays at each evening meeting will continue, these can be about a research project, practice and service development or an area team – anything that helps information sharing in the region.

Manchester ACPIN membership has reduced significantly over time; 32 members currently compared with 67 last September, so please return your renewal as soon as possible and support this year's new and improved programme!

## ■ MERSEYSIDE

Jo Jones

Regional Representative

Merseyside membership totalled 35 in the first publication of the membership list for 2006 – I'm confident as I am writing this that renewal forms will be being 'uncovered' and sent off 1st class! The baby boom continues amongst our committee with Jenny Thain and Ann-Marie D'Rozario leaving to embrace motherhood. Jenny has been a committee member for many years and has held almost all major posts – we can't thank Jenny enough for her tireless efforts and energy in all those guises. My concerns re who may take over at the helm and keep us on course where thankfully unfounded as Amanda Deaves is back amongst us and all is well! Our committee currently numbers eight – that's 16 open arms to welcome new members!

The end of 2005 saw Merseyside hosting two excellent courses. The two day Basic Splinting Course with Sue Edwards was well attended, informative, enjoyable and even entertaining at times! The November FES Course was unfortunately

undersubscribed but despite low numbers, the committee decided to continue and those who attended experienced a stimulating and inspiring two days.

The first event planned for 2006 – a study day on spinal injuries was however, a casualty of undersubscription – we apologise for its cancellation and hope to reschedule it later in the year. The provisional programme for the remainder of 2006 is as follows:

- May/June *Neuroplasticity* (Study day).
- September 9th *Hypnotherapy* (Evening lecture).
- October *Possible reschedule of Spinal Injuries* (Study day)

As always your ideas for future courses are very welcome.

## ■ NORTH TRENT

**Emma Procter**  
Regional Representative

The North Trent committee has had its ups and downs in the last few months and we have had a few logistical difficulties organising meetings and are therefore a little behind with things!

However we ran a very successful half-day course in December, 'Spasticity: Evidence based management and treatment' with Paulette van Vliet and Fredericke van Wijet. The course was a mixture of theory and workshop that created a fun atmosphere and an opportunity to share ideas and I think all present would thoroughly recommend it. I would like to take this opportunity to thank everybody for their support and assistance on the day.

We have the following day courses planned:

- April 26th *Gym Balls in Neuro*, speaker Janice Champion (Park Rehab Centre, Rotherham).
- October 21st *Regeneration and recovery after CNS lesion* John Marsdon (half day; Sheffield – exact location TBC).

I am sorry that I have insufficient details to publish a lecture

programme for the rest of the year, as we are reluctant to publish anything until we have everything confirmed. We will let you know via *Frontline* as well as local advertising when events are happening. For those of you for whom we have email addresses we will use that method to communicate with you in the future. As ever, if anyone has any suggestions for lectures or courses or would like to host an event at their hospital, please get in touch with myself or any of the committee. We are always looking for ideas.

## ■ NORTHERN

**Julia Williamson**  
Regional Representative

Hope everyone has had a good Christmas and New Year and you are all happily settled into 2006.

We ended our programme for 2005 with a very successful FES course at Hunter Moor-many thanks to Alex Haugh, Catherine Birkett and all the staff at Hunters Moor for all their hard work in arranging the course.

We are keen to set up a network of physiotherapists who are trained in using FES within the Northern region to share experiences and techniques.

The regional ACPIN branch continues to be active in organising courses for the next year by the time you're reading this we will have run the Introductory Bobath weekends at North Tees in February, March and April with Paul Johnson – thanks to Paul and to Serena, Nicola and all the staff at North Tees for helping with the course organisation. We will also have had a 'Cheese and Wine' AGM at Newcastle General.

Also planned for 2006 is a course with Mary Lynch-Ellerington on May 11th and 12th. This will be aimed at more senior staff and we're hoping to look at 'Gait in higher level patients' – the exact programme and venue TBA.

We also have plans to run a course, either evening lecture or study afternoon, about Brain Gym and also

may reschedule the case report writing study afternoon.

If you have any ideas for courses you would like Northern ACPIN to run please get in touch with any of the committee members and let us know.

Thanks for supporting Northern ACPIN and please continue with this in 2006.

## ■ OXFORD

**Claire Guy**  
Chair

We continue to have excellent evening attendances, a big thank you to all our members for their commitment in turning out at one of our two main venues of Oxford and High Wycombe.

There was an interesting and successful talk by Drew Dodds, an orthotist based at the Nuffield Orthopaedic Hospital, and then two stimulating sessions addressing the management of the shoulder, in October with Jane Moser (ESP) looking at the musculo-skeletal aspect, and then in January, a practical session led by the OCE Neuro Clinical Specialist, Charlie Winward. In the future a combined course may be run. A highly successful hydrotherapy course was held in Oxford with Alison Skinner where emphasis was to offer numerous clinical applications to the neurological client group.

Early in the year we welcomed Jane Bennett to the committee .... and without asking!

The incomplete spinal injuries day course will now be held early 2007, please contact us if you are interested, and we will also be sending out fliers with good advanced notice.

Congratulations are due to Fiona Cuthbertson and Meredith Newman, both proud mums.

As always we would love to hear from you if you are interested in becoming a committee member or if you have any ideas for future events.

Please feel free to let any of the committee know or contact Claire Guy on 01865 737290.

## Provisional 2006 programme

- April TBC *Management of complex disability*.
- May TBC *Clinical application of the MS NICE guidelines* Prof Wade.
- June 6th 7.15pm *Parkinsons and related syndromes* Dr Matthew Jackson (Wycombe General Hospital)
- July 13th 7.00pm *Social Evening – Punting* (Oxford) meet at Cherwell Boathouse.
- September 12th TBC 7.15pm *Orthopaedic Management of the Neurological Foot and Ankle* Speaker is an orthopaedic surgeon TBC.
- October 13th-14th *Gait and balance* Pam Mulholland, Bobath Tutor (Two day practical course).
- November 15th 7.15pm *Seating considerations for the wheelchair user* Lone Rose (Stoke Mandeville Hospital spinal gymnasium)

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

## ■ SCOTLAND

**Paula Cowan**  
Regional Representative

The Scottish Committee is doing well at the moment but is always keen for new members. We look forward to a productive year. I will be stepping down as the Scottish rep at the AGM due to study commitments and also the fact I have served for three years now so it is someone else's turn!

## Provisional 2006 programme

- April 1st *Trunk/pelvis/community management of stroke* Mark Smith Cost £20/30. Also AGM (All members encouraged to attend and give support).
- June 19th *Goal setting* Day course (NHS24 Edinburgh)

- The management course that was cancelled in March has been rescheduled for later in the year. It will be a Friday and will be subsidized by ACPIN to reduce costs.

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

## ■ SOUTH TRENT

**Tina Hutchinson**  
Regional Representative

Firstly, we would like to say a huge thank you to Lal Russell for her hard work as Regional Rep for South Trent. Lal has handed over the reigns to Tina Hutchinson (me)! We held two very successful courses in the last six months. A Gait workshop delivered by Helen Linfield and a two day study weekend on Parkinsons delivered by Fiona Lindopp. Both courses were very well attended with excellent feedback.

We have a busy year planned with several evening lectures and study days. Study days include a Head and Neck workshop being held on September 23rd and 24th by Debbie Strang (Bobath tutor). We are also planning to hold an acupuncture course. Thanks to all our members for your support.

## ■ SOUTH WEST

**Kirsten Cheadle**  
Regional Representative

There have been a few changes within the committee over the last few months with Pegotty Talbot taking over the Chair post from Gina Sargeant. We would like to thank both of them – Gina for all of her hard work over the last few years and Pegotty for taking on the task! We have welcomed new members to the committee from Gloucestershire and Wiltshire and always value the input of new people.

We have made further links with members in Devon and are hoping to

gather further support and run lectures and courses which are more accessible to those in the extremes of our large region. Please look out for further information in *Frontline* and on fliers about forthcoming events.

The last few months have seen some excellent, well attended events, particularly the 'practice and feedback for stroke patients' course by Paulette van Vliet. Our thanks go to our speakers.

We have planned our programme for 2006 and have some bookings for beyond.

- April and May Two evenings on *shoulder assessment and treatment* (Southmead Hospital).
- September *Respiratory Care for Neuro patients*.
- November 17th/18th *Movement Science approach to the upper limb* Ailie Turton and Liz Britton (Cardiff).

We are also planning an incomplete spinal injuries study day, a gym ball course with Janice Champion and hope to hold evening lectures on other topics, still to be arranged.

Please see our website [www.southwestacpin.net](http://www.southwestacpin.net) for further details of courses and committee members and please do contact us if you would like to join, or if you have any courses you would particularly like to see us run.

## ■ SURREY & BORDERS

**Brigitt Bailey**  
Regional Representative

We started our programme this year with an evening lecture by Helen Linfield on 'Dynamic Stability'. In her talk she explored the components of dynamic stability, particularly looking at the contributions of the CNS and the muscular system, as well as focusing on the role of muscles as mobilisers and/or stabilisers. This lecture was well attended and enjoyed by all participants.

This followed in November by a talk on 'Communication' by

Rosemary Townsend, Speech and Language Therapist. The session was very interactive and practical, attended by a great variety of therapists from different areas. Rosemary highlighted the fact that communication was more than verbal language and was looking at management strategies therapists can use in dealing with dysphasic patients.

By the time you receive your spring *Synapse* we will have held the AGM on the 21st February at Farnham Hospital and we are looking forward to hearing Emma Cooke and Cathy Donaldson, two research physiotherapists working with Professor Val Pomeroy talk on their research on 'The effects of functional strength training on upper and lower limb after stroke'.

This is of particular interest to some physiotherapists in the region as some of our patients are participating in this research.

Future meetings will include:

- May 9th PD – *Balance and Falls* Emma Stack (Woking Community Hospital).
  - September 13th Fiona Jones *title to be confirmed* (Frimley Park Hospital).
- For November, we are in the process of planning a study-day on 'Spasticity Management'.

Unfortunately we have lost some valuable committee members during the year for personal reasons and we would like to take the opportunity to thank them all. As last year, we are looking for more people to come forward and join the committee at the AGM.

Watch out for flyers in departments giving details of the evening lectures.

If you are interested in becoming a committee member or have any suggestions for topics or speakers for the 2006/7 programme please let us know and contact: Brigitt Bailey on 01483 846346 or by e-mail [brigitt.bailey@shawpct.nhs.uk](mailto:brigitt.bailey@shawpct.nhs.uk)

## ■ SUSSEX

**Clare Hall**  
Regional Representative

The membership is at a healthy level in Sussex although more members are always welcome.

Sussex ACPIN continues to enjoy a varied programme of events in different venues.

In August 2005, we had another practical day as Part II Myofascial Release: Upper limb and Trunk in Neurology, with Mary Sanderson at The Conquest Hospital. There was positive feedback from all participants about the excellent teaching and much discussion on the potentially significant impact on neuro patients.

In November, there was the study day 'Use of Orthotics in the Treatment of Gait with Neurologically Impaired Patients', with Michelle Long, Clinical Specialist at Southlands Hospital. This was very successful and useful for physios of all levels of experience.

Our 2006 programme of study days is as follows:

- April 26th *Postural Control* Pauline Pope (Firwood House, Eastbourne).
- Date to be confirmed *Practice and Feedback for Stroke Patients* Paulette Van Vliet (Conquest Hospital, St Leonards-on-Sea, East Sussex).

We are always seeking further ideas for topics, speakers and venues. Have a think and let us know about your wishes for next year's programme: contact details of all the committee are on the website.

## ■ WESSEX

**Mary Vincent**  
Regional Representative

After innocently attending my first Wessex committee meeting in Autumn 2005, I found myself volunteering to be the regional rep. Due to the recent and impending arrival of babies, there have been a number of changes within the committee and as a result a new committee has been formed, with

Heather Back kindly volunteering to be Treasurer and Marjon van Wees kindly volunteering to be Secretary.

The role of Chair still needs to be filled, and we are also looking for more members to sit on the committee – any volunteers within the region welcomed!

I understand 2005 was a quiet year for Wessex ACPIN, but we are hoping to be more active in 2006. Presently two evening lectures and two courses have been planned for the first half of the year and we hope to build on this programme with support from our members.

#### Programme for 2006

- Date to be confirmed *Hydrotherapy for Neurologically Impaired Patients* (venue TBC)
- June (date to be confirmed) *Recovery of a neurologically impaired upper limb* (Two day course, details and speakers to be confirmed).

## ■ WEST MIDLANDS

**Liz Cohen**

Regional Representative

West Midlands ACPIN Committee is suffering from the famous pregnancy bug at present with four members of the committee on maternity leave. We wish Michelle, Jo, Zoë and Claire all the best for their recent and forthcoming births. We have seen a few new committee members join and a few resign. At this time we wish to thank Sarah for her many years of commitment to the committee from the start.

In December we welcomed Dr Soryal to Moseley Hall Hospital for an evening lecture on 'Dystonia' which was very well received. In a few weeks time on February 18th we welcome back Helen Lindfield and Liz Mackay to present a 'Clinical Reasoning in Neurology' workshop which is full to bursting! Our AGM will be run at this time.

We are already planning a busy schedule for 2006 to 2007. The provisional programme so far (dates,

titles and venues to be confirmed) is:

- May *Proprioception* Dr Jill Ramsay from The University of Birmingham (Rescheduled evening lecture, details to follow).
- September *FES course* Christine Singleton TBC.
- November 6th *Out-Patient Techniques in Neurology* Helen Lindfield (Worcester Royal Hospital).
- December 2006 (Evening Lecture TBC).
- January/February 2007 *Advanced PNF course* Nikki Rochford (Heartlands Hospital, Birmingham).

Thank you for your continued support and don't forget to renew

membership! A special thanks to the committee for all their hard work.

We are always looking for new members with new ideas for the committee, so if you feel you would like to come along (no commitment!) and see what it is all about then please get in touch. Meetings usually happen in and around Birmingham with home cooked food (tempting you?) approximately once every eight weeks depending on the programme.

## ■ YORKSHIRE

**Jill Fisher**

Regional Representative

The Yorkshire region has had a successful season with good attendance for informative evening lectures and day courses, thanks as always to our speakers.

In September, Pauline Pope led a Posture Management Study Day, demand outstripped place availability for this excellent study day, and we are planning to repeat the course on June the 10th this year to meet this demand.

In November, Nikki Adams was our speaker for a very interesting evening lecture 'Visual Systems In Balance Training incorporating some brain gym and neurolinguistic programming principles'. The talk was well supported in Dewsbury, a new location for Yorkshire ACPIN, thanks

to Margery Heron for organising the venue. The committee would welcome further offers from members who could organise different venues enabling lecture and a day course programme to be offered at a variety of sites to improve accessibility to more members.

In January, our speaker for an evening lecture held at the Leeds General Infirmary was Dr Bamford, the subject being 'Horizon Scanning in Stroke'.

A number of other interesting days and evenings are in the process of being arranged including a Gait Study Day to be led by Debbie Strang. The provisional date for this event is the 21st of July. Evening talks will hopefully include a behaviour management talk and an evening focusing on multiple sclerosis issues.

The AGM and day course led by Mick Thacker is arranged for April 22nd, the topic being Pain in Neurological Conditions. Having heard Mick talk at the national ACPIN day last year I know it will be a very interesting and informative day

Yorkshire members please consider if you could support ACPIN locally by joining the seven members currently on the committee. As well as fulfilling a valuable role supporting the committee, it provides a good opportunity for networking and helping to develop your CV.



# Letters

Dear Synapse,

I am writing to you regarding a new post which I have just undertaken, which I thought may be of interest to you. I have attached an outline of the post, in addition to project and personal background details.

I would be interested in receiving some feedback and would be willing for you to pass on this information to any relevant parties.

## Background

The Stroke Therapy Evaluation Project (STEP) was started in 1997 to create an environment where health professionals with different areas of clinical expertise were able to work co-operatively to establish a relevant, reliable, accessible and understandable evidence base for stroke care. Initially STEP aimed:

- To produce Cochrane systematic reviews relevant to stroke rehabilitation.
- To disseminate best evidence in stroke rehabilitation.
- To provide training on evidence-based practice to health professionals working in stroke rehabilitation.
- To contribute towards evidence-based guidelines.
- To promote evidence-based stroke rehabilitation.

From this point STEP continued to progress into a more sustainable concept and it has become clear that with the increasing volume of high quality evidence in stroke rehabilitation and increasing awareness of evidence-based practice, the solution would be to move towards a web-based project. Following a successful funding application to NOF ('New Opportunities Fund', now known as 'The Big Lottery Fund') [www.effectivestrokecare.org](http://www.effectivestrokecare.org) was

established. The aim of Effective Stroke Care is to break down the barriers that prevent health professionals keeping up to date with rapidly increasing volumes of high quality research and provide systematically determined evidence-based answers to key clinical questions.

[effectivestrokecare.org](http://effectivestrokecare.org) is freely accessible and contains an up to date database of the evidence of effectiveness of interventions in stroke care.

## My role

This is a one year seconded post funded by the Stroke Managed Clinical Network to work as part of the STEP team to review all trials, using rigorous critical appraisal techniques, on upper limb interventions following stroke. Following critical appraisal of the relevant literature evidence statements to inform clinical practice will be prepared and disseminated through [www.effectivestrokecare.org](http://www.effectivestrokecare.org). During my time on the STEP project a Cochrane systematic review will also be completed (title to be confirmed), which will further the evidence base for upper limb interventions for stroke patients.

During the year I will also be given to opportunity to attend various conferences, courses and study days to develop my own knowledge base and skills and present the work I will be undertaking.

I am very excited about undertaking this role, which I believe will give me a valuable insight into the world of research and also assist in furthering the evidence base in this very important area of clinical practice. Furthermore I believe that it is imperative that the research agenda of Allied Health Professions is taken forward and promoted. One

aspect of the job I am particularly looking forward to is liaising with various individuals to inform them about the work being undertaken and encouraging others to participate, where possible.

I hope you find this interesting and relevant.

Yours truly,

Fiona Coupar

Health Care Analyst

Glasgow Royal

## My background

Occupational Therapist with over five years clinical experience within general hospitals. Through experience a particular interest developed in neuro-rehabilitation and upper limb rehabilitation and has led me to join the STEP team for this project.

I hope this information is of interest to you. I would be happy to discuss this project further or to give presentations to interested individuals within your organisation.

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# Guidelines for authors

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

## ■ CASE REPORTS

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

### Introduction

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

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

### The patient

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

### Intervention

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

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

### Method

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

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

## Implications for practice

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

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

## Summary

List the main lessons to be drawn from this example.

## References

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

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

## ■ ABSTRACTS OF THESIS AND DISSERTATIONS

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

## ■ AUDIT REPORT

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

## ■ REVIEW OF ARTICLES

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

## ■ PRODUCT NEWS

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

## ■ REVIEW OF BOOKS, SOFTWARE AND VIDEOS

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

## ■ LETTERS TO SYNAPSE

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

## PREPARATION OF EDITORIAL MATERIAL

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

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

The first page should give:

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

## All articles

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

## Measurements

As the International System of Units (SI) is not yet universal, both metric and imperial units are used in the United Kingdom in different circumstances. Depending on which units were used for the original calculations, data may be reported in imperial units followed by the SI equivalent in parentheses, or SI measurements followed by imperial

measurements in parentheses. If the article mentions an outcome measure, appropriate information about it should be included, describing measurement properties and where it may be obtained.

## Permissions and ethical certification

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

## Submission of articles

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

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

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