

**ASSOCIATION OF  
PAEDIATRIC  
CHARTERED  
PHYSIOTHERAPISTS**

**JOURNAL**



**JUNE 2004**

ISSUE  
NO. 111

# OFFICERS OF THE ASSOCIATION

CHAIRMAN	Lesley Smith	Physiotherapy Dept Royal Hospital for Sick Children York Hill NHS Trust Dalnair St GLASGOW G3 8 SJ lesley.smith@yorkhill.scot.nhs.uk
VICE-CHAIRMAN	Peta Smith	Physiotherapy Dept Mary Sheridan Centre 43 New Dover Rd CANTERBURY CT1 3AF peta.smith@ekht.nhs.uk
SECRETARY	Laura Wiggins	26 Braidpark Drive GLASGOW G46 6NB laura.wiggins@nthworld.com
TREASURER	Fiona Down	5 Home Farm Close Hilton HUNTINGDON Cams PE28 9EW fiona.down@btinternet.com
PUBLIC RELATIONS OFFICER	Gill Holmes	Child Development Centre Alder Hey Children's Hospital Eaton Rd LIVERPOOL L12 2AP Gill.Holmes@RLCH-TR.nwest.co.uk
EDUCATION OFFICER	Adele Leake	Snr Lecturer in Physiotherapy School of Health & Social Care Collegiate College Campus Sheffield Hallam University SHEFFIELD S10 2BT a.c.moore@shu.ac.uk
PUBLICATIONS OFFICER	Lorna Stybelska	Paediatric Physiotherapy Dept Cumberland Infirmary CARLISLE Cumbria CA2 7HY stybelska@aol.com
MEMBERSHIP SECRETARY	Susan Rideout	Physiotherapy Dept The Children's Hospital, Steelhouse Lane BIRMINGHAM B4 6NH susan.rideout@bch.nhs.uk
EDITOR	Sally Braithwaite	531 Church Rd Yardley Birmingham B33 8PG Sally.Braithwaite@btinternet.com
RESEARCH OFFICER	Jeanne Hartley	Physiotherapy Dept Great Ormond St Hospital LONDON WC1N 3ZJH hartlj@gosh.nhs.uk
CIG LIAISON	Linda Fisher	Special Educational Needs & Psychology Service SE Essex Area Education Office The Knares BASILDON SS16 5RX linda.fisher2@essexcc.gov.uk
Committee Members	Christine Shaw	42 Cammo Grove EDINBURGH EH4 4EX c.h.shaw@blueyonder.co.uk
	Sarah Crombie	10a Record Road Emsworth Hants PO10 7NS scrombie@srtl.co.uk



Editorial .....	2
Letters to the Editor .....	3
ARTICLES	
CONFERENCE 2004	
Lecture Abstracts .....	5
The Prognosis for Walking in Cerebral Palsy Mr Alf Bass - Consultant Paediatric Orthopaedic Surgeon .....	9
Serial Casting - a review of the evidence Adele Leake MCSP Senior Physiotherapy Lecturer .....	11
The Decision Making Process for Giving Botulinum Toxin in Managing Spasticity in Cerebral Palsy Kaat Deslovere - Kinesiologist .....	15
Free Paper Abstracts .....	18
Poster Presentation Abstract .....	20
The Role of the Paediatric Physiotherapist in the Management of Spasticity Lyn Hammings - Superintendent Paediatric Physiotherapist .....	21
REGULAR FEATURES	
APCP Matters .....	24
Research and Education .....	34
Regional Reports & Neonatal Clinical Interest Sub-Group Report .....	35
APCP Publications .....	39
Here and There .....	40
Courses .....	42
Vacancies .....	46
APCP Research Register .....	47
Regional Representatives .....	inside back cover

The Editorial Board does not necessarily agree with opinions expressed in articles and correspondence,  
and does not necessarily endorse courses and equipment advertised



Firstly, I would like to thank and congratulate the organising committee based in the North West for all their efforts in organising such a terrific conference in Liverpool.

I think this conference has set the standard of things to come. It has been the intention of your national committee for some time to raise profile of APCP. Which is not quite as easy as it sounds. In the current professional climate it is essential for all paediatric physiotherapists to have a 'look good' and 'feel good' factor. We really do not sell ourselves well and often do not seem to be valued by others because of this. Conference in Liverpool has given the opportunity for some high profile national and international speakers with presentations of a high standard which were shared with a large number of delegates, evidence in itself that many paediatric physiotherapists take their continuing professional development seriously. Thank goodness that gone are the days of student accommodation with lumpy beds, the residue of cigarette smoke and worse, dripping taps (if they worked at all) and a bathroom some distance down a maze of dark corridors with little light — what did happen to those light bulbs?

Just as an aside, I remember going to conference more years ago than I care to confess but there may be one or two people around that remember this incident. We were in fact sharing the corridor with some students who had stayed behind for reasons best known to themselves - this would have been fine except that they liked to practise their skate-boarding skills along that nice smooth hallway in the wee small hours of the morning. It was a good excuse to stay up late in the bar and nothing much has changed there except no excuse seems necessary now.

Networking was the order of the day this conference. There were plenty of opportunities to exchange ideas and for debate amongst therapists and an excellent trade exhibition to extend this to the representatives of the equipment companies who helped to make this successful conference possible with their generous sponsorship.

Much mention was made of the need for research and evidence to underpin our therapeutic practice - look out for details of how you can access the research bursaries available from APCP in the research and education section of the journal.

Finally, don't stop sharing your ideas and questions in these pages; it is your forum to both seek advice and to shape the future of paediatric therapy, which in these times of ever changing systems needs to be influenced by all of you and moulded in the way you wish it to go.

Sally Braithwaite

### EDITORIAL BOARD

Sally Braithwaite - Editor  
Sally.Braithwaite@btinternet.com

Lesley Smith  
lesley.smith@yorkhill.scot.nhs.uk

Gill Holmes  
Gill.Holmes@RLCH-TR.nwest.co.uk

Adare Brady  
adare.brady@uh.n-i.nhs.uk

Felicity Dickson

Alison Gilmour  
Alison.gilmour@graysmill.edin.sch.uk

Gill Smith  
gilliansmith@hotmail.com

Sue Whitby

Terry Pountney  
Terry.Pountney@southdowns.nhs.uk

Jill Williams

## Letters

Allie Carter  
Guy's & St Thomas'  
NHS Trust

Dear Sally,

I am writing to say what a marvelous Conference we have just attended. Well done to the organisers on such an excellent & professional programme. Having such a splendid venue enhanced the whole experience and really did make one feel valued and special for a few days.....back to the grindstone now but with excellent food for thought.

Yours truly,  
Allie Carter

Marian Inns  
Senior Community  
Children's Physiotherapist  
Children's Physiotherapy  
Gloucestershire  
c/o The Lodge Community  
Therapy Centre  
Dilke Memorial Hospital  
Cinderford  
Glos GL14 3HY

Dear Sally

We are currently compiling Children's Physiotherapy Service Guidelines for mainstream school physiotherapy input in the Gloucestershire area.

Our team would be most grateful if other districts could share samples to enable us to work towards national parity and to promote a comprehensive overview of parameters.

Thanking colleagues in anticipation, our contact details are as given.

Marian Inns  
Judith Wilkes  
Anna-Marie Tandy

Helen Towers  
Senior 1 Paediatric  
Physiotherapist  
Paediatric Physiotherapy  
Service  
St Helen's House  
571 Foxhall Road  
Ipswich  
Suffolk IP3 8LX  
Tel: 01473 275520  
Fax: 275575

Dear Editor

I am a Paediatric Physiotherapist working with a child with moderate to severe Cerebral Palsy Spastic Quadriplegia. The child's parents have chosen to follow a treatment approach known as Advanced Neuromotor Rehabilitation (ANR), carried out by a charity called Advance.

I would be interested to hear the news and experiences of other therapists who have encountered the Advance approach, particularly with regard to compliance with conventional Physiotherapy.

Yours sincerely  
Helen Towers

Marion Giles MCSP  
Langside Avenue  
Parkstone  
Dorset  
BH12 5BN  
Tel: 01202 518635  
or 549559  
Fax: 01202 531513

Dear Mrs Braithwaite

Re: Hyperbaric Oxygen Therapy for Cerebral Palsy

I would be grateful to hear from any therapists who have been involved with children with Cerebral Palsy who have received Hyperbaric Oxygen Therapy, either in the UK or in America.

Thanking you in anticipation.

Yours sincerely  
Marion Giles MCSP

Pam Shults  
Children's Therapy Services  
Poole Hospital NHS Trust  
Longfleet Road  
Poole  
Dorset BH15 2JB  
Tel: 01202 665511  
Email:  
pam.shults@poole.nhs.uk

Dear Editor

Re: Lycra Support Garments and Splints

As a group of children's Occupational and Physiotherapists, we are aware that the provision of lycra support garments within the Wessex region is inequitable. It has come to light that there are different practices in every department. In some departments, children are assessed for and provided with funded garments whilst in others there is no service at all.

The Wessex area NAPOT and APCP have sent representatives to join a 'steering group'. The objectives of the group are to gather evidence to support the provision of lycra garments and splints; to identify best practices, use of materials and costs; to create criteria and protocols which can be used across the Wessex area and to draw up a paper which can be used in the various areas to bid for funds to provide a service.

We hope that as a group of Paediatric OTs and Physios we will be able to have greater influence on the various funding agencies by acting as a 'pressure group'. If any other professionals have been successful in setting up a funded service we would value your advice and encouragement.

Yours faithfully  
Pam Shults

Copy for the  
**SEPTEMBER 2004 JOURNAL**  
must be with the editor by  
**1st AUGUST 2004**

The editorial board reserve the right to edit all material submitted

## Abstracts from the main lectures at Conference 2004 in Liverpool

### MUSCLE STRENGTHENING IN CEREBRAL PALSY

Gill Holmes M.Phil  
Superintendent Physiotherapist  
Alder Hey Gait Laboratory  
Royal Liverpool Children's NHS Trust

#### ABSTRACT

Cerebral palsy (CP) is a general term used to describe a variety of motor disorders. The motor syndrome includes weakness, loss of dexterity, abnormal postures, reflex excitability, changes in muscle fibre types and length and the inertial contributions of the skeleton as it grows during childhood (Lin, JP). Some muscle groups are more affected than others with the distal plantarflexors and dorsiflexors showing a higher level of involvement (Elder, G et al 2003).

Despite the fact that muscle weakness is reported as a common symptom in children with CP (Damiano et al 1995; Wiley ME, Damiano DL 1998; Elder, G et al 2003), and the fact that muscle strength is an essential component of normal muscle control, this aspect of the disability was virtually ignored by therapists for decades due to the predominance of neurodevelopmental therapy (Wiley ME; Damiano DL 1998). In fact it would be true to say that muscle strengthening was actively discouraged as it was feared that 1) it would increase spasticity and abnormal movements and so interfere with motor control; 2) that children with cerebral palsy would reap little or no benefit from weight training due to lack of isolated muscle control of targeted muscles and 3) that muscle weakness was not considered a primary contributor to motor dysfunction. (Damiano DL et al 1995).

In recent years there has been a renewed interest in the use of muscle strengthening in children and adults with central nervous damage (Damiano DL 1995) and many studies have shown clinically significant improvement in function as a result of strength training programmes (MacPahil HEA, Kramer JF 1994; Wiley ME, Damiano DL 1995; Damiano DL, Vaughan CL, Abel MF 1995).

During a similar period there has been promotion of physical fitness as a major benefit to health. Studies have shown that good-to-high levels of physical fitness in individuals (muscular strength, endurance and cardio-respiratory fitness) can offset the decline in function which occurs with the ageing process

and can assist in the maintenance of physical independence. At the same time it has also been noted that people with cerebral palsy must maintain higher levels of fitness than the general population to offset the decline in function which occurs from the ageing process and the continuing evolution of cerebral palsy (Rimmer JH 2001).

In the lecture the concepts of muscle strengthening and general health promotion in the treatment of patients with cerebral palsy will be further discussed with the aim of challenging current treatment modalities and stimulating thoughts and ideas regarding the direction that treatment interventions in cerebral palsy should take.

1. Lin JP The Management of Spasticity Associated with the Cerebral Palsies in Children and Adolescents, editors Allbright AE; Neville B. First Edition. Churchill Communications pp11-38
2. Elder, G et al Contributing factors to muscle weakness in children with cerebral palsy. *Dev Med Child Neurol* 2003, 45: 542-550
3. Damiano DL, Vaughan CL, Abel MF Muscle response to heavy resistance exercise in children with spastic cerebral palsy. *Dev Med Child Neurol* 1995, 37: 731-739
4. Wiley ME, Damiano DL Lower extremity strength profiles in spastic cerebral palsy. *Dev Med Child Neurol* 1998, 40: 100-107
5. MacPahil HEA, Kramer JF. Effects of isokinetic strength training on functional ability and walking efficiency in adolescents with CP. *Dev Med Child Neurol*. 1995, 37: 763-775
6. Rimmer JH Physical fitness levels of persons with cerebral palsy. *Dev Med Child Neurol*. 2001, 4

### FETAL AND NEONATAL INDICATORS FOR DISABILITY

Dr. Bill Yoxall Consultant Neonatologist  
Liverpool Women's Hospital

#### ABSTRACT

The identification of fetuses and neonates who are likely to develop disability has three potential clinical purposes. Firstly, to inform decisions relating to the non-institution or withdrawal of life saving treatments in children in whom such treatments are inappropriate. Secondly, to allow clinicians to provide meaningful prognoses for the parents of children exposed to perinatal adversity. Thirdly, to identify groups of such children who may benefit from closer monitoring and earlier intervention.

A variety of demographic, physiological, metabolic, imaging and clinical measurements provide information in this area. Most provide reassurance of normality when no evidence of damage is demonstrated, but the positive predictive of any

## Abstracts from the main lectures at Conference 2004 in Liverpool

---

single positive test is poor. In practice, clinicians must use a combination of information from various sources.

Standard neurological examination of posture, tone and reflex activity in the neonatal period only allows identification of only the most severely disabled children. Methods to study of patterns of spontaneous movements appear to be much more accurate in identifying children who are likely to develop disability. This information is not available to clinicians for informing possible end of life decisions, but may be helpful in providing prognostic information to parents or services for providing monitoring or early intervention. The acceptability of this approach to parents and the cost effectiveness of the method have not been assessed.

### CLINICAL AND RADIOLOGICAL INVESTIGATION OF NEURODISABILITY

Dr Lewis Rosenbloom  
*Honorary Consultant Paediatric Neurologist  
Royal Liverpool Children's Hospital NHS Trust*

#### ABSTRACT

In modern practice it is appropriate that when children are considered to have neurological disabilities, that a cause for these should be ascertained if that is at all possible.

The reasons for this include the facts that neurological disability is life-long and establishing why it has occurred is a legitimate component of overall management.

Secondly, it is important to distinguish between static and progressive disorders and examples of these that are not uncommon in clinical practice will be presented.

Thirdly even for non-progressive pathologies, information can be obtained not only about aetiology but also about prognosis following investigation. This includes prognosis for other family members should a genetic disorder be identifiable.

Fourthly an understanding of aetiology can be helpful in avoiding misconceptions about blame whether this applies to family members or to treating and caring services.

In this presentation I shall identify some of the clinical indicators that are of use in practice when attempting to determine aetiology of neurological

disability. I shall also review and illustrate the place that magnetic resonance brain imaging and other investigations have when considering why children have their disabilities.

### PREDICTING OUTCOME IN PRETERM INFANTS

Dr Anna Mayhew  
*Clinical Specialist Preston PCT*

Greenbank Therapy Officers  
Ripon Street  
Preston  
PR1 7LY  
01772 401090

#### ABSTRACT

Project title: A comparison of the ability of cranial ultrasound, neonatal neurological assessment and the observation of spontaneous general movements to predict outcome in premature infants

Principle Investigator: Anna Mayhew (née Simpson)

Supervisors: Professor Nigel Mathers, Director, Institute of Primary Care, University of Sheffield and Dr Alan Gibson, Consultant Neonatologist, Jessop Wing, Sheffield Teaching Hospitals

#### *Summary*

The ability of three different assessment techniques to predict neurological outcome, were assessed in a cohort of ninety-eight infants born at 32 weeks gestation or less. Neonatal neurological assessment (NNA), cranial ultrasound (US) and spontaneous general movements (GMs) performed whilst the infants were still premature and up to 14 weeks post term age, were compared singularly and in combination for ability to predict scores on the Bayley Scales of Infant Development (BSID) and presence or absence of cerebral palsy (CP) at two years of age. Prior to term age US was a better predictor of CP and after term age GMs proved better than the other techniques. NNA was better at predicting scores on the Bayley scales. A combination of techniques over time improved the ability to predict outcome. Combining US and GMs predicted CP more effectively, and NNA and GMs were better predictors of Bayley scores. However, statistically significant combinations did not produce clinically useful models that clearly identified high-risk infants at an early stage. The fact that traditional techniques, such as US and NNA more confidently predict a normal outcome is well documented in other studies, especially when used in combination, but it is also recognised that abnormality cannot be predicted with equal confidence. The results from this study are consistent with these data. However, the ability of GMs to predict CP in this preterm cohort was not demonstrated with the same certainty as claimed in previous studies.



### EXERCISE IN CYSTIC FIBROSIS

Mary Dodd FCSP  
Consultant Physiotherapist in Cystic Fibrosis  
Manchester

#### ABSTRACT

The contribution of exercise to a healthy lifestyle is well recognised in both health and disease. Although patients with cystic fibrosis (CF) are exercise limited by their lung disease and poor nutritional status, the majority of unfit patients with mild to moderate lung disease have the capacity to exercise and increase fitness similar to their peers. Patients with severe disease will have limited exercise capacity but with careful supervision their work capacity can be improved and they should not be excluded from training programmes.

Aerobic and anaerobic performance is reduced in CF and the problem appears to be one of muscle quality and quantity. For the majority of patients the limiting symptom to lower and upper body exercise is muscular fatigue. Improving nutritional status and exercise are probably required to increase muscle mass.

The short term benefits of exercise programmes include improvement in cardiorespiratory fitness, muscle strength and endurance, morale and decrease in breathlessness. Despite declining lung function it has been shown that patients can maintain their fitness in the long term and increased fitness is associated with decreased mortality. If exercise is therefore to be part of routine management and maintained in the long term, unsupervised, individualised home-based programmes would be advantageous. A three-year RCT of home exercise supports this hypothesis and resulted in a preservation of lung function in the exercising group.

Habitual levels of activity provide information about activities of daily living. There is increasing concern about activity levels in children in the general population and a study has shown that levels are reduced in CF. It is imperative that patterns of exercise are established early in childhood and the positive effects emphasised to parents and families from the time of diagnosis. Unlike other treatments in CF exercise is enjoyable and is perceived differently to other forms of self care. We should be encouraged to transfer the knowledge gained from exercise studies into the routine management of children with CF.

#### References

1. Godfrey S, Mearns M. (1971) Pulmonary function and response to exercise in cystic fibrosis. *Arch Dis Child*, 46,144-151.
2. Marcotte JE, Grisdale RK, Levison H et al. (1986) Multiple factors limit exercise capacity in cystic fibrosis. *Pediatr Pulmonol*, 2,274-281.
3. Klijn PHC, van der Net J, Kimpen JL et al. (2003) Longitudinal determinants of peak aerobic performance in children with cystic fibrosis. *Chest*, 124:2215-2219
4. Lands LC, Heigenhauser JF, Jones NL. (1992) Analysis of factors limiting maximal exercise performance in cystic fibrosis. *Clin Sci*, 83,391-7.
5. Cerny FJ, Pullano TP, Cropp GJA. (1982) Cardiorespiratory adaptations to exercise in cystic fibrosis. *Am Rev Resp Dis*, 126,217-220.
6. Boas SR, Joswiak ML, Nixon PA et al. (1996) Factors limiting anaerobic performance in adolescent males with cystic fibrosis. *Medicine and Science in Sports and Exercise*, 28, 291-298.
7. DeMeer K, Jeneson JAL, Gulmans VAM et al. (1995) Efficiency of oxidative work performance of skeletal muscle in patients with cystic fibrosis. *Thorax*, 50,980-983.
8. Moser C, Tirakitsoontorn P, Nussbaum E et al. (2000) Muscle size and cardiorespiratory response to exercise in cystic fibrosis. *Am J Respir Crit Care Med*, 162:1823-7
9. Lands LC, Heigenhauser JF, Jones NL. (1993) Respiratory and Peripheral muscle function in cystic fibrosis. *Am Rev Resp Dis*, 147,865-869.
10. Moorcroft AJ, Dodd ME, Haworth C et al. (1997) Exercise limitation and symptoms at peak cycle ergometry in adults with cystic fibrosis. *Thorax*, 52, (S6 A5).
11. Moorcroft AJ, Dodd ME, Webb AK. (1997) Exercise capacity, ventilation, and symptoms at peak arm versus peak leg ergometry in cystic fibrosis. *Pediatr Pulmonol*, S14,300-1.
12. Moorcroft JA, Dodd ME, Webb AK. (1997) Long-term change in exercise capacity, body mass and pulmonary function in adults with cystic fibrosis. *Chest*, 111,338-343.
13. Bakker W. (1992) Nutritional state and lung disease in cystic fibrosis. *Neth J Med*, 41,130-136.
14. Heijerman HGM, Bakker W, Sterk PJ et al. (1992) Long-term effects of exercise training and hyperalimentation in adult cystic fibrosis patients with severe pulmonary dysfunction. *Int J Rehabil Res*, 16,22-27.
15. Nixon PA, Orenstein DM, Kelsey SF et al. (1992) The prognostic value of exercise testing in patients with cystic fibrosis. *N Engl J Med*, 327,1785-8.

## Abstracts from the main lectures at Conference 2004 in Liverpool

---

16. Schneiderman-Walker J, Pollock SL, Corey M et al. (2000) A randomised controlled trial of a 3-year home exercise program in cystic fibrosis. *J Pediatr* 136:304-10
17. Boucher GP, Lands LC, Hay JA et al. (1997) Activity levels and the relationship to lung function and nutritional status in children with cystic fibrosis. *Am J Phys Med Rehabil* 76, 311-15.
18. Baeke JAH, Burema J, Frijters ER. (1982) A short questionnaire for measurement of habitual physical activity in epidemiological studies. *Am J Clin Nutrition*, 36,936-942.
19. Moorcroft AJ, Abbott J, Dodd ME et al. (1996) Assessment of habitual levels of physical activity in cystic fibrosis. *Pediatr Pulmonol* (S13)
20. Abbott J, Dodd ME, Webb AK. (1996) Health perceptions and treatment adherence in adults with cystic fibrosis. *Thorax*, 51,1233-1238.
21. Gulmans VA, de Meer K, Brackel HJ et al. (1999) Outpatient exercise training in children with cystic fibrosis: physiological effects, perceived competence and acceptability. *Pediatr Pulmonol* 28:39-46
22. Boas SR, Danduran MJ, McColley SA. (1999) Parental attitudes about exercise regarding their children with cystic fibrosis. *Int J Sports Med* 20:334-8
23. Prasad SA, Cerny FJ. (2002) Factors that influence adherence to exercise and their effectiveness: application to cystic fibrosis. *Pediatr Pulmonol* 34:66-72

### RESEARCH BEHIND THE TREATMENT OF ASYMPTOMATIC INFANTS WITH CYSTIC FIBROSIS

Diane Rogers  
*Clinical specialist in Paediatric Cystic Fibrosis and  
Respiratory Care, Cardiff*

#### ABSTRACT

Cystic Fibrosis (CF) is the most common inherited recessive disease in the United Kingdom (UK). In the general population, 1:25 carry the CF gene and in the UK, the annual incidence of CF is 1:2500 live births. Respiratory disease and bronchial damage contribute substantially to the early morbidity and mortality associated with this disorder.

Management of a patient's chest disease is aimed at clearing the airways of mucopurulent secretions with regular chest physiotherapy from diagnosis to terminal phase, considered integral component in delaying the progression of lung disease.

Current understanding and established practice pertaining to chest physiotherapy in infants with CF is based almost entirely on theoretical reasoning and precedence. My lecture will discuss the evidence, and make the arguments for and against, continuing with routine chest physiotherapy treatment for infants with CF as opposed to chest physiotherapy treatment when the patient is symptomatic.

### EPILEPSY SURGERY IN CHILDHOOD

Mr Paul May  
*Consultant Paediatric Neurosurgeon  
Royal Liverpool Children's Hospital and The Walton  
Centre for Neurology and Neurosurgery*

#### ABSTRACT

The majority of children with epilepsy will be controlled adequately with anticonvulsants. A significant proportion however will be refractory to medical treatment. Some of these children may benefit from surgical procedures to control or suppress their epilepsy.

In general terms epilepsy surgery falls into 2 categories: -

- a) The excision of the focus.
- b) The control of spread.

Excision of the focus surgery can involve the removal of small parts of the brain up to the more radical operation of hemispherectomy; in congenital hemiplegia. In these patients an elaborate pre-surgical evaluation involving imaging, neuropsychology, neuro-psychometry and clinical assessment is required. In some groups, in particular children with temporal lobe epilepsy and a structural lesion in the medial part of their temporal lobe, the eradication of seizures can be as high as 80%.

In the second category of surgical procedures the results are not so good. These procedures involve limiting the spread of the seizure activity from the focus, particularly in multi-focal or generalised epilepsy. The operation of splitting the brain in two by corpus callostomy is less frequently undertaken and perhaps the most common operation in this category now is the vagal nerve stimulation, which I will discuss in detail.

## Serial Casting : A Review of the Evidence

### Results

- Increased passive ROM immediately and 4 months post casting ( $p < 0.0001$ )
- Running speed increased at 4 months ( $p < 0.005$ )
- PCI improved at 4 months ( $p < 0.005$ )
- Step length increased at 4 months ( $p < 0.005$ )
- Improved initial contact to heel strike at 1 month and flat foot at 4 months....

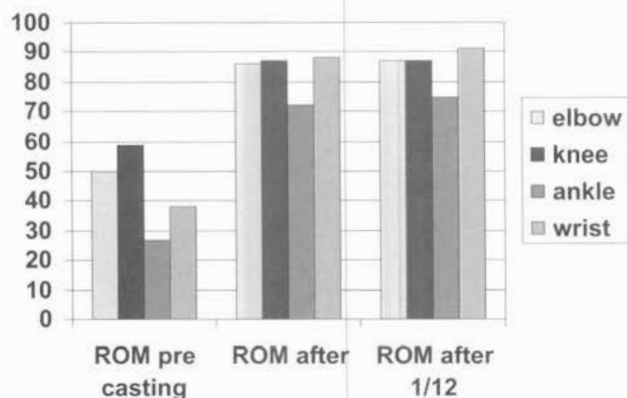
### Effectiveness of serial casting on contracture (Pohl, 2002)

- $n=105$  adults with severe cerebral spasticity
- mixed pathologies, (TBI, Acute haemorrhage)
- serial casting to relieve fixed contractures caused by increased tone.
- 172 joints – (42 elbow, 41 wrist, 21 knee, 68 ankle)
- Casting method, stockinet, circular padding, 6 layers of hard cast.
- (group a) changed 5-7 days, (group b) changed 1-4 days

### Results

	Group A (changed 5-7 days)	Group B (changed 1-4 days)
mean application time	32.6+/- 20.6 days	9.3 days +/- 1.4 days,
mean number of casts	4.4+/-2.1	3.5+/-1.4
increased ROM	immediately and after 1 month in both groups. $P < 0.001$	
Discontinuation due to complications ( $p=0.03$ )	18.5%	6.3%

Graph to show mean % of maximum ROM of different joints before, immediately following casting and after 1/12



### Discussion

- Changing cast intervals of less than 5 days is superior ie, reduced complication rate, reduced total application time.
- Complications can be reduced by experienced application
- Splints were used to maintain range
- Best results found in ankle joint casting
- Found no evidence of injury to tendon, bands or joint capsules, destruction of cross links within muscle fibres suggested to improve flexibility
- Decrease of baseline force under the cast to 20% of the initial value occurs within the first 24 hours in patients with severe spasticity.

### Underpinning theory

#### • SHORT TERM stretch –

Stress relaxation - if length constant tension will decrease over time,

Creep - if tension constant length will increase over time,

Realignment of random collagen pattern

Short term effects only (Williams 1988)

#### • LONG TERM stretch

Muscle architecture changes

Immobilised muscle in lengthened position leads to increased number sarcomeres, each of slightly decreased length (Williams & Goldspink 1977)

#### • PASSIVE and ACTIVE movement

Thixotropy - Muscle will become more flexible with repeated movement (Hagbarth 1985)

- isometric exercise decreased stiffness

#### - mechanisms

- muscle spindle stretch sensitivity change
- mechanoreceptor change
- breaking and attaching of residual cross bridges.

#### • Reduced atrophy with isometric activity in lengthened position (Yang 1997)

#### • Reduction in tone via;

- Reduction in abnormal sensory input
  - Prolonged tactile sensory stimulus leading to accommodation
  - "switch on presynaptic inhibition" by normal sensory input
  - Long slow stretch leading to stimulation of golgi tendon organs leading to inhibition of the alpha motor neurone.
- (Watkins 1999)

### In conclusion

There is significant evidence for continued inclusion in the therapists "tool bag" Underpinning theory from animal model studies offers support for length changes occurring during casting. Muscle fibre atrophy may not be as significant for the muscle held in the lengthened position. Recommendations

## Serial Casting : A Review of the Evidence

---

are made for the formation of clinical guidelines on the application of serial casting for children with cerebral palsy. Issues regarding suitability, tolerance, Physiotherapy work load and training, remain key components in consideration of the cost vs benefit relationship.

### References:

- Brouwer B, Wheeldon RK, Stradiotto-Parker N (1998) "Reflex excitability and isometric force production in cerebral palsy; the effect of serial casting" *Developmental medicine and child neurology* 40(3) 168-175
- Corry IS, Cosgrove AP, Duffy CM, McNeill S, Taylor TC, Graham HK (1998) Botulinum toxin A compared with stretching casts in the treatment of spastic equinus; a randomised prospective trial" *journal of paediatric orthopedics* 18(3) 304-311
- Cottalorda J, Gautheron V, Metton G, Charmet E, Chavrier Y (2000) "Toe-walking in children younger than six years with cerebral palsy" *journal of bone and joint surgery* 82(4) 541-4.
- Cusick BD (1990) *Progressive casting and splinting*. Tucson, Ariz, Therapy skill builders
- Flett PJ, Stern LM, Waddy H, Connell TM, Seeger JD, Gibson SK (1999) "Botulinum Toxin A versus fixed cast stretching for dynamic calf tightness in cerebral palsy" *Journal of Paediatric Child Health*, 35, 71-77
- Hagbarth KE (1985) "Thixotropic behaviour of human finger flexor muscles with accompanying changes in spindle and reflex responses to stretch" *Journal of physiology* 368: 323-342
- Harris SR, Riffle K (1986) "Effects of inhibitive ankle-foot orthosis on standing balance in children with cerebral palsy; A single subject design." *Physical therapy* 66(5)663-7
- Hinderer KA, Harris SR, Purdy AH (1988) "Effects of "tone-reducing" vs standard plaster casts on gait improvement of children with cerebral palsy" *Developmental Medicine and Child neurology* 30(3) 370-377
- Leong B(2002) "Critical review of passive muscle stretch;implications for the treatment of children in vegetative and minimally conscious states" *Brain injury* 16(2) 169-183
- McClure PW, Blackburn LG, Dusold C (1994) "The use of splints in the treatment of joint stiffness, Biologic rationale and an algorithm for making clinical decisions" *Physical therapy* 74(12) 1101-1108
- Mills V (1984) "Electromyographic results of inhibitory splinting" *Physical therapy* 64; 190-207
- Preissner KS (2001) "The effects of serial casting in spasticity; a literature review" *Occupational Therapy in Health Care* 14(2) 99-106,
- Sussman MD (1983) "Casting as an adjunct to neurodevelopmental therapy for cerebral palsy" *Developmental medicine and child neurology* 25; 801-805
- Watkins CA (1999) "Mechanical and neurophysiological changes in spastic muscles;serial casting in spastic equinovarus following traumatic brain injury" *Physiotherapy* 85(11) 603-609
- Watt J, Sims D, Harackham F, Schmidt L, McMillan A, Hamilton J (1986) "A prospective study of inhibitive casting as an adjunct to physiotherapy for cerebral palsied children" *developmental medicine and child neurology* 28, 480-8
- Williams and Goldspink 1977 "Changes in Sarcomere length and physiological properties in immobilized muscle" *J of Anatomy*
- Williams P (1988) "Effect of intermittent stretch on immobilized muscle" *Annals of the Rheumatic Diseases*. 47, 1014-1016
- Yang S (1997) "Changes in muscle fibre type, muscle mass and IGF1 gene expression in rabbit skeletal muscle subjected to stretch" *Journal of Anatomy* 190: 613-622



# The decision-making process for giving Botulinum Toxin in Managing Spasticity in Cerebral Palsy

Conference presentation – APCP conference 2004

Kaat Deslovere  
Kinesiologist, Belgium

## Tone reduction for a child with CP

Cerebral palsy (CP) has been described by Mercer Rang as 'an insult of the developing brain that produces a disorder of movement and posture that is permanent but not unchanging'. Although this definition speaks for itself, one certainly needs to keep in mind that CP is incurable.

Children with CP may present with a variety of motor problems. Some are directly related to the damage to the central nervous system, influencing muscle tone, balance, strength and selectivity (primary problems), whereas static muscle contractures and bony deformities (secondary problems) develop slowly over time in response to the primary problems and to growth (Gage 1991). Furthermore, the child often develops adaptive mechanisms or 'coping responses' in gait to overcome the primary and secondary problems.

There are several treatment options for the management of these motor problems. To some extent, primary problems can be addressed with oral medication, neuromuscular blockade, selective dorsal rhizotomy (SDR) and intrathecal baclofen (ITB). Secondary problems are alleviated by surgical intervention, including tendon lengthening and correction of bony lever-arm dysfunction (Rang *et al.* 1986, Bleck 1987, Gage 1991, Renshaw *et al.* 1995). For each of these interventions the benefits of appropriate physiotherapy and orthotic management can be demonstrated. By definition, coping mechanisms will disappear spontaneously once the primary and secondary problems are resolved.

In view of the complexity of the motor disorders in children with CP - who also have a variety of neurological deficits compounded by the influence of growth on the pathological process - a multidisciplinary team evaluation using objective measurements is essential to define the best treatment strategy.

## The working mechanism of BTX-A and indications

Botulinum Toxin A (BTX-A), a neuromuscular blockade, is a toxin produced by *Clostridium botulinum* that affects the neuromuscular synapse by inhibiting the release of acetylcholine. Because this directly decreases muscle tone, BTX-A acts on one of the primary problems.

The use of BTX-A in the management of pediatric gait disorders is now widely accepted. BTX-A treatment has been used at the Pellenberg University Hospital (Leuven, Belgium) to manage the spasticity associated with CP since 1995.

Gage (1991) has advised that, whenever possible, surgical intervention should be postponed until gait is mature. Hence, for a large cohort of disabled children, who develop gait at a more advanced age, it is suggested that such patients should receive conservative (i.e., not surgical) treatment until the age of 8-10 years. When this conservative therapy is limited to physiotherapy and the use of orthoses, the dynamic contractures often progress to fixed contractures and even skeletal deformations, causing severe biomechanical lever-arm dysfunction. However, when these therapies are complemented by a treatment for the spasticity, such as BTX-A injections, it is hoped that the consequences of the persistent hypertonicity can be limited, thereby postponing surgery until the appropriate age, or maybe even avoiding surgery altogether for certain patients.

From functional and clinical post-treatment evaluation, it is clear that the earlier BTX-A treatment is started, the better the outcome is likely to be (Cosgrove, 1994). The general indication for BTX-A injections is 'the presence of a dynamic contracture, interfering with function, in absence of a fixed myostatic contracture' (Boyd and Graham, 1997). Combining BTX-A injections with casting corrects muscle contractures to some extent. However, BTX-A injections should mainly be used to prevent contractures and a number of studies have demonstrated that injections of BTX-A, together with post-injection physiotherapy and orthotic management, improve function and may favorably influence the pathological process (Graham *et al.*, 2000). Because repeated BTX-A injections can help to prevent the development of muscle contractures and bony deformities if started at an early age, such a treatment approach may lessen the complexity of future surgery and may help to delay surgery until the optimal timing is achieved (Borton *et al.*, 1998; Fabry *et al.*, 1999; Zurcher *et al.*, 1999).

## The multilevel concept

The management of CP has progressed rapidly in the past 20 years. Based on the results of gait

## The decision-making process for giving Botulinum Toxin in Managing Spasticity in Cerebral Palsy

analysis and clinical examination, the necessity for multilevel treatment in one event has become apparent. For pure orthopedic interventions, Wenger and Rang (1986) convinced us that the overall result is better if all major muscles involved are lengthened and/or transferred in the course of a single surgical procedure so that all lower-extremity joints are balanced simultaneously. From a biomechanical point of view this principle is evident. So the same principles are applied in the selection of target muscles for BTX-A injections, such that treatment is focused on the optimal alignment of the lower limbs and pelvis in one course of injections.

### The integrated approach

BTX-A injections cannot be viewed in isolation, as they are only one aspect of an integrated approach to the multidisciplinary treatment of children with CP (Molenaers *et al.*, 1999, Desloovere *et al.*, 2001).

Over the past few years of using BTX-A to treat children with CP the necessity for an integrated approach has become apparent. Indeed, this strategy for BTX-A treatment has been developed continuously over the past 6 years. The importance of the various aspects of this strategy is based on: the objective evaluation of BTX-A treatment using full gait analysis and extended clinical examination, the feedback from the physiotherapists treating the patients before and after the BTX-A injections, how the children deal with orthoses, and a multidisciplinary post-injection follow-up program.

The fundamentals of the approach are proper muscle selection (based on standardized evaluations), an appropriate dosage of BTX-A, and an accurate injection technique. These three aspects are absolute conditions to ensure a result. Once these fundamentals are assured it becomes clear that other crucial factors are largely involved in the optimal 'long-term' outcome, namely, pre- and post-injection care (an optimal combination of BTX-A injections with casting, physical therapy and orthotic management), an extended evaluation of the outcome, and patient selection, timing and appropriate goal settings. Only when all these aspects are properly addressed is the success of BTX-A treatment guaranteed.

In an integrated approach to treating children with CP, BTX-A becomes more than merely a tone-reducer. It becomes the key that opens the door to different treatment options. Perfectly timed BTX-A injections applied according to a multilevel,

integrated approach can influence the pathological process and may have a disease-modifying effect.

### Overview of the integrated approach:

- Fundamentals of the multilevel integrated approach:
- Muscle selection using standardized evaluation
- Dosage
- Injection technique
- Crucial factors of the multilevel integrated approach
- Pre and post injection care: Casting, physical therapy and orthotic management
- Measurement of the outcome
- Patient selection, timing and goal settings

### Conclusions

The results of different objective studies demonstrate that integrated multilevel treatment with BTX-A is successful in managing spasticity in young children with cerebral palsy and results in improved walking performance. Results of recent studies provide evidence of a carry-over effect. In an integrated approach, BTX-A becomes more than merely a tone-reducer. It becomes the key that opens the door to different treatment options. Perfectly timed BTX-A injections applied according to a multilevel, integrated approach can influence the pathological process and may have a disease-modifying effect. BTX-A treatment is therefore a useful adjunct to the multi-disciplinary care of these children, particularly at a young age when the gait can still be modified and the spastic muscles stretched so that contractures can be prevented.

The same principles as those used for multilevel surgery should be applied in the selection of target muscles for BTX-A injections, with treatment focused on the optimal alignment of the lower legs and pelvis, allowing the child to develop and train a completely new walking pattern. According to the goal-setting a targeted approach may be more suitable for some children.

### References

- Bleck EB. (1987). Orthopaedic management in cerebral palsy. London: Mac Keith Press, pp. 142-212.
- Borton D, Walker K, Nattrass G & Graham HK (1998). Calf lengthening in Cerebral Palsy – Risk factor outcome analysis, AACPDM San Antonio. *Dev Med Child Neurol* 40 (suppl.).
- Boyd R & Graham HK (1997). Botulinum toxin A in the management of children with cerebral palsy: indications and outcome. *Eur J Neurol* 4: S15-S22.
- Cosgrove AP, Corry IS, Graham HK (1994). Botulinum toxin in the management of the lower

## The decision-making process for giving Botulinum Toxin in Managing Spasticity in Cerebral Palsy

---

limb in cerebral palsy. *Dev Med Child Neurol* 36: 386-396.

Desloovere K, Molenaers G, Jonkers I, De Cat J, De Borre L, Nijs J, Eyssen M, Pauwels P, De Cock P (2001). A randomised study of botulinum toxin A & casting in the ambulant child with cerebral palsy using objective measures. *Eur J Neurol* 8 (suppl 5): 75-87.

Fabry G, Liu XC, Molenaers G (1999). Gait patterns in patients with spastic diplegic cerebral palsy who underwent staged operations. *J Pediatr Orthop* 8: 33-38.

Gage JR (1991). Gait Analysis in Cerebral Palsy. London: Mac Keith Press, pp. 101-131.

Graham HK, Aoki KR, Autti-Rämo I, Boyd RN, Delgado MR, Gaebler-Spira DJ, Gormley ME, Guyer BM, Heinen F, Holton AF, Matthews D, Molenaers G, Motta F, Garcia Ruiz PJ, Wissel J (2000). Recommendations for the use of botulinum toxin type A in the management of cerebral palsy. *Gait and Posture* 11: 67-79

Molenaers G, Desloovere K, Eyssen M, De Cat J, Jonkers I & P De Cock (1999). Botulinum toxin type A treatment of cerebral palsy: an integrated approach. *Eur J Neurol* 6 (suppl 4): S51-S57.

Rang M, Silver R, de la Garza J (1986). Cerebral Palsy. In: Lovell WW, Winter RB, eds. *Paediatric Orthopaedics* (2 nd edition). Philadelphia: JB Lippincott Co; pp. 345-396.

Wenger DR & Rang M (1993). *The art and practice of children's orthopaedics*. New York: Raven Press.

Zurcher AW, Molenaers G & Fabry G (1999). Treatment of equinus in young children with hemiplegic cerebral palsy: recurrence after achilles tendon lengthening and kinematic and kinetic evaluation of treatment with botulinum toxin. *Gait and Posture* 10: 90.

## Conference 2004 – Free Paper Abstracts

### "An Exploration of Critical Issues in Transferring Adolescents with Severe Cerebral Palsy." (Qualitative Study)

– Vivienne Funke (Physiotherapist)

#### ABSTRACT

##### **Background**

Recent literature promotes disabled adolescents' ownership of their health by encouraging participation outside the therapeutic environment (Stewart et al 2001). As they grow, adolescents with severe cerebral palsy face the risk of increasing deformity and loss of strength, which affects their ability to take their own weight in standing. This ability enables them to assist in their transfer and may be of major functional importance as their access may become limited as soon as they need the assistance of two carers or a hoist to transfer. Carers who assist severely disabled persons commonly suffer from low back pain. Legislation around moving and handling aims to prevent employed carers from lifting the disabled person. Whilst transfers tend to assume a high priority for health professionals and carers, there is little information about how adolescents themselves or their parents view this aspect of care.

##### **Aim**

This study aimed to explore the perspectives of adolescents, their parents and carers on issues around assisted transfers.

##### **Method**

Using the principles of case study research and an approach based on grounded theory principles, data was collected from members of four care team 'cases', including the adolescent, his/her parents and main carers in individual semi-structured interviews. Cases were selected if they used both hoisting and stand-transferring. The cases were selected to represent a maximum variety of contexts likely to raise as many issues as possible.

##### **Results**

Results of analysis of interview transcripts have identified the following themes as important in understanding the views of all participants: Communication; Expectations of involvement; Risk management; Physical context and Adaptation. In all cases, differences in opinion became apparent between home and school/college. Individual issues have been identified for each of the four cases. All adolescents had opinions on their methods of

transfer. All had negative experiences of hoisting. Two parents were supportive of hoisting, though they needed to be able to transfer their child without a hoist in a number of situations. Two parents never used a hoist at home and did not see the need for hoisting. All carers supported hoisting and most felt that the adolescents would inevitably need to be hoisted more in the future. Therapists felt they wanted to keep the ownership of the transfer with those who perform it most often – the adolescents, parents and the carers. However, three of the four adolescents felt they had no say. Parents did not know who to ask for help or did not ask.

##### **Conclusions**

There is a need for agreement on whose role it is to co-ordinate the method of transfer. There is a great need for moving and handling training for parents and adolescents. There is a need for health care professionals to utilise their knowledge of the adolescents' likely future physical abilities, methods of transfer and equipment to facilitate the problem-solving process amongst the care team. It is suggested that in order for needs of adolescents, their parents and their carers to be met, all team members need to have an understanding of each other's expectations. Agendas and knowledge about the present and potential future issues of adolescents' care need to be communicated in a more open and inclusive way if a method of transfer that is risk managed, and truly owned by the adolescent is to be achieved.

### 'An Evaluation of Targeted Training'

Authors Jan Morton MSc MCSP, Amy Bell BSc  
MCSP, David Young PhD MPhil BSc

#### ABSTRACT

##### **Introduction:**

Targeted Training is a method of training motor control in children with hypertonic cerebral palsy. The method, developed by Dr Penny Butler and Richard Major (Butler & Major 1992) shows promise as a treatment method that is underpinned by sound biomechanical principles, but to date has not been independently evaluated (Butler 1998). Equipment applies stability to hold the body just below the level where movement control exists and through open-chain activities stimulates improved vertical and dynamic motor control; the support is then lowered to target the next body level down thus developing control in a cephalocaudal direction.

##### **Purpose:**

This randomised, controlled pilot study was designed to evaluate targeted training as a treatment method for children with hypertonic cerebral palsy, to give an illustration of the effect that the treatment



may produce. Gross motor function was evaluated along with abnormal muscle tone, joint range of motion, the equipment's ease of use and child compliance and enjoyment of the method. The James & Grace Anderson Trust awarded a small grant and 'The Movement Centre' Trustees<sup>1</sup> loaned the training equipment free of charge.

#### Method:

Following ethical approval by Yorkhill NHS Trust Ethics Committee and informed consent being given, a convenience sample (n = 19, aged 4 to 11 years), from two special schools in Glasgow, were stratified by the Gross Motor Function Classification System (Palisano 1997) then randomly allocated the active or control group. Training was in addition to the usual physiotherapy.

The experimental group trained in school over 12-weeks on 4 days a week. Both groups were measured before and after the training period using: the Gross Motor Function Measure (GMFM) (Russell et al 1993), the Ashworth scale (Ashworth 1964) for abnormal muscle tone, and range of motion (ROM) measured by standardised goniometry. Data were also generated by Likert scales for ease of positioning of the children into the equipment and the tolerance of the children to the programme by the physiotherapy assistants recruited to undertake the exercise sessions.

The magnitude of differences between active and control groups are expressed as 95% confidence intervals for each parameter of interest. Where differences were normally distributed, confidence intervals were based on the t-distribution and when the assumption of normality was not valid, Mann-Whitney confidence intervals are reported. Statistical significance was set at  $p \leq 0.05$ .

#### Results:

The small convenience sample limits the statistical power of the results. However as differences over time were measured then compared with the control group it would appear that this method has added value to the exercising group.

Table 1 shows 95% confidence intervals (along with p-values and the appropriate test used) for analysis of the differences in the changes between the groups in muscle tone and function measurements. The results of the Likert Scale scores collected for the training equipment in use showed continuous

upwards trends. Child happiness, from week one at 80% to week 12 at 96% and ease of positioning moved from 74% to 96% in the same period.

**Table 1:** Between group comparisons of changes (after score minus before score)

Variable	95% Confidence Interval (Active – Control)	p- value	Statistical Test
Muscle tone 1 R	(-1.000, 0.000)	0.325	Mann-Whitney
Muscle tone 2 R	(-2.000, 0.000)	0.008	Mann-Whitney
Muscle tone 3 R	(-1.000, 0.000)	0.129	Mann-Whitney
Muscle tone 4 R	(-2, 1)	0.464	Mann-Whitney
Muscle tone 1 L	(-1.000, 0.000)	0.325	Mann-Whitney
Muscle tone 2 L	(-0.999, 1.000)	0.832	Mann-Whitney
Muscle tone 3 L	(-2.001, 0.000)	0.450	Mann-Whitney
Muscle tone 4 L	(-2.000, 1.000)	0.396	Mann-Whitney
GMFM dimension B	(-18.76, 13.96)	0.721	Two-sample t-test
GMFM dimension C	(-7.27, 7.57)	0.962	Two-sample t-test
GMFM dimension D	(-3.01, 29.00)	0.073	Mann-Whitney
GMFM dimension E	(-3.997, 7.999)	0.247	Mann-Whitney

#### Key findings:

The joint ROM data were gathered to monitor for any adverse change as a result of using Targeted Training, the data show little difference between the two groups. One a statistically significant result may be the result of a random error within the data as the other 15 measures were non-significant; a larger sample may show this more clearly.

Muscle tone measurements show a downwards trend in the experimental group with one measurement reaching statistical significance (Table 1).

The changes in Gross Motor Function Measure show some increases in both the experimental and control groups but the training group makes some greater increases compared to the controls with one of these measures almost reaching statistical significance (dimension D,  $p=0.073$ ). The training period was 12 weeks, this was the minimum time previously reported for change to sitting balance to have occurred (Butler 1998). A longer training period with a follow-up period should be included in future studies.

Child comfort and compliance figures show a continuous rise. The success of the children being

<sup>1</sup> The Movement Centre. The Robert Jones and Agnes Hunt Orthopaedic and District Hospital NHS Trust, Oswestry, Shropshire, SY10 7AG.

happy and enjoying the sessions is in no small measure down to the play skills of the assistants but the children would not have willingly participated if they had not been comfortable. Initially there were some difficulties positioning some of the larger children, who needed hoisting into the equipment, however, once these matters were resolved the task became routine and easy.

#### Conclusions:

The children enjoyed being part of this project and exercising in the special equipment. The equipment proved easy to use by the semi-skilled people with no additional skills than a parent or carer could be trained to perform.

There were no adverse joint range of movement changes and abnormal muscle tone may have reduced in the exercising group. There were some added improvements observed in the Gross Motor Function Measure in the experimental group compared to the control group.

Although a larger study, of a homogenous group of children, is required to substantiate the results of this pilot study it has given a useful impression of the effects of Targeted Training in this study's group and permitted power calculations to inform future investigation.

#### References:

Ashworth, B. (1964) Preliminary trial of carisoprodol in multiple sclerosis. *The Practitioner*. 192 pp. 540-542.

Butler, PB. & Major, RE. (1992) The learning of motor control: Biomechanical considerations. *Physiotherapy*. Vol.78, no.1, pp. 6-11.

Butler, PB. (1998) A preliminary report on the effectiveness of trunk targeting in achieving independent sitting balance in children with cerebral palsy. *Clinical Rehabilitation*. Vol.12, pp.281-293.

Palisano, R., Rosenbaum, P., Walter, S., Russell, D., Wood, E., Galuppi, B. (1997) Gross Motor Function Classification System for Cerebral Palsy. *Developmental Medicine and Child Neurology*. 39, pp.214-223.

Russell, DJ., Rosenbaum, PL., Gowland, C., Hardy, S., Lane, M., Plews, N., McGavin, H., Cadman, DT., Jarvis, S. (1993) *Gross Motor Function Measure Manual*. 2<sup>nd</sup> Edition. Hamilton: McMaster University, Canada.

## Conference 2004 – Poster Presentation Abstracts

#### Newsletter Article

#### **New resource for children with motor skill difficulties**

A group of Paediatric Therapists, Educational Psychologists and Specialist Teachers have teamed up to produce an exciting new resource to help primary school staff. The resource, a CD ROM called 'MAKING MOVES', has been developed to provide information and strategies for school staff to help children with a range of motor skill difficulties including problems with attention, organisation, co-ordination, handwriting, PE skills and communication difficulties.

The project has been funded by the Cumbria and Lancashire Workforce Development Confederation and has involved Paediatric Occupational Therapists, Physiotherapists, Speech and Language Therapists and Education Staff working together in a unique partnership. The executive team consisted of staff from Morecambe Bay PCT, Preston PCT, Wyre PCT and Lancashire County Council. All the information on the CD has been provided by the expert knowledge of the team and colleagues from throughout Lancashire.

The CD was produced as a response to the increasing need of primary school staff for advice and support to help children in mainstream schools who have motor skill difficulties. The aim is for it to be used by school staff on a daily basis as a trouble shooting resource and provides activities and advice that can be incorporated into school life. It can also be used in collaboration with the National Healthy Schools Programme. It is easy to use with simple instructions and the facility to print off the suggestions as required.

The CD's will be given free of charge to all primary schools within Cumbria and Lancashire. The first wave of distribution will target the schools in the pilot area of Lancaster, Morecambe, Preston, Blackpool, Wyre and Fylde where school staff will be invited to a drop in session to collect their CD. The aim is to then include schools in the rest of Cumbria and Lancashire via their local services. The CD will be evaluated over the next 12 months before considering national distribution.

For more information go to [www.clwdc.nhs.uk](http://www.clwdc.nhs.uk)

# The Role of the Paediatric Physiotherapist in the Management of Spasticity

**Author: Lyn Hammings, Superintendent Paediatric Physiotherapist, Frenchay Children's Centre, Frenchay Hospital, Bristol BS16 1LE**

Cerebral palsy is the most common motor disorder in children in the United Kingdom (1 in 400 live births) and spasticity occurs in 85% of children with cerebral palsy (diplegia, hemiplegia and quadriplegia) (Hagbergm 1993). Other disorders such as familial spastic paraparesis are much less frequently encountered but may also present with spasticity.

Spasticity can be defined as excessive and inappropriate involuntary muscular activity in association with upper motor neurone damage. The clinical manifestations of spasticity include a velocity dependent increase in tonic stretch reflexes with exaggerated tendon jerks (Katz and Rymer, 1989). Spasticity may cause poverty of movement, tendency to characteristic postures, spread and overflow of associated movements. As the child grows the spastic muscles frequently fail to grow as rapidly as neighbouring structures, causing contractures, deformity, including bony torsional abnormalities and joint instability.

Spasticity can be treated by a variety of options, including oral medication (Baclofen, Tizanidine, Dantrolene, Diazepam), intrathecal medication (Baclofen), intramuscular medication (Botulinum toxin A), orthopaedic surgery (either single or multiple procedures), neurosurgery (Selective Dorsal Rhizotomy) and orthoses. However, interlinking all of these treatments and providing the main ongoing treatment option is physiotherapy.

The paediatric physiotherapist is one of the key-workers in a multi-disciplinary team, having an overview of the child's physical, developmental and functional status. Often the physiotherapist is involved with the child and family from early diagnosis. She forms close links with the family and other carers and fulfils a counselling and teaching role as well as frequently being the prime therapist.

The paediatric physiotherapist has a role in both the assessment and treatment of the child with spasticity. Physiotherapy treatment options are numerous (Neuro-Developmental Treatment /Bobath, Conductive Education, Vojta, Doman Delecatto, muscle strengthening, serial-casting, orthoses) with some treatment options having more

evidence-based literature to support them than others. However, frequently the physiotherapist may decide to adopt an eclectic approach (Levitt, 1995), whereby she selects the most appropriate treatment options according to the needs of the child at any one time.

In order to select the most appropriate treatment(s) the physiotherapist must first assess the child, preferably using validated reliable assessment tools. If appropriate outcome measures are selected then the physiotherapist can repeat the assessment at regular intervals in order to monitor change. This is essential, especially when non-physiotherapy treatment options such as medication or surgery are being considered. All too often in the past treatment options have been selected or discarded according to subjective assessments by parents or clinicians without objective evidence.

Objective assessments may include:

- Orthopaedic assessment (joint range, muscle length)
- Muscle tone (modified Ashworth, Oswestry Scale)
- Function (Gross Motor Function Measure)
- Gait analysis (video/Observational Gait Scale, kinematics)

It is important to note that the reliability, repeatability and validity of some measures are still largely unproven. Any measure of muscle tone/spasticity may be affected by the child's wellbeing, the environment, head position etc, and therefore it is extremely difficult to produce a reliable assessment tool. However, measures of function (GMFM) have been validated (Russell et al, 2000) and kinematic gait analysis is reliable but unfortunately not always readily available. All assessments benefit from always being repeated by the same assessor for increased reliability.

After assessing the child the physiotherapist must then select the most appropriate treatment intervention(s). From an early age it is essential that the child with spasticity receives such treatment as will allow him to develop as fully as possible by minimising time spent in abnormal postures, often influenced by the position of the head. Abnormal postures may be treated by positioning the child using equipment such as sleep systems, supportive seating, and standing frames. Frequent changes in position are advised to reduce prolonged periods of immobilisation in one position, in which one group of muscles become shortened and the opposing group become lengthened. The use of weight bearing positions can help develop the hip joints, thus reducing the tendency to hip subluxation/dislocation. Research has shown that 24 hour postural care can minimise the tendency to hip dislocation in children with quadriplegic cerebral palsy (Pountney et al, 2001).



## The Role of the Paediatric Physiotherapist in the Management of Spasticity

---

In addition to positioning the physiotherapist may maintain muscle length by using passive stretching techniques. Bones grow at their epiphyseal junctions and muscles then are stimulated to lengthen, by adding sarcomeres, by the stretch provided by active movement. In children with spasticity, passive movement may have to replace active movement, but research demonstrates that stretching may have to be carried out for at least 30 minutes daily to maintain muscle length (Williams, 1990), or for more than 6 hours per day in order to stretch a muscle (Tardieu et al, 1998).

In order to facilitate stretching daily for 6 hours or more the physiotherapist may work in conjunction with the orthotist using splints to maintain optimum positions, especially in distal joints. Orthoses may be static, dynamic or reflex-inhibiting, according to the needs of the child. Some orthoses may be worn at night when the child is resting, but more often than not they are used during the day to enable better function or to improve gait. There needs to be ongoing assessment, by the physiotherapist and orthotist together, of the child's needs and functional ability/gait, in order to always ensure that the child has the most appropriate orthotic provision.

The paediatric physiotherapist may also use casting (single or serial) to stretch shortened muscles or soft tissue thus preventing or reducing contractures. Research has shown that the use of casting is as effective as Botulinum toxin A (BTX-A) in the short-term treatment of spasticity (Corry et al, 1998) and casting can also be an effective adjunct to the use of BTX-A (Bottos, 2003).

Neurodevelopmental therapy, developed by Karl and Berta Bobath in 1943, aims to facilitate more normal movement by inhibiting abnormal patterns of released postural reflex activity, using appropriate handling techniques (Bobath and Bobath, 1984). The physiotherapist's role is to select the appropriate techniques and activities and then teach the parents/carers to become proficient in these so that the child can be facilitated throughout his daily life. Training and guiding the parents is of great importance. The child spends most of his time at home and/or school and is only with the therapist for a limited time. No amount of treatment can be effective unless it is carried over into everyday life. The physiotherapist has a very valuable role as a teacher, especially with increasing integration of children with physical disability into mainstream schools. The child's carer in the school becomes another member of the therapy team alongside the parents, and needs to be taught how to facilitate the child's functional abilities. Everyone concerned with

the child's management should work closely together and have an understanding of the aims of treatment, with appropriate and achievable functional goals.

Muscle strengthening, until recently, was seen as an undesirable form of treatment for the child with spasticity, as it was felt that effort would increase tone and therefore decrease active movement. However, recent research by Damiano et al, 1995, has shown that muscle strengthening may be effective in developing better use of weaker antagonist muscles. This technique may be especially effective following the injection of BTX-A to temporarily reduce spasticity in the agonists.

When the use of BTX-A or orthopaedic surgery is being considered the paediatric physiotherapist has an essential role to play in assessment of the child prior to selection of intervention. She often has knowledge of the child's development over several years and also of the family and child's emotional and social circumstances, all of which may be key factors in assessing the most appropriate intervention for the child. The physiotherapist should be part of the clinical decision making team, offering appropriate advice to the orthopaedic consultant based on her in-depth knowledge of the child's physical and functional status.

Following administration of BTX-A, the physiotherapist should develop a treatment programme aiming to stretch the muscles weakened by BTX-A, strengthen the opposing muscles and re-educate gait/function. This is necessary in order to maximise the benefit of the BTX-A and minimise the frequency of repetition of treatment. Functional improvement may last well beyond the 3-month direct effect of BTX-A and it is essential that the physiotherapist takes advantage of this window of opportunity.

Following orthopaedic surgery or selective dorsal rhizotomy, the physiotherapist has an important role in the rehabilitation of the child. This may include hydrotherapy as well as any of the aforementioned physiotherapy techniques and may be a lengthy procedure involving close liaison with carers both at home and in school and respite care. Overall, the paediatric physiotherapist has a key role in the management of spasticity, being responsible for ongoing treatment of the child, together with assessment and review as required to monitor the effect of physiotherapeutic, medical and surgical treatment. She also has a role in liaison between the various clinicians involved in the care of the child (orthotist, orthopaedic consultant, paediatrician and neurologist) to ensure a co-ordinated approach. Finally she has a role as a teacher helping parents and carers learn to manage and treat their child's spasticity in a continuing 24-hour programme as part of their daily routine.



## The Role of the Paediatric Physiotherapist in the Management of Spasticity

---

### References

Bobath K, Bobath B (1984) The neuro-developmental treatment. In: Management of the motor disorders of children with cerebral palsy. Clinics in Developmental Medicine No 90. Oxford: Spastics International Medical Publications and Blackwell Scientific Publications Ltd. 6-18

Bottos M, Bebedetti MG, Salucci P et al (2003) Botulinum toxin with and without casting in ambulant children with spastic diplegia: a clinical and functional assessment. *Developmental Medicine and Child Neurology* 45:758-762

Corry IS, Cosgrove AP, Duffy CM et al (1998) Botulinum toxin A compared with stretching casts in the treatment of spastic equines: a randomised prospective trial. *Journal of Pediatric Orthopaedics* 18:304-311

Damiano DL, Vaught CL, Abel MF (1995) Muscle response to heavy resistance exercise in spastic cerebral palsy. *Developmental Medicine and Child Neurology* 37:731-739

Hagberg B, Hagberg G (1999) Origins of cerebral palsy. In: Recent advances in pediatrics, No 11. London: Churchill Livingstone. 67-83

Katz RT, Rymer WZ (1989) Spastic hypertonia: mechanisms and measurement. *Archives of Physical Medicine and Rehabilitation* 70:144-155

Levitt S (1995) Synthesis of treatment systems. *Treatment of Cerebral Palsy and Motor Delay*. Oxford: Blackwell Science 28-46

Pountney TE, Mulcahy CM, Clarke S et al (2001) Chailey approach to postural management. Birmingham, Active Design

Russell DJ, Avery LM, Rosenbaum PI et al (2000) Improved scaling of the Gross Motor Function Measure for children with cerebral palsy: evidence of reliability and validity. *Physical Therapy* 80:873-885

Tardieu C, Lespargot A, Tabary C et al (1988) For how long must the Soleus muscle be stretched each day to prevent contracture? *Developmental Medicine and Child Neurology* 30:3-10

Williams PE (1990) Use of intermittent stretch in the prevention of serial sarcomere loss in immobilised muscle. *Annals of Rheumatology and Disability* 49:316-317

This was the prize-winning essay  
sponsored by Alevyan  
and won Lyn a free place at conference  
in Liverpool – well done Lyn.

## NATIONAL COMMITTEE MATTERS

A meeting of the National Committee was held on Friday 30th April at the Crowne plaza Hotel, Liverpool. The meeting was held before the official opening of conference and the business of the day included –

- Welcoming new London representative, Stephanie Cawker, to the committee and alternate representatives Clare Olsen (South West) and Felicity Dickson (Northern Ireland) to the meeting.
- APCP – NAPOT collaboration to produce joint guidelines for the treatment of DCD has progressed slowly. APCP will invite NAPOT representatives and interested physiotherapist to attend a meeting. Date and venue to be confirmed
- Hips and Erbs Palsy Evidence Based Summaries: The review of the evidence base is almost complete and it will be necessary to update future publications. The Paediatric Manual Handling guidelines will also be reviewed.
- Adare Brady met with Phil Gray in March. Issues discussed included communication between CSP and APCP and payment for the use of CSP meeting rooms. The role of CIG's and increasing pressure on committee members was noted.
- APCP committee felt that it is important to continue support for the Paediatric MSc module at Queen Margaret College, Edinburgh.
- Pip White, Professional Advisor, Research and Effectiveness unit at the CSP contacted APCP regarding revising the core standards documents and invited APCP to comment on issues relating to consent, confidentiality and child protection.
- Prahb Salaman, PRO officer at CSP has asked that we inform members that National Physiotherapy week will be 5th – 9th July 2004
- Work for the Children's Competencies framework has been completed. The second phase will include standards for neonatal care. Peta Smith will attend on behalf of APCP
- The Critical Care/ Respiratory group are now an affiliated group of APCP. They hope to hold a meeting in October in Bristol, date to be confirmed. This group will now have a representative at APCP national Committee meetings
- A proposal to build and maintain a website for APCP was discussed at length and will be presented in the PRO report
- APCP members from around the country attended a Botulinum toxin scoping meeting to discuss producing national guidelines for physiotherapy involvement in treatment with Botulinum toxin A injections. Lesley Katchburian has agreed to co-ordinate the project and APCP has agreed to sponsor production of guidelines.

This was Adare Brady's last meeting as Chairman of APCP. Lesley Smith is now Chairman with Peta Smith being elected Vice-Chairman in her place. It was also the last meeting for Julia Graham and Adare thanked her for her work on the National committee over many years.

The next National Committee meeting will be held on 9th July 2004, at CSP, London. Please contact your Regional Representative if you have issues for discussion.

**Laura Wiggins**

### Amendment to the APCP Constitution

At the Annual General Meeting (AGM) members were asked to adopt changes to the APCP constitution. These had been printed in the March journal. At the meeting, the new post of Diversity Officer was changed from Executive committee member to National committee post.

The members present at the AGM voted to adopt the new constitution.

The next AGM will be held in October 2005 – exact date to be confirmed.

The following are transcripts of the reports given at the recent Annual General Meeting of the Association of Paediatric Chartered Physiotherapists:

### CHAIRMAN'S REPORT

Welcome to the 31st Annual General Meeting of the National Association of Paediatric Chartered Physiotherapists. As the Association continues to grow, the membership last year topped 2000; the nature of our "success" has led to a re-think of the way things are run. The National Committee continues to meet four times per year, but now has an all-day meeting, rather than a halfday for the regional representatives and a half day for the whole committee. This has proved very successful and makes best use of available time, as the Education Committee and the Editorial Board also meet the day before the National Committee meeting. The meetings this year have been in London at the CSP in July and October, here yesterday in Liverpool, and in January the National Committee travelled to Belfast for the committee meeting which was part of a working weekend, and to sample some of our hospitality.

The Committee has recognised the need for a five year plan for APCP to move the Association forward in the 21st century and meet the needs of our members. Three main areas were looked at during the working weekend:

1. the Constitution – this is agenda item 12
2. profile – this group looked at the website and promotion of APCP
3. CPD – what do our members need and want and how do we pay our conference speakers and reward them appropriately?

Sally Braithwaite continues to lead the Editorial Board and she has seen the successful launch of the new A4 journal format with the March edition. Articles are now peer-reviewed by a panel of experts and new guidance has been given for writing for the APCP Journal.

I spoke last year about the setting up of the neonatal subgroup (chaired by Peta Smith) and am delighted to report how successful the group has been so far. Study days have been held in different regions and nationally, and the committee has now organised a two day conference for October this year in Edinburgh. The key speaker is Johanna Darragh, a physiotherapist from Canada, who helped to devise the Alberta Infant Motor Scale, and she will speak on long term research into variability of development in full term infants.

The second subgroup to affiliate to APCP is the PICU/Critical care group and I would like to thank Sarah Hibbert and Dave Morgan for asking me to attend a meeting of this group on Tuesday of this week, to lend my support from APCP. The group is already planning a committee and has set some objectives, with the next meeting planned for October in Bristol.

You may remember that I was representing APCP on the National Reference Group for the Children's Competency Project of the NSF and this work was due for completion in December 2003. I am glad to say this was one deadline which did not need an extension! The final versions of the Children's overview framework and new units are now available on the Skills for Health website. The standards can now be used for local purposes and will be officially launched next week.

The second phase of the project will be looking at Maternity and Care of the Newborn (including the specialist competences required to care for neonates) and Peta Smith and the neonatal subgroup will be involved in this work for APCP.

Peta also attended a seminar at the Royal College of paediatrics and Child health in October 2003 to discuss newborn screening for Duchenne Muscular Dystrophy, and I thank her for that.

Sarah Crombie, Research Officer, attended a meeting with Leonie Dawson, Professional Advisor at the CSP, in September to discuss the production of a leaflet on therapy services aimed at mainstream schools. Unfortunately, the dfes does not see this as high priority due to staffing shortages, but I have been assured the work is pending and not forgotten.

The National Committee continues to work closely with the CSP on paediatric issues, and submitted a response on the NSF for Children – Emerging Findings and the green paper "Every Child Matters". I met with Phil Gray, Chief Executive of the CSP, in March this year to try to raise the profile of paediatric physiotherapy within the CSP, improve communication and let him know the amount of work the National committee of APCP does on a voluntary basis, on behalf of the CSP. He thanked the committee for all the hard work they do.

The evidence based summaries on Obstetric Brachial Plexus Palsy (OBPP) and Hip Dislocation in Children with Cerebral Palsy are currently being updated, ably led by Di Coggings and Terry Pountney. The third proposed topic at that time was Developmental Co-ordination Disorder (DCD) but there were problems with the evidence base. The College of Occupational Therapists and National Association of Paediatric Occupational Therapists produced a document "Doubly Disadvantaged"- a report on waiting lists and time for OT services for children with DCD and their parents in July 2003 and one of the recommendations was for them to work in collaboration with APCP and the CSP to improve services to children with DCD and their parents. I have written formally to the Chair of NAPOT, Gill Brown, to arrange a joint meeting but progress is slow.

As paediatric physiotherapists we are noticing an increase in the incidence of babies presenting with positional occipital flattening, and Peta Smith, Jeanne Hartley and Christine Young, have written on behalf of APCP to Kay East, Chief Health Professions Officer at the Department of Health, and Mr Colin Baker, Chairman of the Foundation for the Study of Infant Deaths, to highlight the problem. APCP is currently reviewing the evidence supporting a community approach to successful early recognition and prevention of plagiocephaly.

On-call continues to play a major part in competency issues for paediatric physiotherapy and Liz Hardy, Paul Ritson and Nicky McNarry are working with the Association of Chartered Physiotherapists in Respiratory Care (ACPRC) to develop the paediatric aspect of the training. The CSP gave ACPRC £6000 to develop this training.

Following the call for research proposals last summer, the National Committee awarded three bursaries, details of which have been printed in the Journal. Sarah Crombie has called for applications for this year's bursary, so please think about this seriously – the deadline is 1st September 2004.

Linda Fisher, CIG Liaison Officer and Lesley Smith, Vice Chair, have been working with the CIG Liaison Committee on two motions for ARC, which is to be held in Newcastle upon Tyne on 12th and 13th May. The first motion requests that the CSP develops a mechanism for endorsing CIOG skills courses to support both individual and groups of CIGs (motion 3). I would urge you to ask your workplace stewards and others attending ARC to support this motion. The second motion APCP are supporting is motion 28, asking conference to support the belief that the CIGs and Occupational groups should not have to pay to use meeting rooms at the CSP, as this penalises non-profit making groups carrying out CSP work.

APCP continues to work with the Paediatric Physiotherapists in Management Support group (PPIMS) on outcome measures, consent and Agenda for Change, with the vice chair attending the three meetings per year.

Laura Wiggins (secretary of APCP) and Lesley Katchburian (GOS) are currently heading a representative group from the UK looking at physiotherapy intervention and botulinum toxin, and held an exploratory meeting in London in April.

And now, APCP needs your help. The CSP is revising the Core and Service Standards of Physiotherapy Practice and the revised documents are out for member consultation. APCP will be making a response as there have been some specific issues raised relating to paediatrics, but please feel free to make your comments directly to Pip White, Professional Advisor at the CSP, or to me by e-mail by 7th May, and I will collate a response.

Secondly, the CSP has produced a Strategy Consultation Document – Building Our Future, and again this is your opportunity to influence your society. Summary copies of this document came with Frontline (April 21st)

Finally, I come to the National Committee changes for this year. I finish as Chair to be replaced by the Vice Chair, Lesley Smith. Sarah Crombie retires as Research Officer but remains on National Committee, and Julia Graham (former regional representative and Treasurer) retires after eight years on National Committee.

I would like to thank the Committee for all their hard work over the last year as I couldn't have done it without them. I would also like to thank Eileen Kinley and the organising committee from the North West region for organising a great conference at a super venue.

Thank you,  
**Adare Brady**  
*Chair APCP.*



### PUBLIC RELATIONS OFFICER'S REPORT

The main issue this year has been the APCP website. This was launched at the National Conference in Birmingham just under 2 years ago and whilst it has been well used by therapists, other health professionals and parents both in this country and overseas there have been limitations and problems. The most notable, as everyone who has been on the site will agree, is the difficulty that we have had in updating the site. This has proved to be so problematic and as it is in danger of giving the association an unprofessional reputation - the decision has been made to close the current site and approach the CSP Design and New Media Unit to build and maintain a new one. There are cost implications but it is money well spent to have a well running professional website. There are many benefits to doing this as updating the site would be far easier and training and support will be readily available.

Although planning is still in the early stages it is the intent that the website will have two interactive sites one for non-members and another for members. On the members site it is planned to have downloadable APCP publications and eventually the quarterly journal will also be downloadable. It is also foreseen that regions will be able to post their courses and events on the site with downloadable application forms and related documents. There will be links to the CSP interactive site.

There is still a lot of work to do and there are implications for the PRO role as this role has expanded and it may be that will have to be a vice or assistant PRO to assist in the running and monitoring of the website.

**Gill Holme**  
PRO

### EDUCATION LIAISON OFFICER'S REPORT

#### Actions to assist members CPD.

Introduction to paediatrics at Liverpool – Adelphi hotel.

Over subscribed course with very good participation from delegates, good range of speakers, well evaluated. Planned future development – Alteration in the assessment of the course, due to the extensive work load this involves for delegates. The use of a reflective proforma for insertion into the CSP CPD portfolio will reduce work loads but fall in line with the chartered societies outline portfolio.

#### Advanced course in Cerebral palsy management

Over subscribed course for senior I physiotherapists specialising in the management of Cerebral Palsy. Advancement of clinical reasoning skills is the main focus of the course with lecturer and facilitator input. The course has been well evaluated. Further development included heavier emphasis on evidence based practice with critical appraisal and analysis of the evidence for some key interventions.

Planned future development – Rolling programme of advanced level courses in other specialities including respiratory, neuromuscular and musculoskeletal paediatrics. These courses will be spread throughout regions to enable members easy access.

#### Outcome measures

An apology, due to unforeseen circumstances, I have been unable to finish the document for launch today. The remaining sections are waiting for personal comments from physiotherapists using the common outcome measures, to give "top tips" on their use for novice users. The final draft will be completed in the next couple of months for launch ASAP.

#### Student support

The committee have been involved in collaboration with students and their research projects. On several occasions the committee have been involved only at the final stages of data collection and would have been happy to be consulted and therefore been able to offer advice in shaping the initial project at an earlier stage. This would be beneficial to both the student and to paediatric physiotherapy. Universities have been approached to encourage students to contact us in the initial stages of dissertation planning.

### Purchase of a lap top computer and data projector

Due to the expensive costs of hiring a data projector and lap top at our many venues, the committee asked to be allowed to purchase these for APCP. This equipment is portable and can be used for all APCP courses. Our calculations of ongoing expenses and the expansion of APCP's courses have shown that the equipment will have paid for itself within the next 2 years.

### New project for the coming years

Distance learning student and junior physiotherapist support pack. A package of learning materials to assist physiotherapists new to paediatrics.

**Adele Leake,**  
Education Liaison Officer

## RESEARCH OFFICER'S REPORT

I think we would all agree that the use and development of evidence based practice should be at the heart of all paediatric physiotherapy. For many reasons however, we as a professional group are still struggling to get this off the ground. We can all think of reasons why research is difficult or even unthinkable in the current health service climate. Many researchers though have shown us that it can be done and that we have to keep on going to ensure that our practice is developed from sound research evidence. The APCP are committed to supporting its members in this aim: firstly by enabling the development of research interests and secondly by sharing findings.

We have been running a regular research page in the APCP Journal, which gives updates on current research issues, opportunities for funding and support for members. We have a research group database which any member can join, in order to receive information via email on funding opportunities or study day information. This was started this year to ensure that members could receive more up to date information than the quarterly Journal could provide. There has been a good response to this, and so please do join the database if you would like to receive any R&D information.

The research group database also acts as a source of information on member's research interests. This has been invaluable in the past when I have been able to put members in touch with each other when there have been similar research interests. Now that my email is in the Journal, I am kept quite busy with enquiries, including those from physiotherapists from as far away as Australia.

We aim to support physiotherapy students with their research studies. This year we have been developing a comprehensive list of members who are happy to assist in projects, either by filling out questionnaires, attending discussion groups or conducting telephone interviews. It is vital that we encourage students to develop their interest in paediatrics.

Last year the APCP granted 3 research bursaries. The studies were the physiotherapy management of children with CP in mainstream schools, consent in paediatrics and the use of a functional foot orthosis for knee pain. These are being carried out over the next 18 months. The next call for research studies has been advertised with the closing date in September. So far we have had little response, but I am hoping that we will have some studies by the end of the summer. We are extending the closing date to 1 October and will be advertising the bursary every autumn and spring. This is a fantastic opportunity for those embarking on research and should not be missed.

Following a working weekend where it was discussed how the APCP could best support its members in their research interests, it was decided to alter the focus of research support. We looked at the current needs of our members, who on the whole can now access support within the workplace to develop research skills such as critical appraisal, methodology and statistics. As paediatric physiotherapists we can however, support each other in appropriate project design and in the need for research in any particular area of interest. For this, the APCP are in an ideal position to be able to put members in touch with others who are researching similar fields and to offer mentorship to discuss project ideas. It was therefore decided that local APCP regions, if they are not been doing so already, would start to organise regular research meetings to provide support to its local members. We are hoping that this will provide an easier means of support as opposed to a national

research meeting as previously organised. This is the reason we cancelled the research meeting in London in February. Hopefully, local research groups will encourage everyone to hear what research is going on in their region and provide an informal environment to discuss and develop research ideas. There will be a meeting in the south-east region in the autumn. Details will be advertised in Frontline and to all on the research database. All are welcome to attend. It is still felt, however, that there is a need for a national forum for the dissemination of research, and this will be achieved by providing the free paper and poster session at every national APCP conference. We hope that this will be an improved strategy for all.

### TREASURER'S REPORT

I have copies of the full National and Regional Accounts for members to view if they wish, but for the purposes of this report you will view the Income and Expenditure sheet, and the Balance sheet, for the National Account.

Firstly, I would like to take you through the National Income and Expenditure sheet. The figures in the left hand column represent the figures for 2003, and can be compared to figures for 2002 (in the right hand column).

#### Income

**Courses:** (£19,140) this figure represents all income received from the Introduction to Paediatrics Course held in Liverpool in October 2003, and from the Advanced Cerebral Palsy Course held in Mansfield in November 2003.

These figures should be off set against expenditure for courses. Corporation tax is payable on income received from non-members.

**Capitation Fees:** APCP receives £2 per member from the CSP each year in the form of Capitation fees. The record shows that APCP received only £144 in 2003 compared to £6,940 in 2002. APCP actually received £3,644 from the CSP in 2003. This discrepancy is due to the fact that CSP paid us twice in 2002, and eventually requested a refund in 2003 once they had realised their error!

**Subscriptions:** (£47,108) these are received from members and represent the main income of the Association.

**Publications:** (£3,090) this figure represents the sale of APCP publications during 2003.

**Bank Interest:** (£2,179) this item is self explanatory.

**Sundry:** (£16) this income is received from shares owned by the Association from an Abbey National Account previously held.

**Received from Conference:** (£6,779) this represents the profit from the Conference held in 2003 in Bournemouth and transferred to the National Account.

**Advertising:** (£1,300) this is the income received from advertising in the quarterly journal - Corporation Tax is payable on this figure.

**Congress 2002:** (£412) this represents the profit made from joining the CSP for Congress in Birmingham in 2002.

#### Expenditure:

**Catering & Accommodation:** (£1,934) this figure represents the cost of National Committee meetings that are held four times per year, which combine Editorial Board meetings, Education and Research Committee meetings, Executive Committee meetings and other sub-groups as required. The extra costs in 2002 in part reflect the additional costs of the AGM and Congress.

## APCP Matters

---

**Committee Travel:** (£12,749) this cost has again risen, partly reflecting rising costs generally. In addition, committee members are increasingly being asked to attend further meetings with outside agencies to act as representatives of APCP - where possible members seek reimbursement for this travel from the host bodies.

**Honorarium:** (£1,650) there are now 11 committee members who receive an Honorarium each year - the figure currently paid is £150: Chairman, Vice-chairman, Secretary, Treasurer, PRO, Editor, Membership Secretary, Research Officer, Education Liaison Officer, Publications Officer, and CIG Liaison Officer. The latter two officers only started to receive an Honorarium in 2003 - hence the rise in this expenditure.

**Postage:** (£6,934) this figure includes the costs of posting the both the quarterly journal and membership cards.

**Accountancy Fees:** (£1,586) this item is self-explanatory.

**Course Fees:** (£17,062) this figure represents the expenses incurred in organising the 2 courses discussed earlier. Overall a marginal profit was made.

**Publications:** (£15,473) this figure represents the cost of printing the quarterly journal and some expenditure on publications.

**Computer Expenses:** (£249) this figure represents the amount paid to maintain links to the BACS system - allowing us to continue to use Direct Debit payments system.

**Gifts:** (£187) this included gifts to the Organising Committee of the Bournemouth Conference.

**Conference and AGM Expenses:** (£5,210) this figure includes expenses incurred by the National Committee, for National Committee Members to attend the Conference and AGM in 2003.

**Depreciation of computer Equipment:** (£1077) in 2003 the Association acquired a new lap-top computer for the Secretary (£1,535) and a new lap top and data projector for the Education Committee (£1,794) - this is shown as an addition to the Fixed Assets - depreciation is calculated at one third of original value per year.

**Neonatal Group Donation:** (£1,000) this was transferred to the Neonatal Group Bank Account to assist with the establishment of our first Affiliated Group. Their accounts are now included in the full report, together with accounts for the regions.

**APCP SW - Conference 2003:** (£2,704) this represents a share the profits for Conference 2003 paid to the host region (South West)

**Research Bursaries:** (£6,279) these were initiated in 2003. We are currently supporting 3 Research Projects - this figure represents monies paid out in 2003 to these 3 projects. We have a further £15,000 committed to these project over the next 2 years.

**Corporation Tax:** this is a tax charged to the association on profits made from non-members attending courses, as well as some other income e.g. from advertising in the Journal. There is no figure here, as overprovision was made in 2002.

And now on to the Balance Sheet for the National Accounts:

### National Account Balance Sheet

**Fixed Assets:** (£2,988) this represents the Association's 3 computers (with depreciation).

**Current Assets:** (£105,500) this represents the total monies held in the Association's two account at the end of 2003.

**Current Liabilities:** (£4,145) which was still owed to creditors at the end of December 2003 (i.e. 2 invoices which had been received, but not paid).

As discussed previously, the accountants have calculated no Corporation Tax Liabilities due to over provision in 2002.



## APCP Matters

---

**Accumulated Fund:** as you will see from these figures, the Association again made a surplus (£6,074) last year. This was significantly less than in the previous few years.

As discussed at last year's AGM, the National Committee feel that the Association has more than adequate funds to cover its running costs over the next few years. The Committee have agreed that funds will continue therefore to be offered to support Research Bursaries. The Committee feel that it is now an appropriate time to invest some of its funds in to promoting a more professional image for the Association, and a thereby promoting paediatric physiotherapy and physiotherapists.

I therefore anticipate that at next year's AGM in Wales, I will be reporting a moderate deficit in the accounts for 2004.

Finally, I would like to take this opportunity to thank all of the Regional Treasurers, and the Treasurer of the Neonatal Group, for their work over the past year.

**Fiona Down**

APCP National Treasurer

**ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS**  
**National Account**  
**Income and Expenditure Account for the Year Ended 31 December 2003**

	2003 £	2002 £
<b>INCOME</b>		
Courses	19,140	15,572
Capitation Fees	144	6,940
Subscriptions	47,108	44,277
Publications	3,090	5,075
Bank Interest Received	2,179	1,822
Sundry	16	51
Received from Conference	6,779	4,398
Advertising	1,300	1,950
Congress 2002	412	-
	80,168	80,085
<b>EXPENDITURE</b>		
Catering & Accommodation	1,934	5,794
Committee Travel & Subsistence	12,749	9,016
Honorarium	1,650	1,350
Postage, Stationery & Telephone	6,934	5,154
Accountancy Fees	1,586	1,528
Course Fees	17,062	12,810
Publications	15,473	15,113
Bank Charges & Interest	-	98
Computer Expenses	249	229
Gifts	187	215
Conference & AGM Expenses	5,210	5,553
Depreciation of Computer Equipment	1,077	245
Neonatal Group - Donation	1,000	-
APCP SW - Conference 2003	2,704	-
Research Bursaries	6,279	-
	74,094	57,105
	6,074	22,980
Corporation Tax	-	37
Surplus for the year	6,074	22,943

ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS  
National Account  
Balance Sheet as at 31 December 2003

	Note	£	2003 £	£	2002 £
<b>FIXED ASSETS</b>					
Computer Equipment		2,988		736	
<b>CURRENT ASSETS</b>					
Cash at Bank		105,500		91,620	
Congress Debtor		-		3,980	
Conference Debtor		-		2,000	
		105,500		97,600	
<b>CURRENT LIABILITIES</b>					
Creditors		4,145		-	
Corporation Tax		-		67	
		4,145		67	
		101,355		97,533	
		104,343		98,269	
<b>ACCUMULATED FUND</b>					
Balance brought forward at 1.1.2003		98,269		75,326	
Add: Surplus for the year		6,074		22,943	
Balance carried forward at 31.12.2003		104,343		98,269	

### REPORT FROM THE CLINICAL INTEREST GROUP LIAISON COMMITTEE

Hello, just a brief report to give you an update. The committee continues to meet three times a year for an all day meeting at the CSP. The next meeting is scheduled for the end of May.

- The Clinical Interest /Occupational Group Information Pack is now complete and will be ready for distribution in May. Your regional representatives and national committee members will all have copies. The pack is comprehensive and should prove most useful. The APCP national committee certainly found the suggested constitution section very helpful. The pack also contains a 'What's in it for me?' section.
- There have been discussions on 'Scope of Practice'. The Rules of Professional Conduct Rule 1 detail the Scope of Practice of both the Profession and the individual Physiotherapist. The current debate is about the expansion of the practice of physiotherapy particularly in the areas of alternative medicine, e.g. acupuncture, aromatherapy, reflexology and the issue of whether the link to core skills is being revised as is the competence of safety of practitioners using the modalities. Pen Robinson, Director of Member Network and Relations, explained that the Society had always agreed not to list the modalities of the profession as this will affect the flexibility and development of the profession. There will be further debate within the Professional Practice Committee with feedback to Clinical interest Groups for discussion.
- There is a review of the 1000 hours of supervised clinical practice for qualifying Physiotherapy Students. This is work in progress and assurance was given that reviewing the number of hours was not due to a problem with finding placements for students.
- The CSP have organised dates to support Clinical Interest Group Executive Committee Officers and training workshops have been arranged for the Diversity Officer and the Research Officer.
- The APCP now has a Diversity Officer and the CSP are in the process of issuing a manual including guidelines to support accessibility and a self audit check list. These will be especially useful when CIGs organise their study days or conferences. We will make sure all regional representatives have copies of these when they are published.

There will be more news after the next meeting. Please contact me if you have any queries or would like more details.

**Linda Fisher**

Clinical Interest Group Liaison Officer

# Research and Education

## RESEARCH

### **Research bursary**

This was advertised in the March Journal and so far there have been few responses. If you have any project in mind, but are not sure whether it will be suitable to apply for this bursary, do please contact me for an informal chat. I would be happy to discuss your proposal with you. We have decided to postpone the closing date from 1 September to 1 October this year and will from now on, be accepting applications twice a year with a closing date of 1 March and 1 October. So if you're not quite ready yet to apply, don't worry you have another chance next spring.

### **Student questionnaires**

Many thanks to those of you who responded to my plea to help students with their project questionnaires. We regularly receive requests to help students in this way, and I am sure you would all agree that we need to promote and encourage an interest in paediatrics among students.

### **Research database**

If you would like to receive regular updates on research news such as conferences, courses, funding sources, please fill out the form at the back of the Journal with your email so that this can be done. If you think you are on the database, but are not receiving any news. Please email me as I may not have your correct address.

### **Research meeting**

We are planning to hold a research meeting in September in the south-east region. This will be to provide a forum to hear about research going on in the area and discuss people's research ideas. If you would like to hear what research is happening, or have the opportunity to talk to others thinking about embarking on research, please do join us. We hope that it'll be an informal meeting to help generate enthusiasm and support.

### **Forthcoming conferences**

'Care of children: Research perspectives.' On Friday 10 September 2004. University of Bradford. Email: [v.h.elliott@bradford.ac.uk](mailto:v.h.elliott@bradford.ac.uk) for details.

European Academy of Childhood Disability, 16<sup>th</sup> annual meeting, 7-9 October 2004. Edinburgh. Email contact: [eacd2004@in-conference.org.uk](mailto:eacd2004@in-conference.org.uk)

### **Change of research officer**

I am now handing my post over to Jeanne Hartley who can be contacted on [hartlj@gosh.nhs.uk](mailto:hartlj@gosh.nhs.uk) I have really enjoyed my time as research officer and wish her much success in this post.

**Sarah Crombie**



## Regional Reports

### SCOTLAND

On Friday 19th March the APCP branch in Scotland held the first of two study days planned for this year, together with our AGM. The presentations were under the title of "A Mixed Bag". All the presentations were excellent and covered areas of interest to paediatric physiotherapists which included the assessment and diagnosis of JIA, the Ponsetti approach to the treatment of club feet, the genetic anomalies in neuro-muscular conditions and the components of a care pathway for patients with Muscular Dystrophy.

The committee decided to hold the study day and AGM in Dumfermline in Fife, as a conscious effort to move away from the central belt. Despite a miserable snowy day, the attendance was good and in line with previous attendance for study days held in either Glasgow or Edinburgh.

The AGM took place before lunch. There was no problem in ensuring that we had the required quorum of ordinary members. The reports from the Chairman and the other Office bearers confirmed that our membership numbers and funds remain healthy. Plans for future study days were outlined, and the members were asked for future topic suggestions.

The regional committee are very aware of their role as the communication link between national committee and the members in Scotland. It was agreed that the next regional committee meeting on 4th June would be largely devoted to identifying ways of improving the communication channels in all directions, to raise the profile of APCP in Scotland.

The national committee members on the regional committee also fed back from the working weekend in Belfast and gave the commitment to do the same from the APCP National Committee Meeting, AGM and Conference in Liverpool at the end of April.

ALISON GILMOUR

### NORTHERN IRELAND

Since I last wrote we have had one further evening meeting when Lou Downey spoke on the Treatment of Children's Sports Injuries. It was a very interesting and beneficial talk, which gave us all some food for thought.

That evening we were also planning to have our AGM but due to a poor turnout of non-committee members we had to run it as a business meeting.

This was very disappointing as we were unable to vote through certain issues, most notably the election of new committee members. As we get together as a committee in the next few weeks to plan for next year can I encourage you all to put these evenings in your diary and plan to attend. We try to run courses and talks which we feel are topical and of interest to the members. With this in mind we are always grateful of any suggestions you might have. Volunteers to speak would be a bonus! Details for next year should be sent to you over the summer sometime.

We would like to thank Adare for all her hard work as APCP National Chairperson and for all her support and advice to us locally. Enjoy the freetime Adare, it's very well deserved!

Meanwhile enjoy the sunshine everyone! (We can but hope!).

ALISON MOUNSTEPHEN

### EAST ANGLIA

We held a very popular and successful AGM and Study Day on 6th March at Addenbrookes Hospital. The topics were Targeted Training in the morning, and Caseload Weighting in the afternoon. The feedback and comments we received from everyone who attended was very positive, and I am only sorry that I missed it (being unavoidably detained in bed with the flu!). Many people felt that it was a good mix of clinical and management topics, and both were very relevant to practice.

We also had some excellent suggestions of topics for future study days, which we will try to incorporate into our programme for the rest of this year and next year. We will be running a day on Erbs Palsy, Torticollis, and Talipes on 12th June, and members will by now have received details of the programme. We look forward to seeing many of you there on the day.

In the autumn we are organising an introduction to Sensory Integration. This will be held in St Albans, and the programme will be sent out to members nearer the time. We would also like to arrange a study day early in 2004 on Wheelchairs, and as well as speakers, will invite some suppliers who could bring examples of different types of wheelchairs. For our next AGM in March 2005, we are proposing to cover two topics, and are investigating Pilates for DCD, and Splinting/orthotics as possibilities. We were hoping to run a day on strength training, but have had to postpone this as we have as yet been unable to arrange a speaker. We do have more ideas for next year's programme, so watch this space!

SUE COOMBE

## Regional Reports

---

### SOUTH EAST

Since the last report we have held a study day at Pembury Hospital on March 22nd 2004. The Committee has been aware that most of the study days held during the past year had an emphasis on community paediatric care featuring mostly neuro-developmental issues. This study day was specially chosen to re-address the balance and to include something for members working in respiratory care. The day was entitled 'A Breath of Fresh Air' and our two invited speakers from the northwest region spoke on aspects of evidence based respiratory care in both the acute and community settings. The speakers were Paul Ritson, Clinical Specialist Physiotherapist PICU, from Alder Hey and Elaine Lloyd, Senior Paediatric Physiotherapist from Booth Hall Hospital, Manchester. It was a very interesting day for all who attended, including quite a few non-members.

The AGM of the region was also held during the lunchtime. The very poor attendance of the membership meant that once again we did not have a quorum, but as there were no issues that required a vote on the agenda the meeting went ahead. On behalf of the regional committee I would like to express our disappointment in the support that we have received from you the membership over the past year. The committee has worked extremely hard on your behalf, often in our own time, to try to make the study days stimulating and attractive talking into account the views and ideas expressed by the membership. We have gone out of our way to vary the venues around the region and also to include subject matter that you have asked for. We have over 140 members within the region and at the most 20 members usually attend of whom 6-8 are usually committee members.

This is an important time of change for services and employees of the health service. Agenda for Change is imminent and the early implementers are leading the way forward for the rest of us to follow this October. APCP provides a forum for networking and information sharing regarding the job evaluation process. It is important that paediatric physiotherapists don't work in isolation to develop their job descriptions but by sharing and networking we can hope to ensure that this specialised area of work is rightly acknowledged for the skill and expertise it requires. Agenda for Change is strongly linked to modernization within the NHS to improve service provision, where better then for ideas to be shared and exchanged to this end than within our own professional forum?

Plans for future study days are well under way. A follow-up day from the two School Study days is

planned for June 16th again at Charlton School, it is hoped to finalise standardised criteria / protocols and best practice pathways for the regional school services from this day. Look out in Frontline for more details or contact Ann Martin Tel: 02088546259 x250.

In the autumn we are planning a study day on Paediatric Orthopaedics facilitated by Jenny Seggie, Extended Scope Practitioner, Paediatric Orthopaedics, East Kent Hospitals Trust. We look to you for support for these days.

We are still looking for nominations for people to join us on the committee and if anyone is interested than please contact Anne Finnlayson, Chair on Tel: 01622 226075. Personally I have gained far more than I have given from being involved with APCP, I have made great friendships and also found invaluable the support, expertise and experience of fellow members in helping me with decision making clinically and with regard to service development.

Sulu Mehta has stood down after serving her term of office as Regional Treasurer. Our sincere thanks go to her for keeping the accounts in order for us!

Finally I am standing down as regional representative for the southeast region as I have growing commitments on the national committee and also the affiliated national neonatal group committee. I will continue to hold a place on the regional committee as a committee member, but would like to take this opportunity to express my thanks to the committee for all their help, support and friendship over the past few years. Ann Martin (see contact details above) will be taking over as Regional Representative and the new Secretary and Treasurer will be announced shortly.

PETA SMITH

### NORTH EAST

The study day held in March on the 'Ponseti Approach to the Management of Talipes' by Naomi Davis and Team was well attended and evaluated extremely well. As we had sufficient quorum, we also had our AGM after two aborted attempts last year.

Details for our next study day on Saturday 2nd October 2004 have been finalised. Jackie Pattman, a HACP tutor from Sussex will facilitate theory and practical sessions at the hydrotherapy pool in the Physiotherapy Department of Harrogate District Hospital, North Yorkshire. Cost for the day will be £50 for members and £75 for non-members (to include lunch). Remember to bring your cossie and towel on the day. Further details can be found on

## IN OTHER JOURNALS

NAPOT

2003, vol 7, no 3, Autumn

NAPOT Conference Issue

Framing the Future for Occupational Therapy with Children and Young People. F McElderry. 7-10

A survey of UK Practice: Clinical Reasoning. G Kelly. 10-11

NAPOT Conference Seminars. 2003. 12-16

Conference 2003: Hot Topics. 16-17

Literature Searching for Therapists. J Grisbrooke, D Webber. 17-19

2004, vol 8, no 1, Spring

Paediatric Occupational Therapy in the 21<sup>st</sup> Century: A Survey of UK Practice.  
Part Two: Philosophical Assumptions, Beliefs and Values. G. Kelly. 6-8

Measuring the Effectiveness of Paediatric Occupational Therapy Using Single Case Study Design. L Platts, J Berry. 8-14

Review of Management Grades in Children's and Young People's Occupational Therapy. Napot Wessex Managers' Group. 15-19

Bristol Royal Children's Hospital Inpatient Service Review. L Plowden. 20-23

Back-Up Trust. A Taylor. 23-24

Whizz-Kidz Children's Mobility Centres Project. H Tidey. 24-25





# Association of Paediatric Chartered Physiotherapists

## Introduction to Paediatrics

18<sup>th</sup> to the 21<sup>st</sup> of October 2004

A 4 day course for junior or senior II Physiotherapists working in paediatrics

This course aims to;

- Improve knowledge base regarding normal development and maturation.
- Enhance understanding of paediatric pathologies in neurological, respiratory and musculoskeletal paediatrics.
- Further develop clinical reasoning and management strategies with reference to common paediatric pathologies.
- Increase awareness of the broader aspects of paediatric practice including; legal and ethical issues, moving and handling, psychosocial factors.
- Develop assessment and treatment strategies and techniques
- Provide opportunity for discussion with peers

Touchbase conference centre, Birmingham.

Cost £260 - including lunch each day

For details contact. Mary Harrison email [Harrwhit@aol.com](mailto:Harrwhit@aol.com) stating "APCP intro paed" in title bar. or tel. 01423 866373





# A.P.C.P. Conference Wales 2005



To be held at  
**Swansea University**

**Thursday 31st March 2005  
to  
Saturday 2nd April 2005**

THE  
HELPING HAND COMPANY  
LEDBURY LIMITED



## Symmetrikit Postural Care Pathway The Family Centred Approach to Postural Care

Course and Pathway Co-ordinator : Claire Johnson

Tutors

John and Liz Goldsmith, David Hill, Claire Whittle, Stuart Moore, Sheldon Jones

A forum for therapists developing 24 hour Postural Care

**The Verzons Country House Hotel, Nr Ledbury, Herefordshire**

**14th, 15th & 16th July 2004**

£350 (excl. VAT) for two nights full board inclusive of seminars and Pathway materials (first come first served for single rooms, then sharing twin bedded rooms or single rooms in a local alternate hotel)

This course will provide therapists with an opportunity to work with others providing postural care and developing Care Pathways to provide a structured and practical approach to:-

IDENTIFYING NEED  
ASSESSMENT AND TRAINING  
EQUIPMENT ACQUISITION  
MONITORING AND SUPPORT  
REASSESSMENT AND RETRAINING

Discussion and guidance on piloting and implementing the Care Pathway along with materials for presentations to management on the introduction of changes to service delivery. Develop and justify Consultant status. Lead a structured Postural Care Service integrated across disciplines and providers by using the Symmetrikit Postural Care Pathway

The subjects will include:-

Biomechanics and measurement combined with physiology of chest distortion  
Biomechanics and measurement of windswept body shape  
The physiology involved in achieving thermal comfort  
Sleep and the Family  
Behavioural and positioning strategies  
Photography and documentation of Postural Care

This Course represents the admission route to becoming a Tutor on the National Open College Network Qualification in Postural Care for families & carers & also a subject related MSc accreditation through Coventry University.

SPACE IS LIMITED

Applications to Claire Johnson : The Helping Hand Company (Ledbury) Ltd  
Bromyard Road Industrial Estate, Ledbury, Herefordshire. HR8 1NS  
Tel 01531 635388 email [clairejohnson@helpinghand.co.uk](mailto:clairejohnson@helpinghand.co.uk)  
website [www.helpinghand.co.uk](http://www.helpinghand.co.uk)



**Sheffield  
Hallam University**

**NEW Postgraduate Programme in Paediatric Physiotherapy**

Continuing Professional Development

We offer a framework of postgraduate study in paediatrics. Study may be full or part-time depending on the modules you choose. Our programmes are flexible and allow you to design an individual route that suits your continuing professional development and learning needs. This includes opportunities to develop in one specialist aspect of paediatrics. The modules may be studied individually for CPD or as part of a MSc award.

- **MSc Physiotherapy**
- **MSc Paediatric Physiotherapy** – new award
- **Doctorate in Professional Studies**

**Paediatric modules include;**

**Legal and Ethical Issues in Paediatrics**

**Paediatric Neurology**

**Paediatric Respiratory Care**

**Paediatric Orthopaedics**

**Neonatal Care**

**Clinical Practice in Paediatric Physiotherapy**

**Other optional modules include:**

*Musculoskeletal Management 1 & 2*

*Chronic Lung Disease*

*Clinical Outcomes*

*Definition & Diagnosis of Sport Injury*

*Orthopaedic Image Interpretation*

*Understanding Core Stabilisation*

*Critical Care*

*Issues in Changing Practice*

*Treatment of Sport Injury*

*Chest Image Interpretation*

*Research*

Modules start from September 2004 or February 2005 and may be taken as stand-alone courses.

For further information please contact: The Post-Experience & Postgraduate Office · Health and Social Care · Sheffield Hallam University · Collegiate Crescent Campus · Sheffield · S10 2BP

Telephone **0114 225 2373** or e-mail **pep-enquiries@shu.ac.uk**

[www.shu.ac.uk/schools/hsc](http://www.shu.ac.uk/schools/hsc)

**2004 steps conference**

**29<sup>th</sup> October 2004**

**Holiday Inn, Maidenhead, Berks**

**9.15 – 16.45**

**The Rates:**

There is an early bird discount of 10% for bookings made before 30<sup>th</sup> July.

**steps professional - £75 per person**

(only available with a steps no.)

**Full Fee - £100 per person**

For more information and booking form go to the website: [www.steps-charity.org.uk](http://www.steps-charity.org.uk)

or contact:

Sue Banton

**steps**, Lymm Court, 11 Eagle Brow, Lymm, Cheshire  
WA13 0LP

Tel: 0871 7170044. Fax: 0871 7170045, email:  
[sue@steps-charity.org.uk](mailto:sue@steps-charity.org.uk)

A multidisciplinary study day giving an overview of the two most common musculoskeletal problems of the newborn

**Developmental Dysplasia of the Hip (DDH)  
Congenital Talipes Equinovarus**

**Programme A: DDH- screening and management**

This programme is part of Baby Hip Health Week and will cover all aspects of Developmental Dysplasia of the Hip. The programme will cover DOH guidelines on screening and surveillance of DDH, the use of ultrasound, care in the community, the parental experience, treatment for the child and young adult. There are practical workshops on clinical and ultrasound examination and care in splints and plasters.

**Programme B: Clubfoot- from Ponseti to the adult foot**

The programme will cover the Ponseti Method of treating clubfoot, the parental experience, resistant clubfoot and relapse and treating the adult foot. There are practical workshops on the Ponseti Method, management of the foot abduction brace, orthotics and physiotherapy. There will be a special presentation on treating clubfoot in the developing world using the Ponseti Method.

**Who should attend?**

Health professionals including, orthopaedic specialists, public health specialists, nurses, midwives, obstetricians, GPs, physiotherapists, orthotists and other professionals working in child health. Members of the public are welcome. Unfortunately we are unable to offer crèche facilities

### Hull and East Yorkshire Hospitals **NHS**

NHS Trust

#### **SUPERINTENDENT III PHYSIOTHERAPIST – TEAM LEADER**

#### **PHYSIOTHERAPY, HULL ROYAL INFIRMARY**

**£26,881 - £29,681 PA, FULL TIME – 36 HPW**

We are an enthusiastic team in a teaching hospital with rotational junior and senior II staff, also taking regular student placements.

The caseload is varied including orthopaedic, neurology – both acquired and babies with cerebral palsy/development problems and rheumatology inpatients. We also cover the new children's critical care unit and have access to the neonatal intensive care unit at the new maternity hospital.

As outpatients, we will see musculo-skeletal, rheumatology and neurological conditions where we have facilities to offer hydrotherapy and gymnasium if appropriate, also babies up-to two years of age with developmental delay or cerebral palsy.

We are heavily involved with the management of cerebral palsy children undergoing orthopaedic surgery, having a close working relationship with the Paediatric Orthopaedic Consultant. We also have an established Ponseti management programme for babies with Congenital Talipes Equinovarus.

The Physiotherapy service offers an environment that supports personal and professional development and welcomes innovation. The service has developed greatly over the last year and is continuing to change. Close links with the Institute of Rehabilitation give clinicians direct links with Research and Development Therapists who provide support in all aspects of evidence based practice, research and practice development.

Hull and East Yorkshire Hospitals NHS is a large Trust with an annual budget of £253 million, employs over 6,000 staff and serves a population of 1.2 million.

Hull is a major city with many new developments offering a wide range of cultural and sporting opportunities. There is easy access to the nearby pleasant countryside, dales, moors and coastline. It is easily accessible from the nearby pretty East Yorkshire villages or historic towns of York and Lincoln making commuting an inviting option.

For further information please contact Liz Minnich, Head of Physiotherapy on 01482 675099 or email [liz.minnich@hey.nhs.uk](mailto:liz.minnich@hey.nhs.uk)

**For an application form and job pack please contact our 24 hour job line number on 01482 623072 or e-mail [jennifer.goodwill@hey.nhs.uk](mailto:jennifer.goodwill@hey.nhs.uk) quoting the reference number HEY651 followed by your name and address.**



# THE APCP RESEARCH GROUP REGISTER

If you would like to be a member of the APCP research group, please fill in the form below and return it to Sarah Crombie, Research Officer, 10a Record Road, Emsworth, PO10 7NS. This information will be used to inform you of research study days and help us to learn more about our members' research interest.

Name

Contact  
Address

Post Code

Tel. No.

Fax No.

E-Mail:

What are your research interests?

Are you undertaking any type of research project small or large? YES/NO  
If so please give a brief summary . . .

Would you be happy for other physiotherapists with similar research interests to be put in touch with you? YES/NO

*Thank you for completing this form.*



## REGIONAL REPRESENTATIVES

### EAST ANGLIA

Sue Coombe  
32 High Bungay Rd  
LODDEN  
Norfolk  
NR14 6JT  
coombeloddon@aol.com

### LONDON

Stephanoe Cawker  
The Wolfson Centre  
Mecklenburgh Square  
LONDON  
WC1N 2AP  
cawkes@gosh.nhs.uk

### SCOTLAND

Alison Gilmour  
Graysmill School  
1 Redhall House Drive  
Craiglockhart  
EDINBURGH  
Alison.gilmour@graysmill.edin.sch.uk

### SOUTH WEST

Ruth Davies  
Child Development Unit  
Musgrove Park Hospital  
TAUNTON  
Somerset TA1 5DA  
roofyrooster@hotmail.com

### SOUTH EAST

Ann Martin  
Physiotherapy Dept  
Childrens Therapy Centre  
Goldie Leigh  
LODGE HILL SE2 0AY  
annmartin775@hotmail.com

### WALES

Jill Williams  
Nursery Unit  
The Hollies Special School  
Pentwyn  
CARDIFF

### NORTH WEST

Elaine Lloyd  
Physiotherapy Dept  
Booth Hall Children's Hospital  
Charlston Rd Blockley  
MANCHESTER  
M9 7AA  
elainelloyd911@madasafish.com

### TRENT

Claire Hill  
Physiotherapy Dept  
Sheffield Children's Hospital  
Western Bank  
SHEFFIELD  
S10 2 TH  
claire.wagstaff@talk21.com

### NORTHERN IRELAND

Felicity Dickson  
Sceabo Children's Centre  
Ards Community Hospital  
Church Street  
NEWTONARDS  
BT23 4AS N Ireland  
felicity@dicksona22.fsnet.co.uk

### WEST MIDLANDS

Lindsay Rae  
Physiotherapy Dept.  
The Children's Hospital  
Steelhouse Lane  
BIRMINGHAM B4 6NL  
lindsay.rae@bch/nhs.uk

### NORTH EAST

Mary Harrison  
11 Whitsundale Close  
KNARESBOROUGH  
N Yorkshire  
HG5 0HX  
harrwhit@aol.com

### OVERSEAS

Gill Holmes (PRO)  
Physiotherapy Dept  
Alder Hey Children's Hospital  
Eaton Rd  
LIVERPOOL L12 2AP  
Gill.Holmes@RLCH-TR.nwest.co.uk

## **In this issue :**

**CONFERENCE 2004**

### **Lecture Abstracts**

**The Prognosis for Walking in Cerebral Palsy**

**Serial Casting - a review of the evidence**

**The Decision Making Process for Giving  
Botulinum Toxin in Managing Spasticity in  
Cerebral Palsy**

### **Free Paper Abstracts**

### **Poster Presentation Abstract**

**The Role of the Paediatric Physiotherapist  
in the Management of Spasticity**

