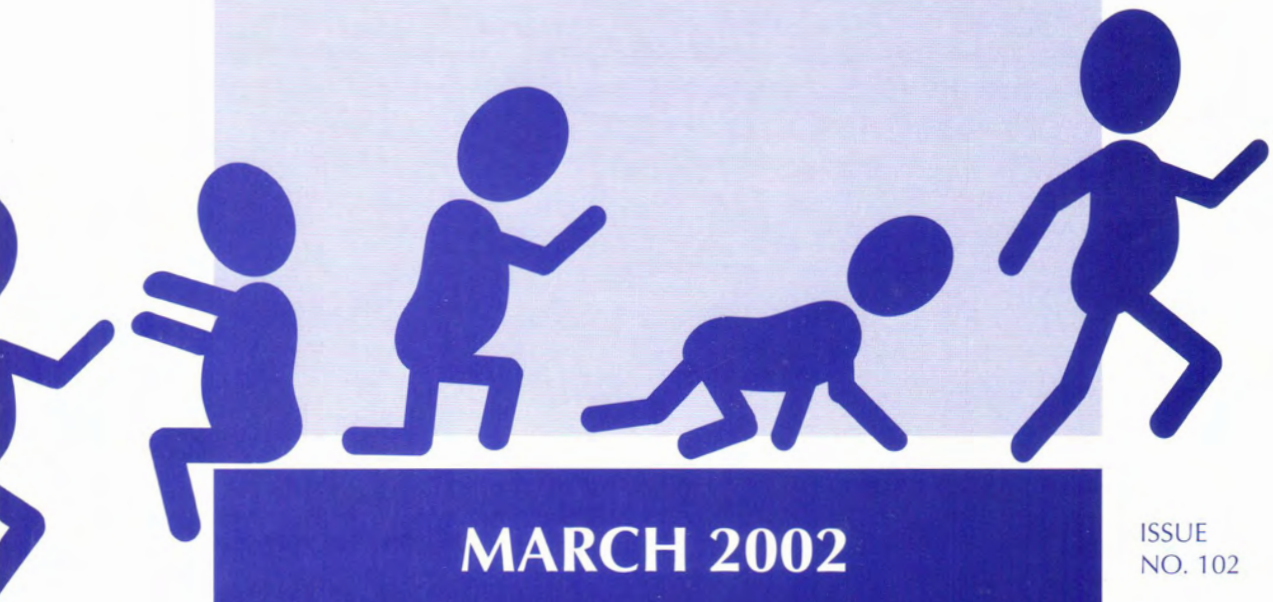
ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

JOURNAL



MARCH 2002

ISSUE NO. 102

OFFICERS OF THE ASSOCIATION

CHAIRMAN	Ms Diane Coggings	7 Union Street High Barnet Herts EN5 4HY
VICE-CHAIRMAN	Mrs Adare Brady	Physiotherapy Dept Antrim Hospital 45 Bush Rd Antrim N Ireland BT41 2LR
SECRETARY	Mrs Christine Shaw	42 Cammo Grove Edinburgh EH4 8EX
TREASURER	Mrs Julia Graham	Child Health Services The North Hampshire Hospitals Trust Paediatric Physiotherapy Dept (G Floor) The North Hampshire Hospital Aldermaston Rd Basingstoke Hants RG24 9NA
PUBLIC RELATIONS OFFICER	Ms Gill Holmes	Child Development Centre Alder Hey Children's Hospital Eaton Rd Liverpool L12 2AP
POST REG. ED. SPOKESMAN	Mrs Terry Pountney	Chailey Heritage Clinical Services North Chailey E. Sussex BN8 4EF
PUBLICATIONS OFFICER	Mrs Eileen Kinley	Physiotherapy Department Child Development Centre Alder Hey Children's Hospital Eaton Rd Liverpool L12 2AP
MEMBERSHIP SECRETARY	Ms Sian Howells	Physiotherapy Dept Llandough Hospital Penlan Rd Vale Of Glamorgan CF64 2XX
EDITOR	Mrs Sally Braithwaite	531 Church Rd Yardley Birmingham B33 8PG
RESEARCH OFFICER	Mrs Sarah Crombie	10a Record Road Emsworth Hants PO10 7NS
C.I.G. LIAISON	Mrs Linda Fisher	Special Educational Needs & Psychology Service S.E.Essex Area Education Office The Knares BASILDON SS16 5RX

JOURNAL OF THE ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS
NUMBER 102 MARCH 2002

EDITORIAL

It seems no time at all since I last sat at a keyboard and wrote the editorial for December's Journal and now we are into a new year. So, firstly let me take the opportunity to wish you all, somewhat belatedly by the time you read this, happy new year.

It has given me very great pleasure to put this particular journal together. As many of you will have realized by now I am always banging on about the importance of sharing our ideas and good practice. You will find in the pages ahead an article written as part of a MSc in Physiotherapy, a case study produced as part of the Introduction to Paediatrics Course recently run in Cardiff by APCP, and a piece about the role of the paediatric physiotherapist in intensive care and the importance of contributions to research produced by a clinical specialist. Along with these is a report of work being done in a specialist unit by two therapists collaborating in their chosen specialist field.

However, just stop to think how much support is given to individuals that allows them to produce these important pieces of work. Courses don't run themselves and participants need funding and the backing of their colleagues to allow them the time to attend. Papers don't just write themselves, they take time and commitment on the part of their authors and those around them. Often we feel guilty about making the time to go on a course. There is rarely locum cover if a therapist is away from day to day work, more strain falls on colleagues to prioritise work and get the really important things done. Families have to fend for themselves, or a babysitter needs to be found - all this can make a course more expensive than ever. A therapist may find a way for the course fees to be paid, but not for the extra child care; study days rarely, if ever, come with a crèche. Our weekends and evenings are precious and yet we use them for all sorts of continuing professional development activities - for courses, journal clubs, analysing data and writing up our findings to mention just a few.

For most therapists there is mandatory training which has to be undertaken to fulfill the terms of working contracts with their trusts and this undoubtedly happens in working time – or sometimes lunchtime – but it does not address the fact that as therapists we are being encouraged to sign up to lifelong learning and are now required to prove that we are doing so. In some way the culture in which this learning takes place has to change. Yes, we can support one another and also share our own experiences, but in order to develop a situation in which all physiotherapists can continue to learn at all levels, there must be some kind of structured support, both in terms of finance and levels of staffing. This would enable us to do the necessary work when colleagues are away, to extend learning opportunities beyond the mandatory and into a philosophy of which we as a profession can be proud, always feeling that we can make the best of every opportunity to learn and always giving the very best to our clinical commitments.

With the demise of the CPSM and the introduction of the new Heath Professionals Council, legislation will be implemented to ensure that, quite rightly, continuing professional development in its many forms will be the order of the day. Please share your thoughts on the future of life-long learning and how it should be taken forward and supported.

Sally Braithwaite
Editor

Viv Wright
Superintendent Physiotherapist
Physiotherapy Department
Shepherd School
Harvey Road
Nottingham NG8 3BB
Tel. 0115 942 5641

Dear Colleagues

Does anyone know of any written standards concerning allocated therapy space meeting Health & Safety recommendations, particularly within special schools for treatment and/or management of students.

I am trying to formalise permanent therapy space or rooms within special schools and am finding it difficult to gain any back up in order to negotiate the need for a private, specific space, with no multi-use facility.

Thank you

Yours sincerely

Viv Wright
Superintendent Physiotherapist

Mrs Sue Whitby
Senior 1 Paediatric
Physiotherapist
Paediatric Therapy Service
Huntingdonshire PCT
Community Unit
Primrose Lane
Huntingdon
PE29 1WE
Tel. 01480 415203

Dear Sally,

Please publish this request for help!

Is there anyone who is a state-of-the-art moderniser? Are you or do you know anyone who is reorganising their paediatric therapy services?

We are trying to "modernise" our service. We need to prioritise our work and sort out what we can really do.

We intend to produce a document to explain to parents and partner organisations what we can do for their children. We may also include what we cannot do.

Have any of you been in touch with Education Services, about training other competent professionals and learning support assistants (LSA)?

Do people have a formal system for training and monitoring LSAs who carry out "proxy physiotherapy"?

What a lot of questions working with children in the NHS (and beyond) in 2002 seems to raise.

Please contact me if you can help in any way. We would be happy to share anything we do and we can all plagiarise with pride!

Many thanks

Mrs Sue Whitby
Senior 1 Paediatric Physiotherapist.

Elen Elais
Priory Manor Child Development Centre
Physiotherapy Department
1 Blagdon Road
Lewisham
London SE13 7HL
Tel. 020 7771 4530
Fax: 020 7771 4556

Dear Sally

I hope you are still the Editor of the APCP Journal!

I was writing to ask whether a request could be put into the next APCP Journal for any colleagues who may be treating a child with a diagnosis of primary torsion dystonia.

I have recently had one of the children on my caseload diagnosed with this type of dystonia and am interested to discuss any specific management issues with a colleague who has experience with this condition.

Thank you very much for your help.

Best wishes

Elen Elias
Senior I Physiotherapist

Belinda Eve
Dereham Hospital
Dereham
Norfolk
NR19 2EX

Dear Diane

I have been given your name by Sue Morgan, the Paediatric Superintendent at the Norfolk and Norwich Hospital so do hope you do not mind me contacting you.

I am a physiotherapist and specialise in the treatment of continence problems. At the moment I am undertaking a project developing a training programme for all disciplines who will be involved in a new integrated continence service. I am aware that the main treatment for enuretic problems is very different for children but am unsure at what age physical treatment is appropriate and how the interface between the paediatric and adult services is best handled in this speciality.

Would you know of any physiotherapist who might be able to help me? I would be grateful for any assistance you could give me.

Yours sincerely

Belinda Eve

Copy for the

JUNE 2002 JOURNAL

must be with the editor by

1st MAY 2002

The editorial board reserve the right to edit all material submitted

LONG-TERM REPEATABILITY OF BRONCHODILATOR CHALLENGE IN CLINICALLY STABLE CHILDREN WITH CYSTIC FIBROSIS

Authors: Diane Rogers, Iolo JM Doull

Address: Cystic Fibrosis Unit
Department of Child Health, University Hospital of Wales, Cardiff, UK

Phone (44) 1222 743530 Fax (44) 1222 743587
Email Doullij@cardiff.ac.uk

Correspondence Dr Iolo Doull
Funding: Nil
Running Head: Cystic fibrosis, bronchodilator, responsiveness

Abstract

Background : The variability in bronchodilator responsiveness in patients with cystic fibrosis (CF) is thought to reflect changes in respiratory status. We therefore determined the long term repeatability of bronchodilator challenge in 15 clinically stable children with CF, 11 of whom were receiving regular nebulised corticosteroids.

Methods : Pulmonary function testing (FVC, FEV_1, FEF_{50}, PEF; expressed as a percentage of age /sex matched predicted values) were recorded pre and post nebulised 5mg of salbutamol when the child was clinically stable, and the change post bronchodilator calculated. The challenge was repeated 12 months later when the child was clinically stable .

Results : There was no significant change in mean pre bronchodilator FVC (86.7 versus 85.2%, 95% CI difference - 5.8, 8.7; p=0.7), FEV_1 (76.5 versus 75.1%, 95% CI difference - 5.1, 7.9; p=0.7), FEF_{50} (69.2 versus 72.6%, 95% CI difference -15.2, 8.4, p=0.6) or PEF (73.5 versus 77.5%, 95% CI difference - 11.9, 23.9; p=0.3) over the 12 months of the study. Comparing the two challenges 12 months apart, there was no significant relationship between post salbutamol changes in pulmonary function. The repeatability (difference between 2 measurements for the same subject for 95% of pairs of observations) of FEV_1 bronchodilator responsiveness was 11.9%. The poor relationship between challenges 12 months apart remained when those children receiving or not receiving inhaled corticosteroids were analysed separately.

Conclusion : Even in clinically stable children with CF, bronchodilator challenge has poor long term repeatability which precludes it's usefulness as a diagnostic tool.

Introduction

Although use of nebulised bronchodilators is widespread in the management of cystic fibrosis (CF) [1], there remains controversy over which patients derive greatest benefit and the indications for initiating therapy [2]. Clinical practice is often to initiate therapy on the basis of a bronchodilator challenge, where a predetermined improvement in pulmonary function is sought following administration of a bronchodilator. Cross sectional studies report markedly differing proportions of CF patients with bronchodilator

responsiveness [3]. However a longitudinal study reported undulations in bronchodilator responsiveness over a 12 months period, with 95% of the patients demonstrating bronchodilator responsiveness at some stage of the study [4]. The authors suggested that changes in bronchodilator responsiveness reflected changes in respiratory status. We therefore determined the long term repeatability of bronchodilator challenge in a group of clinically stable children with CF, most of whom were receiving regular inhaled corticosteroids.

Patients and Methods

All patients were attending the paediatric cystic fibrosis clinic at the University Hospital of Wales. All patients had clinical symptoms of CF and elevated sweat sodium and chloride levels. Forced vital capacity (FVC), forced expiratory volume in 1 second (FEV_1), forced expiratory flow at 50% vital capacity (FEF_{50}) and peak expiratory flow rate (PEFR) were measured using a Compact Vitalograph Spirometer (Vitalograph Limited, Buckingham UK), and the best of 3 attempts recorded (expressed as a percentage of predicted for age, height and sex (ECCS Polgar)). Five mg of salbutamol (Allen and Hanburys, Uxbridge, UK) was given via a Sidestream nebuliser and mouthpiece driven by an CR50 air compressor (Medic-aid Limited , Bognor Regis, UK). Pulmonary function was repeated 15 minutes later, and the change post bronchodilator calculated. Inhaled bronchodilators and corticosteroids were withheld for 12 hours prior to assessment. The challenge was repeated as close as possible to 12 months later when the child was clinically stable (did not require intravenous antibiotics within 1 month of assessment) by the same observer. Changes in pulmonary function were compared using paired t-test, and correlation used for relationships between parameters. Results are presented as the difference in means with 95% confidence interval (CI). The measurement error (within subject standard deviation (s_w)) and repeatability (difference between 2 measurements for the same subject for 95% of pairs of observations ($2.77s_w$)) of the change in pulmonary function post bronchodilator were determined [5].

Results

Seventeen CF patients entered the study, but 2 were withdrawn because they required a course of intravenous antibiotics within 1 month of an assessment. Thus 15 patients (9 male and 6 female), mean aged 9.5 years (range 7-13) completed the study. All were receiving regular inhaled salbutamol, and 11 were receiving regular nebulised budesonide (Astra Pharmaceuticals, Kings Langley, UK). There were no major changes in treatment over the course of the study. During the study 5 children had 2 courses of intravenous antibiotics, 3 had 1 course and 7 children did not require intravenous antibiotics. Over the 12 months of the study there was no significant change in mean pre bronchodilator FVC (86.7 versus 85.2%, 95% CI difference - 5.8, 8.7; p=0.7). FEV_1 (76.5 versus 75.1%, 95% CI difference - 5.1, 7.9; p=0.7), FEF_{50} (69.2 versus 72.6%, 95% CI difference -15.2, 8.4, p=0.6) or PEF (73.5 versus 77.5%, 95% CI difference - 11.9, 23.9; p=0.3). There was a significant correlation between initial and 12

month repeat FVC (r = 0.61, p=0.01), FEV1 (r=0.76, p=0.001), FEF50 (r=0.76, p=0.001) and PEF (r=0.7, p=0.004). There was no significant relationship between baseline lung function and bronchodilator responsiveness at either challenge. Only 2 children had a greater than 10% improvement in FEV_1 at either challenge, and no child had a greater than 15% improvement in FEV_1. Comparing the two challenges 12 months apart, there was however no significant relationship between post salbutamol level changes in pulmonary function (table 1). The poor relationship between challenges 12 months apart remained when those children receiving or not receiving inhaled corticosteroids were analysed separately.

Table 1

Comparison of changes in pulmonary function (%) after nebulised salbutamol in two challenges twelve months apart

	Difference between 1st and 2nd test					
	mean	SD	Correl-ation	p value	Within subject SD	Repeat-ability
FVC	-1.6	10.3	0.1	0.7	7.1	19.7
FEV1	0.0	6.3	0.4	0.1	4.3	11.9
FEF50	0.53	20.2	-0.3	0.3	10.6	29.4
PEF	-0.4	15.4	0.01	0.9	13.8	38.3

Discussion

The clinical status of this group of children did not change markedly over 12 months. There were clinically and statistically insignificant decreases in mean FVC and FEV_1. Within individuals, pulmonary function was significantly correlated at the start and end of the study. Nevertheless the repeatability of bronchodilator challenge was poor. Our findings suggest that over 12 months, changes in FEV_1 bronchodilator responsiveness of up to 11.9% may be due to measurement error, and that changes in other indices are even less reproducible.

Previous longitudinal investigations of bronchodilator challenge have studied groups of patients of wide age range and clinical status [4,6]. The variability in bronchodilator responsiveness they observed may have reflected changes and/or differences in clinical status. Although one study reported a weak negative association between bronchodilator responsiveness and baseline pulmonary function [6], we were unable to demonstrate such a relationship, in keeping with the majority of studies [4]. It is possible that few of the children had significant bronchodilator responsiveness because they did not have severe lung disease and were clinically stable,.

All of our patients were receiving regular salbutamol, and most were receiving nebulised budesonide. There are concerns over the long term use of regular beta 2 agonists in asthma or bronchitis [7]. In contrast long

term beta 2 agonists appear beneficial to patients with CF [8], although their effect on bronchodilator responsiveness in CF is unclear. Inhaled corticosteroids increase bronchodilator responsiveness in children with asthma[9], but have no effect on bronchodilator responsiveness in adults with COPD [10]. Although the role of regular long term corticosteroids in CF is unclear, it is our practice to use such treatment in any CF patient with significant wheeze, and we are unaware of any action of inhaled corticosteroids on bronchodilator responsiveness in CF.

We believe that the poor long term repeatability of bronchodilator challenge precludes its usefulness as a diagnostic tool in children with mild to moderate CF. The indications for initiating bronchodilator therapy in CF remain unclear and requires further investigation.

References

1 Rosenfeld M, Emerson J, Astley S et al. Home nebulizer use among patients with cystic fibrosis. J Pediatr 1998;132:125-31

2 Chernick V. Use of bronchodilator therapy in cystic fibrosis. Ped Pulmonol 1997;S16:275

3 Landau LI, Phelan PD. The variable effect of a bronchodilating agent on pulmonary function in cystic fibrosis. J Pediatr 1973;82:863-8

4 Hordvik NL, K(nig P, Morris D, Kreutz C, Barbero GJ. A longitudinal study of bronchodilator responsiveness in cystic fibrosis. Am Rev Respir Dis 1985;131:889-93

5 Bland JM, Altman DG. Measurement error. Brit Med J 1996;313:744

6 Pattishall EN. Longitudinal response of pulmonary function to bronchodilators in cystic fibrosis. Ped Pulmonol 1990;9:80-5

7 van Schayck CP, Dompeling E, van Herwaarden CL, Folgering H, Verbeek AL, van der Hoogen HJ, van Weel C. Bronchodilator treatment in moderate asthma or chronic bronchitis: continuous or on demand? A randomised controlled study. Brit Med J 1991;303:1426-31

8 König P, Poehler J, Barbero GJ. A placebo controlled, double blind trial of the long term effects of salbutamol administration in patients with cystic fibrosis. Ped Pulmonol 1998;25:32-6

9 Van Essen-Zandvliet EE, Hughes MD, Waalkens HJ, Duiverman EJ, Pocock SI, Kerrebijn KF. Effects of 22 months of treatment with inhaled corticosteroids and or beta-2-agonists on lung-function, airway responsiveness, and symptoms in children with asthma. Am Rev Respir Dis1992;146:547-554

10 Watson A, Lim TK, Joyce H, Pride NB. Failure of inhaled corticosteroids to modify bronchoconstrictor or bronchodilator responsiveness in middle-aged smokers with mild air-flow obstruction. Chest 1992;101:350-355

Maddison JC. Organisation of cystic fibrosis services: from national levels of care to home care. In Practical Guidelines for Cystic Fibrosis Care, Ed Hill CM, Churchill Livingstone, London 1998.

SHEONA TILLING

Royal Gwent Hospital
Newport

Simon is a 13 year-old boy with cystic fibrosis (CF) and learning difficulties. Diagnosis of CF was confirmed at 6 weeks of age by a sweat test after presenting with a history of failure to thrive. As a result of this, appropriate treatment was able to start almost immediately.

I did not meet Simon until 5 years ago when he was 8 years of age; therefore this case study will mainly concentrate on his history and physiotherapy intervention during the time I have known him.

Simon lives with his mum, a part-time night nurse in a local nursing home, Dad, a full-time factory worker, working continental shifts, 16 year-old sister and 8 year-old brother who are both at school. Both Mum and Dad are car drivers and they own one car. No other members of the family have a history of CF.

Simon attends mainstream school. It was noted in March 2000 that the number and length of his hospital admissions was increasing in association with a decline in his school work, possibly exacerbated by his learning difficulties, therefore extra tuition has been arranged - both in hospital and at home - when he is unwell to ensure he manages to maintain his schooling.

Simon's current medication is listed below:

Vitamin K	10mg daily
Vitamin E	200mg daily
Multivitamins	2 tablets OD
Flixotide	125mcgs BD (inhaler)
Salbutamol	200mcgs BD (inhaler/nebuliser)
Flucloxacillin	1gm TDS
Colomycin	1 mega unit BD (nebuliser)
Dnase	1 nebule OD (nebuliser)
Flixonase	50mcgs BD (each nostril)

On objective examination Simon is of average height for his age and maintains adequate nutrition without requiring supplemental feeding. He is not short of breath at rest (SOBAR) and is able to talk with ease when well.

Oxygen saturations are normally 96-97% at rest in air when well, however, they can decrease to 91-92% in air during the day, associated with peripheral cyanosis and SOBAR. During these periods supplemental oxygen is required.

Exercise tests are performed annually with all CF patients (in association with their annual assessments), using the standardised 10 metre shuttle walk test (12 levels). During Simon's most recent test he was able to complete level 11 of the test (880 metres) and stopped as he felt too short of breath (SOB) to continue.

Oxygen saturations before the test were 97%, dipping slightly to 95% immediately and 5 minutes after the test and had increased to 96% 10

minutes after the test. Heart rate at rest was 109bpm, increasing to 190bpm immediately post test and decreasing to 120bpm both 5 and 10 minutes post test. Although normal values of heart rate and oxygen saturations were achieved, recording should have continued until resting values were restored.

Simon demonstrated a bronchodilator response to exercise with his forced vital capacity (FVC) increasing from 76 to 79% of predicted, forced expiratory volume in 1 second (FEV 1) from 60 to 63% and forced expiratory flow (25-75%) (FEF25-75) from 41 to 42%, with peak expiratory flow remaining static at 360 l/min-1. This test was performed on completion of 2 weeks intravenous (IV) antibiotics and therefore, may be argued this could be Simon's best expected performance.

Unfortunately, due to formal annual exercise tests being a new protocol in all age appropriate CF patients, there are no previous tests to compare these results with in order to indicate if his exercise tolerance has increased, been maintained or decreased.

Simon follows a fairly rigorous physiotherapy regime, which will be discussed later. He always has a productive cough, clearing moderate amounts of secretions, increasing during respiratory exacerbations. He has clubbing of fingers and toes. A thoracic kyphosis is progressively developing and he has recently been complaining of right knee pain.

Subjectively, Simon is not always perceptive of his signs and symptoms and as a result does not feel CF interrupts his life, except when he requires hospital admission for a course of IV antibiotics.

On questioning, he is aware of a constant productive cough that does not concern him, he also does not feel he suffers from poor exercise tolerance in relation to his peers as he participates in basketball and hockey in school, as well as swimming and cycling. He does not find cough or wheeze a problem when exercising either in or outdoors. When unwell he does perceive shortness of breath at rest and on exertion and difficulty clearing secretions.

Simon has recently been complaining of intermittent right knee and low back pain.

Simon does admit to getting bored with his physiotherapy regime but manages to stick to it most of the time, largely due to a lot of parental support and encouragement.

It is well documented the lungs of patients with CF produce large amounts of thick secretions due to an ion transport deficiency. This develops a warm moist environment ideal for the colonisation of respiratory pathogens, which sets up a viscious cycle of chronic infection, inflammation, secretion production and airway obstruction causing significant patient morbidity and mortality. As the disease progresses a downward spiral of chronic

respiratory insufficiency, increased work of breathing, increasing nutritional demands, decreased exercise tolerance and impaired mucociliary clearance leads to a significant decrease in quality of life.

Physiotherapy airway clearance techniques form an integral part of any CF patient's medical management in an attempt to optimise ongoing clearance thereby reducing the risk of the above occurring, and reducing the risks of morbidity.

Airway clearance can be achieved by a variety of treatment modalities. Treatment recommended may vary and each patient should be treated as an individual.

Recommendation should be based on what suits the patient best in relation to their specific problems or any contraindications to certain physiotherapy modalities. The patient should also be comfortable with the treatment modality chosen to enhance adherence to the treatment regime, considering most patients are requested to perform airway clearance at least twice a day.

Simon's home physiotherapy regime consisted of percussion and postural drainage (PD) over Mum's lap from a young age, progressing to the use of a wedge and he now uses a Beckibed.

Many studies have been conducted regarding the use of head down gravity-assisted positioning during physiotherapy treatment and its association with exacerbation of gastro-oesophageal reflux (GOR) and thereby causing further secondary lung damage. It is widely documented GOR is increased in CF patients.

BUTTON ET AL (1997) conducted a study to evaluate the effects of standard physiotherapy (using head down positioning) and modified physiotherapy (without head down positions) in twenty newly diagnosed CF patients with a mean age of 2.1 months. All infants had 2 physiotherapy treatment sessions of both standard and modified chest physiotherapy during a 30 hour period of pH monitoring. Findings demonstrated number of, but not duration of reflux episodes was significantly increased during standard physiotherapy, compared to modified physiotherapy.

Although this case study uses a significant number of infants who could represent the rest of the population, it is not clear how soon after feeding physiotherapy was performed which could influence the results.

However, research by PHILLIPS ET AL (1998) has demonstrated an increase in reflux episodes during physiotherapy in the sitting position, not in head down positions.

More research is required concerning this physiotherapy treatment modality. Simon has never demonstrated any signs of GOR, therefore, head down positioning does not pose a problem.

As CF patients become older and are more able to understand their disease and the need to maintain airway clearance, they should be encouraged to participate in their treatment and eventually perform independent physiotherapy treatment in preparation for coping with their disease in adult life.

Simon's mum reports he was educated and encouraged to increase participation with PD and percussion by including the active cycle of breathing (ACBT) by 5 years of age.

The ACBT consists of three components; firstly, thoracic expansion exercises which re-inflate atelectatic airways and enhance collateral ventilation, thereby mobilising secretions from peripheral to central airways; secondly, the forced expiratory technique (FET), which should be performed at mid to low lung volumes, to mobilise secretions from peripheral to central airways in preparation for the cough and sputum expectoration and, thirdly, breathing control and relaxation to maintain oxygen saturations as some studies have highlighted the association of desaturation with the use of the ACBT.

Research has found ACBT assists with improved lung function and secretion clearance, which may be enhanced when used in conjunction with PD and percussion.

At 8 years of age Simon was introduced to the positive expiratory pressure (PEP) mask in an attempt to enhance independence. He still uses the PEP mask with ACBT and has developed an excellent technique.

However, maintaining Simon's concentration with his PEP mask is difficult, the main problem appears to be he prefers to watch television during treatment, and therefore becomes easily distracted. If the television is turned off he becomes bored and hurries his treatment therefore, not maximising airway clearance. Simon generally prefers to play a passive role with physiotherapy, with his mum continuing to treat him with percussion, PD and ACBT, allowing him to continue to watch television! A compromise now seems to have been reached between Simon and his mum in that physiotherapy is performed at least twice daily consisting of PEP mask once and percussion, PD and ACBT once. Much research has highlighted the benefits of PEP mask in the treatment of CF patients.

McILWAINE ET AL (1997) conducted a comparative trial of postural drainage and percussion with PEP mask in forty patients aged between 6 and 17 years over a one year period. Lung functions of all patients were recorded 3 monthly and adherence to physiotherapy was monitored by a daily record and monthly questionnaire. All lung function parametres were found to have improved on the PEP mask group and declined in the PD/ percussion group, concluding the PEP mask was a superior physiotherapy treatment modality in comparison to PD and percussion. If this is the case, initial treatment of CF infants with PD and percussion should be replaced

with PEP mask as the earliest available opportunity, however, although the above study uses a good representation of the population for a relatively long period of time, the results may have been altered if the ABCT had been included in the PD / percussion group. Measurement of the adherence to treatment by a daily record and monthly questionnaire may have introduced some bias and patients/carers may record treatment that may not have actually been performed. Over time 'bad habits' may have developed with the prescribed treatment leading to some alterations in individual treatment regimes, which also could have affected the results.

In contrast, THOMAS ET AL (1995) conducted a literature search to assess the differences found between the PEP mask, standard physiotherapy (PD, percussion and vibrations), autogenic drainage, exercise and FET. Findings conclude greater sputum expectoration was achieved with standard physiotherapy in comparison to no physiotherapy; FEV1 was significantly increased when standard physiotherapy was combined with exercise, rather than standard physiotherapy alone, but no other differences were found between other physiotherapy treatment modalities. Simon's in-patient physiotherapy regime normally consists of PD including head down positions if tolerated, percussion, vibrations and ACBT, three times daily. This is because when Simon suffers a respiratory exacerbation he becomes hypoxic and therefore oxygen dependant, SOBAR with increased tenacity and volume of secretions, thus further increasing his work of breathing. As a result PEP mask become uncomfortable if not impossible to perform effectively. Assisted physiotherapy treatment becomes appropriate in order to encourage rest and to ensure achieving adequate airway clearance.

Invariably, by the end of the first week of IV antibiotics he is sufficiently improved to begin independent PEP mask again, usually starting with evening physiotherapy only, by which time large quantities of secretions have normally already been cleared.

Gradually, independent physiotherapy with PEP mask is increased until discharge home. This allows assessment of his physiotherapy technique at regular intervals as need for hospitalisation is currently about every 6-8 weeks. The community physiotherapy team assesses both mums and Simon's physiotherapy home regime every 3 months.

During Simon's most recent hospital admission, significant blood streaked sputum became a problem. On discussion with the paediatric respiratory medical team it was felt it was possibly due to a severe intercurrent infection causing increased coughing and difficulty clearing tenacious secretions was causing this problem. If this was the case, physiotherapy needed to be continued regularly to assist with airway clearance.

Physiotherapy treatment was modified to PD without head down tilt with thoracic expansion exercises, relaxation and breathing control only. For the following 48 hours no further blood streaking was noted. Treatment was then increased to PD with slow, one-handed percussion. Again, no

blood streaking was experienced during the following 24 hours, therefore, 2-handed percussion was resumed and 48 hours later head down positioning was re-introduced with no further blood streaking evident for the rest of the hospital admission.

Due to the need to continue physiotherapy despite the risk of increasing haemoptysis, care was largely on the basis of trial and error and appeared to be appropriate in this instance. If haemoptysis had increased physiotherapy may have had to be stopped; PEP mark was resumed after discharge home.

Physiotherapy intervention during Simon's in-patient stays falls with the responsibility of the physiotherapist as Mum and Dad find it difficult to ensure timing of visiting around bronchodilator treatment and schooling due to their working patterns, owning one car between them and not living very locally, however, it provides time for the parents to have a break. Mum is reluctant to carry out home IV therapy as she feels she would find it difficult to give treatment on time, increase assisted physiotherapy to three times daily while taking the needs of the other family members into account.

Other physiotherapy treatment modalities which could be used with a patient like Simon to ensure airway clearance are the flutter; a device which provides oscillatory PEP, and has been reported in several studies to alter sputum rheology and therefore aid sputum clearance (KONSTAN ET AL; 1994), however, there are few statistically significant studies concerning this treatment modality, often with small samples of patients and poor results. PRYOR ET AL (1994) found ACBT alone to clear significantly more sputum than the flutter.

In the past there has been some documentation of the use of the flutter and its association with haemoptysis and more recently work discussed at the 1999 North American Cystic Fibrosis Conference associated its use with a decline in FEV1.

As a result I have been reluctant to use the flutter with Simon, however, he does report trying it some years ago but felt it was ineffective in clearing large amounts of thick secretions, and also a dislike of the sensation was a problem, highlighting the need for the patient to be happy with the chosen treatment modality. The cornet is a relatively new device also offering oscillatory PEP, although there is little research into its use and effects at present.

Further research into the use of both these devices is needed.

Autogenic drainage may also be used. However, neither my colleagues nor myself are presently qualified to teach this treatment method. The patient appears to need to maintain concentration and be proprioceptively aware of sputum within the lung. Simon as present does not fall into these categories, but it may be an option for the future.

Exercise is well documented regarding both its physiological and psychological benefits; including improved mood, psychological well-being, relaxation, general fitness, improved circulation, decreased blood pressure, as well as enhancing airway clearance in the respiratory patient.

It now appears to be widely recognised exercise is not a replacement for respiratory physiotherapy but a useful adjunct.

Treatment of Cystic Fibrosis in-patients with exercise can be difficult as due to cross infection issues, patients are not allowed to mix with other respiratory patients. Simon suffers with multi-resistant strain of pseudomonas aeruginosa.

Exercise on an individual basis can become boring leading to lack of interest and adherence. However, if research suggests it can be a useful adjunct it should be encouraged especially with a patient such as Simon, who easily becomes disinterested with physiotherapy and finds difficulty in clearing secretions. When an out-patient, the subject of exercise does not always become a problem with the paediatric population due to school games and out of school activities with peers such as cycling, swimming and roller blading.

During hospital admissions Simon is placed on supplemental nebulised saline (5%) to encourage further thinning of secretions to enhance sputum clearance in association with Dnase.

During the European Cystic Fibrosis Conference in Stockholm this year our medical team reported some discussion involving the use of 7% saline leading to much improved sputum clearance in comparison to 5%; this was used with Simon during his recent hospital admission when physiotherapy had to be modified due to haemoptysis. Although there were no significant outcome markers we could use to assess its effect; sputum expectoration and lung functions continued to improve, despite a radically modified physiotherapy regime. Further published research on this subject is needed.

Simon has been complaining of intermittent generalised right knee pain for approximately the past 6 weeks. On examination there was no bruising, swelling, redness or tenderness on palpation. Full range of motion was achieved and resisted movements and accessory movements did not reproduce the pain. Muscle strength appeared normal and equal. Gait pattern was slightly altered but this may have caused the problem, as Simon had painful verrucas on the side of his left foot, possibly causing increased strain to be placed onto the right lower limb. A diagnosis of Osgood Schlatters was made after an appointment with an orthopaedic consultant. A strengthening regime has begun, concentrating on the quadriceps and vastus medialis oblique in an attempt to improve strength and stability around the knee joint. Continuation of sports to assist with this, and help maintain respiratory status has been encouraged. He has also been referred

to the Community Physiotherapy Team for access to hydrotherapy to help with improvement in muscle strength and decrease pain.

Postural deformities are becoming increasingly common in Cystic Fibrosis patients largely as a secondary complication of high dose, long term use of steroids and their systemic absorption leading to osteporosis in association with recumbent positions when unwell, overuse of accessory respiratory muscles and overall improved longevity with improving medical management. Poor posture leads to excess strain on the joints and soft tissues involved. Simon has presented with a thoracic kyphosis for approximately one year and is now beginning to complain of low back pain.

Postural advice / education was issued to both Simon and his parents initially, although it appears a more pro-active treatment is required to re-educate him of normal posture, strengthen weakened, elongated muscle and decrease pain. Referral to an out-patient physiotherapist specialised in this field may be more appropriate. Hydrotherapy initially for knee pain may also help encourage spine extension and help with strengthening thoracic extensors.

In conclusion, respiratory physiotherapy intervention has been Simon's main stay of treatment over the past few years as his respiratory status has been slowly declining.

Although postural drainage, percussion and ACBT may not seem appropriate for a 13 year-old child, it suits Simon when unwell. Increased independence with PEP mask should continue to be encouraged when well.

Monitoring of haemoptysis is needed to ensure physiotherapy treatment remains appropriate.

The test of incremental respiratory endurance (TIRE) may become an appropriate treatment modality for Simon in the future, as CHATHAM ET AL (1997) found improvements in inspiratory muscle performance and lung function after TIRE inspiratory muscle training, as well as increased sputum expectoration (CHATHAM ET AL; 1998). Autogenic drainage may also be an option as previously discussed.

Exercise needs to be encouraged to maximise sputum clearance and maintain general muscle strength, posture and exercise tolerance.

Simon has problems which may be associated with his learning difficulties, such as poor concentration, lack of interest and motivation which may also be linked to Simon being a normal 13 year-old boy! However, I have learnt a lot from him such as the importance of appropriate physiotherapy treatment, need to modify in certain situations and to look for other Cystic Fibrosis associated problems beyond the respiratory system which require physiotherapy intervention to prevent patient morbitity and maintain quality of life.

Much more could have been included in this case study such as Simon's involvement in the nebulised TOBI trail and role of other nebulised treatment in association with physiotherapy, however the word limit prevented this, therefore, the salient points of his management only have been discussed.

ALL NAMES HAVE BEEN CHANGED TO MAINTAIN CONFIDENTIALITY

References

Button BM, Heine RG, Catto-Smith AG, Phelan P, Olinsky A. (1997). Postural drainage and gastro-oesophageal reflux in infants with cystic fibrosis. ARCHIVES OF DISEASE IN CHILDHOOD. 76; 148-150.

Chatham K, Ionecu A, Davies C. (1997). Through range computer generated inspiratory muscle training in cystic fibrosis. PAEDIATRIC PULMONARY (A347), 299.

Chatham K, Nixon L, Ionecu AA, Garwood R, Premier G, Shale DJ (1998). Increased sputum expectoration in cystic fibrosis patients after repeated resisted mueller manoeuvres. PAEDIATRIC PULMONARY (A505), 348.

Konstan MW, Stern RC, Doershuk C. (1994). Efficacy of the flutter device for airway mucus clearance in patients with cystic fibrosis. THE JOURNAL OF PAEDIATRICS 124(S); 689-693.

McIlwaine PM, Wong LT, Peacock D, Davidson AGF (1997). Long term comparative trial of conventional postural drainage and percussion versus positive expiratory pressure physiotherapy in the treatment of cystic fibrosis. THE JOURNAL OF PAEDIATRICS 131(4); 570-574.

Phillips GE, Pikes SE, Rosenthal M, Bush A (1998). Holding the baby; head downwards positioning for physiotherapy does not cause gastro-oesophageal reflux. EUROPEAN RESPIRATORY JOURNAL 12; 954-957.

Pryor JA, Webber BA, Hodson ME, Warner JO (1994). The Flutter VRP1 as an adjunct to chest physiotherapy in cystic fibrosis. RESPIRATORY MEDICINE 88; 677-681.

Thomas J, Cook DJ, Brooks D (1995). Chest Physical Therapy Management of Patients with Cystic Fibrosis. AMERICAN JOURNAL OF CRITICAL CARE MEDICINE 151; 846-850.

PAUL RITSON MCSP SRP Clinical Specialist Physiotherapist (PICU) Physiotherapy Department
Royal Liverpool Children's NHS Trust (Alder Hey)
Eaton Road, West Derby, Liverpool, L12 2AP
0151 228 4811 (Bleep 111)

Paediatric Intensive Care (PICU) services have changed greatly over the last 10 years. We, as a Profession have had to keep abreast of these changes, and so our role has evolved from that of a technician to one of an autonomous practitioner. This article looks at the role of a Physiotherapist on the Paediatric Intensive Care Unit at the Royal Liverpool Children's Hospital (Alder Hey) in Liverpool. I'm sure that readers with experience in Paediatrics will recognise many aspects of the role, but I hope to bring to the fore a few areas that may not be considered as "the norm"!

To set the scene, our unit is a combined Paediatric Cardiac and General Paediatric Intensive Care. It has 23 beds, making it one of the biggest in the country. There are over 170 nurses on the unit and 3 physiotherapists. Physiotherapy establishment is 1wte Clinical Specialist, 1wte Senior I and 1wte Senior II.

By far the greatest change in our role on PICU has been in the speciality of Cardio-Respiratory Care. On the unit, a blanket referral system is in operation. This means that the physiotherapist will assess and treat children without a medical referral and decide upon their future physiotherapy management. For this to be effective it is vital to have the support of the whole PICU team, from the Consultant Intensivist through to the newest Staff Nurse and the Health Care Assistants. The physiotherapy assessment is very detailed and takes into consideration all of the body's systems including respiratory, cardiovascular, neurological and pharmacological. All of these systems interact with each other, so none can be ignored as they will play a large part in the final physiotherapy problem list.

After thorough assessment, a treatment programme will be devised to address the patient's active problems. Techniques used may include, most importantly, positioning, which will be the mainstay of our treatment programme. We use position to gain optimum gas exchange, aiding oxygen transport and removal of carbon dioxide. It is also used to aid drainage of pulmonary secretions and reduce work of breathing. The most commonly used positions for this purpose are prone lying and sitting, which comes as a surprise to some ventilated children !

Manual techniques, due to the increasing evidence base, are used much less frequently. Percussion is virtually never used due to its deleterious effects on oxygenation in the cardiovascularly unstable patient. Vibrations and shaking must be used with extreme care in the premature or neonatal patient due to the risk of cerebral insult.

Hand ventilation of the intubated patient is utilised frequently to aid the removal of excess pulmonary secretions and minimise the hypoxia caused by suctioning. Hand ventilation technique can be quite difficult to master, but it is a vital therapeutic and emergency procedure that should be taught to all clinical PICU staff.

Physiotherapists are now taking on much more challenging and advanced roles in the respiratory management of PICU patients. These include ventilator weaning, therapeutic and diagnostic broncho-alveolar lavage, bronchoscopy, extubation, taking blood gases, ordering investigations (eg.CXR), and controversially, prescribing of some respiratory drugs such as bronchodilators. It is very important that physiotherapists are seen as part of these developments and are given the support and encouragement to develop their roles.

Another important role of the PICU physiotherapist is that of neurological and neurodevelopmental care. Long term patients will commonly have some degree of delayed development due to their lack of normal stimuli. Acquired or progressive neurological problems will also be frequently encountered.

Here, the PICU physiotherapist will be involved in the initial assessment of developmental delay, the referral to specialist Paediatric Neurology Physiotherapists, and the day to day supervision of neurodevelopmental programmes taking place on the unit performed by nursing staff, play specialists and parents/carers.

In the event of a patient with a progressive neurological condition being admitted to the PICU, the unit physiotherapist should be involved in liaison with the child's community services to enable the child to continue with established treatment programmes and to keep these services up to date with any changes in condition or management.

When a child is admitted to the PICU with an acquired neurological condition such as head injury, the physiotherapist will be responsible for the initial assessment of that child. Depending on assessment findings, they will then arrange for appropriate Orthotics to be supplied (eg. AFO's). Usually, during the initial phase, the PICU physiotherapist initiates early rehabilitation, such as positioning for prevention of contractures and inhibition of increased tone / reflexes. This early stage should always be undertaken with the input of the Neurology Physiotherapist. Once the acute phase has passed and the patient is stable, the patient is then transferred to their care for continuing rehabilitation.

Orthopaedic care is another part of the PICU physiotherapist's role. Patients admitted with orthopaedic problems fall into two categories. The first is elective surgery, such as spinal surgery for kyphoscoliosis. The second are the varied trauma cases such as road traffic accidents.

Patients undergoing orthopaedic management on the PICU should be assessed by the PICU physiotherapist and referred on to specialist paediatric orthopaedic physiotherapists for advice or further management.

By far the most important role of the PICU physiotherapist is one of education and research. I feel we have a huge responsibility to provide education to the Multi-disciplinary Team regarding areas in which we are skilled. We should also be involved with teaching parents and carers to manage their child's on-going physiotherapy needs effectively and safely, and to show them the benefits of physiotherapy intervention.

Physiotherapy is a profession with a relatively small evidence base to justify it. Part of my role is to promote and facilitate research on the unit. This is vital if we are to maintain and improve our profile. We must maintain our credibility if our roles are to develop within the modern NHS structure.

The above shows how the role of the PICU physiotherapist is both diverse and ever increasing. In the future, I feel that the role of this type of therapist will continue to evolve, moving more into the field of ventilator management and education of other members of the PICU Healthcare Team. It is a role that is stimulating, forever changing and, of course, rewarding.

A REVIEW OF THE EFFICACY OF KNEE-ANKLE-FOOT ORTHOSES IN THE MANAGEMENT OF CHILDREN WITH DUCHENNE MUSCULAR DYSTROPHY.

Formative Assignment for the Paediatric Module of an MSc in Physiotherapy

Donna Wynne
Senior Physiotherapist, Woodend Hospital, Grampion University Hospital Trust, Eday Road, Aberdeen.

Introduction

The musculoskeletal management of the secondary complications of Duchenne Muscular Dystrophy (DMD) is exceptionally complex and although published literature exists, there is little agreement. In addition, sound research practice can be compounded by the complicated nature of the disease and its presentation.

Very little up-to-date literature exists with the regard to the use of Knee-Ankle-Foot orthoses (KAFOs), although they are recognised as an important part of the physical management. Bakker et al (1997) identified that there is a large discrepancy of prescription criteria for KAFOs amongst professionals and much variation in compliance levels in boys with DMD. Research of KAFOs prescription is often inextricably linked with surgical management (Shapiro and Specht 1993), which is another complex area with little recent evidence. In general, controversy exists with regard to the specific timing and process of intervention with KAFOs and how this relates to outcome.

A literature search was carried out to identify relevant articles in the fields using the following key words: *muscular dystrophy, rehabilitation, physiotherapy, orthoses, braces, walking, ambulation.* Medline and Cinahl were searched using key terms listed from 1960-2001.

This review critiques three key published research papers which investigate the use of KAFOs in boys with DMD, and highlights key points with relation to outcome. Further discussion will compare the results of a variety of studies carried out in this field and make note of important clinical implications.

Bakker et al (2000). The effects of knee-ankle-foot orthoses in the treatment of duchenne muscular dystrophy.

This recent review article is concerned with evaluating the effects of KAFOs in the treatment of DMD. Specifically, the review sets out to evaluate the use of KAFOs with relation to duration of time worn, and assess whether the outcome is related to certain patient characteristics. This would appear initially to be a very broad aim as they do not state what effects they actually want to evaluate and at what stage they wish to measure outcome of intervention. Hence this review could potentially have a very diverse range of outcomes and results as a large variety of variables could be included. It perhaps would have been more focused to investigate what aspect of KAFO treatment is effective and choose specific areas to include in a review. A broad range of articles with a variety of methodologies were inevitably included in this review, hence making an accurate comparison very difficult. For this reason, it is impossible to exclude the possibility of author bias in selection, with the consideration of the original broadly based review question.

Initially, the reviewers presented inclusion criteria but within this failed to offer a definition of KAFOs. Caliper were also included in the selection criteria but without definition. According to a recent study by Taktak and Bowker (1995), the design and structure of KAFOs has changed significantly and no explanation was presented to validate the inclusion of the study of use of calipers in the review. It is generally understood that calipers

were the early form of KAFOs but it is unclear from the text whether these studies can be reliably compared in terms of outcome as the difference in structure and function of the devices is not explained. Many of the studies included in the review were assessing the outcome of calipers and were carried out in the 1960s and 70s, thereby accounting for a large percentage of the evidence assessed. Author selection bias could not be ruled out when considering the reliability of articles included thereby casting doubt over the true value of the concluding evidence from the review.

The review did include a wide variety of potential designs of studies in terms of controlled and uncontrolled clinical trails and case studies, thus improving the overall base from which sound evidence could be derived. However, the authors did fail to include any unpublished works and in addition, did not mention whether any unpublished work was in existence, nor comment on its worthiness for inclusion in the review. The exclusion criteria were fairly and clearly defined, reducing the ambiguity with relation to suitability of studies.

The inclusion and exclusion criteria presented a very broad based sample of research articles to be reviewed and it appeared this related directly to the fairly non-specific review question posed. Nevertheless, a broad based review if carried out systematically can produce a collective catalogue of results, with the inclusion of appropriate articles (Oxman 1994). However, in this case it appeared that little attention was paid to the quality of articles included in the review.

Evidence was presented to justify the review procedure utilised for selection of articles, contributing to the overall reliability of the process chosen. However, it is unclear from this whether the process chosen was suitable for use in the field of rehabilitation, hence disallowing the assumption that the correct search fields and an adequate number and range of key words used.

The review followed a two-tiered structure but it was not evident from the text where this stage was developed and whether is it could be considered reliable. In this second stage variables were described and studies had to fulfill these in order to be included in the review. Despite this, it become obvious later that some studies had only fulfilled one of the three criteria whist others fulfilled all. This would be considered to be a large methodological flaw and could allow the authors to reach erroneous conclusions. Reviews should be subject to sensitivity analysis (Oxman 1994) to reduce the chances of changes in inclusion/exclusion criteria affecting the conclusions of reviews.

Descriptive statistical methods were used to analyse results collectively, but no other statistical analysis was used to further evaluate or signify the results collated. Throughout the review the authors failed to critique the methodology of the studies which somewhat detracted from the quality of the review. They did however discuss the wide range of outcome measures and variety of methodology, which subsequently disallowed accurate or fair comparison of most sets of results. The failure to comment on the poor quality and dated nature of most studies when considering the results was significantly omitted in the reviewers overall analysis, but they did fairly present some general conclusions. Most notably that KAFOs did appear to increase the length of a child's ambulatory time but that the timing of intervention and the link with surgery was unknown. Overall, they did answer their initial aims, however broad based initially, but disappointingly did not offer any clinical implications as a result of the review. The researchers did however make some recommendations for further studies.

Vignos et al (1996). Evaluation of a program for long term treatment of duchenne muscular dystrophy.

This is the most recently published work investigating the use of KAFOs in children with DMD, and therefore was considered to be an informative and up-to-date perspective for inclusion in this focused review of literature. The study sets out to present, retrospectively, an account and evaluation of forty years of the treatment of boys with DMD, specifically relating to KAFO and surgical intervention. Although descriptive, the longitudinal nature of the study in this field is unique and therefore is deemed to be a key article for inclusion in this mini-review.

Initially, the study explains the general background and provides a relevant contextual framework and explanation for the relationship of the study with the already established body of evidence.

As a retrospective descriptive analysis, the study lacks a robust scientific design from which useful strong conclusions can be derived. Nevertheless, this research can provide a useful perspective with regard to therapeutic input as a result of the unique time-span of the study.

One hundred and forty four patients were included in the retrospective analysis. In order to be included the boys with DMD had to be in attendance at the centre in the study and have been followed up for a minimum of a year.

The study described the assessment process each child underwent which was stated to be the same for every patient, hence it was deemed to be standardised. Despite this, it could be argued that many differing staff members over the period of time could have participated in the measurement of outcome and therefore inter/intro tester reliability unknown. This places doubt upon the reliability of data gathered and conclusions made.

Outcome measures for the assessment procedure were described, some in detail. A functional scoring outcome devised by the authors in 1960 had been used throughout the forty-year period. Justification for its use in the assessment of these subjects is not presented and therefore, its validity and reliability unknown. Passive range of movement techniques of assessment were the same as those used by the American Academy of Orthopaedic Surgeons, and carried a inter/intra rater reliability score and provide a valid and reliable measure of this particular outcome.

The subjects over the years had fallen into one of three categories later derived by the authors. Group one consisted of those who had no "bracing"- later described as KAFO- or operative intervention. The reasons presented for this were somewhat ambiguous and did not appear to follow clear guidelines. It is unclear who made these decisions but it would appear reasonable to make supposition that they were made by more than one person, further reducing the comparability of subjects and individual cases suggesting rather unreliable evaluation.

Group two consisted of seventeen patients who did have KAFOs but whose families declined operative intervention or who were described as only having "slight" heelcord contractures. It is unclear whether this meant the child would actually not qualify for surgery.

The third group of subjects were largest in number, totaling ninety-nine. These patients did have surgery and used KAFOs to assist walking. They formed two subgroups, those who had tenotomy of achilles tendon and release of the illiotibial band, and the second group who had the aforementioned procedure and a posterior tibial transfer.

The procedure for bracing was based on criteria developed in 1962 by Spencer and Vignos which although dated, has become the widely accepted procedure since that time, (Heckmatt et al 1985; Williams et al 1984). This follows a standardised validated protocol enhancing the reliability of the results.

Interestingly, a large part of the assessment was based on subjective observation techniques especially related to gait and balance. These techniques were presumably utilised and as direct result, became an established part of assessment prior to the development of any other sophisticated gait analysis techniques. It is well recognised that observation is a large part of assessment but is not as sensitive to detecting change as other methods (Rose et al 1991). Therefore, it cannot be concluded reliably that the subjects studied were being issued with KAFOs at the correct times, or that the changes were being accurately assessed.

Only descriptive statistics were used to analyse the results, and in view of the large study population, it is disappointing that more robust methods of analysis were not used to offer levels of significance. This may have added more clarity and credibility when considering carefully the results of a generally unscientific study. Unfortunately it is impossible to accept the results of the authors which state that the use of KAFOs alone extends the ambulation ability of a child with DMD to a mean age of 13.6 years and that standing ability is extended by 2 years. Nevertheless the study does provide some descriptive data, which if subject to some robust statistical testing could be utlised with caution to offer some meaningful results. It is important to note, that despite being of poor design quality, this study offers the only longitudinal results with relation to the use of KAFOs and as such is valuable in this capacity. Furthermore these findings are in agreement with other studies published, namely, Hyde et al (1982), Williams et al (1984), and Heckmatt et al (1985).

Hyde et al (1982) Prolongation of ambulation in duchenne muscular dystrophy by appropriate orthoses.

The study by Hyde et al is unusual in terms of its aims. The aims of the study are fairly comprehensive. In addition to assessing if a combination of surgical intervention and KAFOs prolong ambulation, they also attempt to find out if there is an optimum time for intervention. The study proceeds to investigate if the intervention has any effect on muscle strength, and if any specific design features should be considered when prescribing the KAFOs. This is a unique study in terms of its comprehensive design and unusual combination of objectives and therefore was considered to be of key importance in the review of literature.

Thirty boys were included in the study, but as with many other studies of this nature it was unknown how they were recruited to the study. The only criteria for inclusion were that they had to be considered suitable for KAFO prescription. In order to fulfill these criteria the ambulant child had to have a diagnosis of DMD and be considered to be a regular faller or at risk of falling. Parental permission also fulfilled mandatory criteria.

Outcome measures used included the measurement of muscle force using the validated medical research council grading, and measurement of functional performance using the scale derived by Spencer and Vignos (1962) as utilised by Vignos et al (1996).

Each of the thirty boys had an achilles tendon release followed by a period of casting and subsequent physiotherapy sessions. This study is one of very few which illustrates a standardised approach to surgery and offers a description of the physiotherapy management including times scales of intervention. Another unusual feature in this particular field of studies, but nonetheless very positive, is the inclusion of a description of the design of the KAFOs utilised in the study. This offers important information often omitted by many other

authors, further adding to the replicability of the study, and providing an improved design upon which to build.

Nevertheless, as with all studies published investigating KAFOs, too few variables are controlled including demographic characteristics like age and functional ability. This study is unfortunate in that it includes a large age range of patients with varying degrees of functional abilities, which make the generalisation of results difficult.

Results of the study demonstrated that there was a significant correlation between the duration of ambulation with KAFOs and hip abductor strength. Further strength was added to these results with the addition of statistical analysis and the notation of probability values. It has been noted with previous studies critiqued, that this was a major detraction from the credibility any results obtained, and therefore the inclusion of the statistical analysis in this study is a very positive feature.

Overall, the authors did report on all of their original aims, but once again, the results of this study should be analysed carefully in view of the small sample size. Furthermore, although it is evident that this study is of a better standard than some others in the field, it is important to consider that there are many improvements to be made to the design before definitive conclusions could be derived.

Clinical Implications

It is clear that the studies in this field conducted to date, carry a large number and variety of methodological flaws, a few of which have been highlighted from the small sample of literature reviewed in this piece of work. Importance should be placed on assessing the results obtained in context, and careful attention should be paid to acknowledge the true significance of any results with regard to the potential implications on clinical practice.

In general terms, the evidence, although of varying quality, seems to suggest that the provision of KAFOs has some effect on lengthening the period of ambulation and following this, can extend a child's standing ability. However, there are many variables within this to be considered.

The varied use of outcome measures makes it impossible to combine the results of studies reliably. In addition, many studies rely on largely subjective methods of measuring outcome which could not be accurately compared.

No studies to date have used a biomechanical analysis approach to the assessment of a child's function or gait when wearing KAFOs, a method advocated by Hsu and Furumasu (1993). They suggest that this would be the most accurate manner to establish the correct timing for intervention, an issue not answered by previous studies.

An important consideration when assessing the value of the more dated studies is the continuing advancement in the medical field. It has been suggested by Shapiro and Specht (1993), that with the advent of new molecular tests, it has become apparent that some patients diagnosed with DMD have now been found to have Becker's type muscular dystrophy. This has huge implications for the early studies involving patients with DMD, as Beckers' type dystrophy is known to have a less aggressive progression, and could subsequently, render the results invalid as studies may have been conducted on subjects with different pathologies.

The design features of KAFOs has come under the research spotlight in recent years with studies by Bakker et al (1997) and Taktak and Bowker (1995) and is no doubt an area which will require development as patients views and compliance has generally been an area which has been neglected. It is evident that from the research completed that greater consideration needs to be taken with regard to patients' views and perceptions of their treatment.

Conclusion

In view of the quality of the evidence presented, and the vast difference in terms of timing of intervention and surgery, it seems that no agreement exists with regard to best practice for the provision of KAFOs. Complex surgical procedures and presentation of patients will continue to challenge clinicians in their practice and researchers with the design of investigations.

In terms of clinical practice it is evident that the use of KAFOs has some benefit, so therefore the importance of objective baseline measures and consideration of the wider implications and issues as discussed, will enable clinicians to make decisions based on individual presentation and best practice. The development of more robust research design with a greater focus on specific aspects of management, will hopefully provide the evidence upon which to base treatment in the future.

References

- BAKKER J., DEGROOT I., DEJONG B., VAN TOL DE JAGGER M., LANKHORST G. (1997) Prescription pattern for orthoses in the netherlands; use and experience in the ambulatory phase of duchenne muscular dystropy. Disability and Rehabilitation 19(8), p318-25.
- BAKKER J., DEGROOT I., BECKERMAN H., DEJONG B., LANKHORST G. (2000) The effects of knee-ankle-foot orthoses in the treatment of duchenne muscular dystrophy: review of the literature. Clinical Rehabilitation 14, p343-59.
- HECKMATT J., DUBOWITZ V., HYDE S., FLORENCE J., GABAIN J., THOMPSON N. (1985) Prolongation of walking in duchenne muscular dystrophy with lightweight orthoses: review of 57 cases. Developmental Medicine and Child Neurology. 2, p155-60.
- HSU J., FURUMASU J. (1993) Gait and posture changes in the duchenne muscular dystrophy child. Clinical Orthopaedics and Related Research. 288, p122-25.
- HYDE S., SCOTT O., GODDARD C., DUBOWITZ V. (1982) Prolongation of ambulation in duchenne muscular dystrophy by appropriate orthoses. Physiotherapy. 68(4), p105-108.
- OXMAN A. (1994) Checklists for review articles. British Medical Journal. 309, p648-51.
- ROSE S., OUNPUU S., DELUCA P. (1991) Strategies for the assessment of pediatric gait in the clinical setting. Physical Therapy. 71(12), p961-80.
- SHAPIRO F., SPECHT Z. (1993) Current concepts review: The diagnosis and orthopaedic treatment of inherited muscular diseases of childhood. Journal of Bone and Joint Surgery. 3, p439-54.

- SPENCER G., VIGNOS P. (1962) Bracing for ambulation in childhood progressive muscular dystrophy. Journal of Bone and Joint Surgery. 44A(2), p234-42.
- TAKTAK D., BOWKER P. (1995) Lightweight modular knee-ankle-foot orthoses for duchenne muscular dystrophy; design, development and evaluation. Archives of Physical Medicine and Rehabilitation. 76, p1156-62.
- VIGNOS P., WAGNER M., KARLINCHAK B., KATIRJI B. (1996) Evaluation of a program for long-term treatment of duchenne muscular dystrophy. Journal of Bone and Joint Surgery. 78-A(12), p1844-52.
- WILLIAMS E., READ L., ELLIS A., MORRIS P., GALASCO C. (1984) The management of equinus deformity in duchenne muscular dystrophy. Journal of Bone and Joint Surgery. 66-B(4), p546-550.

NOTICE

The 29th Annual General Meeting

of the

Association of Paediatric Chartered Physiotherapists

will be held on

Friday 12th April 2002

at

Homerton College, Cambridge

beginning at 11.20am

All paid up members of the Association are entitled to attend. Voting will be restricted to full members of the Association and a current membership card will be required.

Minutes of the last AGM are available from the Secretary on receipt of a S.A.E.

Nominations are invited for one committee vacancy.

Nominations should be sent to the Secretary by the end of **March 2002** together with the names of a proposer and seconder who must be paid up members of the Association.

Association of Paediatric Chartered Physiotherapists

NOMINATION FOR NATIONAL COMMITTEE

NOMINEE .....

ADDRESS .....

.....

TEL. NO. .....

C.S.P. NO. ..... A.P.C.P. NO. .....

PLACE OF WORK .....

POSITION .....

PROPOSER .....

ADDRESS .....

.....

TEL. NO. ..... A.P.C.P. NO. .....

SECONDER .....

ADDRESS .....

.....

TEL. NO. ..... A.P.C.P. NO. .....

BRIEF PERSONAL PROFILE IN SUPPORT OF YOUR NOMINATION.

.....

.....

.....

.....

Please return completed form to : APCP Secretary, Mrs. Christine Shaw, 42 Cammo Grove, Edinburgh EH4 8EX to arrive no later than 4 weeks prior to the A.G.M.

SUMMARY OF ISSUES DISCUSSEDAT THE APCP NATIONAL COMMITTEE MEETING HELD AT THE CHARTERED SOCIETY OF PHYSIOTHRAPY, LONDON, ON 18TH JANUARY 2002

Research

Research is the topic for the Study Day in Cambridge on 12th April. The programme and application forms were in the December Journal. Sarah Crombie, Research Officer, is looking for papers for a free paper session.

Anyone who is involved in any kind of research should let Sarah know by completing the form at the back of the Journal

Education

The next "Introduction to Paediatrics Course" will take place in Harrogate from 18th – 22nd November 2002

The MSC paediatric module in Edinburgh is currently running for it's second year. It will not run next year but the following year OTs will also be invited to attend

APCP have submitted four topics for inclusion in the CSP 's Guideline project. These are: orthotic managements in children with neurological problems; hip management in cerebral palsy: obstetric brachial plexus palsy and physiotherapy provision in mainstream schools.

Public Relations

APCP will instigate a poster competition entitled "Children's Physiotherapy Goes Everywhere". Details will be announced at the AGM in April and judging will be at Conference in October

Membership

Membership of APCP continues to increase. There are currently 1544 members but at the end of 2001 there were 1720 members.

Conferences

The APCP AGM will be held on 12th April at the Study Day in Cambridge
APCP Conference will combine with the CSP Congress in October 2002 in Birmingham
APCP Conference 2003 will be held in Bournemouth from 2nd – 5th April

Any member wishing to see a full copy of the minutes of the above meeting should contact their regional representative

Next Meeting

The next meeting of the APCP National Committee will be held on Thursday 11th April 2002 at Homerton College, Cambridge.

Clinical Interest Group Liaison Officer Report

- **Professional Development Opportunities: CI/OG Resource Directory:**

The directory had been launched at the CSP Congress. It has been designed to fit in with the standard pack, can be purchased separately, £12.00, if individuals already have a standard pack. The directory would be reviewed with the 'standards', scheduled for 2002. The use of umbrella groups facilitated the groupings and provided a navigational tool to enable readers to target a specific section of physiotherapy.

- **CSP's CPD CD-Rom available:**

This is also available in hard copy, from the CSP, £24.68 including VAT and postage and packing. It is designed for personal use only, partly due to the issues of a personal portfolio and also related to the purchasing license. There are copyright issues. Individual CIGs wanting workshops on CPD are invited to contact Julia O'Sullivan at the CSP on (020 7306 6612 or osullivanj@csphysio.org.uk), who will organise/run workshops for individual CI/OG's on CPD. Considerations of how groups could support members on CPD was going to be further discussed.

- **CSP Website rebuild:**

The CSP are creating a 'new' website, which is due to be launched in February. It will be easier and quicker to access information. There will be a directory of members, in response to frequent requests from members and the public. It will be able to link to CIG's own sites, or create a webpage as requested.

- **CI/OG Conference 2002:**

There are initial plans for a CI/OG conference, dates etc not confirmed.

Representatives from all CI/OG groups - numbers depending on venue / cost

CI/OG's would be charged for non-attendance, if requested to attend

Ongoing plans

- **Time off issues:**

A questionnaire has been designed and is being piloted among CIG members. The plan is to send to all members of CIGs to ascertain extent of the problem / issue about time off for CIG activities, including study days.

- **Promotion of CIGs:**

CI/OGs have become an accepted part of physiotherapy and members of the profession want to use them but only 45% of the membership want to give something in return by joining the groups. Given their role around CPD, should membership to a CI/OG group, at a certain grade, be mandatory? Groups needed to be marketed to the profession and requested assistance from the CSP to do this.

- **CSP Congress:**

ICC in Birmingham has been booked for a further three years.

Suggested collaboration with smaller groups if own group could not sustain a 3-day programme.

- **CI/OG DDA representatives:**

To ensure the groups' compliance with DDA there will be a named representative from each group.

- **Guidance for developing community junior rotational posts:**

Guidance paper has now been re-drafted.

- **Draft curriculum for qualifying programmes in physiotherapy:**

Feedback from the umbrella groups included needing a stronger emphasis around empowerment and training of patients and the weighting within the document about the balance between specific physiotherapy issues and how physio fits into the rest of the team.

- **Guidelines for Good Practice for the Management of the Multiple Student Model or Practice Placements in Physiotherapy:**

Discussion took place, around this paper, about the advantages and disadvantages of single or multiple student placements.

- **Setting the agenda:**

This is a project in the Northern and Yorkshire Region for professional networking, support and effectiveness. There is involvement of the CIGs, and the concept is to have structures in place to actively and efficiently collaborate, network and offer peer support.

- **Organisational Review:**

The CSP has undertaken a restructuring procedure to improve services to members, improve CSP business planning, priority setting and delivery, ensure improved staff team working withing 'functions', (rather than departments) and across the organisation and provide more value for money.

Linda Fisher

FORWARD NOTICE OF THE 1st ANNUAL APCP POSTER COMPETITION

A GREAT OPPORTUNITY!!

In order to update our resources and create a source of publicity material APCP has decided to hold an annual poster competition. This first competition will be sponsored by APCP. The theme is:

"CHILDREN'S PHYSIOTHERAPY GOES EVERYWHERE."

There are two categories:

1) Professional - open to APCP members
2) Children - open to under 16 year olds

We are looking for creative and informative designs which reflect the diverse nature of Paediatric Physiotherapy. Designs can include photographs, drawings, text - in fact anything which informs on Paediatric Physiotherapy.

This free competition will be launched at the AGM Study Day in Cambridge, April 2002. Further details and application forms will be available at this time.

The executive committee will judge the competition at Conference in Birmingham in October 2002.

Winning posters will be reproduced in poster and leaflet form and will be available for sale.
Prizes will include £100 book token for the professional category, £50 Smiths vouchers for children.

WATCH THIS SPACE!

For further details please contact Gill Holmes PRO, CDC RLCH NHS Trust Alder Hey, Eaton Rd, Liverpool, L12 2AP. 0151 228 4811 ext 2660.

APCP Study day in Cambridge

We are eagerly looking forward to the study day *'Involving Children in Research-getting started'*, which is being held on April 12 in Cambridge. If you have not yet applied, it is not too late!! The application form was in the December journal along with the programme for the day. We have organised some excellent speakers and research projects to be presented in the free paper session. So whether you are just thinking about getting involved in research, feel you need to understand the basics better, or would be interested to hear about some projects which are being carried out around the country, please come and join us.

Research Register

Our research register is slowly growing. If you are involved in any piece of research, however small, please tell me about it. It may help someone else who is looking to investigate a similar area, as well as disseminating your work. Even if you have not yet embarked on a project, but need some help or advice, please join our research group. Do fill out the form at the back of this journal.

CSP news

Changes to R&D

In line with the government's current implementation of Strategic Health Authorities, regional R&D offices are being redesigned. All regions are now stopping commissioning on new R&D activity as money is being redirected towards the national programmes. There will most likely be 4 National Directors of R&D, but it is not clear how the current services will carry on being delivered. Changes are region specific and therefore you need to contact your region for changes affecting them.

Effectiveness bulletins

Two new bulletins on rheumatology and neurology are now available from the CSP. Contact Marion Attew, Tel: 020 7306 6617

Useful Websites

RDInfo: This database is now funded by the DoH and is available on www.rdinfo.org.uk It is easily searched to find over 800 funding sources for healthcare research in the UK. This covers 1700 different awards totalling over £45m. Well worth a look.

RDAnnounce: This new web-based NHS R&D alert facility carries details of the most recent announcements from the DH?NHS R&D. It includes funding calls, key publications and other developments such as policies It is found on www.doh.govuk/research/rdannounce.htm

PEDRO: http://ptwww.cchs.usyd.edu.au/pedro/ This is a database of abstracts of randomized controlled trials of physiotherapy topics

NICE database: http://.nice.org.uk/database/db_ind.htm

Current controlled trials:
http://controlled-trials.com/ligin.cfm?=form&returnto=home_page.cfm

www.ex.ac.uk/stloyes/schhom.htm Electronic distance learning module: the university of Exeter have produced a module to introduce principles and application of evidence based practice

Chartered Society of Physiotherapy: www.csp.org.uk

Additional web-sites to visit

OMNI (Organising Medical Networked Information). Provides a gateway to many quality Internet sites dedicated to health and medical sciences. Based at the University of Nottingham, at http://omni.nott.ac.uk

CIRRIE is the Centre for International Rehabilitation Research Information and Exchange. They have a free database for international research on rehabilitation. It also has a directory of international research centres and conferences. http://cirrie.buffalo.edu/search

(PIER) Paediatric Information and Education Resource
This is a free web site developed by the Sheffield Children's Hospital to encourage communication between health professionals involved in the care of children. The site contains many national and local guidelines for paediatric care, examples of patient leaflets, educational material and research findings. http://www.pier.org.uk
Username: PIER Visitor, Password: Browse

Sarah Crombie
Research Liaison Officer

REGIONAL REPRESENTATIVES

EAST ANGLIA

Ms Fiona Down
Hinchingbrooke NHS
Healthcare Trust Primrose Lane
Huntingdon
PE29 1WG

LONDON

Ms Jeanne Hartley
Physiotherapy Dept
Great Ormond Street hospital
London
WC1N 32JH

SCOTLAND

Mrs Lesley Smith
Physiotherapy Dept
Royal Hospital for Sick Children
York Hill NHS Trust
Glasgow G3 8SJ

SOUTH WEST

Mrs Pam Evans
York House
New Road
Swanmore
Hampshire SO32 2PF

SOUTH EAST

Mrs Peta Smith
Physiotherapy Dept
Mary Sheridan Centre
43 New Dover Rd
CANTERBURY CT1 3AT

WALES

Mrs Jill Williams
Nursery Unit
The Hollies Special School
Pentwyn
CARDIFF

NORTH WEST

Pamela Bland
Physiotherapy Dept
Paediatric Out-Patients
Queens Park Hospital
BLACKBURN
BB2 3HH

TRENT

Ms Claire Hill
Physiotherapy Dept
Sheffield Children's Hospital
Western Bank
Sheffield
S10 2TH

NORTHERN IRELAND

Mrs Judith McArthur
Physiotherapy Dept
Whiteabby Hospital
Doagh Road
Newtonabbe
Northern Ireland BT37 9RH

WEST MIDLANDS

Ms Fiona Nicholson
Physiotherapy Dept.
Birmingham Children's Hospital
Steelhouse Lane
B4 6NL

NORTH EAST

Mrs M Harrison
11 Whitsundale Close
Knaresborough
N Yorkshire
HG 0HX

OVERSEAS

Mrs Gill Holmes PRO
Physiotherapy Dept
Alder Hey Children's Hospital
Eaton Road
Liverpool L12 2AP

SOUTH EAST

First of a happy New Year to you all!

By now you should have all received your fliers and made a note in your diaries about our next regional study day to be held on Saturday 9th March at Goldie Leigh, Abbey Wood. Following the very positive feedback from the successful study day held last year in workshop format this day will be in the same format. The title of the day is 'Children with Disabilities in Mainstream Schools' and I'm sure should spark off interesting discussion. The day is free to members and £5.00 for non-members.

The day will include the AGM. There are vacancies on the committee so please submit nominations to Claire Hay, the Secretary, as soon as possible.

The committee is making plans for 3 further study days for the coming year. Subjects being considered are Muscle Imbalance, Postural Management, and Children with Behavioural Problems so keep an eye out in Frontline and our Journal for further info.

Claire Hay has kindly agreed to take on the office of Secretary as Holly Grant has had to step down due to increasing home commitments. Thanks to Holly for all her hard work.

Many people have renewed their subscriptions for this year, however there are still a number outstanding. Please could you remind friends and colleagues if you know they have not yet done so!

The Research study day in Cambridge on April 12th looks really interesting – don't forget to get your application forms in soon (see December'01 Journal). The national AGM will also be held on that day. Hope to see you all there.

PETA SMITH

NORTH EAST

By the time you receive your Journal, many of you will have attended or be about to attend the AGM and study day on Paediatric Manual Handling. Hopefully you will have taken a copy of the application form for further use. In future, I shall not be sending them out automatically with the flier. If you require a form, I am happy to send one to individuals.

NB. The date – Saturday 22nd June 2002, and venue – Halifax, are correct for the next study day but the topic and speaker have changed. Christine Shaw, Development Officer for MOVE in Scotland, will come and do a whole day for us on the introduction and overview of the MOVE programme. MOVE stands for Mobility Opportunities via Education. It combines mobility skills with a teaching approach. This will be an excellent day for therapists and our educational colleagues, so do invite them along.

We intend re-scheduling the Respiratory Study Day, already advertised for June, with the AGM in 2003. Part of the day will be a problem solving session.

An update on 'Setting the Agenda Pilot Project'. There has been an initial meeting of CIG reps from the area with Nigel Senior (CSP) and Isabel Ashford, Regional Professional Officer for the project. It is intended in the very near future to set up electronic networking (web-site) for clinical and occupational groups in the Yorkshire and Northern Area so that communication and collaboration may effectively take place across the profession. This is a very exciting development and if successful will be rolled out nationally in a year's time. NB. This web-site will be in addition to the national APCP web-site to be launched very shortly.

MARY HARRISON

SOUTH WEST

It is with some sadness that I write my last regional report for the Journal. I have thoroughly enjoyed the last 4 years as SW Regional Rep and 3 years as Chairman of the SW Committee. It has been great hearing from so many of you and meeting you at study days and conferences. Ruth Davies took over the Chair last year and has finally succumbed to the offer of

being Regional Rep as well. Good luck, Ruth, and I hope you enjoy the experience as much as I have.

The AGM is on Saturday16 March 2002, at Winchester, during a study day on respiratory matters. Topics covered will include the postural management of chests to prevent deformity and loss of respiratory function, anatomy and physiology of the child's chest, video-fluoroscopy and feeding/swallowing problems in relation to respiration.

The Committee has made a start on organizing the APCP Conference 2003, which will be at a seaside resort near you, so book early to ensure a room with a sea view!

Please check Frontline and local fliers for details of afternoon workshops in the Wessex region. We hope to have one soon on the differential diagnosis of cerebral palsy. Would anyone like to organize and host one on the problems of local and national funding for 24 hour postural management? (or any other hot topic).

Finally, I would like to thank the SW Committee for all the work they do on your behalf. Please continue to support them.

With best wishes to all SW members.

PAM EVANS

NORTH WEST

It doesn't seem that long since I wrote for the last journal and here we are at the end of January 2002 planning for APCP Conference in 2004. Hopefully you all attended the NW AGM on 2nd March and we now have some new committee members for 2002, as well as knowing a lot more about managing spasticity, thanks to Chris Barber.

On 6th June, 2002 we have a study day at Hebden Green Winsford looking at the physiotherapeutic and surgical intervention of talipes and Torticollis.

In November the committee are organising a study day at Liverpool looking at Gait Analysis, so keep your eyes and ears open for further information.

Please encourage people who may have forgotten to renew their membership or who are interested in joining the APCP to contact the membership secretary Sian Howells (details at the front of the journal).

PAM BLAND

LONDON

There will be a study day on April 10th at the Education Centre, Northwick Park Hospital entitled 'The new SEN code of practice and how does it affect you?' There will be various speakers and it promises to be a really good day. Please contact Nicky Bennett at Q1 St Anne's Hospital, St Anne's Road London N15 if you would like to attend. The Branch AGM will also be held so if you have any suggestions to make, or opinions to share on the running of the London Branch, this is your chance to have your say!

Physiotherapists are under increasing pressure to demonstrate the effectiveness of their work. The Movement Assessment Battery for Children is one instrument which provides both quantitative and qualitative information about a child's motor performance. We are arranging a day's course on April 30th at the Institute of Education in London which will consist of formal lectures and practical workshops on the Movement ABC. Speakers include Sheila Henderson who is the senior author of the Movement ABC, Anna Barnett, Research Psychologist and Judith Peters, Clinical Specialist Physiotherapist. The day is designed for those with previous experience as well as new users. Places will be limited so please book early by contacting Kate Page at the Bobath Centre, East End Road, London N2.

There will be a vacancy on the committee at the AGM so if any of you would like to contribute to the running of the Branch please do get in touch with Kate.

JEANNE HARTLEY

EAST ANGLIA

We already have two study days lined up this year. The first, 'Is Room 101 the best place for your physiotherapy records?' will be held in conjunction with the regional AGM on March 9th, 2002 at Addenbrooke's Hospital.

In June we will be hosting a two day course on gait analysis with Elaine Owen - for further information check out the 'courses' section!! Places for this are limited - so be quick!!

The committee also have many ideas up their sleeves for the rest of 2002 and 2003. If any of you have any topics which you would like us to cover then please do let us know, as hopefully once Congress is over we will have more time to organise local courses again.

We have recently lost 2 committee members. Linda Fisher has left to take up the post of CIG Liaison Officer on the National APCP Committee. In September, Linda was seconded to Essex County Council to lead a project on multi-agency provision for children and young people with disabilities, and their families. Linda has agreed to present her experiences as part of the APCP programme at the CSP Congress in October - we therefore look forward to seeing her again there. Nicky Murray has also decided to leave the committee as she is expecting her first baby - CONGRATULATIONS!! Nicky has been busy over the past 6-8 months investigating the possibilities of launching our own website - so many thanks to Nicky (and her husband) for their work - the rest of us wouldn't have had a clue !!

And finally, as I reported last time, please don't forget the National APCP AGM and Study Day which is being held on Friday, April 12th 2002 at Homerton College, Cambridge - it would be good to see as many of you there as possible.

FIONA DOWN

WALES

APCP Wales has continued to experience a very busy autumn and winter. After a most interesting and thought-provoking C.P. problem-sharing day, led by Jennie Carroll, Director of Bobath Cymru, we rush on to our next occasion. This will be a Manual Handling day, run by Pat Alexander at Prince Philip Hospital, Llanelli on March 15th, starting at 9.30 a.m. We finish at 4 p.m. and hold our AGM straight away - but more of that later.

We have made provisional arrangements for the following courses for 2002:

April/May	Update on Paediatric Rheumatology.
May/June	Paediatric Hydrotherapy - possibly in Bridgend area
Oct./Nov.	Sleep and Lying Postures - Terry Pountney V.P. Shunts - Mr Hadfield, University Hospital of Wales Cardiff

We hope that our membership will find something to interest and inform them in the above, and will continue to support our efforts in organising the courses.

The National Assembly of Wales has commissioned literature reviews of children with special needs in Wales. This includes information about good practice guidelines, information for parents and children, evidence-based practice. Mrs Lyn Horrocks, Superintendent Physiotherapist at the Children's Centre, University of Wales Cardiff has been commissioned to collect the information for such children with mobility problems, including children with cerebral palsy, muscle conditions, spina bifida, etc. If any of our members have examples of good innovative practice, multi-agency working, information for parents and children that you would like her to include in her review, please contact her on tel: 02920 742107, fax: 02920 743599, email: lyn.horrocks@uhw-tr.wales.nhs.uk. Address: Children's Centre, University Hospital of Wales Cardiff, Cardiff CF4 4EW.

Meanwhile, back at the AGM, we have vacancies for six new committee members. We would dearly love to see some new faces joining some very old ones - so give it some thought and get yourself elected.

Hwyl!

JILL WILLIAMS

SCOTLAND

Well done Scottish membership – superb renewal rate for mid January. Those of you who have subsequently responded will boost the numbers considerably.

Mary Harrison and Dawn Simpson were on form as expected in November and our Home Research Projects and AGM takes place at Yorkhill on the 8th of March. In the afternoon we are delighted that Rosemary Lane is fit to travel to Glasgow. Her topic is of course "The Horse as a therapeutic modality".

Our thanks and congratulations go to Jane Reid who due to an exciting work secondment was recently required to resign from the Scottish Committee and post of treasurer. Jane, we hope things are going well in Aberdeen. Kathy Banford, the secretary from Dumfries and Galloway, also comes off the committee this year. Thank you Kathy for your superb support and scribing from all of us.

My last duty as Scottish Rep will be at Homerton College, Cambridge in April when the launch of the new APCP publications takes place. I have greatly enjoyed these years as Regional Rep and much as Teleri Robinson reflected in the December Journal APCP from members to national committee are friendly and approachable, all in all a thoroughly good experience.

Best wishes to those coming to the committee. You have an excellent, enthusiastic and growing membership.

LESLEY SMITH

NORTHERN IRELAND

We are looking forward to our AGM on the 11th February 2002, as we are having Christopher McCusker speak to us about Children with Behaviour Problems. Christopher is a Clinical Psychologist in the Royal Belfast Hospital for Sick Children.

The last evening meeting for the current programme will be on Monday 11th March 2002, when Lorraine Maxwell from MPH will be speaking to us about Perthes and Congenital Dislocating Hips.

The N.I.A.P.C.P. committee would like to wish Adare Brady all the very best as she takes up the position of chair of A.P.C.P. and also best wishes to Alison Gilpin our treasurer for her wedding in March.

JUDITH McARTHUR

WEST MIDLANDS

I am glad to report we have 80 people coming on the study day at BCH with Margaret Mayston (Bobath Centre). We are pleased with the response and hope we can continue to attract so many paediatric physiotherapists. We have vacancies for the local committee and are keen to draw people from as many different trusts in the West Midlands as possible, so if you are interested, please contact us.

If you would like to organise a local event with support from APCP or have any ideas for a study day, please let us know.

Ring Lindsay Rae or Elen Wright at BCH on 0121 - 333 - 9483 if you want further information.

FIONA NICHOLSON

APPLICATIONS FORM FOR APCP PUBLICATIONS – 2002

2001 Publications:

Evidence Based Practice in Paediatrics:

- Management of Obstetric Brachial Plexus Palsy £3.00

- Hip Subluxation and Dislocation in Children with Cerebral Palsy £3.00

OR ..... £5.00 for the pair - **(Postage & Packing included in price)**

Paediatric Manual Handling - Guidelines for Paediatric Physiotherapist
..... £10 (Postage & Packing included in the price)
Human Postural Reactions - Lessons from Purdon Martin by Dr. John Foley
..... £5 (Postage & Packing included in the price)

P & P not included in the following prices:

Tests & Measures Resources Pack (2nd edition) £3.50
Haemophilia Booklet £3.50
Baby Massage £1.00
The Children Act 1989 "A synopsis for Physiotherapists" £2.50
Standards of practice ..... (update due April 2002)
Statutory Assessment of Children with Special Educational Needs ..... (to be updated)
Guidelines for Calculating Caseloads ..... (to be updated)

TOTAL BOOK ORDER £
*UK POST & PACKING £

* POST & PACKING COSTS (UK Only)

Single copies: £0.50
2 - 5 copies £1.00
6-10 copies £2.50

MORE THAN 10 COPIES OR FOR POSTING TO OUTSIDE UK - POSTAGE UPON REQUEST PLEASE

TERMS : **STRICTLY CASH WITH ORDER**

**Cheques & postal orders or Money Orders made payable to "APCP Publications" & included with order

SEND ORDER WITH PAYMENT to:

Eileen Kinley, Supt. Physiotherapist, CDC, Royal Liverpool Children's NHS Trust,
Eaton Road, Liverpool L12 2AP Tel: 0151 228 4811 ext 2660

Name & Address for delivery: .....

.....

.....

REHABILITATION FOR THE TRAUMATIC BRAIN INJURY

Physiotherapy Practice in Context

Maggie Campbell
Churchill Livingstone 2000
ISBN 0 443 06131 9
(253 pages)

This brief overview of physiotherapy in traumatic brain injury would be a great basic book for student therapists new to the field or those not working in specific head injury units. For those already working in established units there is little new information. The section on sensorimotor assessment has some good ideas and the book's holistic approach to therapy is excellent. As a reference aid it is difficult to dip into as the chapters need reading from beginning to end and the layout is rarely in point form.

Unfortunately the book is not geared towards paediatric physiotherapists. The majority of the author's experience is in adult rehabilitation, mostly community and the examples reflect this.

NICOLE CASH
Paediatric Physiotherapist

A snippet for our slightly older members!!!

The Department of Health has produced two documents relating to retirement, which are free of charge and entitled:

1) 'Working Lives Flexing Retirement' guidance for staff
2) 'Working Lives Flexing Retirement' guidance for managers

These are available from –

Department of Health
PO Box 77
London se1 6SH

Fax 01623 724524
Email doh@prologistics.co.uk

New Special Educational Needs Code of Practice

To obtain copies of the Special Educational Needs Code of Practice including the accompanying Toolkit package contact:

DfES Publications
PO Box 505
Sherwood Park
Annesley
Notts NG13 0DJ

Tel No 0845 6022260
Fax No 0845 6033360
Email Dfes@prolog.uk.com

Telephone the above to order, copies are usually dispatched within five working days (Free of charge delivered to home address)

Remember

Our own APCP Special Educational Needs statementing booklet will be updated to meet the new legislation as soon as possible

UPDATE ON WORK OF NICE NATIONAL CLINICAL GUIDELINES

This is to update you on the work of the National Institute for Clinical Excellence (NICE) with respect to their guideline programme with respect to "Cancer in Children and Adolescents". APCP have been asked by the CSP to collate evidence for the evidence submission. NICE will organise an extensive search of electronic databases. However, there may be much unpublished evidence or information not on electronic databases. This evidence, "grey" literature, is what we are invited to submit.

Clinical practice guidelines form part of the evidence base from which practitioners work and are systematically developed statements to assist practitioners and patient decisions about appropriate healthcare for specific clinical circumstances (1). 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.

NICE has recently published a new work programme on its web site, www.nice.org.uk, and invited interested parties to sign up as stakeholders. The CSP has done this on behalf of the profession for topics of relevance to physiotherapists. APCP is liaising with the CSP to assist with this. **We need your help.**

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 guidelines.
2. Submitting evidence.
3. Commenting on draft versions of the guidelines.

Submission of evidence

NICE offer stakeholders the opportunity to submit evidence to inform the guideline. There are two key areas where members can assist.

Firstly, by suggesting **questions and keywords** to help inform the literature search.

Secondly, there may be unpublished evidence or information not on electronic databases. This evidence, "grey" literature, is what we are invited to submit. **We need help in identifying this.** The type of evidence NICE will accept can be found on "The Guideline Development Process - Information for Stakeholders, page 23 3.4.1 *Finding the evidence*, available from www.nice.org.uk Examples may include:-

- qualitative studies/surveys that examine patient/doctor/carer experiences of treatment or management
- systematic reviews

PLEASE - if anyone can help, please let me know on either *ccridland@lineone.net* or 020 7377 7874/7700

Di Coggins

Cox Ortho is an established orthotic company with specialist skills in paediatrics, built up over many years of working with some of London's top teaching hospitals, including The Royal London and Great Ormond Street Hospital.

We specialise in the neurological approach to tone involvement and work closely with our physiotherapy teams and clinicians in developing new methods and techniques across the whole range of paediatrics.

We currently provide orthotic services to a number of special schools and supply most products on a guaranteed fortnightly basis, to coincide with the next clinic. Our experienced team of technicians combines quality with the fastest leadtimes in the UK, manufacturing DAFOs, AFOs and spinal bracing within a few days.

We have expertise in solving the most complex cases and have a mobile gait lab facility to help in diagnosing the more technical issues.

Our workshop training courses give our physiotherapy colleagues hands-on experience in orthotic moulding and cast rectification, and are a great way of informal trouble shooting with dialogue in the latest physiotherapy orthotic techniques. Contact us or visit our website for more details.

If you would like to know more about us, and how Cox Ortho can help your Trust or school, please contact Pam Jeffrey (Business Development Manager) on 020 7247 1178 or pamela@coxortho.com. Or to talk directly with one of our orthotists : Stewart Alvis (07712 677 462), Peter Cane (07712 677 461), Graham Galer (07885 290 958) or David Slocombe (07712 677 460).

Visit us at www.Coxortho.com

Introduction to Paediatrics

18th - 22nd November 2002
Harrogate

Run by

The Association of Paediatric Chartered Physiotherapists

Just starting out in paediatric physiotherapy and want to learn more about all aspects of working with children?

The five day course programme covers: normal development, neurological impairment, cerebral palsy, assessment, working with children and families, paediatric manual handling, common respiratory conditions, cystic fibrosis, intensive care, legal and ethical issues, common orthopaedic conditions, biomechanics of posture, assessment and use of orthotics, neuromuscular conditions, rheumatology, DCD, adolescence and transition to adulthood, problem solving workshops, multi-agency working, the Statementing process and working in schools, and working with children through play.

Venue: The White Hart Hotel and Conference Centre
Cold Bath Road
Harrogate
HG2 0NF

Cost: Full residency	£525 APCP members
	£550 non APCP members
Non resident	£250 APCP members
	£275 non APCP members

Cheques made payable to 'APCP'

Applications to: Mrs Julia Graham, Supt. Physiotherapist, Child Health Services, G Floor, North Hampshire Hospital, Aldermaston Road, Basingstoke, Hampshire, RG24 9NA Tel: 01256 313694

APCP Introduction to Paediatrics

Application Form

18th - 22nd November 2002, Harrogate

First name _____ Surname _____

Home address _____

Postcode _____

Telephone number _____

Email address _____

Place of work Address _____

Postcode _____

Telephone number _____

Email address _____

APCP number and region _____

Do you have any special dietary requirements? (If yes, please detail)

_____

Do you have any special needs with regard to access, support, information presented during the course? (If yes please detail)

_____

Course package requested:		
	Full residency APCP member	£525 _____
	Full residency non APCP member	£550 _____
	Non resident APCP member	£250 _____
	Non resident non APCP member	£275 _____

Applications, including payment (cheques payable to 'APCP') to:
Julia Graham, Supt. Physiotherapist, Child Health Services, G Floor, North Hampshire Hospital, Aldermaston Road, Basingstoke, Hampshire, RG24 9NA. Tel: 01256 313694
Closing date for applications: 31st October 2002. Places limited to 25.

EAST ANGLIA REGION STUDY DAY

GAIT ANALYSIS - ELAINE OWEN

Date: Friday, June 21st and Saturday, June 22nd 2002.

Venue: Ida Darwin Hospital, Fulbourne, Cambridge

Cost: £60 members / £120 non-members

For further information and a booking form contact Maaike van Varick on 01702 221044.

Places will be allocated to the first 30 applications received with payment.

MAC KEITH MEETINGS

with

THE NATIONAL DEMONSTRATION CENTRE

The Management of Hip Dysplasia in Children with Cerebral Palsy

A one day conference primarily for paediatricians, physiotherapists and occupational therapists on

Tuesday, 21st May 2002

Pride Park Stadium, Derby

Topics include: Natural history and surveillance; postural management; the orthopaedic management of lateral migration in the early years; severe subluxation and dislocation; advanced deformity, pelvic obliquity and pain; with plenty of discussion time.

Speakers:
Aidan Cosgrove (Belfast, NI),
Jan Lehovsky (Stanmore), Richard Morton (Derby)
Mark Paterson (London), Terry Pountney (Chailey),
David Scrutton (London).

Fee: £95 Medical; £45 Non-medical

For further details telephone: 01332 254679 or visit www.ndcrehab.org.uk or email ndc@sdah-tr.trent.nhs.uk

FIFTH ANNUAL COURSE IN PHYSIOTHERAPY FOR CHILDREN WITH MOTOR LEARNING DIFFICULTIES INCLUDING DYSPRAXIA

This course is designed for physiotherapists working in paediatrics with some knowledge of Neuro-Developmental Therapy.

It gives an overview of motor learning difficulties including Dyspraxia and covers assessment and treatment planning. The course offers a mix of theory, practical and video observations. Sally's work combines knowledge of Sensory Integration with Neuro-Development Treatment.

This course would appeal to experienced clinicians and those developing their skills in this area.

Tutor:	**Sally Wright MCSP**
Dates:	**13 - 17 May 2002**
Venue:	**Chelsea and Westminster Hospital**
Fee:	**£300.00**
Closing Date:	**26th April 2002**

For further information please contact Jenny Bassford, Physiotherapy Dept., Chelsea & Westminster Hospital, 369 Fulham Road, London SW10 9NH. Tel. 020 8846 1608

Involving Children in Research - Getting Started

Friday April 12th 2002

9 a.m. - 4 30 p.m.

Homerton College, Cambridge

Programme

9.00am	Registration
9.30am	'Ethical Considerations in Paediatric Research' Speaker: Terry Poutney, Research Physiotherapist Chailey Heritage
10.15am	'Methodologies in paediatric physiotherapy research' Speaker: Eva Bower, Senior Lecturer, Southampton University
11.00am	Coffee
11.20am	APCP AGM
12.15pm	Lunch
1.15pm	Launch of new APCP publications Free paper session
2.45pm	Tea
3.10pm	'Setting up a Project' Speaker: Anna Simpson, Research Fellow, Sheffield University
4.00pm	Plenary
4.30pm	Close

Involving Children in Research - Getting Started

Friday April 12th 2002

9 a.m. - 4.30 p.m.

Homerton College, Cambridge

Name: .....

Address: .....

..... Postcode: .....

Telephone: .....

Email: .....

Work address: .....

Telephone: .....

APCP No. and Region: .....
Non-member:

National Committee Member: Yes/No

Do you have any dietary / special requirements? If Yes, please detail:

.....

.....

.....

Please send cheque payable to 'APCP' for the sum of £35 member / £40 non-member, to: Sarah Crombie, Research Officer, APCP, 10A Record Road, Emsworth, Hampshire, PO10 7NS. Telephone 01243 815296

Closing date for applications: 31/03/02

CSP CONGRESS - AFFECTING CHANGE.
11th - 13th OCTOBER 2000
at the International Convention Centre, Birmingham.

APCP has decided to join the CSP Congress once again following its success in 1999.

This year the East Anglia branch have been putting together APCP's programme and we hope that many of you will be tempted to participate! Please ensure that you register by the beginning of September.

As in 1999 the APCP National Committee and Congress Organising Committee will be based at the Copthorne Hotel.

The Copthorne is a 4 star hotel situated just 3 minutes walk from the Conference Centre and within easy reach of rail and road connections.

The many facilities include swimming pool, sauna, steam room, spa and gym. For the less energetically inclined there is a choice of two restaurants and a bar to relax in.

The CSP will be producing a programme brochure in April / May 2002.

This will detail the entire Congress content including APCP's programme. You will also be able to find details concerning the APCP Supper. If you wish to join us at the Copthorne details will be listed on the accommodation booking form available upon application to attend the Congress.

We hope to see many of you there!

East Anglia, Organising Committee.

PROGRAMME

FRIDAY, 11th OCTOBER

12.30 Registration.

14.00 - 17.30	**Topic:**	**Paediatric Outcome Measures.**
	Speaker:	**Virginia Knox - Paediatric Physiotherapist from the Bobath Centre, London.**

(Afternoon tea and exhibition viewing to be staggered between 15.00 and 16.00 - Virginia will continue her presentation after tea.)

17.30 Welcome reception in the trade exhibition .

SATURDAY, 12th OCTOBER 2001.

08.30 Registration.

09.15 Opening keynote address.

10.45 - 12.30 **Topic:** **Cerebral Palsy in Adulthood and Implications for Paediatric Practice.**
Speaker: **Chris Barber, Physiotherapist from Bobath Centre, London.**

(Morning coffee, exhibition and poster viewing staggered between 10.45 and 12.00 - Chris will continue her presentation after coffee)

12.30 CSP award ceremony in main auditorium.

13.15 Lunch in exhibition hall.

14.15 Concurrent free paper sessions - in all halls.

15.50 Afternoon tea and final exhibition viewing.

16.15 - 17.30 **Topic:** **Nocturnal Ventilation for Muscular Dystrophy**
Speaker: **Michelle Eagle, Research Practitoner in Neuromuscular Disorders, Institute of Genetics International Centre For Life, Newcastle**

17.30 CSP AGM in main auditorium for all CSP members.

20.30 APCP Supper at Copthorne Hotel.

SUNDAY, 13TH OCTOBER 2002.

09.00 Registrations.

09.30 **Topic:** **Multi-agency provision for children and young people with disabilities, and their families.**
Speaker: **Linda Fisher, Paediatric Physiotherapist currently seconded to Essex county council to lead a pilot project on multi-agency provision.**

(Morning coffee between 11.00 and 11.30)

11.00/11.30 **Topic:** **Managing the curriculum for children with severe motor difficulties.**
Speaker: **Pilla Pickles, author of the book by this title.**

13.00 Round-up session in each hall.

Institute of Child Health

and Great Ormond Street Hospital for Children NHS Trust
UNIVERSITY COLLEGE LONDON MEDICAL SCHOOL

Overview of Paediatric Physiotherapy
Monday 20 - Friday 24 May 2002

This course is divided into two parts and is intended for physiotherapists established in paediatrics.

Part 1 Update in Paediatric Physiotherapy
Monday: Chronic pain, juvenile idiopathic arthritis, osteogenesis imperfecta, normal variants in orthopaedics, congental talipes equino-varus, arthrogryposis multiplex congenita
Tuesday: Neurosurgery, epilepsy investigations, dyspraxia/DCD, muscular dystrophies, management of the long term ventilated child
Wednesday: Scoliosis, causes and management of limb length disrepancy physiotherapy management of limb lengthening, assessment and management of children undergoing surgery for CP, surgery for children with CP, orthotics

Part 2 Evidence Based Presentations
Thursday: What is evidence based practice? library resources, hydrotherapy study, developing guidelines: the delphi technique, cystic fibrosis: outcome, education study
Friday: Development of APCP guidelines for Erbs Palsy, emerging role of the newborn, developmental physiotherapist, curing progressive infantile scoliosis by early treatment, development of a gait analysis tool and functional mobility, muscle and contracture
Fees: £375 whole course, £240 part 1, £160 part 2

Paediatric Rheumatology
Tuesday 28 - Wednesday 29 May 2002
Further details to be announced
Fee: £210 / £160 (physiotherapists, occupational therapists, nurses, social workers).

Study Day on Paediatric Long-term Ventilation
Tuesday 11 June 2002
Further details to be announced.
Fee: £105 / £295 (if taken together Respiratory Medicine course)

Update in Paediatric Respiratory Medicine
Wednesday 12 - Thursday 13 June 2002
Further details to be announced.
Fee: £210 / £105 per day / £295 (if taken together with the Study Day on Paediatric Long-term Ventilation)

Further details and application forms are available from:
The Courses and Conferences Office, Institute of Child Health, 30 Guilford Street, London WC1N 1EH
Direct Tel: 020 7829 8692 / 020 7813 8394
Direct Fax: 020 7831 6902

Peterborough Hospitals NHS
NHS Trust

Paediatrics

Senior 1/11 Physiotherapist

36 hours per week (negotiable)
Ref: 497.01

Due to retirement we are seeking a Physiotherapist to join our acute paediatric team.

You will need:

- Postgraduate experience in Paediatrics
- Postgraduate experience in respiratory care
- An interest in respiratory paediatrics
- A commitment to multi-disciplinary team working.

We will provide you with:

- Experienced clinical supervision and support
- Training and development to meet your C.P.D.
- An opportunity to work in both acute and primary care settings.

The opportunity to work in a large progressive department that encourages innovation and clinical excellence.

Part time or job share applications welcomed. Flexible working hours available.

For further information or an informal discussion about any of the above, please contact Claire Chiwandire - Specialities Team Leader on 01733 874060 or email clare.chiwandire@pbh-tr.anglox.nhs.uk

Closing date: 14th March 2002.

Application Forms and job descriptions may be obtained by telephoning the Recruitment Line on (01733) 874222 (24-hour VoiceMail system). Applications to be received by 12 noon, on the closing date.

For further information about Peterborough Hospitals NHS Trust, visit our website www.peterboroughhospitals.co.uk

The Trust operates a no-smoking policy. Staff are not permitted to smoke on theTrust's premises.

We are an equal opportunities employer.

Hinchingbrooke Health Care NHS
NHS Trust

Senior I (II) Paediatric Physiotherapist
36 hours, full time

You will be an enthusiastic and adaptable Paediatric Physiotherapist prepared to work on this a small team in a large rural area.

The post is community based within an Integrated Children's Service, soon to join Huntingdonshire PCT. This is a multi disciplinary team managed by a Superintendent Physiotherapist. You will be required to work within mainstream schools, homes and clinic settings with a varied caseload aged 0 – 19.

Experience in Bobath, respiratory or orthopaedics is desirable but in service training can be given to enthusiastic physiotherapists with relevant experience in other fields. Continuing professional development and innovative ideas are encouraged.

There are close links with Hinchingbrooke Hospital. Huntingdon is situated in a very pleasant part of Cambridgeshire, 20 miles west of Cambridge, or the A1 and A14 with good travel connections to London and the North. Staff benefits include modern on-site accommodation, staff discount scheme and on-site child care at the hospital.

For further information or an informal visit please contact Katy Searle on 01480 415203.

Appointment to this post is subject to satisfactory references and police check. Car driver essential.

For an application form and information pack please contact Vanessa Pratt, Secretary, Children's Services, Hinchingbrooke Healthcare NHS Trust, Community Unit, Huntingdon, Cambs PE29 1WG, Tel: 01480 415204.

Closing date 15th March 2002.

THE APCP RESEARCH GROUP REGISTER

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

Name

Contact
Address

Post Code

Tel. No.

Fax No.

E-Mail:

What are your research interests?

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

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

Thank you for completing this form.

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.

Cover designed by John Soper

Printed and bound by
G. H. SMITH & SON, EASINGWOLD, YORK
ISSN 1368 - 7360

In this issue: