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PAEDIATRIC  
CHARTERED  
PHYSIOTHERAPISTS**

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

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# EDITORIAL

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Time seems to fly. It is difficult to believe that yet another APCP Conference has been and gone, leaving some of us with memories of fantastic weather and great organisation, for which our thanks must go to the organising committee, and much food for thought. Not, of course, forgetting Dame Edna and a great social time and comradeship, with lots of opportunities to catch up with old friends and plenty of time to make new ones. Incidentally, did you know that the National Committee had so many talented disco dancers? If you had been at conference dinner you too could have shared the fun.

The lectures at conference were of a high standard and some are reproduced for you all to share in this edition of your Journal, along with some of the free papers that were presented and an outline of some of the workshop material. These sparked much discussion and debate as to how ideas to support children and their families in a changing National Health Service could be implemented by paediatric physiotherapists in many areas of the profession.

There have been some changes on the National Committee. Christine Shaw steps down as secretary and to her we extend our thanks for many hours of hard work. She will remain on the National Committee for a while to support Laura Wiggins who will be filling this post. Welcome to Laura and also to Susan Rideout who will be your new membership secretary, taking over from Sian Howells who will be greatly missed by us all. Best of luck, Sian - sorry I can't manage that in Welsh. We would also like to welcome new regional reps.

So APCP begins a new year looking forward to conference in Liverpool in 2004, get it into your diary. Plans are already well ahead and it promises to be a great event. Look out for the essay competition in this edition of the Journal. You could win yourself a free place. Don't forget the research study day in September or considering the possibility of a place on the advanced Cerebral Palsy Course. Above all keep writing for the Journal and sharing your ideas and experiences. Without you, there would probably be no journal at all.

**Sally Braithwaite**

Editor

Copy for the  
**SEPTEMBER 2003 JOURNAL**  
**must be with the editor by**  
**1st AUGUST 2003**

The editorial board reserve the right to edit all material submitted

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Terry Pirie  
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Dear Sally

**Re: Handling Regulations and the use of the David Hart Walker**

Many schools and departments are having difficulties identifying a safe way of helping children/students use the David Hart Walker.

Here at the RNIB School at Conover we have found a safe method using an Oxford Hoist and changing table. The student who currently uses a walker is of teenage years and well built, but thoroughly enjoys being independent using this piece of equipment.

If any physiotherapists/departments would like details of the method used – along with photographs – please contact us and we will be happy to help.

Yours sincerely

Terry Pirie/Belinda Donnoli

Dear Sally

Our department is hoping to develop the use of acupuncture to treat pain in musculoskeletal problems with a small group of our older patients.

We have had a good response in terms of replies to a questionnaire we sent out to 20 paediatric units/hospitals but only a few use acupuncture as a treatment modality within paediatrics. We have been unable to find any published papers on the use of acupuncture on this subject.

If there are any other members of APCP who do use acupuncture and would be willing to share their experience, could they please contact us on Penny.sutherland@sdah-tr.trent.nhs.uk, or Steve.cockerill@sdah-tr.trent.nhs.uk

With thanks

Penny Sutherland  
Steve Cockerill

Dear Editor

I am working with a young man whose family are trying to plan for his secondary education and are keen to see schools – residential or day schools – that focus on the physical development rather than academic achievements.

The young man involved has dystonic athetosis but uses high level computer technology for his communication and schoolwork. He is amazing to work with but is keen to physically achieve.

Are any colleagues working in such a school? If so would you kindly let me know details so that this family may visit.

With thanks for your help.

Terry Pirie

## LETTERS

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Dear Sally

I was interested to read the letter in the March edition of the APCP journal from private Chartered Physiotherapists commencing on the working relationship between private and NHS therapists in the treatment of children.

In West Hertfordshire we have been actively involved in developing such a relationship in conjunction with Occupational Therapy (OT) and Speech and Language Therapy (SALT) colleagues. We have developed a leaflet which outlines the choices available to parents who want private therapists to work with their child alongside the NHS therapist and which emphasises the essential need for communication between the therapists.

The leaflet is based on the advice from the CSP and the APCP as well as the professional bodies of OT and SALT.

I would agree that effective communication is the key to a good collaborative working relationship but would emphasise that this communication must be two-way.

Therapists must respect the professionalism and skills of each other and work together to agree responsibilities for the different aspects of the child's care. Indeed sometimes the most realistic division of responsibilities is for the NHS therapist to lead on equipment and management within school and the private therapist to lead on the management of the child at home.

Such issues as manual handling and safeguarding should influence the practice of both NHS and private therapists as the parents and child must not be placed at risk. Realistic and agreed goals should be agreed and set within the context of the setting i.e. school or home.

If anyone is interested to receive a copy of the leaflet that we have developed, please send a stamped addressed envelope to our Physiotherapy team.

Yours sincerely

Sheila Billings

on behalf of Children's Physiotherapy Services  
Hertfordshire Partnership Trust

## LETTERS

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Website: [www.whizz-kidz.org.uk](http://www.whizz-kidz.org.uk)

Dear Editor

### **Clarification of Whizz-Kidz' application process**

There has been recent concern from national mobility equipment dealers that primary therapists are unaware of the procedural changes that have been introduced within national charity Whizz-Kidz since it ended its monthly application system in 2000.

Whizz-Kidz Mobility Therapists have also learnt that some therapy managers are not happy for primary therapists to assist families with the application/assessment of privately funded wheelchairs.

Any applications for mobility equipment are prioritised by the Whizz-Kidz Mobility Therapists taking into consideration both the child's clinical and lifestyle needs. Part of this process is liaising where indicated with the primary therapists, wheelchair services, local education authorities and social services and once the priority is established the families are informed of this by letter. Joint funding opportunities will be investigated at this stage.

Once funding for the child is available, the assessment process is started and all relevant people are invited to be present to identify the most suitable equipment for the child. This will be followed by a dealer visit(s) who will demonstrate suitable items and when equipment may be tried in the most appropriate environment eg home and/or school.

On delivery, final adjustments are made, the child and parents are shown correct use of the equipment, and given guidelines on maintenance and servicing. Any further training needs are determined and identification of who will provide this established.

I hope that this has given clarification of the process undertaken on receipt of an application for mobility equipment to Whizz-Kidz, and also highlights how much Whizz-Kidz Mobility Therapists value the involvement and expertise of the primary therapist to achieve the optimum item of mobility equipment for each individual child/young person.

If any further information is required please contact: [info@whizz-kidz.org.uk](mailto:info@whizz-kidz.org.uk)

Yours sincerely  
Judith Davis

## LETTERS

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Dear Sally

Following the publishing of the letter from Dawn Narborough and me in the June 2002 issue of the journal, asking if anyone had been involved with work developing Assistant Skills competencies, we are very pleased to inform you that our neighbours in Leicestershire and Rutland NHS Trust responded.

Sue Foster and Shirley Hardy are developing Physiotherapy Assistant Skill Acquisition Modules. There are currently 14 draft documents which we have been invited to co-pilot with our own staff. I have received a very positive response from staff.

Dawn and I feel that we would like to publicly acknowledge the tremendous amount of work that has already been completed by Shirley and Sue and trust that on completion of the pilot study this might be shared amongst a wider field.

Yours sincerely

Kathryn Hughes

Dawn Narborough

Gail Nash  
Project Leader  
(Therapies Project)  
Jigsaw CDC  
Beatlie School Campus  
Livingston

To whom it may concern,

I have recently taken up a new exciting post as Project Leader for an Integrated Therapy project which has been funded through the Changing Children's Services Fund.

The main remit of the job is to look at different models of service delivery for children and their families attending the Child Development Centre.

The project also involves exploring and implementing other systems, for example, lead therapist/key worker systems, joint documentation, the use of outcome measures and integrated assessments. I will also be involved in looking at multi-agency working.

I would be most grateful for people's views, ideas, experiences in any of the areas mentioned.

Yours faithfully

Gail Nash

# A SELECTION OF PRESENTATIONS FROM CONFERENCE 2003

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## **MAKING THE RIGHT START**

**HELEN ROBINSON, MCSP**

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The neuro-developmental role of the physiotherapist within the neonatal unit environment has developed dramatically within the last decade. There are increasing numbers of physiotherapists working within the field but the majority support their units on an ad hoc basis, with no designated time due to a lack of funding.

The setting up of a clinical interest group in November 2002 to support physiotherapists who are working, or who are interested in working with neonates, will give support to physiotherapists in the field, raise the profile of this type of work and give rise to increased levels of specialist posts and funding for this important role.

In 2000 funding was gained for a part time neuro-developmental post in a Level 2 neonatal unit. This was achieved by raising the profile of the physiotherapist within the unit and ensuring that advice was always available for infants known to have suffered a significant neurological event. This led to the medical team using me more to assess at-risk infants and, with support from the Senior Sister and Neonatologist on the unit, I was encouraged to put forward a bid for funding a post on the unit.

My role on the unit has developed since funding was gained and I am now able to provide a service that:

- Promotes normal developmental positioning and care
- Assesses at-risk infants
- Identifies infants with developmental and neurological difficulties
- Implements early intervention
- Educates medical team and carers
- Provides comprehensive follow up to at-risk infants

### **Developmentally Supportive Positioning**

The importance of developmentally supportive positioning within the neonatal environment has been recognised for a number of years and the majority of units are now practised at this. There is not always however, the understanding for the reasons and importance of supportive positioning or the implications that inadequate positioning has on later developmental outcome. All carers for the infant, including parents, need to be educated as to the reasons why positioning is so important and the role it continues to play once the infant is discharged from hospital.

A term baby develops physiological flexion in the last trimester of pregnancy and this is essential to allow the development of normal movement. The strong flexion is reduced by gravity over the first couple of months allowing extensor muscle activity to develop. The balance between flexion and extension provides the stabilisation on which normal development can occur.

With muscle tone developing at around 36 weeks gestation, and the impact that gravity has on a preterm infant the inability to counteract the effects of gravity leads to extended postures which are deviant and can contribute to delayed or abnormal motor development.

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Each developmentally supportive position has its advantages and disadvantages although there are certain positions where the pros far outweigh the cons.

The main aims of positioning should be:

- Promoting flexion and avoid extension
- Facilitating smooth anti-gravity movement and the development of head control
- Promoting symmetry and midline orientation
- Preventing musculoskeletal deformity and skin breakdown
- Enhancing behavioural organisation
- Decreasing energy expenditure and improving sleep time

Prone developmentally and medically is the position with the most advantages. It facilitates the development of flexor tone, head control and hand to mouth and decreases the risk of preferred head turn. It improves oxygenation, increases tidal volume and lung compliance, improves gastric emptying, sleep time and energy conservation and reduces the number of apnoeas. It can however cause difficulty in access for medical care.

Side lying also facilitates flexion and encourages midline orientation with improved hand to mouth activity. It is also the best position for counteracting external rotation and retraction of limbs. It can be difficult to maintain an infant in this position, particularly an irritable or extending infant and there is a risk of atelectasis in extremely low birth weight babies.

Supine is the position of least choice developmentally as it is a position of extension and encourages hyperextension of the neck and shoulder girdle retraction if the infant is not positioned properly. It also causes increased startle responses and sleep disturbances. On Somerset Neonatal Unit this position is only used as the position of choice for the medically unstable infant and for the infant one week prior to discharge from the unit in preparation for going home. For the medically unstable infant it enables easy observation and accommodates ventilator equipment and umbilical catheters.

All infants on the unit regardless of gestation receive positioning advice within their nursing developmental care plans.

### **Assessment of at-risk infants**

There are a variety of assessments that are available to use with the high-risk population. Some are devised for use within the Neonatal Intensive Care Unit (NICU) / Special Care Baby Unit (SCBU) setting and are designed to be used with the preterm population. Others are devised for use as a follow up tool once the infant is discharged from the unit. The use of available assessments is dependent on the training undertaken by the physiotherapist and the practicality of using that assessment within the physiotherapists working environment i.e. related to individual preference.

Criteria for a neuro-developmental physiotherapy assessment are:

- < 32 weeks gestation
- < 1500 grams
- Abnormal cranial ultrasound scan
- Hypoxic Ischaemic Encephalopathy
- Ventilation for >48 hours

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## Assessments on the Neonatal Unit

I mainly use 2 assessments suitable for the preterm infant population on the unit, Prechtl's Functional Assessment of the Young Nervous System and the Joan Lacey Longitudinal Assessment of the Preterm Infant. I am also in the process of training in Brazelton's Neonatal Behavioural Assessment Scale, so will discuss this briefly.

### Prechtl-Functional Assessment of the Young Nervous System.

This assessment enables early identification of infants who require early therapeutic intervention in a non-invasive and non-intrusive way. It is used during the preterm period up to two months post term age. A video camera is placed mid-sagittally or laterally from above the infant's cot or incubator and the infant is recorded, with no handling, in the supine position for about an hour.

The assessment looks at spontaneous general movements (GM's) involving the whole body. These GM's can be observed in the preterm and term period and up to two months post term. They have a writhing appearance, with sequences of extension and flexion with superimposed rotations, variable sequence, intensity force and speed. General Movement's continue until about the second month post term when they are then followed by a new general movement pattern known as Fidgety movements.

Abnormal general movements in the preterm and first two months post term period are classified in to three groups.

- Poor repertoire of GM's – movement sequence is monotonous and lacks complexity
- Cramped Synchronised GM's – movements are rigid and all limb and trunk muscles contract and relax simultaneously
- Chaotic GM's – movements are abrupt, occur in a chaotic order and lack fluency and smoothness

At the age of about 8 weeks post term the form and character of GM's of normal infants changes from the writhing pattern to a fidgety pattern. These are very small,

3D circular movements of neck, trunk and limbs in all directions. They are continual in the awake infant so videoing for this pattern of movement takes about 5 minutes

Fidgety movements (FM's) are judged as abnormal if they have never been observed from 6-20 weeks post term age (Absent Fidgety Movements) or if they look like normal FM's but they are greatly exaggerated (Abnormal Fidgety Movements). Absent fidgety movements predicts Cerebral Palsy (CP) with a sensitivity of 95% and a specificity of 96%. The FM assessment takes place in the neonatal follow up clinic.

When the results of the Prechtl assessment were compared with results of a traditional neurological examination the sensitivity and specificity of GM assessment with respect to outcome were consistently superior to those of neurological examination in both preterm and term infants. Comparing GM assessment with cranial ultrasound results showed that until 2 months post term both techniques provide similar prognostic values. However, during the 3<sup>rd</sup> month the assessment of fidgety movements is superior (specificity 96%;sensitivity 95%) to predictions based on cranial USS (specificity 83%; sensitivity 80%).

The Prechtl assessment is a highly valid and reliable assessment. Training in the assessment technique involves a 6-day course approved by The General Movement Trust.

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## **Joan Lacey – Longitudinal Assessment of the Preterm Infant**

This assessment emphasizes observational skills and evaluates the quality & variety of movement. It is a longitudinal assessment that enables the documentation of items into a known developmental sequence.

The assessment documents spontaneous movements, the development of movement control against gravity, the development of anti-gravity postures, the caudo-cephalic maturation of muscle tone and evaluates selected reflexes.

During the assessment atypical features and their transient or dominant occurrence are documented. These features include coarse jitters, Asymmetric Tonic Neck Reflex (ATNR) dominating the movement pattern, paucity of movements, stereotypic movements, contradictory development, hypertonia / hypotonia and persistent thumb flexion/adduction.

These atypical features and the longitudinal assessments enable the classification of the assessment into one of three categories on discharge.

- “Usual” – progressive development without atypical features.
- “Unusual” – transient occurrence of one or some atypical features.
- “Suspect” – persistent atypical features dominating the assessment.

The classification of the infant into one of the categories enables more selective follow up.

Use of Joan Lacey assessment makes it possible to identify the majority (76%) of children who can expect normal motor outcome. The Joan Lacey course runs for approximately 5 days.

## **Neonatal Behavioural Assessment Scale (NBAS)**

This is an assessment that aims to educate professionals and parents to the extraordinary behavioural capabilities of the infant. It observes the infant's contribution to the parent-infant system, their competencies and difficulties and looks at the infants individual differences. The assessment includes 28 behavioural items, 18 reflex items and some supplementary items. It helps parents understand their infant's behaviour, fosters parents sensitivity and responsibility to their infant and helps them to read their infant's signals.

Once trained, this assessment technique can be considered a valuable tool to use for those infants who are irritable due to cerebral irritation or drug withdrawal or with those parents who are having difficulties bonding with their baby.

The NBAS course involved one training day where you practice administering and scoring the assessment followed by a self training phase where you administer the assessment to about 20 full term infants. This training finishes with a certification session where administrative competence and scoring ability are required to receive certification.

## **Follow Up Assessment**

The follow up clinic is a combined Consultant / Specialist Paediatric Registrar and physiotherapy clinic. Infants who are born at less than 32 weeks gestation are routinely followed up at 6 weeks, 4, 6, 8, 12, 18 and 24 months. Infants less than 26 weeks gestation are followed up in the same way but after 24 months are followed up annually until they are 5 years. Any infants who have identified difficulties will be followed up more frequently. In the follow up clinic setting I originally used the Alberta Infant Motor Score but, as I have

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learned with time, this is only going to identify those infants who require early physiotherapy intervention and will miss those who would benefit from an assessment by another member of the multi-disciplinary team such as OT or SALT. I now combine the AIMS with the BINS during the infants follow up appointment. From about 8 -20 weeks post term age infants will also have a Prechtl fidgety movement assessment when they attend for clinic.

### **Alberta Infant Motor Scale (AIMS)**

The AIMS is a norm-referenced measure of gross motor development used in infants from birth to 18 months. It was developed to highlight infants who are delayed or deviant in their motor development and to evaluate infant's motor development as a result of maturation or intervention over time. It is ideal in the clinic situation because it is quick to administer and is scored by observation only.

Infants are observed in 4 positional planes, prone, supine, sitting and standing. They are given a point for each activity that is observed on the assessment sheet and the total score is then plotted on a centile chart. From this an infant can be defined as normal, suspicious or at-risk and the appropriate follow up can be implemented.

The AIMS has been shown to have strong concurrent validity and to be a reliable assessment tool. The AIMS can be performed by any health professional that has a background in infant motor development and an understanding of the essential components of movement.

### **The Bayley Infant Neurodevelopmental Screener (BINS)**

The BINS is designed to identify infants between 3 and 24 months who are developmentally delayed or have neurological impairments. It is a tool that identifies infants who may need further diagnostic testing and is clinically suited to the high-risk population.

Four areas of ability are assessed –

**Basic Neurological Functions** – these items assess neurological intactness if the infants developing central nervous system

**Receptive Functions** – the early entry of information into the central processing system, namely sensation and perception

**Expressive Functions** – three primary areas involved, fine motor, oral motor and gross motor.

**Cognitive Processes** – this involves higher order functions, memory, learning, thinking and reasoning.

The BINS is quick to administer so is suitable for high volume situations such as clinics. It has good concurrent and predictive validity.

It can be administered and interpreted by an examiner with experience in infant development and the handling of infants (physiotherapists are documented in the manual as suitable examiners).

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## Education Role

Within my role I teach both medical professionals and parents/ carers. I am involved in a rolling teaching programme for the nursing staff on the unit and during nursing grade study days. The programme includes teaching on the role of the neonatal physiotherapist, developmentally supportive positioning, explanation of assessment techniques, preterm motor development and cerebral palsy. I speak at the paediatric/ neonatology medical staff teaching afternoons, particularly on the assessment of preterm infants and their follow up. I have spoken on the Children's Nursing Degree course run by Plymouth University.

When I am asking for consent from parents to video their infant I discuss with parents the assessment process and how the preterm infant develops. During the week before discharge I explain to parents ways to encourage normal development at home and how and why their infant differs from a term infant. This is given to the parents in written form for them to take home. We also talk about the recent research from America about car seat safety.

## Physiotherapy Referrals

Graduates of the NICU and SCBU get referred for ongoing physiotherapy input as soon as it is identified that a problem will arise or has arisen. For those infants who are identified as high risk for developmental difficulties, as identified using the Joan Lacey assessment or the Prechtl Assessment, the community paediatric physiotherapy team will be notified as soon as the difficulty has been identified and the infant has graduated for NICU to SCBU. A home visit is usually offered within a month of the infant going home.

For those identified through the Follow Up Clinic referral will be immediate from there. If an infant is showing mild to moderate developmental delay with no abnormal neurology then they will be seen by me in the Child Development Centre for a short course of treatment. If significant progress has not been made during this period of treatment the infant will then be referred out to the community for further input.

I am unable to routinely follow up those infants that are discharged whilst oxygen dependent. This is a vital group of infants who need regular developmental monitoring and advice. The area in which I work is very rural and home visits to these infants would demand increased availability of time. At present there is not the funding for these hours but this is an area of service in the future that needs to be addressed.

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## **STRENGTH TRAINING FOR CHILDREN WITH CEREBRAL PALSY**

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### **Introduction:**

Recent studies suggest that muscle weakness may be an integral component of the movement disorder of cerebral palsy (CP); (Guiliani, 1992; Damiano & Abel, 1998; Dodd et al 2002), although for over half a century it has been much neglected in most therapy programmes. This is largely due to the idea proposed by Bobath (1984, 1990) that muscle weakness is secondary to the problems of co-ordination, and that resisted muscle activity will lead to an increase in spasticity. However no evidence has been found to support these claims (MacPhail & Kramer, 1995; Miller & Light, 1997), and muscle strength in children with CP has been shown to be significantly less than that of typical children (Wiley & Damiano, 1998).

Accordingly, neurophysiotherapists need to reacquaint themselves with the principles of muscle physiology, to fully understand determinants of muscle strength and the principles of strength training programmes in order to attempt to manage the impairment of muscle weakness in the CP population. It is also essential to appreciate to what extent this impairment contributes to activity limitation and participation restriction (WHO: ICF, 2001) and how strength training may enhance the person's participation, particularly societal participation (Dodd et al, 2002).

### **Determinants of muscle force and strength:**

1. Muscle fibre alignment (McArdle et al, 2001, chapter 18)
  - Parallel : muscle fibre = muscle length to allow rapid shortening
  - Pennate: greater packing of muscle fibres – generate more force
2. Muscle cross-sectional area
3. Motor unit recruitment and coding:

As contraction continues and greater force is required more units are recruited (spatial summation) and in addition the firing rate is increased to generate greater force (see Winter 1979, in Jones and Round, 1990)- this is known as rate coding (temporal summation).
4. Length-tension characteristics: a muscle is known to generate the most effective force at its mid-position at which point there can be maximum overlap of actin with the myosin heads.
5. Number of sarcomeres also influence contraction strength. The sarcomere is the contractile element of the muscle (see McArdle, chapter 18).

### **Is muscle weakness significant in children with CP?**

- More than 50 years ago, Phelps, a prominent worker in the field of CP, suggested that muscle weakness was a primary problem for the child with CP and that muscle strengthening should be an integral part of treatment (Slominski, 1984)
- Children with CP have been show to be weaker than age matched peers (Damiano et al 1995; Wiley & Damiano, 1998)
- Muscle weakness has been unmasked following dorsal rhizotomy (Guiliani, 1992)

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- It has been suggested that leg strength is related to preferred walking velocity and functional ability as measured using the Gross Motor Functional Measure (GMFM; Damiano et al, 1995, 1998; MacPhail and Kramer, 1994)

### **What are the reasons for muscle weakness in children with cerebral palsy?**

The following are some possible reasons why children with CP will have primary and/or secondary muscle weakness/disuse: atrophy, muscles at biomechanical disadvantage to effectively generate force, reduced drive onto motoneurone pool, hypotonia or inappropriate muscle activation e.g. antagonist restraint. It must be kept in mind that hypotonia is not merely weakness as some would suggest (Carr & Shepherd, 2003). If this were the case then such muscle could be strengthened, but it is the clinical experience of most therapists that truly hypotonic muscles are difficult to activate in a sustained manner, let alone strengthen. Clinical experience suggests that muscle weakness and hypotonia are simultaneously present. By trying to effect a change via realignment to gain optimal biomechanical advantage for muscle activation, and the use of stimulation techniques, it is possible to more clearly delineate true weakness from hypotonia.

Contrary to previous ideas, advances in our understanding of spasticity reveal that muscles which are so-called spastic are also weak (Brouwer et al 1998; Engsborg et al, 2000). It is essential to view spasticity as simply the hyper-reflexic element of increased tone and view it in the context of the upper motor neurone syndrome (see: Burke 1988; Carr & Shepherd, 1998; Mayston, 2002). When viewed in this way, spasticity is often only a very minor component of the person's movement disorder. A revision of the understanding of tone in healthy people can usefully be applied to those with atypical tone to enable a more rational basis determining what type of intervention might be needed and explaining its effect (Mayston, 2002).

### **How can muscle strength be increased?**

There are 4 main principles to keep in mind (see McArdle, 2001; Bruton, 2002):

- **Overload:** muscle must be worked against a load which is greater than normal, at least 65% of maximum but probably more.
- **Specificity:** adaptations occur according to the type of training. Also applies to length-tension relationships and velocities used.
- **Individuality:** variability due to genetics, metabolism, endocrine regulation, relative fitness level
- **Reversibility:** training effects will be reversed; a maintenance programme is required

Muscle can be trained to increase strength in a variety of ways:

1. Progressive resistance weight training
2. Isometric training
3. Isokinetic training
4. Use of weight bearing exercise (with added load).
5. Circuit training.

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The first three are formal exercise programmes, but it might be possible to utilise functional weight bearing activities with added load, or to set a circuit training programme, shown to be effective for increasing strength (Andersson et al 2003; Blundell et al 2003). Repetition is also an important factor, the question is how much—again the amount of load will influence the choice: while 1RM (repetition maximum) carried out several times a week may increase muscle strength. However, it may be that heavy loading of muscle might not be suitable for children whose epiphyseal plates are still developing (Faigenbaum et al 1999).

Sufficient time must be given to the programme – the strength gains in the first 4-6 weeks of training are achieved by increased neural drive to the motoneurone pools innervating the target muscles. It must also be kept in mind that the training effect will be specific to the type of training e.g. range of movement, velocity etc. This seems to suggest that functional benefit might best be achieved by combining strength training with the functional task which has been targeted for improvement.

### **Is strength training effective for children with CP?**

There is limited but positive evidence which suggests that strength training can be beneficial for children with CP although it is not yet clear which children will benefit most, or what type of training will be most effective. A recent review by Dodd et al (2002) summarised the studies which provide some support for including strength training as part of the management programme for the child with CP. Two types of studies to note are the use of isokinetic training by MacPhail & Kramer (1995) and studies using weight training by Damiano's group (1995, 1998), both of which show that strength training results in functional gains which are retained post-training.

### **A pilot study to investigate the effects of isokinetic training on muscle stiffness in adolescents with CP (Mayston, Harrison & Sabha, submitted).**

A small study was undertaken to determine if a 4-week period of isokinetic muscle training would increase muscle stiffness in children with spastic CP. A device was used to measure muscle stiffness (Myotonometer, Neurogenics, USA). For healthy subjects a one-off session of isokinetic training did not result in increased muscle stiffness (n=7), nor was this the case for the 4 subjects who underwent the 4-week training (one healthy adult; 3 children with CP, aged 13-16y; 2 with spastic diplegia, one with spastic quadriplegia who was wheelchair dependent). Significant gains were made in muscle strength (n=2/3 for CP) but little carry-over into function was achieved, probably because of the limited training time and the effect of other impairments such as increased agonist-antagonist co-contraction.

### **Summary:**

Muscle weakness appears to be a significant impairment in children with CP. Clinical experience suggests that this is particularly so for children with hypotonia for whom muscle strengthening regimes may not be effective because of the significant reduction of CNS excitability and difficulty in recruiting muscle activity.

Results from the limited number of studies carried out to date suggest that there is some evidence to support the view that strength training programmes can improve muscle strength in children and young adults with CP. However, the majority of individuals with CP who participated in these studies did not have a severe type of CP and were independently mobile. More studies need to be carried out to determine which people with CP will benefit most, what type of training will be most effective and also to ascertain how functional benefits will be most effectively obtained. As in any type of intervention, strengthening should not be applied unless functional

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gain will be obtained. Thus as yet it is not yet clearly known how such changes may impact on mobility, function and societal participation.

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**AN INVESTIGATION INTO THE TRANSMISSION OF GRAVITATIONAL  
FORCE DURING STANDING IN A PRONE STANDING FRAME**

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**Introduction**

Therapeutic standing is an accepted part of paediatric physiotherapy practise. Experimental evidence suggests that weight bearing has positive effects on bone mineral density (Siemenda et al 1991, Welten et al 1994), soft tissue length (Tabary et al 1972, Stokes 1998) and muscle tone (Tremblay et al 1990). There is evidence to suggest that standing helps to reduce risk of hip dislocation in non-ambulant children. (Beals 1969)

Non-, or partially-ambulant children with cerebral palsy are at increased risk of fracture due to lowered bone density (Henderson et al 1995, Wilmshurst et al, 1996). Stuberg (1992) found that the use of a stander for 60 mins. 4-5 times per week produced changes in bone density.

For those with sufficient head and trunk control, standing in a 'half' or 'flexistand' type of frame, in a vertical position, presents the best opportunity for weight bearing as demonstrated in research by Miedaner (1990), and Curtis (1989).

Those who cannot maintain a well-aligned posture in an upright position use prone standers. There has been little research to inform therapists about the most effective way of using such standers. Miedaner (1990) found that children with severe spastic quadriplegia and/or poor head and trunk control achieved best weight bearing (of about 74% of body weight), when standing at a prone angle of 20° from the vertical.

As standing frames are usually adjusted on a trial and error basis it would be useful to know if relatively small changes in prone angle can alter weight bearing significantly.

**Aims of Research**

The aim of this project was to pilot a method of investigating how gravitational force is transmitted during therapeutic standing, and how weight bearing is influenced by changes in prone angle. Every effort was made to perform the stands in the usual classroom environment with the child taking part in lessons as normal.

**Equipment**

- Jenx prone standing frame – junior size (see Fig 1)
- Force plates constructed of MDF with 5mm. steel strain gauges (Radio Spares cat no 632-168) mounted as shown in Fig 2.

Knee pad– one above and one below each of the two corners of the interface with the standing frame and two at 90° to them on the outside edges of the MDF block.

Footplate- 2 strain gauges, mounted above and below the MDF at each side of the block and a further pair mounted diagonally opposite each other in a circular cut out, in the middle of the block.

- 4 Caltek CM1200C digital voltmeters (mounted on MDF to enable easy reading of results- see Fig 1)
- Panasonic NV – DS27 digital video camera

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## Subjects

Following approval by the Brent Ethics Committee, children of an appropriate size for the adapted frame, who routinely stood in similar frames, were asked if they would like to participate in the project. The nature of the project was explained to them by their class teacher. Permission was then sought from their parents in writing, following an explanatory phone call.

5 children took part in the research, four boys and one girl, between 4 and 10 years of age, with a diagnosis of cerebral palsy. All usually stand 4–5 times per week in prone standers, in their classrooms at Grove Park Special School (for children with physical disabilities). Their details are set out in Table One.

All children use wheelchairs for travel to and from school, and when not mobilizing as described in Table One. Child 3 has an electric (indoor) wheelchair; the others have manually propelled chairs.

## Method

Prior to first use, the frame was calibrated, and then tried with a normally developing volunteer.

Measurements taken during the trial of the frame showed that calibration was necessary before each use.

The frame was marked so that it could be adjusted to 20°, 25°, and 30° degrees from the vertical quickly and accurately. (It was also made possible to measure any change of angle in the footplate needed, but this proved to be unnecessary).

Each child stood on 3 occasions with the stander angled at 20°, 25°, and 30° from the vertical. Most stands lasted for 30 minutes, 3 were discontinued early due to discomfort. The stands were videoed, but it proved impossible to site the video in such a way as to have a good view of the meter readings and the whole child on most occasions. This was because of safety considerations (i.e. trailing wires) and space limitations imposed by the classroom setting. This rendered the video recordings less useful than had been hoped, although it was still possible to examine readings and relate them to the child's activity during some stands. Readings from the voltmeters were taken at 5 minutes intervals during the stand with a final reading after the child had finished standing.

Each child was weighed, using electronic chair scales, during the period of the research.

CHILD	CLASSIFICATION	MOBILITY	PASSIVE RANGE
One	Spastic quadriplegia	Short distances with postural walker. Also uses tricycle at home and in school	Full passive range - hamstrings tight
Two	Spastic quadriplegia with underlying hypotonia	Uses postural walker in therapy and 'Pony' walker	Full passive range
Three	Choreoathetosis with spasticity	'Pony' walker in therapy. Tricycle at home	20° fixed flexion at knees
Four	Spastic quadriplegia	'Pony' walker in therapy	10° fixed flexion at knees
Five	Spastic diplegia	Independent with postural walker in school and uses tricycle in school.	Full passive range

Table One: Details of subjects

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## Results

The results were displayed in graph form. The graphs show the forces recorded relative to a vertical force equal to the body weight, for each reading taken at 5-minute intervals during the stand.

It is evident from the graphs that channel two was relatively insensitive to vertical pressure on the knee-pad at the angles used for standing. A further calibration was therefore performed using readings obtained with the frame tipped through 90°. This produced a calibration figure that was applied to each set of experimental data by assuming a constant ratio of sensitivities of channel one and two.

For the 20° stands, the graphs show only small horizontal forces at the knee-pad, less than 1/10<sup>th</sup> body weight, but vertical forces are considerable in some cases. Child 3 exerted a force greater than body weight at the start of the stand and around 0.8 of body weight throughout the stand, and readings 0.5 of body weight were recorded in child 4.

It is surprising that in two cases, child 1 and child 2, there is an upward force on the knee-pad. This is probably explained by the fact that, as shown on the video recording, these children, who were the smallest subjects, did not actually have their knees positioned centrally on the knee-pad during the stand, despite the frame being adjusted to its smallest size.

At the footplate, channel four shows more sensitivity to horizontal forces than channel three. The output of channel three is greater than that of channel four indicating that the majority of force at the footplate is applied vertically. These forces are also quite considerable, between 0.4 and 0.8 of body weight. Similar variations occur at all angles.

Four children showed highest forces through the footplate at a prone angle of 25°, child 1 transmitted the highest force at 30°.

At the knee-pad, Child 1 and child 3 transmitted most force at 20°; child 4 and child 5 transmitted more force through the knees at 30°, child 2 transmitted forces most at 25°.

Child 4, who moves his trunk and upper limbs most while standing, showed most variability in readings. The others showed variations in force transmitted of around 20% of body weight at most and exerted pressure fairly steadily on the force plates.

The forces shown by the two channels of the footplate force plate vary in their distribution at the different angles for each individual child, possibly indicating differences in the way that force is transmitted through the feet with the changing angle.

## Discussion

These results indicate that children standing in prone standing frames are transmitting significant amounts of their body weight through their lower limbs. If the results of animal research (Lanyon and Rubin, 1984, Rubin and Lanyon 1985) can be extrapolated to children as suggested by Stuberg (1992) this would suggest that standing should have some protective effect on maintenance of bone mineral density. In the majority of stands the loading appears to be fairly static which would suggest that standing in this way may be less effective as a stimulus for bone remodelling. However if, as postulated by Chad et al (1999) children with limited mobility have a lower threshold for bone accrual, even this degree of loading may be sufficient to promote some degree of bone formation.

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This project has measured the forces transmitted by the body to the standing frame. Ideally one would like to be able to assess the forces on the skeleton. To do this, one would need to know the exact joint positions and distribution of body weight, in order to calculate the torque around the joints and perform a biomechanical analysis and construct force vectors. The muscle pull on the skeleton is likely to exert higher forces on the bones than those exerted by the body on the standing frame.

The greater variability in weight bearing in the more active child suggests that there might be more value in standing children in lessons when they will be involved in more active occupations.

Child 3 and Child 4, who both have some restriction in range of knee extension, exerted relatively high pressures on the knee-pad. This may be related to their lack of full extension. However, as noted, Child 4 is particularly active during standing and often throws himself into extension. He may therefore use pressure on his knees to give himself a fixed point from which to move. Child 3, who has choreoathetosis, may also be using pressure at the knees to gain stability. Neither child complained of knee pain during standing.

Due to the small size of this sample and the heterogeneity of the subjects it is not possible to make any definitive recommendations with regard to angle of standing frame. It would appear that an angle of 25° facilitated best weight bearing through the feet for most of the children in this sample. While each individual child needs to be assessed carefully to find their optimum position for standing perhaps this would at least suggest a good starting point for assessment.

### **Limitations of the project**

The desire to perform the standing in the classroom and thus to research what happens when the children stand in their usual way, imposed certain conditions which, in retrospect, detract from the effectiveness of the project. The children were clothed in their everyday clothes, which made accurate assessment of joint angles impossible when reviewing the videos – shorts or tight clothing such as leggings would have made some form of surface marking possible so that a better assessment of joint angles could be made and related to the force plate readings. As discussed above, for biomechanical analysis to be performed this would be essential.

The modifications made to the standing frame for the project made it difficult to fix the knee-pad and the adductor wedge satisfactorily. This meant that adjustments had to be made during the stand for child 4 who moved a lot during standing.

The space and safety constraints of the classroom made positioning of the video difficult – some way of optimising and standardising the recording position would make the observations more accurate and dependable.

The use of an adapted standing frame limited the number of subjects available, as they had to fit the frame.

The time constraints and the factors mentioned limited the number of children who could be studied and therefore the results cannot be given statistical significance.

### **Conclusion**

This project has demonstrated that children transmit significant forces through their lower limbs when standing in prone standing frames. An angle of 25° from the vertical enabled four out of the five subjects to generate most force through their feet in standing. The relatively high pressures that some children exerted through their knees may be a cause for concern, although all of the children in the project routinely spend some of their free time moving on the floor by weight bearing through their knees and are thus accustomed to taking weight through them.

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Further study of the way in which the force is being transmitted through the knees in relation to the child's activity within the frame would help to clarify this.

The possibility of encouraging more dynamic weight bearing by giving active occupations while standing could also be a worthwhile topic for study.

A further study with larger numbers, that is able to overcome the limitations described above, could help to inform therapeutic practise as well as giving evidence for the effectiveness of standing as a means of promoting weight bearing in non ambulant children.

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**EVALUATION OF ORTHOSES USED IN THE MANAGEMENT OF  
CHILDREN WITH CEREBRAL PALSY WHO WALK WITH FRAMES**

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**Background**

Much work has been carried out over recent years to examine the benefits of using various types of ankle foot orthoses on the gait of children with cerebral palsy (Crenshaw et al, 2000; Rethlefsen et al, 1999). This work has highlighted some improvements and advantages to the use of orthoses, although as Morris (2002) suggests there still remains much clinical uncertainty and variation in practice. In the majority of the investigations, gait analysis has been performed which, due to some disadvantages of motion analysis systems, has meant that very little research has been performed on children with cerebral palsy who walk with frames. In addition, little work has considered the children's views and opinions. However disabled children, including those who do not speak, are able to meaningfully convey what they think, feel and want in their lives (Morris, 1998).

**Aims**

The aims of the study were:

1. to evaluate the biomechanical and physiological effects of orthoses on the walking ability of a group of children with cerebral palsy who walk with the assistance of frames.
2. to discover what the children thought of their orthoses and the effect they have on their walking.

**Method**

Fourteen children were recruited from physiotherapy departments located in a residential school and 2 child development centres. The children were aged between 5 and 16 years, and had a diagnosis of cerebral palsy. Between them, the children wore a variety of orthoses and used a variety of walking aids, although the Kaye walker was the most frequently used.

Each child was interviewed about their orthoses. They were then asked to walk around a 20m course using their walking frame for a period of 5 minutes during which time data were recorded using a video camera and a heart rate monitor. The children were assessed with and without orthoses – in random order. During each trial they had a number of retro-reflective markers placed over joint centres and bony landmarks on both lower limbs which were filmed in the sagittal plane. At the end of each 5-minute period of walking, the children were given a series of simple pictorial scales and asked to rate four aspects of their walking performance – speed, ease, steadiness and level of tiredness.

The video material was analysed using the Peak Motus (Peak Performance Technologies Inc., Colorado) software to establish what changes occurred in joint angles with and without the orthoses. Walking velocity, stride length and stance/swing phase timings were also calculated. Heart rate and velocity data were used to evaluate energy expenditure using the Physiological Cost Index as described by Butler et al, 1984. The audiotaped interview data were transcribed and subjected to content analysis. The ratings from the scales were compared using the Wilcoxon signed ranks test.

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## Results

### *Biomechanical assessment*

Overall there were mixed results with the orthoses having positive effects in some children, negative on others and in many children no changes occurred. Eight of the children showed consistent results. Four subjects consistently improved with orthoses and 4 subjects showed no change. Consequently the orthoses did not improve joint kinematics and temporal/spatial parameters across the board. In some children, temporal or spatial parameters improved but joint kinematics did not (and vice versa). In many cases, no changes were observed. Although the orthoses changed the ankle kinematics in many of the children, only three subjects showed any improvements at either the knee or hip.

### *Interviews and ratings*

Most children who wore their orthoses for the majority of the time, found them comfortable and some reported definite benefits to wearing them. Even when children did not identify specific benefits they seemed to accept wearing the orthoses. Children's ratings of their walking with and without orthoses identified no clear preference. The difference in ratings was not statistically significant apart from the level of tiredness which was significantly in favour of walking without orthoses ( $z = -1.983$ ,  $p = 0.047$ ). There was a lack of consistency between the children's ratings and the results from the biomechanical assessments. This may have been due to their age, their expectations, or linked to the fact that the biomechanical assessment provided no clear indication of a preferred outcome either.

## Conclusions

In light of these findings, it would seem important that careful consideration is given to identifying the specific aim of prescribing orthoses, and selecting the correct type of splint. Following prescription it would also be useful, although not always possible, to use gait analysis to evaluate whether these goals have been achieved.

The experience of carrying out this study indicated that children are able to express their views about, and experiences of, a therapeutic intervention.

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## Acknowledgements

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## SERIAL CASTING

**SHELLEY COX MCSP, Superintendent Physiotherapist, Southampton General Hospital**

When considering serial casting one consideration must be the histological changes within muscle. Normal muscle immobilised within a shortened position has shown to cause a decrease of up to 40% in the number of sarcomeres. This is secondary to the sarcomeres being less than their optimum position for tension generation causing the muscle to respond by losing sarcomeres with a resultant decrease in fibre length. The remaining sarcomeres then increase in length to return to the optimum tension generating position. If the shortening is actually brought about by active muscle contraction, then this adaptation is very rapid. This effect is seen both in adult and growing muscle and has also been found to be more specific to fibre type i.e. that fatigue resistant fibres are more susceptible to shortening and therefore fibre type 1 more likely to contract.

Looking at immobilisation in an over lengthened position there is a different response in adult muscle (mice and rabbits) compared with growing muscle. An adult responds by increasing the number of sarcomeres, however, in growing muscle there is an initial increase in number followed by a lower rate of addition as would be expected with growth and in comparison with the non-immobilised limb. This is followed by an actual decrease in the sarcomere number, thus the length of the muscle belly decreases and it is the tendon that elongates. These changes are noted by day 18 but this must be kept in context, looking at the differing life spans of these animals compared with man.

Looking specifically at changes in muscle associated with cerebral palsy, Akiko Araki et al found that although there was no disease specific abnormality, there were changes in fibre type distribution with a fibre type 1 predominance and a fibre type 2 deficiency. They suggested that the differences between the mechanical characteristics are largely due to the different patterns of activity of the motor nerves as Streter et al showed that there can be a transformation of type 2 fibres to type 1 fibres by intermittent stimulation at a high frequency over a prolonged period. Castle et al noted a variety of changes, however, they found that certain muscles tended to exhibit more or less specific patterns. Generally speaking, type 1 fibre atrophy results when there is a prolonged decrease in tonic contractions and type 1 hypertrophy in the spastic muscles caused by prolonged and excessive tonic contraction. Other articles looking at changes within spastic muscles have also shown decreases in water and glycosaminoglycan which impairs the gliding mechanism, increase in synthesis of collagen and either failure of the cross bridges to disengage or premature re-engaging.

The second consideration is the aim of the splinting/casting you are to do. Is it for joint protection, to enhance function, to improve range of movement and thus enhance function, to prevent deterioration and use proactively and therefore maintain the range of movement, to help manage tone or in a trial prior to orthotics? If your key aim is to improve the range of movement your next decision is whether you want a removable, non-removable, cylindrical, back slab or a drop out style. This decision should be based on certain considerations such as the potential compliance and patient understanding, the potential amount of wear, the available range and amount of tone, any hygiene implications or implications to changing in home programme or exercises, potential changes to the current functional ability, skin condition and underlying diagnosis.

Other considerations that need to be taken into account are timing for application, such as post botulinum toxin or pre-Knee Ankle Foot Orthosis and the ability to go straight into permanent orthotics on removal of splints.

Another key consideration is the equipment available to you, including the types of material, the presence of plaster saw and water baths etc. The materials discussed in the workshop included soft cast, scotch cast, plaster

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of Paris, dynacast optimum/extra, dynacast prelude, thermoplastics, off the shelf splints, i.e. UFOs and combinations. Each material has different properties concerning flexibility, rigidity, ways of removal, weight and drying time, possibility of remoulding, time taken to make the splint and also number of people required.

Lastly you must consider contingency plans to deal with any problems arising from the splint, i.e. pressure sores, increased pain, increased tone or problems with the breaking down of casts. For good practice, one should also provide written instructions to parents on the need to check circulation and for signs of swelling and also advice on how to remove the cast out of hours.

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**A LONG JOURNEY TO A PLACE CALLED HOME –  
ASSISTED VENTILATION BEYOND THE INTENSIVE CARE UNIT**

BARBARA BOOSFELD

Clinical Site Practitioner, Great Ormond Street Hospital for Children, London

Our capacity to manage prematurity and other complex health problems in paediatrics has increased over the last 10 years. In many cases, it is possible to manage but not cure a disease and the child may remain technology dependent for long-term survival. With the changing epidemiology in childhood disease, we are facing increasing dilemmas and debates concerning the relationship of quality versus quantity of life years.

A study published in 1999 (Jardine et al) identified a growing population of British children dependent on some form of long-term mechanical respiratory support. A total of 136 children were identified to be ventilator dependent and we know that the number has more than doubled by today. Sixty eight per cent (93) of the children identified were cared for at home with different packages of support. The level of support identified in the study varied from the provision of 24-hour nursing care at home, to a minimum level of support with the occasional visit by a community nurse or Health Visitor.

The population of children who are long-term ventilator dependent can be categorised into four groups:

- Infants, many of whom have been born prematurely and who have developed severe chronic lung disease
- Children whose primary problem relates to instability of the upper airway
- Children who have survived acute illness or trauma
- Children with neuromuscular disorders

Long-term ventilation is most often the result of an acute illness, when the child has survived a deterioration within a chronic disease or an acute and life-threatening illness such as trauma or major surgery. During this acute period of the illness, the child is admitted to hospital in need of medical and technical interventions, aiming to stabilise the condition, although the outcome is often uncertain and difficult to predict.

Ethical evaluations and decisions about advanced life support for the child are often based on the health-care team's perception on quality of life, economic considerations as well as on survival rates. It may be difficult to predict the long-term impact of a particular treatment on an individual child as measures of outcomes of the intended treatment may not be available for years after treatment was initiated.

Although we as the health care team may no longer see survival as the lone outcome measure for interventions, for many parents of these critically ill children it may be the only hope and imaginable outcome. And parents' expectation and perception of quality of life may well change with the changing condition of the child. Therefore the decision of initiating long-term ventilation is made in partnership with the parents.

Once the child is medically stable, his needs shift from the primary medical care to the psycho-social aspects of care. These are not disease-specific and therefore emphasis is placed on rehabilitation, rather than on particular symptoms or illnesses. The focus now is to help the child achieve his optimal function and to enable the child to live in a normal and loving environment. It is well recognised that the hospital represents both an unsuitable environment for a growing child and an inappropriate use of resources (Warner and Norwood 1991, Noyes 2000). We must now see beyond the imperatives of clinical maintenance and acute organ care. The care plan changes and becomes more flexible and rigid hospital routines and rituals are altered.

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Transferring the ventilator dependent out of the Intensive Care Unit provides a more appropriate environment for the developing child, enhances quality life and prepares the child and the family for a more independent life in the community. At Great Ormond Street Hospital we are lucky to have a unit specifically designed as a low-dependency environment for technology dependent children who are awaiting discharge home. In order to encourage the psycho-social development of the child the unit aims to provide a home-from-home atmosphere. One of the main care priorities is to give as much normality and enjoyment to the child as possible and to 'wean' the families of the intensive care or high-dependency environment, to empower the families to take over the child's care.

The ward philosophy facilitates the development of a more 'normal' daily routine for the child which might include nursery visits, school attendance, regular outings and home visits but no daily medical rounds. For this we needed specially adapted pushchairs and wheelchairs to accommodate mobile ventilatory and emergency equipment.

A ventilator for home care clearly has different requirements from a ventilator used on the Intensive Care Unit. The key features of a home ventilator are:

- Preferred is a single tubing system with exhalation valve
- The machine has some flow auto-regulation (to compensate for leaks)
- The machine must be independent of gas supply
- The machine has a separate O<sub>2</sub> inlet
- Alarms
- Portability, meaning the machine must be operated by battery, preferably an inbuilt battery.

To prepare the family to cope at home and to enable the family to take control over their child's care, intense training and support are necessary outside a high tech and 'protecting' environment such as an Intensive Care Unit. The family benefits from being 'weaned' off the protective routine and environment of the hospital by encouraging frequent home visits, encouraging independence and helping them to cope on their own. The key principle in achieving home care is not to create a hospital in the home, but to achieve safety for the child as simply as possible with the least disruption to normal family life.

In a changing culture of predominantly paternalistic and functionalistic paradigms, it appears timely to define care in an inter-professional context based on the patient's condition and needs rather than on the level of technicality in the task itself. The growing specialization in health care has clearly brought enormous gains in terms of understanding and managing disease and ill health as well as aspects of clinical care, but there also was a cost to pay. The management of the 'whole' seemed to be lost in the explosion of new knowledge about detail, leading to a reductionist division of labour in health and social care. It can be argued that in practice, this is evidenced by the lack of readiness in responding to the discharge proposals of children with complex health needs. Policies and risk assessments frequently seem duplicated in time-consuming processes and unfortunately the needs of patients too often seem secondary to the needs of professionals and individual organisations.

The organization of such complex home-care packages is often a frustrating experience for all concerned. In our experience, however, the main obstacles to successful discharge relate to the provision of a suitable care environment such as suitable housing, resource issues in the community and the identification of the necessary money to meet the cost of home care from public funds. Guidelines for the discharge home of the ventilator dependent child suggest that the families should not have to provide the bulk of medical care for their child and that the family might need 24-hour support in caring for the child (Jardine, Wallis 1998). Although the

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family often provides the main bulk of the child's care, all caregivers need regular rests to remain alert. The care, however, need not always be provided by qualified nursing staff, but can well be provided by trained carers who work under the guidance and supervision of a Paediatric Community Team.

At Great Ormond Street we have just over 7 years experience with discharge planning for such complex children. Over this time, our discharge strategy has developed and progressed. There are usually a minimum of 7 steps to complete for successful discharge.

- Step one in the discharge planning process addresses the medical stability of the child and suitability for home care. An identified case manager undertakes an initial assessment for a suitable care package in partnership with the family. Such an assessment must be based on an appraisal of the long-term needs of the family rather than on a short-term crisis intervention and will require flexibility, reflecting each family's different and changing needs for support.
- The case manager establishes effective links with the community teams, the child's local hospital and the Commissioning Authority to identify key players who will need to become involved in the planning and decision-making process. In order to make proposals for additional human and financial resources an early assessment of the pre-existing local services is required, particularly in establishing the case for identification of additional human and financial resources.
- Upon completion of the initial multidisciplinary assessment, the case manager produces a comprehensive report detailing information regarding the child's medical and social history, his needs for future care, a plan for discharge and follow-up care, and a list detailing all equipment and ongoing costs involved. This report is then circulated to the family and all identified key-workers prior to the first multidisciplinary planning meeting.
- Both the Primary Care and the hospital teams meet to discuss and to plan the child's home care. Usually several such meetings are required and it is useful to set provisional dates for future meetings and to agree an overall discharge planning timetable. The family should be directly involved in all discussions throughout the planning and decision-making processes.
- Once the level of the required skill mix for the home-care team has been decided on and once the agreement for funding of the entire package is given, the recruitment and selection process for the home-care team can begin. Because this is such a time-consuming process, it should be initiated as soon as possible. As the care-workers will be working in the family's home it is essential that the families are fully involved (or at the very least kept up to date with progress) at every stage in the selection process.
- Newly recruited staff then needs training in all aspects of care. A competency-based training programme may assist with assessment of the learners before the child's discharge home.
- Although many families patiently await their ventilated child's discharge from hospital to home, for some, the days and weeks leading up to discharge can be very stressful indeed. Some of the negative effects for the family that emerge as care shifts from hospital to home include issues of privacy and intrusion, alteration in parental roles, financial burdens and the demands upon the family members for provision of complex care to their own child. It is of great value to start home visits early, the more teaching and training that can be done on the family's own home, the better the family can be prepared for what is ahead of them.

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This presentation offered a discussion on the child's journey from hospital to home and the difficulties to overcome when planning the discharge of a technology-dependent child into the community emphasising the need for de-intensifying the child prior to discharge.

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## BIOMECHANICS AND PREVENTION OF BODY SHAPE DISTORTION

JOHN and LIZ GOLDSMITH

- Biomechanics and Prevention of Chest Distortion
  - Symmetrikit Postural Care Pathway
- Case Studies Using Non-Invasive Surveillance of Body Shape

### Biomechanics of and Prevention of Chest Distortion

Immobility in habitual lying postures causes distortion of body shape. The chest features strength through mobility providing pliable protection for heart and lungs, whilst allowing for movements of respiration. Consequently it is a particularly vulnerable structure, which distorts readily and predictably in response to internal pressures and habitual posture, compromising the physical well-being of the individual. Characteristics and severity of distortion are seen to relate to the state of equilibrium and length in the lying posture of an imaginary line called the sterno-spinal line (SSL). The SSL passes directly through the chest from xiphoid process of the sternum to the spine. This workshop describes a theory of equilibrium and distortion of the chest. It considers factors predisposing the chest to distortion and measurement of normal elastic distortion and recoil with consequences of progressive loss of recoil. Equilibrium and instability of postures, corrective strategies, safety and training implications are discussed.

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

The concept that the individual with severe movement difficulties needs symmetrical support in sitting, standing and lying 24 hours a day is accepted by many therapists. The ©SYMMETRIKIT Postural Care Pathway provides the structure to implement this service. This method of working will:

- Empower families to protect body shape
- Improve your relationship between you and the families
- Ensure you and your organization are protected legally
- Enable you to analyse the size of the problem to fight for funding
- Provide therapists with methods of non-invasive surveillance of body shape to provide objective outcome measures.

Each delegate receives the following materials which make up the ©SYMMETRIKIT Postural Care Pathway:

- The Process Map and supporting documentation
- A Compact Disc with a series of presentations, enabling the therapist to run:-
  - A Programme of Family Workshops
  - Presentations to management on service development
  - A Therapist's Pack, consisting of supporting documents. This includes a variance report to ensure compliance with minimum legal requirements.
- A Parent Pack for their own reference consisting of:
  - The '©SYMMETRIKIT Profile of Postural Care', a client-held record to enable the family to co-ordinate care.
  - 'The Family Centred Approach to Postural Care', a workbook which explores: concepts, consent and risk analysis through a series of paper exercises.

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A two-day course is run either at the Verzons Country House Hotel or as an outreach course to teach therapists how to run the Pathway. Following registration, therapists using *Symmetrikit* equipment are entitled to complimentary Parent Packs to run the Pathway with individual families.

### **Case Studies using non-invasive surveillance of body shape**

In order to protect body shape it is necessary to monitor results of postural care. The Goldsmith Indices of Body Symmetry are a series of objective measures, which enable the therapist to judge and communicate about the success of their treatment regime. Two case studies are illustrated and discussed which demonstrates the use of these measures.

The first is a young girl with multiple disabilities whose family were enabled, through provision of equipment and training, to provide 24-hour postural care when she was five years old. At this stage she was unable to be measured as she was unable to be positioned on the measuring board because of asymmetry of tone and shape. As a result of two years gradual, consistent 24-hour treatment the symmetry of tone and shape were reduced so that she was able to be measured. She had a Windswept Index of 29.5 degrees. She will continue to be measured as the asymmetry is now counteracted by treatment.

The second case study demonstrates the reversal of asymmetry over a three-year period in a boy with cerebral palsy. On the first measurements, when he was six years old, he showed a Windswept Index of 24 degrees to the left and a very slight clockwise rotation in the chest. At this stage, a migration percentage of 26% in the right hip and 21% in the left were identified. His parents were trained and provided with equipment for 24-hour postural care along with an active therapy programme. Over the next three years the asymmetry was reduced so he now has a Windswept Index of 5.75 degrees to the left and his chest measures are symmetrical. As an update for those therapists attending the workshop, his latest hip x-ray report reads: 'Both hips in joint, normal. No evidence of hip subluxation.' This finding supports the conclusion that in this case a high Windswept Index associated with a relatively symmetrical chest, reduction in the Index related to a reduction in Migration Percentage in the hip.

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### 2002 JENX AWARD FOR INNOVATION IN PAEDIATRIC PHYSIOTHERAPY

This Award is now in its 8<sup>th</sup> year. Over the years we have had entries from all around the UK and on lots of different topics. The standard of entries this year was very high and the job of judging was undertaken by a team of four, three members of APCP National Executive Committee and Catherine Jenkins of Jenx Limited. Jenx Limited would like to thank all those of you who sent in entries and also all the judges for their hard work.

The winning entry was from a group of neonatal physiotherapists working in the north of the UK. The entry entitled 'Neonatal Physiotherapy CD Rom' covers the work the group have done towards producing a CD Rom which acts as a tool for information to those working with pre-term babies, physiotherapists, nurses, parents and carers. The information is collected in sections for easy reference and can be accessed by anyone with a computer of suitable specification.

Bobbie Hillman (pictured) came to conference and accepted the Award on behalf of the group.

If you know, or are yourself, a paediatric therapist working on an innovative idea then encourage them to enter this year's award. For more information contact Jenx Limited on 0114 285 3376. Entries are invited from Paediatric Physiotherapists working in the UK. Joint projects between Physios and OTs may be eligible to enter either the Physiotherapy Award or the Occupational Therapy Award.



#### Jenx Award over the years

Following the Physiotherapy Award this year at the AGM of the APCP Conference, a number of people asked what sort of projects are entered for the Award. I promised to write out a brief abstract of the entries we have received over the years for both Awards. In a future *Innovator* I will write out a selection of entry titles and abstracts. If anyone would like further information please contact Catherine Jenkins at Jenx Limited or e-mail to: [catherine@jenx.com](mailto:catherine@jenx.com)

**RALPH HAMMOND, Professional Advisor**

CSP Research and Clinical Effectiveness

## Introduction

The National Institute for Clinical Excellence (NICE) organises the development of national multi-professional guidelines. Clinical guidelines form part of the evidence base from which practitioners work to aid decisions about interventions for specific clinical circumstances. The Government expects these guidelines to be implemented into clinical practice and has founded the Commission for Health Improvement as one mechanism for overseeing that this occurs.

It is vital the profession provides a considered perspective of the care physiotherapists offer for each guideline, to ensure physiotherapy is reflected appropriately. To do this, **the Society depends on its members**. The Association of Paediatric Chartered Physiotherapists (APCP) is working with the CSP to assist with this for those guidelines of relevance, and **needs your help**. The aim of this article is to describe in brief the process of development of a NICE guideline and how members can participate.

## Background

The National Institute for Clinical Excellence (NICE) organises the development of national multi-professional guidelines. The Department of Health and National Assembly for Wales (see [www.doh.gov.uk/](http://www.doh.gov.uk/)) determine the topics. Clinical guidelines form part of the evidence base from which practitioners work and are 'systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances'.<sup>1</sup>

NICE announces its work programme on its website, [www.nice.org.uk](http://www.nice.org.uk), and invites national interested organisations to sign up as stakeholders. The CSP does this on behalf of the profession for topics of relevance to physiotherapists. There are several guidelines currently being developed of particular interest to members of APCP:

- Cancers affecting children and adolescents
- Clinical guideline for the management of depression in children and young people

However, since NICE was established, the Society has registered with NICE as a stakeholder for 33 guidelines, and there are several that may impact on paediatric physiotherapists.

This constitutes a massive work commitment by the Society on behalf of the profession. Table 1 lists key websites for NICE guideline development.

**Table 1**

For more information about the process of guideline development go to

[www.nice.org.uk](http://www.nice.org.uk)

For a list of all the guidelines NICE is developing go to

<http://www.nice.org.uk/catrows.asp?c=20055>

For further information about the Society's involvement go to

[www.csp.org.uk/effectivepractice/guidelines](http://www.csp.org.uk/effectivepractice/guidelines)

<sup>1</sup> Field MJ, Lohr KN (1992) *Guidelines for Clinical Practice: From Development to Use*, Washington, DC: National Academy Press.

Guidelines typically take about 2 years to develop, and are developed through an explicit process; for full information see 'The Guide For Stakeholders', [www.nice.org.uk](http://www.nice.org.uk). This process is the same for each guideline and is in 4 stages. Appendix 1 is a flowchart describing the relationship between NICE, the CSP and APCP for timing in the development of a NICE guideline.

Involvement in the development of NICE guidelines is an excellent learning opportunity for physiotherapists. It is the chance to learn how research evidence is appraised and turned into meaningful clinical recommendations, how multi-professional documents are produced, and how evidence-based practice might really work. Participation in a large-scale national development at the cutting edge of clinical practice is exciting and stimulating.

As deadlines are so tight, communication is electronic. All documents received from NICE are via email, and any consultation between physiotherapists and the CSP will be via email: this is the best method for ensuring timely information is circulated.

The profession has the opportunity for consultation on topics where it feels physiotherapy is a relevant stakeholder. The key stages for consultation are:

1. Deciding the scope of the guideline
2. Submitting evidence
3. Commenting on the two draft versions of the guideline

At each stage the Society will depend on the advice of its members for physiotherapy knowledge, clinical experience and expertise.

## Stage 1: Scope

This is a key stage where clinicians can help the profession. It involves consultation on what is to be **included and excluded** in the guideline. NICE emails a copy of the draft 'scope' to the named person for each stakeholder, i.e. Ralph Hammond at the CSP, who has 4 weeks to respond. The 'scope' is short, about 5 sides long.

## HOW CAN YOU HELP?

Read through the 'scope' document and make a decision as to whether it includes physiotherapy/rehabilitation appropriately. If it does, is the nature of involvement correct? If it doesn't include physiotherapy/rehabilitation, do you think it should? If so, why, if not, why not?

## Stage 2: Evidence Submission

This vital stage doesn't involve reading anything! Stakeholders are given 4 weeks to submit information to assist in the development of the recommendations. Ralph Hammond can send an email to alert you that this deadline is approaching.

## HOW CAN YOU HELP?

There are two key areas where members can assist.

*Firstly* by suggesting **questions** and **keywords** to help inform the literature search. What key clinical questions relating to physiotherapy need to be answered by the guideline? Relate any questions to the 'scope'. Tell us what interventions/modalities need to be considered.

*Secondly*, by alerting the Society to any unpublished reports, consensus statements (including any printed in a CIG newsletter) you know of. NICE organises an extensive search of electronic databases where most medical information is stored. However, there may be unpublished evidence or information not on electronic databases.

## **The Society needs help in identifying this.**

It is possible that for many NICE topics, physiotherapy and physiotherapists are part of the team who help in the management of patients with these diagnoses or conditions, rather than curing the condition *per se*. The Society needs clinicians (of all grades and experience) to offer observations on the problems associated with each guideline topic.

For some conditions there may be concern that there is **insufficient evidence** for the effectiveness of physiotherapy intervention. This **MUST NOT** deter members from getting involved. If physiotherapists believe they are having an effect, and should continue to offer treatment, then the profession must address this, and inform the Guideline Developers, so that *consensus statements* can be developed; this is preferable to no evidence at all.

## **Stage 3: First Draft**

This is perhaps the most attractive one to read, but be warned – it will be a long document (typical documents are between 100 and 500 pages, A4 size). This is the stage when researchers and academics may be best able to help, as it will involve considering if the best available evidence has been included. There are 4 weeks to respond.

### **HOW CAN YOU HELP?**

You don't need to read it all: consider –

- Is physiotherapy /rehabilitation involved?
- If yes, is it in sufficient depth?
- Is the wording correct?
- Any inconsistencies in interpretation of the evidence?
- The practical value of the guideline

## **Stage 4: Final Draft**

This is the final opportunity to comment on the guideline; be warned – it is the longest document (typical documents are 500 pages, A4 size). There are 4 weeks to respond.

### **HOW CAN YOU HELP?**

At this late stage NICE will only accept comments on major omissions or mistakes. You don't need to read it all; the process of development of the guideline is not for consultation: consider: -

- Is physiotherapy /rehabilitation involved? Yes/No
- If yes, is it in sufficient depth? Yes/No
- Is the wording correct?
- Any inconsistencies in interpretation of the evidence?
- The practical value of the guideline

For this final consultation stage you can email NICE directly; it is an open consultation, open to the public. However, remember it is too late to raise new issues. It is possibly easier to send in any comments to the Society, where they will be collated and submitted as one response.

# NATIONAL MULTI-PROFESSIONAL CLINICAL GUIDELINES

## Remember

NICE imposes strict time scales on consultation. Any information that misses a deadline will not be included in the consultation. Therefore to ensure all voices within the profession have the opportunity to input to the Society's response, it is vital to be organised and ready to respond to consultation rather than reacting hastily when the invitation arrives.

## Conclusion

If the Society is not able to respond in a timely and informed manner, the profession runs the risk of physiotherapy not being included in guidelines where its members may feel is appropriate. The aim of NICE guidelines is to have a real impact on what services and treatments are commissioned and provided: **get involved or the profession will miss out.**

Members are encouraged to contact the CSP if they wish to be involved in helping the CSP construct responses at the key stages of consultation. Please contact Ralph Hammond, Professional Adviser, [hammond@rsp.org.uk](mailto:hammond@rsp.org.uk).

## Appendix 1: Flowchart to identify the timing in development of a NICE guideline

Key: GDG = Guideline Development Group (commissioned by NICE)

Time	NICE	CSP	BACPAR
	publishes programme		
		emails this to BACPAR	
	<b>6 weeks later</b>	registers as stakeholder with NICE	
			identifies itself to CSP
		searches databases for grey literature	identifies individuals to liaise with CSP via email
	consults on scope	emails this to <b>identified</b> CI/OGs	search for grey literature and keywords
	<b>4 weeks later</b>	collates replies and writes response (cc to CI/OGs)	considers scope and emails reply to CSP
	publishes final scope		
	GDG requests evidence submissions	forward this to <b>identified</b> CI/OGs	collates evidence and emails to CSP
	<b>4 weeks later</b>	collates all evidence and submits via email (cc to CI/OGs)	
	GDG produces first draft	emails this to CI/OGs	emails response to CSP
	<b>4 weeks later</b>	collates replies and writes response (cc to CI/OGs)	
	publishes final draft on web site	alerts CI/OGs	can respond to NICE
<b>~2 years later</b>	publishes guideline	alerts CI/OGs, articles for Frontline, and CSP web site	disseminates and implements guideline

## APCP MATTERS

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The following reports were those presented at the 2003 Annual General Meeting in Bournemouth

### CHAIRMAN

I am delighted to welcome you all to the 30<sup>th</sup> Annual General Meeting of the Association of Paediatric Chartered Physiotherapists.

This has been another busy year for APCP and the Committee continues to work hard on behalf of the membership. The National Committee currently consists of 13 nationally elected full members and 11 regional representatives. The Committee has met 4 times this year – once at CSP Headquarters in London, once in Birmingham at CSP Congress, here in Bournemouth yesterday and in January, the Committee all made the trip across to Belfast (a first for any National Committee!).

The Editorial Board, led by Sally Braithwaite, has met twice to discuss articles, contents and themes for future Journal issues. Gill Holmes, the PRO, has met twice with the Regional Reps to discuss issues from the regions. The Executive Committee, consisting of the Chair, Vice Chair, Secretary and Treasurer have also met twice before National Committee meetings.

So, what has the Committee been doing for the members? I was asked to represent APCP on the External Working Group (EWG) for the Children's Competency Project, for the Children's National Service Framework (NSF), and attended the first meeting in London in January this year. This work is ongoing with work groups currently being set up to take this work forward. The next EWG meeting is in June, and I will continue to keep members updated through the Regional Reps and the Journal. The time scale for this project is 1 year from commencement (completion in December 2003).

A consultation meeting was held for Allied Health Professional representatives at the Department of Health in London in February, to discuss the 'Ill Child Module' of the Children's NSF and I attended on behalf of APCP.

As some of you will already know, APCP has set up a Neonatal subgroup, the inaugural meeting of which was held in London in November 2002. Smaller regional groups have been meeting since then and will feed back to the National group in June. This group hopes to look at specialist training, peer support and review and to develop standards of good practice amongst others things. It is hoped that other subgroups eg orthopaedic and respiratory, will be set up under the auspices of APCP. Two members of APCP, Liz Hardy and Paul Ritson, are currently working with ACPRC to develop an on-call training course for paediatrics. There is currently a pilot adult course and paediatric involvement is soon to follow.

The Education and Research Committee has worked hard this year on many things and yesterday saw the launch of the new SEN Code of Practice 'Guidance for Paediatric Physiotherapists'.

The National Clinical Guidelines for Stroke (March 2000) are being revised and Terry Pountney and Susan Rideout are the representatives looking at paediatric stroke.

Our Vice Chair, Lesley Smith, is the link person between APCP and PPIMS. She attends the PPIMS meetings and reports back to National Committee. Currently, APCP, PPIMS and BABTT are working on an outcome measures document. Adele Moore, the Education Liaison Officer has had a major role in this project and will give further details in her report later. The Vice Chair is also responsible for the APCP Private Practitioner list. Over the last year there have been less than 20 requests for the list and for the reasons outlined by Lesley in her letter to the Journal in March, individuals must now put their details in the CSP web site, as APCP will no longer hold a private practitioners' list.

Our links with the CSP remain strong and we were delighted to welcome Claire Strickland, Chair of CSP

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## APCP MATTERS

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Council, to our meeting in October at CSP Congress. Peta Smith, and the committee of the Neonatal Subgroup were asked to contribute to a response by the CSP to the Health Select Sub-Committee Inquiry into Maternity Services, which includes neonatal care.

ARC this year will be held in Birmingham in May and APCP have put forward a motion demanding that the CSP lobby the Mayor of London to provide exemption certificates for families with children who have a disability and receive physiotherapy in London, as congestion charges whilst crossing zones may affect their ability to access services.

The National Committee has decided to join with the CSP Congress every 3 years, so our next joint venture will be October 2005. The programme will be organised by the National Committee, so the regions will still have their "turn" to organise a local Conference.

On a more worrying note, APCP has been alerted to the increasing number of cases of litigation against paediatric physiotherapists. I have raised the issue with Pen Robinson, Director of Member Networks and Relations, at the CSP and the Executive Committee hopes to meet with her to discuss this further.

**Adare Brady**

### RESEARCH

Over the past year or so, my role as research officer has developed very much into working in partnership with the education liaison officers, previously Terry Pountney and now Adele Moore. We work as part of a team together with others in the education committee, to actively promote both education and research within the APCP. Most projects and developments in either education or research, are taken on as part of this committee's work, with myself taking the responsibility for some of the more specific questions or issues relating to research.

I have met with others from the education committee several times throughout the year and corresponded regularly on issues relating to research or education. I know that Adele will update you more fully on the activities of this group. Two of the main projects I have been involved in, have been the development of the SEN Code of Practice guidelines for physiotherapists booklet and the organisation and teaching on the Introduction to Paediatrics course last November.

Over the past year, in the APCP Journal we have started a joint research and education page. This part of the Journal aims to give members information on national research news and initiatives, details of research or educational study days, websites to visit and information on how to access help with research projects. It also aims to improve knowledge and confidence in reading and understanding research projects.

Last April we ran our first research study day in Cambridge, which was extremely successful with over 70 attending. Feedback was most encouraging with members commenting on how they enjoyed the chance to network, hear about others involved in projects and felt inspired to learn and develop their own research interests.

This year we have another meeting planned for September 5 in London. It will be run on a workshop style, which was asked for by many attendees from the last study day. It will focus on the practical use and understanding of methodologies in research projects. The day will also include a free paper session and opportunities to ask for help with individual projects.

The APCP research database continues to grow, and contains details of completed and on-going projects, as well as those just interested in research but not yet involved. There is a mixture of projects listed from larger

scale PhD studies to smaller projects for MSc dissertations or clinically based projects. It is extremely useful to have this information so that those embarking on projects know that they are not duplicating work already in progress and also to be able to contact others researching similar fields. The database is, however, certainly not complete and I urge any members who are undertaking projects to share their information and knowledge as far as is possible.

## Research Grant

This year, we have looked into the feasibility of an annual research bursary. In the last APCP Journal, members had the opportunity to feedback on this proposal. I have not received any negative feedback to date. Our proposal therefore, is to offer a bursary of at least £10,000 annually. This will be flexible depending on the projects submitted. There will be guidelines for applying for this bursary in the next Journal. We will be taking the CSP research priorities into consideration when awarding this money. It is expected that this will be awarded at the next research meeting in September 2003.

**Sarah Crombie**

## EDUCATION LIAISON

The education committee have been extremely busy on your behalf this year. We have continued work on several ongoing projects and undertaken some new ones.

### Ongoing projects

#### Introduction to Paediatrics

This course is run every 18 months in various venues throughout the United Kingdom and is taught primarily by members of the education committee with some invited guest speakers. APCP subsidise this course to keep costs to the membership down. **Harrogate November 2002**, The course evaluated extremely well overall. All of the participants rated using the good, very good, and/or excellent responses. Each day was evaluated individually and overall comments were very positive with some useful suggestions for future developments of this course and ongoing APCP events. Students submitted a case study, for marking in January considering the evidence base and clinical reasoning in relation to one of their current patients. Case studies marked and moderated by the teaching team, all passed with varying degrees of success. Well done.

The next 'Introduction to Paediatrics' course is provisionally booked for October in Alderhey.

#### S.E.N. code of practice

The committee has worked hard to produce several draft copies for consultation the final draft of which was agreed and sent to the printers. The SEN booklet is now available to members.

#### Outcome measures pack

The update of the Tests and Measures pack is ongoing. This is a collaborative project with the PPIMS, CSP and BABTT groups. This publication will be available to members to assist in choosing an outcome measurement tool and will contain information on the outcome monitoring loop, validity, reliability, utility and personal experience from members who have used the newer measures. Further investigation is ongoing to ensure

coverage of the range of measures used in paediatrics, including respiratory, neurological and musculoskeletal measures. I'm sure you are aware this is a very big job and any assistance from the membership will be gratefully received.

## **New projects**

### **Journal Club**

Each journal will contain a critical review of an article and the reference for the article to be reviewed in the following edition. This is to encourage the membership to develop critical review skills and to use this as evidence of continuing professional development (CPD), perhaps using the CSP proforma to assist portfolio building.

A suggested format for critical review is given on WWW. This process may be particularly useful for those physiotherapists who work with sole responsibility or who find it difficult to access their peers for discussion.

### **Future course suggestions**

A brief questionnaire was published in the journal for suggested education events which members feel would be relevant for their CPD. The response rate was low, however the suggestions helped to inform our future efforts in the education committee.

### **Advanced Cerebral Palsy Course**

As a direct reponse to the above. This will be held on the 11<sup>th</sup> and 12<sup>th</sup> November, at "Touchbase" near Mansfield, Derbyshire. The rates are very competitive and the centre has excellent facilities and is sited near the M1 with train links via Sheffield, Chesterfield or Nottingham. Course cost is to be finalised but is provisionally set at £120 for 2 days, including lunch, but not including dinner or overnight accommodation although this is available at 2 adjacent hotels. The course will briefly consider neurophysiology, motor control theory, complex case scenarios, development and aging, other influences on the child eg, diet, sleep / wake cycles, behaviour, environment, etc. The course will facilitate critical discussion of assessment and intervention strategies with tutorial and video presentations.

We look forward to another busy year on the APCP education committee and hope that you will feel free to make contact if you have any other suggestions for ways to assist your CPD.

### **Adele Moore**

Education and Research Committee members:

Sarah Crombie, Linda Fisher, Julia Graham, Terry Pountney

## **PUBLIC RELATIONS**

At the AGM and study day in Cambridge last year we launched our poster competition, although there was only a small response an overall winner was chosen at Birmingham in October 2002. This winning poster has been reproduced in both A4 and A2 sizes. The larger poster is available free with a donation to the Members Benevolent Fund. Other information leaflets regarding APCP and Paediatric Physiotherapy are to be updated in the near future.

# APCP MATTERS

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At Congress in Birmingham 2002 the APCP Website was launched and I would like to thank Di Coggins, former chair of APCP, and Paul Levy for all their work in producing the site. The site is well used and there has been some discussion as to whether it should become interactive however it has been decided not to pursue this at the moment.

I have been representing APCP on the advisory panel of the Whizz Kidz Children's Mobility Centres Project. Whizz Kidz has been awarded a 2 year grant from the Department of Health to establish six specialist mobility centres for disabled children and young people throughout England. In 1986 the McColl report recommended that children requiring wheelchairs and prosthetics should be assessed in designated clinics. The Audit Commission Report in 2002 recommended a full consideration of whether children's needs would be better served in designated specialist services. The Disabled Living Centres Council offers independent mobility information and advice to disabled adults but currently there is no specialist centre offering a comprehensive range of paediatric equipment. The aim of the project is to establish six centres in England to act as a specialist resource for the trial and provision of paediatric mobility equipment. These centres will also offer advice, information and training for carers, users and professionals. The centres are to be located in the North West region, North East, Midlands, South West, North London and South London. In these regions local panels have been established of which children and parents are members. As usual the time scale of the project is short with limited resources but I will keep you informed of its progress.

**Gill Holmes**

## TREASURER

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 have four pages to view:

- The National Account Balance Sheet (page 2)
- The National Account Income and Expenditure Account (page 3)
- Notes to the Accountants (page 3a)
- Congress 2002 Income and Expenditure Account (page 4).

Before continuing, I would like to take this opportunity to thank Julia Graham, my predecessor, for her guidance over the past year; and all of the Regional Treasurer's for their work.

Now to the Accounts in detail. Firstly, I would like to take you through the National Income and Expenditure as shown on page 3:

### Income

**Courses:** this figure represents all income received from the Research Study Day and AGM held at Homerton College in April, together with all income received from Introduction to Paediatrics course held in Harrogate in November. In 2002, both of these were organised by the National Committee and therefore delegate fees etc. were all processed through the National Account and not through a separate account. This explains why the figures for 2001/2002 vary so vastly - £725 in 2001 represents the surplus funds only from the Introduction to Paeds course held in 2000; the figure for 2002 represents all income received for the two courses held in 2002 and should be off set against expenditure. In actual fact both of these courses in 2002 ran at very slight losses.

**Capitation Fees:** APCP receives £2 per member from the CSP each year in the form of Capitation fees. You may notice that the Capitation fees for 2002 have doubled - unfortunately this does not reflect a doubling of

## APCP MATTERS

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our membership for the year. The CSP paid the Capitation fees twice, in error, and this has since been rectified in 2003.

**Subscriptions:** these are received from members and represent the main income of the Association.

**Publications:** this figure represents the sale of APCP publications during 2001.

**Bank Interest:** this item is self explanatory.

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

**Received from Conference 2001:** this represents the profit from the Conference held in 2001 in Sheffield and transferred to the National Account.

**Advertising:** this is the income received from advertising in the quarterly journal - Corporation Tax is payable on this figure.

### Expenditure:

**Catering & Accommodation:** 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.

**Committee Travel:** this cost has risen in 2002, partly reflecting rising costs generally. In addition, committee members are increasingly being asked to attend further meeting with outside agencies to act as representatives of APCP - where possible members seek reimbursement for this travel from the host bodies.

**Honorarium:** there are 9 committee members who received an Honorarium in 2002: Chairman, Vice-chairman, Secretary, Treasurer, PRO, Editor, Membership Secretary, Research Officer, and Education Liaison Officer. The figure currently paid is £150.

**Postage:** this figure includes the costs of posting the both the quarterly journal and membership cards.

**Accountancy Fees:** this item is self-explanatory.

**Course Fees:** this figure represents the expenses incurred in organising the Introduction to Paediatrics course in 2002.

**Publications:** this figures represents the cost of printing the quarterly journal and some expenditure on publications.

**Bank charges and Interest:** this item is self-explanatory.

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

**Gifts:** this included a gift to Paul Levy who assisted Di Coggins with the setting up of the APCP website; and gifts to the Congress Organising Committee. It also includes prize money for the poster competition.

**Conference and AGM Expenses:** this figure includes expenses incurred by the National Accounts, for both the AGM held in April (including costs of the Research Study Day), and for committee attending CSP Congress in October.

**Depreciation of Computer Equipment:** in 2002 the Association acquired a new computer for the Membership Secretary - this is shown as an addition to the Fixed Assets - depreciation is calculated at one third of original value per year.

**Corporation Tax:** this is a tax charged to the association on profits made from non-members attending courses, as well as some other income eg. from advertising in the Journal.

**Congress Account (page 4):** this is fairly self-explanatory. Capitation fees are fees received from the CSP for APCP members attending the Congress; and Conference fees in fact represent fees paid for attendance at the APCP Conference Dinner.

Expenditure is straight forward except to point out that 'Committee Fees' includes the cost of Congress registration for the organising committee.

As you will see the Congress made a small surplus of £312, which has now been transferred to the National Account (in 2003).

## **National Account Balance Sheet (page 2):**

**Fixed Assets:** this represents the new computer acquired (with depreciation).

**Current Assets:** Congress Debtor (£3980) represents the amount advanced to the organisers of the 2002 Congress - as the CSP pays capitation fees for Congress after the event, the National Account had to advance monies to help covers costs incurred - this has been repaid in 2003, together with the surplus funds mentioned above.

Conference Debtor (£2000) reflects monies advanced to the organisers of both the 2003 and 2004 Conferences - these amounts will be repaid following each of these events.

**Current Liabilities:** this shows the Corporation Tax liable on the 2002 accounts and will be paid in 2003.

**Accumulated Fund:** as you will see, despite rising costs of running the Association, the Accounts show a surplus for the year of £22,943. 2000 and 2001 also saw significant surpluses (£19000 and £17,510), and therefore the Association now has a substantial accumulated fund. This will allow the Association to continue to maintain in high quality of publications, courses and conferences in the forthcoming years. However, the committee feel that it is important to utilise these additional funds to promote further the field of paediatric physiotherapy. It is therefore being proposed that we look towards utilising some of these funds over the next few years in supporting research into paediatric physiotherapy - Sarah, the Research Officer will discuss this idea further in her report.

**Fiona Down**

# APCP MATTERS

## ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

### National Account

#### Balance Sheet as at 31 December 2002

	Note	2002		2001	
		£	£	£	£
<b>FIXED ASSETS</b>					
Computer Equipment	1		736		1
<b>CURRENT ASSETS</b>					
Cash at Bank		91,620		75,210	
Congress Debtor		3,980		-	
Conference Debtor		2,000		455	
		97,600		75,665	
<b>CURRENT LIABILITIES</b>					
Corporation Tax	2	67		340	
		67		340	
			97,533		75,325
			98,269		75,326
<b>ACCUMULATED FUND</b>					
Balance brought forward at 1.1.2002			75,326		57,816
Add: Surplus for the year			22,943		17,510
			98,269		75,326

# APCP MATTERS

## ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

### National Account

#### Income and Expenditure Account for the Year Ended 31 December 2002

	Note	2002		2001	
		£	£	£	£
<b>INCOME</b>					
Courses		15,572		725	
Capitation Fees		6,940		3,402	
Subscriptions		44,277		42,139	
Publications		5,075		2,345	
Bank Interest Received		1,822		2,313	
Sundry		51		47	
Received from Conference 2002		4,398		-	
Advertising		1,950		1,800	
Corporation Tax Refund		-		1	
ERBS group donation		-		2,000	
		80,085		54,772	
<b>EXPENDITURE</b>					
Catering and Accommodation		5,794		4,540	
Committee Travel and Subsistence		9,016		6,102	
Honorarium		1,350		1,350	
Postage, Stationery and Telephone		5,154		6,723	
Accountancy Fees		1,528		1,469	
Course Fees		12,810		2,150	
Publications		15,113		14,107	
Bank Charges and Interest		98		83	
Computer Expenses		229		317	
Gifts		215		81	
Conference & AGM Expenses		5,553		-	
Depreciation on Computer Equipment		245		-	
		57,105		36,922	
		22,980		17,850	
Corporation Tax	2		37		340
Surplus for the year			22,943		17,510

# APCP MATTERS

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## ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

### National Account

### Notes to the Accounts

31 December 2002

<b>1. Fixed Assets</b>		
	Computer Equipment £	
<b>Cost</b>		
1 January 2002	1,090	
Additions	980	
31 December 2002	<u>2,070</u>	
<b>Depreciation</b>		
1 January 2002	1,089	
Charge for year	245	
31 December 2001	<u>1,334</u>	
<b>Net book amount</b>		
31 December 2002	<u>736</u>	
31 December 2001	<u>1</u>	
<b>2. Taxation</b>	2002	2001
	£	£
Corporation tax due on surplus At 10% 2002 (10% 2001) (over) provision in previous year	67 (30)	340 -
	<u>37</u>	<u>340</u>

# APCP MATTERS

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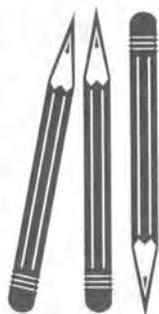
## ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

### Congress Account

#### Income and Expenditure Account

For the Year Ended 31 December 2002

INCOME	£	£
Capitation Fees		5,108
Conference Fees		567
		<hr/>
		5,675
EXPENDITURE		
Catering and Accommodation		2,456
Lecture Fees		1,332
Committee Members fees		907
Printing, Photocopying, Stationery and Postage		33
Travelling		100
Entertainment		545
		<hr/>
		5,363
<b>Surplus for the Year</b>		<hr/>
		312
		<hr/>



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## APCP NATIONAL COMMITTEE EMAIL DIRECTORY

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## Next APCP research study day

The next APCP research study day will be held in at the Institute of Child Health, London on September 5 2003. The day will include workshops in the morning to spend time discussing the use of different methodologies, a guest speaker to talk about their particular project and a free paper session in the afternoon. There will be opportunities to discuss problems, questions and project ideas. If you would like to develop your understanding of research methodology and project design, and wish to hear how others are undertaking research in paediatrics, please join us on this day. I am sure it will be as enjoyable and inspiring as the one held last year. If you have some research you can share with us, large or small, perhaps an MSc project, please do apply for the free paper session. Application form and programme are in this Journal. Please send to Christine Shaw, 42 Cammo Grove, Edinburgh, EH4 8EX, Tel: 0131 339 7555. For the free paper session, please apply to myself at 10A Record Road, Emsworth, Hants PO10 7NS or e-mail [scrombie@srtl.co.uk](mailto:scrombie@srtl.co.uk). The closing date for applications for free papers will be July 31 2003. Cost of the day is £40 for members, £50 non-members, including refreshments and lunch.

## APCP research bursary

This year we have decided to use a sum of APCP money to offer a research bursary. The money offered will be flexible depending on the projects submitted, but we are anticipating a sum in the region of £10,000 over a one or two year period. Any paediatric physiotherapy project may be submitted, but we will be taking into account the CSP research priorities. Details of these priorities can be found on the following web-site:

Guidelines for applications and forms for this bursary should be made to myself at 10A Record Rd, Emsworth, Hants, PO10 7NS. Closing date is July 31 2003. Depending on applications received, we are hoping to be able to award this bursary at the research meeting on September 5 2003.

## The annual APCP Jenx award

This year there were four excellent entries for this award. This was very pleasing after two years of Jenx Ltd not being able to award a winner. The winners this year were Anna Simpson, Fiona Price, Mary Woodcroft, Bobbie Hillman, Emma Caley and Shelagh Parker. Their project was entitled: 'Neonatal Physiotherapy CD-ROM' and their prize money will be put towards the making of this. It is anticipated that this will be a useful training tool for all those involved in neonatal care.

**Sarah Crombie**  
Research Officer

## Programme for APCP Research Meeting

Date:	<b>September 5, 2003</b>		
Venue:	<b>Roland Levinsky Room, Institute of Child Health, 30 Guilford St. London WC1N</b>		
	<b>Tel: 020 7905 2601</b>		
Time:	<b>9.30am – 4.30pm</b>		
9am–9.30am	Registration	1.30pm	Free paper session
9.30am	Methodologies workshop	3.30pm	Tea break
11.30am	Coffee break	4.00pm	Panel discussion
12.00pm	Speaker	4.30pm	Close
12.45pm	Lunch		

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# APCP Research Study Day

Friday 5th September 2003

Institute of Child Health, London

Name .....

Address .....

..... Postcode .....

Telephone .....

Email .....

Work Address .....

..... Postcode .....

Telephone .....

APCP No. and Region .....

Do you have any dietary/special requirements ? If YES please detail .....

.....

.....

Please send cheque payable to 'APCP' for the sum of £40 member / £50 non-member

to Christine Shaw, 42 Cammo Grove, Edinburgh, EH4 8EX. tel. 0131 339 7555

Closing date for applications 15/08/2003.

Stewart DA, Law MC, Rosenbaum P, Willms DG (2001)

“A qualitative study of the transition to Adulthood for youth with Physical disabilities”  
Physical and Occupational Therapy in Pediatrics Vol 21 (4) pgs 3-21

## Overall

A good study clearly presented with close consideration of validity and reliability of findings. Some weaknesses are apparent in recruitment of parents / carers, lack of acknowledgement of researcher relationship, lack of information regarding the level of consensus of opinion and poor consideration of contradictory data. The study clearly explains the methodology, data analysis and interpretation; however these omissions may allow a platform for researcher bias.

## Was there a clear statement of the aims of the research?

Clearly stated, research questions are given on page 5

## Was the research design appropriate to address the aims?

Appropriate and follows recognised protocols for qualitative research. 34 subjects, interview and focus groups, coded themes developed and cross checked.

## Was the recruitment strategy appropriate to the aims of the research?

Clear inclusion strategy to investigate previously stated themes (a priori) probably formulated from literature and clinical experience

Approach via rehab centre staff, then contact and recruitment by researcher. Signed consent? How was this achieved in the more disabled subjects?

“positive inclusion in leisure and hobbies” these users may be somewhat successfully integrated and it would be reasonable to expect positive experiences in the findings, however these are not discussed in any depth.

Table on page 8 demonstrates level of disability and pathology, however also shows that 12 of the 34 participants were parents and 1 service provider. This is subject to bias of interpretation of the needs of a young person and must be considered in the application of the findings.

## Was the data collection method justified?

Addresses the issues and is justified well. Open questions without bias are indicated in the methodology, however the example given may be seen as leading “What do you feel you need to assist you.....”? The respondent may not have indicated need prior to this question.

All interviews are taped and transcribed, demographic data collected,

Coding by 2 researchers is agreed and the coding evolves, this is a well recognised method of qualitative review. However the coding gives no indication of the intensity of feeling for each topic raised i.e. dimensionality.

## Has the relationship between the researcher and the participants been adequately considered, e.g. bias, role, influence?

This is the main flaw to this study. The researcher relationship is not established

# JOURNAL CLUB: CRITICAL REVIEW

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## **Have ethical issues been considered?**

A statement of ethical approval is given

## **Was the data analysis sufficiently rigorous?**

Yes. Triangulation, member checking and reflection on field journal and decision trail seeks to ensure data analysis lacks bias and is interpreted correctly.

## **To what extent is contradictory data considered?**

No contradictory data is evident, it would be expected that some contradictory data be gathered especially as the participants need to be involved in positive leisure or hobbies. Positive aspects of successful transition are not highlighted.

## **Is there a clear statement of findings?**

Yes. Key issues emerge including a summary on page 13 and recommendations for further work.

Key issues include;

- Exposure of adults to disability
- Parents views of removal of social interaction programmes post 16
- Congenital vs. acquired disability
- Gap in provision post 16
- Environment
- Early opportunities
- Lack of adult services
- Needs- personal, communication, decision making, information, physical adaptation, housing, friends, role models, mentors
- Do-it-ourselves, and help if we ask for it.

## **How valuable is the research?**

Demonstrates wider issues in transition and strategies which might be put in place to assist transition. Demonstrates the need for role models and mentors to help raise personal awareness and aspirations. Enables the application of decision making strategies in routine interaction. However, the lack of information regarding the degree of consensus within the participant group and the dimensionality of the themes raised lessens the generalisability of the study. This is perhaps not as problematic in this study as individuality is a key component of the findings.

## **How are the findings compared to other literature, researchers of study methods?**

Suitably applied to previous studies with enhanced findings in depth of information gained from those closest to the experience.

Adele Moore  
Education Liaison Officer

## REGIONAL REPRESENTATIVES

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S10 2TH

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### OVERSEAS

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Physiotherapy Dept  
Alder Hey Children's Hospital  
Eaton Road  
LIVERPOOL L12 2AP

## REGIONAL REPORTS

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### SOUTH WEST

For those who didn't make the conference in Bournemouth, unlucky!! The weather was the glorious, the hotel and food good and even Dame Edna popped in to entertain us! I understand the difficulties in finding the time or money in an ever increasingly busy NHS. Perhaps the published write-ups in the journal will go some way toward not attending. Please think about next year's conference in Liverpool with an international line-up of speakers and a great social side. There may be some money around to help delegates from this area.

Our AGM was also held at the conference and the turn out very small. This runs alongside not having a huge number at the conference from the region. We voted on three new members from, Dorchester, Salisbury and Hants. Still no-one further south than myself from Taunton!

Our next study day is on integrating disability into PE. Probably Sept / Oct time so watch out for Frontline, flyers and possibly the next APCP journal.

Disseminating the information that I receive from the National meetings is quite hard in such a big area and there is not the space here to do so. There are lots of changes afoot and huge amounts of hard work going on across the whole country. Please contact the committee or me if you want to know more on a certain topic. They get a brief from me after National meetings, so should be fairly up to speed.

I also have the new large APCP posters. The region will buy them and if you want them come to the next study day or contact me or any of the committee and we will share them out. I only have 10 though! We are also holding a stock of the new SEN guidelines at a cost of £10 if people wish to buy them

Have a good summer

RUTH DAVIES

### SOUTH EAST

A big thank you to the 28 members who supported the branch and attended the AGM of the South East Region of APCP held in Brighton on 14<sup>th</sup> March 2003. This year, fortunately, there were enough members

present for the meeting to go ahead. The South East branch currently has 139 members registered therefore the percentage of the membership who attended was on the whole rather disappointing.

The Committee are very keen that your views are well represented on the many and varied projects and initiatives they undertake throughout the year both within APCP, the CSP and also outside. We would like to ensure that we are voicing the views of the majority of our members when asked to report to and /or vote on important issues at national APCP meetings. Your opinions, views, and experience are important to the development and professional standing of paediatric physiotherapy and sharing them with your peers will help us to ensure that your voices are heard and acted upon.

Carol Dooley, Chairman, and Claire Hay, Secretary, both offered their resignation from the SE Regional committee at the AGM. On behalf of the Committee I would like express our very sincere thanks to them for all their hard work and support over the past few years. They will both be sadly missed at the meetings and from the sessions in the pub!

Anne Finlayson was voted in as our new Chair and Ann Martin as Secretary. Sulu Mehta was again voted in as Treasurer. The Committee has for a long time been short of Committee members and I am pleased to say that we now have 4 new members to join us. Jill Larkin, Lucy Erasmus, Judith Robinson and Shelley Chatter-Singh. Welcome one and all, it is great to have some new blood !

The Study Day held on the same day in the Post-graduate Centre Brighton evaluated well. Everyone thought that the venue and atmosphere was excellent. 31 delegates attended. In the morning session the subject was Strategies for Physiotherapists working with children with emotional and behavioural difficulties. Most members felt this session was excellent, and that Sarah Alcock, the Clinical Psychologist's, presentation was clear and precise. It was generally felt that there was a good mix of theory and group work throughout the day and this prompted good discussion of strategies in various situations. The afternoon session was on the subject of the

## REGIONAL REPORTS

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management of children with Chronic Fatigue Syndrome/ME. This session also was well evaluated. The speaker was Melanie Bladen Senior Physiotherapist GOSH.

Thank you to all the members who have made many excellent suggestions for further study days. This is much appreciated and gives the Committee a better idea of the subjects that interest you all. Watch this space and Frontline for info for the next course! Wednesday, June 24<sup>th</sup> sees our first venture for this year with an informal workshop entitled 'School Physio'. This applies to therapists working both in the mainstream setting and special schools. The idea is that participants bring along any protocols, guidelines research papers appertaining to all aspects of physiotherapy carried out in the school setting for discussion and information sharing. We hope to look at such areas as hydrotherapy, the use of specialised equipment such as standing frames, activity programmes, PE lessons, MOVE etc. So if you have an interest why not go along and see what the day can come up with.

It is to be held at Chalton School and will be from 10am till 2.45pm. The cost will be only £10.00 per person and will include a small lunch. A bargain! Please contact Ann Martin on 020 8854 6259 ext 250 for further details and watch out for the fliers giving more detailed information/

If any of you would like to take on organizing a day on any subject please do not hesitate to contact the Committee who will be very happy to support and advise you. Why not give it a go!

PETA SMITH

Bay and draw a breath.

At the beginning of April, we held a two-day respiratory course at St David's Hospital Children's Centre in Cardiff. Devised and designed by Diane Rogers, it is felt that those two days will prove to be one of our most successful courses, and we have had quite a few of those! Also, at the beginning of April, the very successful national A.P.C.P. Conference and A.G.M. was held in Bournemouth – blessed with superb organisation, venue, weather, and another view across another Bay! Prior to the opening of Conference, the national committee met as usual to discuss a huge agenda in a short space of time. One of the many pieces of information coming out of the agenda with relevance to A.P.C.P. Wales was the news that we will be hosting the two-day conference and A.G.M. in April 2005. Venues for such occasions have to be booked many months ahead, and so the hunt will be on for our new committee to find somewhere suitable at the earliest opportunity. We can then go ahead and meet the challenge of finding new and innovative material for those two days. Please contact any of the Committee if you have any ideas for such material, or would be willing to be a speaker at this occasion. We look forward to hearing from a number of you out there!

JILL WILLIAMS.

### NORTH EAST

The Study Day on the 8<sup>th</sup> March, Sports Injuries in Children and Adolescents, had superb content and an excellent speaker in Sid Ahmed. It was greatly appreciated by all who attended but unfortunately the AGM did not take place, as we did not have enough members present to make up the quorum necessary. We are going to attempt holding the AGM again on the 7<sup>th</sup> June at our next Study Day, if there are sufficient member numbers attending.

Sadly we have lost 2 of our longstanding officers on the local committee. Georgina Thorton-Keighly, chairperson and previous secretary, has completed her full term of 8 years and will be greatly missed not only for her commitment and hard work over the years but also for her great sense of humour. Penny Sherlock is standing down as secretary but is staying on another

## REGIONAL REPORTS

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year and has offered to support the new secretary Karen Roach. We are most grateful to Penny for this kind gesture. Pam Mitcheson is our new chairperson. We welcome Alma Brambles as a new co-opted member.

The following are finite dates for your diaries:-

18<sup>th</sup> September 2003 – AM Legal Issues  
PM Caseload Weighting - Leeds

6<sup>th</sup> March 2004 – AGM and Ponsetti  
Approach for Talipes.- Tyneside

The committee are open to suggestions on topics for study days, venues, speakers etc. We would really welcome your comments regarding study days etc. These can be posted on the interactivecsp website in discussion or contact your peers or directly to myself.

The pilot for the website is now complete and is being evaluated by CSP. However the website will continue in its present form so keep logging on with any information that will be relevant to your peers or exchanging ideas and comments.

MARY HARRISON

### SCOTLAND

The Scottish region held the A.G.M. with study day on 14<sup>th</sup> March in Perth and has become the custom there was also a study day with a 'mixed bag' of topics. Janice Clark was able to update the presentation given last year by detailing the outcomes of the research project investigating the seating needs of children with D.M.D. and Freidricks Ataxia. Alison Morrison, physiotherapist and Michelle Wells, occupational therapist are involved with a joint venture setting up a screening clinic for the provision of Lycra garments to children within the Glasgow area. They were able to provide us with an insight into the rationale for the selection and use of the garments. We were encouraged to think of our professional development by Alisdair MacSween from Queen Margaret College Edinburgh. Sujay Galen PhD student at Strathclyde University gave an informative and entertaining presentation on his research topic, which combines the use of Botox and F.E.S. To round off the afternoon Girvan MacCorkell from Moorings Mediquip detailed

some of his experiences in Guatemala.

Membership in Scotland has increased since January with late renewals. Sarah Paterson, Treasurer was able to report a healthy bank balance but highlighted our increase in expenditure. The committee will be reviewing costs.

As I am increasing my commitment to national committee this will be my last report as Regional Rep. The role will be taken over by Alison Gilmour from Edinburgh. We look forward to the new committee members joining us and intend to update the contact details sent to members last year

LAURA WIGGINS

### EAST ANGLIA

We had a very successful and well attended AGM and Study Day in March, with Michelle Eagle talking about the management of neuromuscular disorders.

The East Anglia Committee has not met since my last report, so there is no further news to pass on, but I would like to remind you of our study day to be held in Cambridge on 20th June on the subject of paediatric rheumatology. Application forms are available from Maaik Van Varick on 01702 221044.

Please let us know if there are any specific topics you would like us to cover on future study days.

SUE COOMBE

### LONDON

Sorry to start this report off with a moan but the turn out for the AGM could have been better! We even supplied you with a study day on orthotics and lunch. To add to your guilt complexes I could describe how the committee had been up all night baking bread and cakes and polishing the venue but that would be a fib! However it is important that you (**the members**) have an opportunity to influence the way the Branch is run and even volunteer to join us and the best way to do this is by coming out to the AGM! Enough said!

By the time you read this the study evening on hypermobility in children will have come and gone. However I am so pleased that the topic has created such interest in attendance and it is so nice to see that people from outside the immediate London region

## REGIONAL REPORTS

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are coming in for it. We do cover a very large area and if any of you want to have courses nearer to your base please do let us know.

We are planning a study day on pain in CP, hopefully in July. As yet arrangements have not been finalised. Please look out for fliers. Likewise for information regarding Strength and Treadmill Training evening lecture in September. We are also hoping to have a talk on Induced Movement Therapy later in the autumn. This will be instead of Research and Outcome Measures as it is very soon after the APCP research study at the Institute of Child Health in September. If you have any other ideas please let us know.

Finally, congratulations from the London Branch to the team who organised the National Conference in Bournemouth. Sadly I was not able to attend but people tell me that it was very good with excellent speakers.

JEANNE HARTLEY

### NORTH WEST

I'd first like to say a resounding thank you on behalf of the North West membership to Pam who had to stand down as the NW Rep. Pam worked hard in her time as Rep and she will be much missed by the rest of the committee.

The AGM/Study Day on 'Nocturnal Ventilation' on Saturday 8th March by Michelle Eagle was very well attended by the membership. It was an extremely interesting and thought-provoking day. Unfortunately due to a number of unforeseen circumstances we had insufficient elected committee members present to hold an AGM with voting. After taking advice from National Committee we went ahead with a business meeting and felt in the circumstances we would be unlikely to get insufficient members together to hold an AGM.

Our next confirmed study day will be on Thursday 18th September in Blackburn. It will be a respiratory update for community-based physiotherapists and will include CF, Management of the Profoundly Disabled, tracheostomy and practical workshops etc. Final details will be available shortly, so keep your eyes open and a space in your diary.

Plans are now well underway for the Annual Conference which will be here in the North West next year. It is booked for April 30th to May 2nd in Liverpool. It promises to be a very stimulating and full programme.

Finally, membership was confirmed as 182 as of January 2003, which is down on last year but from experience I realise that renewals tend to drift in for several months into the New Year. Please encourage any colleagues who aren't members of the benefits of joining. May I make a special plea to those of you who work in acute units to join. I know it's been a long held belief that APCP has a community bias but by joining you can make a difference.

ELAINE LLOYD

### WEST MIDLANDS

Firstly committee news: our thanks to Fiona Nicholson and Sarah Tomlinson who retired from the committee following our AGM in February. They have both been very long serving members of APCP and their contributions will be missed.

Lindsay Rae will be taking up the position of regional representative as I am moving to become APCP membership secretary.

Welcome to the new committee members Sara Orr, Natalie Storey and Michelle Baylis.

The year has been very successful with an increasing membership and keen interest in joining the committee. Keep advertising everyone.

We have held a number of courses that have been well attended and interesting. Thank you to the organisers.

We are running a two-day gait analysis and orthotics course at the beginning of June that has been well subscribed to and we look forward to hearing of its success.

We are always interested in hearing ideas for courses so please speak to any member of the local committee if there is something you would like to do.

Thanks for all your support.

SUSAN RIDEOUT

# NEONATAL SPECIAL INTEREST GROUP

(AFFILIATED WITH THE APCP)

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## Northern Regional Group

The group met at The Royal Victoria Infirmary, Newcastle on March 19th. The Day was organised by Pat Dulson and was attended by 22 Physiotherapists working on Neonatal Units, and/or neonatal follow up.

We all enjoyed an informal information sharing day, including some short presentations on :

- 'Neonatal Infant Massage' – Barbara Haederle, St. James CDC, Leeds.
- 'Bidding for a Neonatal Post' – Christine Horner, St. Luke's CDC, Bradford.
- 'Feedback from a Prechtl Course' – June Blackett, Wansbeck, Ashington, Northumberland.

The Objectives were :

- To form a regional database.
- Identify the needs of the region.
- Collate each other's guidelines/criteria for respiratory/neurodevelopmental care.

The participants split into 3 groups looking at

1. Respiratory in/out on the neonatal unit.
2. Assessment of the neonatal.
3. Follow-up criteria and guidelines.

The smallest group was the respiratory group and this highlighted the fact that there is a real need for us to address the issues around the best practice and competencies. There was agreement within the group re: criteria for assessment/treatments. A wide range of allocated Physiotherapy time, demonstrated different levels of service provision and development. RHSC, Edinburgh had detailed, guidelines for chest physiotherapy in preterm infants. Ongoing education of doctors, nurses, physiotherapists and parents was identified as a vital part of acute work. We would welcome any other therapists who have an interest, experience and expertise in this particular field.

Many participants brought leaflets, which they have developed in their areas of work. We hope to be able to compile national leaflets from all those already out there rather than re-inventing the wheel!

The information gathered by 3 national committee members who also facilitated the groups will be collated and presented at the next national study day on Friday 27th June at The Postgraduate Medical Centre, Rotherham DGH. This promises to be a very interesting day with Presentations by Dr Alan Gibson, Consultant Neonatologist, Sheffield, and Anna Simpson, Research Fellow. Watch out for the flyers!

**For more information contact the Secretary, Nichola McNarry on  
e-mail: [nicola.mcenary@qmcuh-tr.trent.nhs.uk](mailto:nicola.mcenary@qmcuh-tr.trent.nhs.uk)**

The next Northern study day will be at the James Spence Centre, Royal Victoria Infirmary, Newcastle on a Wednesday in early October – date to be confirmed. Proposals for speakers/agenda are welcome. Contact Paul Dulson, e-mail : [pat.dulson@nuth.northy.nhs.uk](mailto:pat.dulson@nuth.northy.nhs.uk)

**Barbara Haederle**

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### **Therapy Weekly Articles**

Could I give a warning to those who are interviewed for *Therapy Weekly* articles. I was interviewed on a Wednesday morning and had to proof read by a Friday lunchtime. I was unaware that the deadline was so tight and indeed the proof was only received on Thursday late afternoon – I was not back in the office until the Friday morning. Myself and my colleagues were not totally in agreement with the content so I e-mailed *Therapy Weekly* on the Friday morning to say we were not happy with article as it stood, but it went to press for release the following Thursday anyway.

Therefore, I would advise anyone who is interviewed to be clear when a response is required back by and state that it is not to go to press until proof read by yourself.

Helen Miles

**The Children's Trust, Tadworth**

Registered Charity Number 288018

Tel: +44(0)1737 365000 Fax: +44(0)1737 373848 URL: [www.thechildrenstrust.org.uk](http://www.thechildrenstrust.org.uk)

### **Literature Searching : a user guide**

Literature searching is becoming increasingly commonplace for physiotherapists, whether it is for finding out about a particular clinical condition, keeping up to date with literature for continuing professional development purposes or to find evidence for the effectiveness for a particular physiotherapeutic intervention.

It can be difficult to know where to start searching for information, what sources to use, how to use electronic databases and how to manage the information retrieved. A new guide to literature searching has been produced by CSP Library & Information Services that is aimed at providing advice on this topic. The guide covers what literature searching is, reasons for searching the literature, sources to use including libraries, electronic databases, the web, journals, books and grey literature, how to search for evidence, how to manage information and referencing.

The guide is available in full text on the CSP Web site <http://www.csp.org.uk/libraryandinformation/library/publications.cfm?id=258>

The guide can also be obtained in print format costing £10 per copy and is available from Terry Grant, Clerical Assistant, Research & Clinical Effectiveness Unit, Chartered Society of Physiotherapy, 14 Bedford Row, London, WC1R 4ED by sending a cheque made payable to the 'Chartered Society of Physiotherapy'.

Caroline Miller, Senior Information Officer, Library & Information Services, Chartered Society of Physiotherapy.

### **WHIZZ-KIDZ**

You may recall that in the December 2002 Journal I wrote a short piece about 'Standards for the Provision of Mobility Equipment for Children and Young People' The press release below from Whizz-Kidz explains a little more about this piece of work. Can I take this opportunity to thank those of you who responded to my request for opinions and ideas to be taken forward to the group involved in this work – hopefully we will be attempting to address some of the frustrations that you commented upon!

I shall endeavour to keep you all informed of the groups progress

**Fiona Down**

[Fiona-down@hotmail.com](mailto:Fiona-down@hotmail.com)

**Whizz-kidz**

THE MOVEMENT FOR NON-MOBILE CHILDREN

**12th March 2003**

PRESS RELEASE    PRESS RELEASE    PRESS RELEASE

**WHIZZ-KIDZ SPEARHEADS STANDARDS FOR THE PROVISION OF  
MOBILITY EQUIPMENT FOR CHILDREN**

National charity Whizz-Kidz has established a group of paediatric and service provision professionals to develop new Standards for the Provision of Mobility Equipment (specifically wheelchairs) for Children and Young People. The Standards aim to address the existing disparity in quality and equality of statutory mobility equipment provision across the UK.

The group, led by Whizz-Kidz, believes the timing is right for these Standards to be implemented. They are aware, through evidence from service consumers - parents, children and young people - that standards in many areas of statutory provision require significant improvement. Poor standards of assessment, slow service, basic equipment, rigid criteria and financial constraints are amongst the issues identified.

Although national service standards are currently being developed by emPOWER and the National Wheelchair Manager Group, they do not focus on the specific needs of disabled children and young people. There is also a general move within government to reduce postcode lottery and improve standards in its services.

The group includes representatives from: the National Wheelchair Managers Forum (NWMF); British Health Trades Association (BHTA); Rehabilitation Engineer Managers Group (RESMAG); National Association of Paediatric Occupational Therapists (NAPOT); Association of Paediatric Chartered Physiotherapists (APCP); Institute of Physics and Engineering in Medicine (IPEM); NHS Purchasing and Supplies Agency (PASA); Posture and Mobility Group (PMG); and Whizz-Kidz Mobility Therapists.

Once agreed by the group, the draft Standards will be discussed with service consumers across the UK. With their input and following revision, the Standards will then go out to wider consultation with users and professional groups (May 2003). On completion (Summer 2003), the Standards will be submitted to the Department of Health for endorsement.

Ros Ham, Whizz-Kidz Director of Children's Services, says: 'There is an urgent need for dramatic improvement in statutory provision for disabled children and young people. The long-term benefits of greater independence through the provision of the right mobility equipment at a young age are significant and should not be ignored. Independence improves self-esteem, enables increased participation in every day activities and ensures development into confident and active adults. We are very excited to be working with the representative bodies to pave the way for significant change and we look forward to seeing the government implement these Standards across the UK.'

For further information, contact Ros Ham at Whizz-Kidz via e-mail: [r.ham@whizz-kidz.org.uk](mailto:r.ham@whizz-kidz.org.uk) or telephone 020 7233 6600.

## Notes to Editors

• The government move towards reduction of postcode lottery and improvement in service standards is highlighted in the NHS Plan and Agenda for Change and reflected in the work being carried out by the National Service Framework and Modernisation Agency.

• Whizz-Kidz improves the quality of life of disabled children and young people throughout the UK through the provision of customised mobility equipment such as wheelchairs and tricycles - not available on the National Health Service. It is dedicated to providing help and advice to the children and their families and raising awareness of mobility-related issues through national campaigning.

For further press information, please contact:

Rachael Booth-Clibborn at Whizz-Kidz

Telephone: 020 7233 6600

E-mail: [r.booth-clibborn@whizz-kidz.org.uk](mailto:r.booth-clibborn@whizz-kidz.org.uk)

## Useful Websites for Paediatric Physiotherapy

### Organisations

**Association of Paediatric Chartered Physiotherapists (APCP)**

<http://www.apcp.org.uk>

**Centre for Evidence Based Child Health**

<http://www.ich.ucl.ac.uk/ebm/ebm.htm>

**Chartered Society of Physiotherapy**

<http://www.csp.org.uk>

**Contact a Family**

<http://www.cafamily.org.uk/>

**Institute of Child Health / Great Ormond Street Children's Hospital**

<http://www.gosh.nhs.uk/>

**Paediatric Information and Education Resource (PIER)**

<http://www.pier.org.uk/home.htm>

**Royal College of Paediatrics and Child Health**

<http://www.rcpch.ac.uk/>

**Section on Pediatrics American Physical Therapy Association**

<http://www.pediatricapta.org/>

**Databases & Evidence Based Practice**

**AMED (Allied & Complementary Medicine) database**

<http://www.csp.org.uk/libraryandinformation/>

The key database for physiotherapy related material produced by the British Library.

*Free to CSP members when logged in to the CSP website*

**Clinical Evidence**

<http://www.clinicalevidence.com>

The international source of the best available evidence for effective healthcare.

## **Cochrane Library**

<http://www.update-software.com/clibng/cliblogon.htm>

This database produced by the Cochrane Collaboration aims to prepare, maintain and disseminate systematic reviews of the effects of health care and is an invaluable source for evidence based practice.

## **National Electronic Library (NeLH) for Child Health**

<http://www.nelh.shef.ac.uk/nelh/kit/ch/docs.nsf/doc-keys/welcome?open>

The library is part of the National electronic Library for Health and contains evidence based articles, information and guidelines addressing a wide range of topics related to the health and well being of children

## **National Research Register**

<http://www.update-software.com/National/nrr-frame.html>

The National Research Register (NRR) is a register of ongoing and recently completed research projects funded by the United Kingdom's National Health Service.

## **NMAP (Nursing, Midwifery & Allied Health) gateway**

<http://nmap.ac.uk>

An internet gateway to evaluated resources in allied health. A one stop shop for quality physiotherapy related websites contributed to by CSP Library & Information Services staff.

## **Outcome Measures Database (Chartered Society of Physiotherapy)**

<http://www.csp.org.uk/effectivepractice/outcomemeasures.cfm>

A physiotherapy outcome measures databases set up by the Chartered Society of Physiotherapy, developed to help physiotherapists select measures appropriate for their practice. The database includes generic measures as well as condition specific measures and includes paediatrics.

## **PEDBASE (Paediatric Database)**

<http://www.icondata.com/health/pedbase/index.htm>

The purpose of this Database is to provide information on various Pediatric disorders.

## **PEDro (Physiotherapy Evidence Database)**

<http://ptwww.cchs.usyd.edu.au/pedro/>

PEDro, the Physiotherapy Evidence Database, is a database of randomised controlled trials in physiotherapy. It has been developed to give physiotherapists and others rapid access to abstracts and bibliographic details of randomised controlled trials in physiotherapy.

## **PubMed (MEDLINE)**

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>

This Web site allows access to a MEDLINE database of more than 9 million references to articles published in 3900 biomedical journals available free of charge on the World Wide Web.

## **Electronic Journals**

### **Developmental Medicine & Child Neurology**

<http://journals.cambridge.org/bin/bladerunner?30REQEVENT=&REQAUTH=0&500002REQSUB=&REQSTR1=developmentalmedicineandchildneurology>

### **European Journal of Paediatric Neurology**

<http://journals.cambridge.org/bin/bladerunner?30REQEVENT=&REQAUTH=0&500002REQSUB=&REQSTR1=developmentalmedicineandchildneurology>

## HERE AND THERE

### Journal of Child Health Care

<http://www.sagepub.co.uk/frame.html?http://www.sagepub.co.uk/journals/Details/j0414.html>

### Journal of Paediatrics and Child Health

<http://www.blackwellpublishing.com/journals/jpc/>

**Pediatric Physical Therapy** official journal of the paediatric section of the American Physical Therapy Association (APTA)

<http://www.pedpt.com/>

### Pediatric Rehabilitation

<http://www.tandf.co.uk/journals/tf/13638491.html>

### Physical and Occupational Therapy in Pediatrics

<http://www.haworthpress.com/store/product.asp?sku=J006>

### Publications

Children's National Service Framework

<http://www.doh.gov.uk/nsf/children.htm>

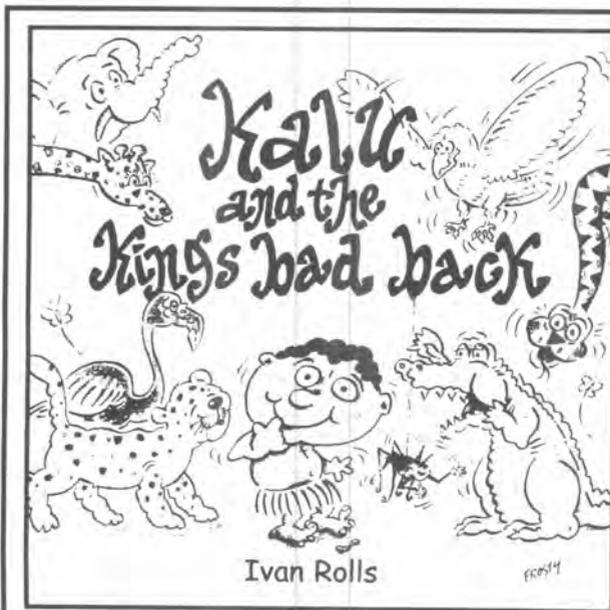
### Paediatric Intensive Care Framework

<http://www.doh.gov.uk/nsf/paediatr.htm>

For more information on physiotherapy related websites search the **NMAP gateway** <http://nmap.ac.uk>

Or refer to **Internet Website relevant to physiotherapists** <http://www.csp.org.uk/libraryandinformation/publications/view.cfm?id=175>

Caroline Miller, Senior Information Officer, Library & Information Services, Chartered Society of Physiotherapy.  
Email [millerc@csp.org.uk](mailto:millerc@csp.org.uk)



An innovative approach to teaching  
**Back-Care and Back/Postural  
Exercise to young children**

**Please call 0151 722 2244**

For an information pack  
and details of courses

Association of Paediatric  
Chartered Physiotherapists

## **Advanced Cerebral Palsy Course**

A 2-day course for Senior 1 Physiotherapists  
working with children with Cerebral Palsy

Indicative content:

- Changing aetiology of cerebral palsy and implications
- Biomechanics
- Bone and muscle change
- Theories of motor control
- Assessment; what do you see, how do you prioritise,
- Timing and type of interventions
- Broader issues  
e.g. pain, pharmacology, vision, communication

**“Touchbase” Conference Centre,  
Mansfield, Derbyshire,  
November 11th and 12th 2003  
Cost - £120 including lunch**

For details contact Fiona Down,  
5 Home Farm Close, Hilton, Huntingdon, Cambridgeshire,  
PE28 9QW

Tel. 01480 830614 email: [fiona\\_down@hotmail.com](mailto:fiona_down@hotmail.com)

**APCP NORTH EAST STUDY DAY**

**LEGAL ISSUES AND CASELOAD WEIGHTING**

- Tutors:** Legal Issues – Pen Robinson, CSP  
Caseload Weighting – Ian Johns, Nottingham
- Date:** Thursday 18<sup>th</sup> September 2003.
- Venue:** St Georges Centre, Middleton. Leeds
- Fee:** Members £30.00 – Non Members £40.00 (includes tea/coffee and lunch)
- Closing date:** 8<sup>th</sup> September 2003

Please send application form (can be downloaded from the [interactivcesp](http://interactivcesp) website in the document section) with a cheque made out to APCP NE and send to course organiser: Jan Kelly, The Vicarage, Church Lane, Woolley, WF4 2JU. Tel: 01977 606908 (W)

**APCP EAST ANGLIA STUDY DAY  
PAEDIATRIC RHEUMATOLOGY**

- Venue:** Addenbrookes, Cambridge
- Date:** Friday 20<sup>th</sup> June
- Speakers:** CLIVE RYDER - Consultant Paediatric Rheumatologist  
JANINE HACKETT - Senior Occupational Therapist  
JAN SCOTT - Senior Paediatric Physiotherapist  
from the Birmingham Children's Hospital Rheumatology Dept.
- Programme:** DIFFERENTIAL DIAGNOSIS  
SURGICAL MANAGEMENT  
DISEASE EDUCATION  
PHYSICAL MANAGEMENT
- Cost:** £30 members, £60 non-members (to include lunch)
- Contact:** Maaïke VanVarick, Tel: 01702 221044  
Email: [maaikevanvarick@hotmail.com](mailto:maaikevanvarick@hotmail.com)

**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**  
**7<sup>th</sup>, 8<sup>th</sup> & 9<sup>th</sup> July 2003**

£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)

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**

*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: [helpinghand.co.uk](http://helpinghand.co.uk)

*Great Ormond Street  
Hospital for Children  
NHS Trust*

## **Weekend Bank Staff**

Are you a Senior I or Senior II paediatric physiotherapist? Do you have acute respiratory skills? Would you like the opportunity to earn extra money?

The physiotherapy department at Great Ormond Street Hospital for Children NHS Trust is looking for physiotherapists just like you to join our weekend on call rota. You would be working with a permanent member of staff providing treatment to children whose condition would deteriorate without input, so proven respiratory skills are essential.

If you would like to discuss this further or arrange an informal visit please contact Devala Dookun, Head of Physiotherapy on 020 7829 8610 or Email [DookuD@gosh.nhs.uk](mailto:DookuD@gosh.nhs.uk). Why not check out the web site at [www.gosh.nhs.uk](http://www.gosh.nhs.uk)

For an application form and job description, please contact our 24 hour recruitment line on 020 7813 8407, fax 020 7813 8227 or email [jobs@gosh.nhs.uk](mailto:jobs@gosh.nhs.uk)

The Trust is committed to equality of opportunity in employment and encourages applications from all sections of the community.

*The child first and always.*

# THE APCP RESEARCH GROUP REGISTER

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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.***

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## Notes for Contributors

The Editorial Board welcomes research material; referenced articles and evaluations of physiotherapy practice; informal articles.

Manuscripts should be sent to Mrs Sally Braithwaite, 531 Church Road, Yardley, Birmingham, B33 8PG.

Copy to be submitted should be typed on one side of the paper, double spaced and with ample margins. All pages should be numbered consecutively.

**Manuscripts** should provide the title of the article and the author(s) name(s) and full postal address for correspondence.

**References** should be given in the Harvard System.

In text Author(s) name and initials followed by the date of publication. Use a,b, to indicate more than one publication in the same year. Where there are 3 or more authors use first name followed by et al.

For books Laszlo, J. & Bairstow, P. (1985) *Perpetual Motor Behaviour* (Rinehart and Winston)

For chapters within books

Morley, T.R. (1992) Spinal deformity in the physically handicapped child, in : G.T. McCarthy (Ed): *Physical Disability in Childhood* (Churchill Livingstone)

For articles Scott O.M., Hyde S.A., Goddard C.M., Dubowitz V., (1981a) Prevention of deformity in Duchenne muscular dystrophy. *Physiotherapy* 67(6), 177-80.

## Tables and Figures

The approximate position of the tables and figures should be indicated in the manuscript.

Keys to symbols should be included.

Tables should be numbered by Roman numerals and figures by Arabic numerals.

Figures should be supplied in a finished form, suitable for reproduction. Figures will not normally be redrawn.

Proofs will be sent to authors if major alterations have been made to the text.

The Editorial Board reserves the right to edit material submitted for publication.

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**An Investigation into the Transmission of  
Gravitational Force During Standing in a  
Prone Standing Frame**

**Evaluation of Orthoses in the Management of  
Children with Cerebral Palsy  
Who Walk with Frames**

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