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Editorial

Just where exactly is time going to? It seems no time at all since I last sat at this keyboard to produce an editorial. I hope you have all had an excellent summer and are returning to work refreshed or if you have not yet managed to get away, you have something good planned in the near future. In general, physiotherapists give so much to their work and leave little time for themselves or their families. It is really important to have time to wind down and recharge the batteries.

I owe one or two people an apology. It seems that over the past two editions of the journal a very few people have ended up with copies that have been put together in the wrong order. I know that a few of you must read your journals fairly quickly because they have already contacted me and I have been able to replace their rogue copies. This problem should sort itself out fairly quickly but if any of you have any 'strange' copies in the future, just let me know and I will try and arrange a replacement copy.

It is a very pleasant task to be able to welcome Lesley Smith as our new chair and Jeanne Hartley as new research officer. I am sure that they are all fired up and ready to go to work on your behalf. At the same time we need to say goodbye and thank you to Adare Brady and Sarah Crombie who have very ably held these posts until recently. They will both be very much missed and although Sarah is staying on the National Committee for the time being, I would like to take this opportunity to wish them both the very best for the future from us all.

We also have two new posts on National Committee; that of diversity officer which is being filled by Sue Combe to meet the requirements of both the CSP and the law and also a vice public relations officer, which falls to the lot of Lindsay Rae. Lindsay, along with Gill Holmes and their helpers, will be on hand to help in the development and running of the new interactive web site. Best of luck to you both in your new roles within APCP.

On a more personal note, I would like to say a big thank you to Gill Smith, Adare Brady and Sue Whitby, who have just retired from the editorial board. Their help has been invaluable in ensuring a smooth transfer to the new journal format and ensuring that the content is always interesting and there when I come to edit it. Without you I would have even more grey hairs. At this point in time I am not planning to appoint any new editorial board members. I think it would be best left for the new editor to appoint whomsoever they choose when they take over from me next year. So for a while the editorial board will be a little short of personnel. My thanks therefore go to the rest of you as you will be working extra hard.

Remember to keep your contributions, thoughts and ideas coming to the journal to share with your colleagues. Remember it is your journal and would not be the same without you. So thank you to all of you as well.

Sally Braithwaite

LESLEY SMITH

New Chair

of APCP

I trained as a physiotherapist at Edinburgh Royal Infirmary in the 70's and my paediatric experience whilst training helped shape my future career path! After completing my training I returned to the West of Scotland, where, after a short spell in the adult sector, an opportunity within Royal Hospital for Sick Children arose.

I married in the mid-70's and we then moved to Ayrshire where I took part in a pilot scheme in the area to establish a community service which subsequently divided into a paediatric / domiciliary and school service. By the late 80's I returned to Glasgow working initially within the Community and latterly back at the Royal Hospital for Sick Children. This hospital provides a combined service for children who live not only within the Glasgow city boundary but also outlying areas, and a tertiary service for the West of Scotland and beyond. As part of my personal development I completed a degree course in Health Studies at Glasgow Caledonian University.

I became involved with APCP as Scottish regional rep in the 90's and have been committed to the cause since then. I am passionate about the physiotherapist's role in contributing to the "wellness" of children. (A spin off from my further studies at Caledonian) In the two years as Vice Chair of APCP I have also recognised the need for clinicians to work closely with our Physiotherapy Paediatric Managers to deliver the best possible care to children and their families.

These are exciting times for APCP with the main themes coming through being ICSP and the development of our own website. I look forward to the planned conferences in Swansea in April 2005 and Scotland in October 2006.

I wish to thank Adare Brady for leaving our clinical interest group in such good shape and look forward to working alongside Peta Smith as the new Vice Chair.

I continue to live in Ayrshire with husband and son. I enjoy travelling, sailing (particularly round the Ionian Islands). Interest over the winter months is taken up supporting both Club and Youth Rugby.

I am sure I will continue to enjoy the camaraderie of the group and hope to meet with you at sometime in the future.

Letters

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Dear Sally,

Lycra Garments & Splints

I write in response to Pam Shults' letter in the June 2004 issue.

I am a member of a multi-disciplinary team providing Lycra garments from Yorkhill Children's Hospital in Glasgow.

Along with a Senior Paediatric O.T. and a Consultant Paediatrician, we have established a Lycra Clinic, which has been running on a monthly basis since June 2002. The Clinic was originally funded by Greater Glasgow Health Board to provide garments to children within its locale. The initial steps were to create a business plan, referral criteria and a set of protocol. We have now gone on to establish audit guidelines and a parental questionnaire.

We continue to learn and further develop our service and have become involved with developing a network across Scotland with other therapists who are using Lycra as a treatment. We have also produced a consolidated information pack relating to our Clinic and would be happy to share it with any therapist wishing to be involved in this exciting technique.

Yours sincerely

Allison Morrison

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Dear Sally

I am currently involved in doing a study to assess functional gains in upper limbs of children and young adults with cerebral palsy of a hemiplegic type using Botulinum Toxin injections as an adjunct to Physiotherapy intervention.

I would be interested to hear from Physiotherapists who treat children who have received Botulinum Toxin injections. Information regarding specific interventions and assessment tools used would be appreciated.

Yours sincerely.

Una Murphy.

Copy for the

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must be with the editor by

1st NOVEMBER 2004

The editorial board reserve the right to edit all material submitted

The Role of Multi-Sensory Pools in Paediatric Hydrotherapy

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Introduction

The aim of this study was to locate and critically appraise literature on the role of multi-sensory pools in paediatric hydrotherapy. The client group involved typically comprised the profound and multiple learning difficulties (P.M.L.D.) population. A further aim was to review the literature in terms of its suitability to act as a springboard to further research.

It was hoped that as a result, a body of evidence-based research would be located which would show the clinical effectiveness of multi-sensory pools and lend professional credibility and academic rigour to the practice within paediatrics. It was also hoped that as a result a case could start to be made for the attraction of statutory funding for these facilities. In a wider sense the research could also indirectly help safeguard the future of hydrotherapy, an expensive modality, which is always under threat.

Presently the use of multi-sensory pools is confined to approximately 50-60 facilities, primarily special schools, throughout the U.K. (source – Spacekraft Ltd) and the direct research evidence for their clinical\therapeutic outcomes is anecdotal and unpublished. The facilities are typically charitably funded and the only rationale behind their installation (if a rationale is considered at all) comes from land-based Multi-Sensory Environments (MSEs), specifically the 'Snoezelen' concept and a separate body of literature by complementary therapists describing the therapeutic effects of colour and light. Barber (1999) describes the nature of these effects in detail, citing the mental, emotional and physical calmness, which follows therapy.

The current rationale behind multi-sensory pools among therapists is that they represent both a client intervention in themselves, e.g. passive relaxation; or can act as an accompaniment to an active technique. Pagliano (2001) notes also the possibilities for stimulation, activity and relaxation.

The rationale behind the land-based M.S.E.'s borrows heavily from the 'Snoezelen' concept, described in the introductions of many authors including Schofield and Davis (2000) and Slevin and McClelland (1999). The M.S.E. also owed something to the introduction of softplay developed by Rupert Oliver and the emergence of discotheque equipment in the 1970's. The 'Snoezelen' approach was developed in the Netherlands in the mid 1970's at the de Hartenburg centre to provide leisure and relaxation for those with learning difficulties, via a programme of sensory awareness. The concept spread quickly to the U.K. and was used extensively at Whittington Hall, Derbyshire and Bottleys Park in Surrey. The approach also came to be used with other client groups including P.M.L.D., demented elderly, neonates, the comatose, terminally ill, mentally ill and those exhibiting challenging behaviours.

The majority of these clients have some kind of cognitive impairment in common and this fits well with 'Snoezelen's best effect occurring through the pre-cognitive channels, and less sophisticated users exhibiting the strongest responses. As the approach spread, so the rationale broadened to include therapeutic and educational effects, such as the relief of pain, and the improvement of gross and fine motor skills. In recent years 'Snoezelen' has been registered as a trademark by the Rompa company and authors now refer instead to M.S.E.'s. Thurtle and Wyatt (1999) estimate that the number of U.K. facilities is in excess of 2,000.

The multi-sensory environment typically consists of auditory input provided by the playing of pre-recorded music and visual input provided by combinations of spotlights, projector wheels, mirror balls, bubble tubes and fibre optics (Martin et al 1998). Barber (1999) notes the use of colour, e.g. passive colours like blues, greens and pinks to calm, and aggressive reds and oranges acting as stimulants. The same thinking applies to the types of music employed, with Barber (1999) describing unaccompanied works as most conducive to relaxation.

Measuring the effects of any input is a conundrum, and a variety of outcome measures can be observed. They fit into three broad categories, namely self-reporting, e.g. of pain, anxiety and wellbeing; observation of clients by video or carers; and objective physiological measurements, e.g. heart rate, breathing pattern and rate, and electromyography levels. Some of the more commonly used outcome measures have included levels of agitation, alertness, maladaptive behaviours and mood; others focussed on feeding behaviours, sleep patterns, use of self activated switches, muscle tone and activities of daily living (A.D.L.). Some authors have piloted behaviour checklists in an attempt to validate their outcome

measures and allow easier replication and these measures are sometimes used with baseline data to permit comparisons.

The most commonly reported outcome measures in the field of conventional paediatric hydrotherapy are not surprisingly centred on the acquisition of motor skills, with aspects like wellbeing and normalization neglected (McHugh, 1995). Amongst Halliwick practitioners (Martin, 1981) independence is a well-reported effect.

If the multi-sensory approach was demonstrated to be clinically effective, it would lend professional credibility and validity to the use of multi-sensory pools and be possible to argue for their use in the NHS with this client group. The evidence would also provide a springboard for further research amongst paediatric or other client groups, establishing new applications and refining existing techniques.

Search Strategy

The 'Aditus ' and Cochrane electronic collections were searched on two days in May and July 2001 for articles of all types in English, using the same search terms. The search terms were multi-sensory pool therapy, M.S.E.'s, M.S.E.'s and paediatrics, multi-sensory rooms, multi-sensory rooms and paediatrics, Snoezelen., hydrotherapy, hydrotherapy and paediatrics, hydrotherapy and spina bifida, hydrotherapy and cerebral palsy, hydrotherapy and muscular dystrophy, hydrotherapy and auditory stimulation, hydrotherapy and light stimulation, profound and multiple learning difficulties.

The databases comprised...
'Aditus'

a) Psych Info 1887 to present.
b) Medline 1996 to present.
c) CINAHL 1982 to present.
d) AMED 1985 to present.
e) BNI plus 1994 to present.

'Cochrane Collection'
All libraries.

The libraries were selected as a good, representative cross section of the published literature within the scientific\medical fields and could be accessed easily. In addition, the references of sourced articles were checked for relevant articles and this did open up some new avenues in related fields.

The experts in the field were consulted, for information; these included Spacekraft Ltd (U.K. suppliers of interactive multi-sensory pools), Rompa Ltd (U.K. suppliers of land-based M.S.E.'s), and the Association of Chartered Physiotherapists in Energy Medicine. In addition enquires were made with a local teacher who has worked extensively with P.M.L.D. clients.

The actual search strategy employed evolved as it became clear that no articles existed on the specific area of multi-sensory pools. Therefore the search was widened to include hydrotherapy and hydrotherapy allied to common paediatric conditions, also land-based M.S.E.'s and the P.M.L.D. client group.

Discussion

Hydrotherapy and paediatric hydrotherapy

A great number of articles acknowledged the therapeutic value of hydrotherapy from ancient history and Roman times and traced through the era of the spa towns into the last century, through both world wars. At the same time many authors lament the dearth of research into the claimed effects of hydrotherapy, and how anecdotal reports predominate in paediatric hydrotherapy. McHugh (1995) describes how research is sparse in the role of aquatic programs for physically disabled children, despite this the benefits of hydrotherapy for the paediatric population were widely accepted and valued.

A great number of claims are made for the benefits of hydrotherapy in articles, some of which are descriptive and others that are recognizable pieces of research. The most convincing pertain to experimental work on physiological effects, e.g. the work done by Hall et al (1990), others cite improvements in muscle strength and joint ranges, endurance and cardio-respiratory function (Vogtle et al, 1998). Whereas Jackson (1996) and Finnie (1997) simply state that gross motor skills and perceptual\motor skills improve.

Jackson (1996) and Vogtle et al (1998) quote the work of others who have examined pain relief as an outcome measure, whilst Eckersley (1993) simply states it as a given. Only Franchimont et al (1983) actually describes the physiological mechanism of pain relief in any depth. Trevalyan's article 'Aquatots ' (1990) is one of few to focus on paediatric hydrotherapy and is typical of the rest, in that it is not a piece of research with a hypothesis. It describes a host of observed benefits for the clients attending including better socialization, speech and respiratory function, emotional wellbeing, cognitive skills, better function, improved self-esteem, greater independence, the freedom of movement and sensory awareness. The specific physical benefits

include decreased spasticity, improved ranges of movement, decreased pain \spasm and contractures.

The Halliwick Method used in hydrotherapy with disabled children is described in a few descriptive articles (Martin, 1981 and Trevalyan, 1990) and again many claims made for the benefits based on anecdotal evidence. Independence is a major theme within Halliwick, both physical and mental, thus improved head and body control accompanies self-esteem. Also improved are A.D.L. function, swimming abilities, breath control, socialization, relaxation, co-ordination, muscle power and balance. The method was developed for children and so play and fun have an important role, with much taught through group games. The water also provides an important means of sensory and body awareness, which has a positive effect on spatial orientation and perception skills. In addition the stress on rotational work mirrors the important place of rotation in a child's normal development.

Boulter (1992) in another descriptive piece identifies similar benefits for those with learning difficulties and physical disabilities and notes how with the addition of soft music challenging behaviours can be calmed.

Jackson (1996) attempts to bring some academic rigour to the study of outcome measures in hydrotherapy, with a qualitative study looking at the wider effects. She found that patients most valued the sense of control the modality gave them, however she herself recognized the study was only a starting point for work on outcome measures, the sample was rather small and the interview structure too unstructured for extrapolation of data or repeatability of the study.

The client group – Profound and Multiple Learning Difficulties

This client group represent a specialized niche within the paediatric population and it is important to identify particular characteristics and how they affect the potential effects of multi-sensory pool therapy. The term describes a population suffering a combination of learning and physical difficulties, and these may also include a sight or hearing loss. These profound impairments impair the natural processes of development and learning, and as Pagliano (2001) notes, the children have difficulty making sense of the world, and processing sensory information (Gleen et al, 1996). Therefore concentration spans are short and the potential for learning new skills limited (Ashby et al, 1995).

There are also physical effects, Lawler (2000) and Shapiro et al (1997) note faster resting pulses\heart rates\blood pressure and predisposition to ulcers. The process of moving is difficult too, with spasticity or flaccidity confining children in often destructive and primitive postures. Despite these difficulties, O'Brien et al (1994) identified evidence of responses to visually and auditorily attractive toys, and detecting cause and effect. This assumes that the sensory environment is carefully engineered to obtain the desired response (Pagliano, 2001), but if it can be achieved, then the motivation will be provided to move and explore the surroundings.

Pagliano (2001) describes in detail how the P.M.L.D. child has an impaired ability to integrate the sensory and motor areas of his central nervous system, unlike the unaffected child who's vestibular system, muscle spindles, and golgi tendon organ are working in harmony to enable normal motor development. He explains therefore that the goal of the therapist or educator is to replace unsuccessful motor movement experiences with successful self-initiated motor pattern.

Light and music therapy

A limited amount of literature exists examining the effects of light and colour therapy, mainly found in the journals of complementary therapy, and largely lacking in academic rigour. Lawler (2000) cites Gimbel (1994) as being one of the few authors to offer any hard evidence. Despite this, both music and colour have been used for healing over many centuries. Most recently seasonal affective disorder has been found to respond to the use of light boxes and colour considered in the décor of prison cells and mental health clinics.

It is reported that blood pressure decreases with the use of blue light and increases with red light (Lawler, 2000), and that even visualizing blue can lower blood pressure. Even more remarkably Gimbel (1994) argues that the whole body is light sensitive and that colour penetrates cell structure, hence blind people are equally receptive to colour. In her study Lawler (2000) found that the responses of the blind P.M.L.D. child matched those of the sighted children in the study.

Authors generally classify colour into the 'warm' reds and oranges, which allude to radiant activity and passion and are therefore stimulants (Barber, 1999 and Pagliano, 2001) and 'cold' blues and greens at low intensities, which allude to contentment and tranquillity and are therefore sedatives. Clinically, colour has been used as a non-invasive, non-threatening method for decreasing anxiety and promoting physiological, emotional and psychological wellbeing, e.g. in labour wards, cardiac care units, in dementia and surgery. In the

research reported in Frontline by Hodgson (2001) bronchoscopy patients were found to improve their pain control by 43%, when exposed to a colourful panorama of tranquil meadow and the sounds of a gurgling brook. The team described this approach as sound and sight distraction.

Pagliano (2001) and Barber (1999) mention music as an environmental resource, which can effect arousal or relaxation, and Barber (1999) describes in detail the precise mechanism of how light and sound pass in neuronal coded form to the thalamus, where they are involved in either the inhibition or enhanced action of several neurotransmitters. Some of these neurotransmitters are involved with the physiological aspects of stress and tension such as heart rate, muscle tone and blood pressure, whilst others are involved with mental and emotional states. Barber (1999) notes further that no cognitive understanding is required for these changes and cites the pleasure shown by babies towards their parents' voices and nursery rhymes. Hence music can operate at a pre-cognitive level to effect the desired result. Thornton in Finnie (1983) adds, that in the case of P.M.L.D. children, music can be used as an object of reference to enable them to understand and anticipate what is coming next; alternatively it can used as rhythm, or as the basis for a game using tapping and clapping.

Multi-sensory Environments

There has been a considerable amount of research carried out into the effects of these facilities, with different client groups. However the number of randomised controlled trials is small and most studies have contained methodological flaws of some kind, using small samples of convenience and carried out in enlightened institutions where the danger of researcher bias is ever present (Slevin and McClelland, 1999 and Withers and Ensum, 1995). The evidence is anecdotal (Thurtle and Wyatt, 1999), not empirical (Shapiro et al, 1997), and therefore the claims made are undocumented and cannot be generalized even if they provide interesting leads for future research (Ayer, 1998).

a) Multi-sensory environments: the claimed benefits and effects.

The 'Snoezelen' concept has been researched for about 20 years, most notably that with the 'Enable' organization and the University of Dundee ('Rompa' catalogue 2001). The team found the approach effective for treatment of traumatic brain injury, both to stimulate or to calm and also for improving gross motor skills.

Slevin and McClelland (1999) in a single-subject quasi-experimental design, which tested 2 hypotheses, found that there was a statistically significant correlation between M.S.E.'s and lower pulse rates. In the study they used M.S.E.'s with tranquil music to see if relaxation could be promoted and self-injurious behaviour decreased. They found generally positive effects on behaviour and relaxation and particularly that there was a high degree of convergent validity between the qualitative comments made by carers about levels of relaxation and the quantitative physiological measures of relaxation. The inter-rater reliability level was high at 87%, but no generalization could be made because of the study design.

Schofield and Davis, (2000) in their work with chronic pain patients identified positive effects on relaxation\pain\depression\stress\sleep patterns and self-esteem, when patients were exposed to these facilities. This study was one of the few randomised controlled studies to be located, with a sample of 73 patients (matched in 2 groups), the use of p levels and an analysis of variance undertaken within the sample. There was a baseline measure and a follow up of patients by questionnaire to assess the effects. The data was collated against reliable and validated\standardized profiles of pain and disability, including e.g. the McGill Pain Scale and the Sickness Impact Profile. The only difficulty in replicating the study would be standardizing the 'Snoezelen'.

Gleen et al (1994) discuss how M.S.E.'s can offer appropriate sensory stimulation to children with limited processing capabilities and allow them to exert control via interactive switches; thus the activity becomes child-led and a learning opportunity. Ayer, (1998) adds that M.S.E.'s can provide a combination of sensory clues to allow P.M.L.D. to better understand concepts. However she does recognize the limitations of her own study as a qualitative series of single case studies, which are hypothesis-building not hypothesis-testing, lacking homogeneity and with more than a suspicion of an expectancy bias. Her study findings must therefore be considered in this light, they were decreased agitation, improved socialization, decreased self abuse, better understanding of cause and effect, evidence of visual tracking, better interaction and making choices, improved relaxation, a means of effective tactile stimulation and an effective link to physiotherapeutic programmes.

Shapiro et al, 1997 looked at a subset of the P.M.L.D. group, who engage in self-injurious behaviours. This was an experimental cross-over design with 3 hypotheses, which used a small sample of convenience. An attempt was made to ensure inter-rater reliability via training\testing and a covariance analysis was used to control for age, sex and

diagnosis in the sample groups involved. However during the statistical analysis the groups had to be combined to achieve statistical significance, which represented a change of design from the original envisaged. The findings must be viewed in this light therefore. The study assumed that maladaptive behaviour was attributable to sensory restriction\overload, or as a desire for attention or as an escape from a situation. Therefore the provision of an alternative sensory stimulation was preferable and might have a positive effect in stimulating the child to explore his environment. Hence the 'Snoezelen' was manipulated to be constant, predictable, long lasting (to facilitate sensory absorption), undemanding and given at an appropriate amplitude. This produced the desired behavioural and physiological changes in the subjects, including effects on muscular tone, heart rate and blood pressure.

Pagliano, (2001) describes how visually impaired children can benefit from M.S.E.'s, as they facilitate use of residual vision.

b) Multi-sensory environments: the concerns and dangers.

Ayer, (1998) identified various concerns in her study, including the isolation from normality, the lack of training for staff, and poor monitoring of data and lack of outcome measures.

Martin et al (1998) in their double crossover design identified no long-term effects for M.S.E.'s beyond the actual environment. They used a reliable assessment and had a longer follow up, with a control condition in place. Their assessment instruments were standardized and any expectancy bias controlled for in the design. The method was described in detail to aid repeatability and the inter-observer agreement levels were high. Multi-variate analyses of variance were carried out and the assessor was blind to the current treatment condition. The conclusion was that there was no correlation between improved behaviour and M.S.E.'s and that the anecdotal benefits were due to the verbal attention being given by the enabler, or a relationship effect or the constant physical attention being given.

In summary, the potential for harm resulting from incorrect use is still unclear, e.g. Williams (1999) notes the dangers of sensory overload in the hypersensitive autistic population causing increased agitation when exposed to M.S.E.'s.

Multi-sensory environments in pools

Pagliano (2001) in his book, which is not a piece of research, identified propioceptive awareness as the main function of a M.S.E. in water. He also felt that combined sensory stimulation facilitates the best use of the remaining senses available, e.g. the vestibular system stimulated by rotation, the muscle spindle by stretches, the golgi tendon organs by pressing switches, tactile stimulation by water on the skin, auditory system by playing of recorded music and the visual system by spotlights\mirror ball\projectors. The benefits include stimulation, calming, improved body awareness\sleep patterns and interaction with both the environment and carers.

The environment can be manipulated, just as in a land-based facility, allowing the sensory-impaired to make sense of the external environment; it can therefore be designed to fit the individual physiotherapeutic or educational needs of the user. Then the therapeutic objectives are set and a structured environment formulated to enable the access of appropriate stimuli through the primary senses.

A Research Proposal

It is self evident that research is required into paediatric hydrotherapy and specifically the role of multi-sensory pools, as little currently exists; and even that in related fields is frequently anecdotal. However as Williams (1999) notes, evidence-based research always begins with anecdotal evidence and its effective harnessing as a driver to further investigation.

a) The difficulties.

The client groups involved are difficult to research, e.g. it is difficult to exclude and\or control variables. The P.M.L.D. population often have difficulty adjusting to the test conditions and understanding unfamiliar assessors. They can also find it difficult to communicate and be understood. This can make studies more protracted or simply not possible and it can make the gathering of data problematic. Sample sizes are typically small, convenience types.

There are ethical considerations with this vulnerable client group, and they must be addressed, so that informed consent is appropriately obtained (Thurtle and Wyatt, 1999).

The independent variable, i.e. the treatment, can be difficult to standardize between studies, e.g. the high number of 'Snoezelen's' sensory combinations. However Pagliano (2001) argues that the M.S.E. is a manipulable environment and particularly suited to the conduct of an assessment.

The devising of assessment criteria, both qualitative and quantitative is troublesome, hence there are difficulties replicating studies and generalizing to similar paediatric populations. These outcome measures need to be objective and collated against recognized and validated scales appropriate to that population of patients. Pagliano (2001) notes that assessment instruments are typically standardized on the large population of non-disabled children and calibrated to be both valid and reliable within 2 standard deviations from the mean. However the P.M.L.D. group are a subset of the general population well outside the normal range, typically 6 standard deviations from the mean. He states there are no standardized, valid and reliable assessment instruments that can be universally applied. Another example is quoted by Shapiro et al (1997), regarding heart rate, a common physiological measure of stress in studies, but little used with the P.M.L.D. population, hence there is no normative, comparative baseline data.

There are also issues about who should record the assessment; Pagliano (2001) suggests familiar care-givers, but they can be subject to expectancy bias, as can the researchers themselves (Hawthorne effect), as well as a confusion of roles.

b) Description of a future research question and its components of design.

A direct, experimental design is suggested, which compares the effects of potential moderating variables, to indicate the most effective type of multi-sensory pool therapy. The other confounding variables should be minimized or controlled for (Ashby et al, 1995). The research question needs to address the important issues of user identity, benefits obtained, referrers' identity and if expectations are met and how. A pilot study and the availability of baseline measures are important (Barber, 1999), also the use of 'blind' observers, to avoid the skewing effects of social interaction between the clients and therapist.

McHugh (1995) suggests qualitative methodology with instrumentation of established validity and reliability to establish the precise role of aquatics in rehabilitation. The study should also have a long term follow up data collection, to assess lasting effects.

A sufficient sample size, comprising a control group matched with the experimental group to reduce variance, is important and Slevin and McClelland (1999) suggest the need for more large-scale random sampled studies and smaller scale multiple baseline research. Meanwhile Thurtle and Wyatt (1999) argue whether the randomised controlled trial is the right design and that small-scale work is just as valid and Franchimont et al (1983) add that double blind studies are impossible in hydrotherapy research.

The outcome measures should be reliable and valid for that population subset e.g. measures previously employed included E.M.G. readings, heart rate, blood pressure, sleeping patterns and measures of muscular tone. Others have used observer checklists to score, e.g. agitation, body language, facial expression, mood, cognition, movement patterns and function. These latter measures can introduce a subjective researcher bias and it therefore might be prudent to use combinations of physiological quantitative measures with qualitative ones, and to design the hypotheses to look for correlation between these measures, as well as between the independent and dependent variables.

The Clinical Implications

As Jackson (1996) points out, hydrotherapy is an expensive modality and without demonstrable justification of its value and measurable outcomes of treatment, it will not survive as a modality. Similarly, multi-sensory pools must use these means to gain acceptance within the NHS and obtain statutory funding. Land-based M.S.E.'s can cost £50,000 and hydrotherapy pools upwards of 0.25 million; in the cost-effective ethos of today's NHS, there needs to be an assurance of value for money and clinical benefit.

Further research can reveal the efficacy of multi-sensory pools, and their mechanism of action. This will enable clinicians to be more discriminating in their approaches and achieve specific outcomes with each particular group of patients. At the moment, in the absence of better evidence, clinicians need not abandon the multi-sensory pool, but they should adopt a questioning approach and closely assess the aims of their interventions, they should also pay heed to staff training\codes of practice and involve themselves in research.

Conclusion

In conclusion, what has been established in this critical literature review?

Virtually all the papers considered are in agreement that further quality research is needed in the fields of hydrotherapy, paediatric hydrotherapy and M.S.E.'s. This author found no research on multi-sensory pools, but some literature in the related fields of paediatric hydrotherapy and multi-sensory environments. This literature was largely small-scale, some was methodologically flawed and there were very few randomised controlled trials.

However the difficulties of research with this client group and setting was acknowledged.

One must conclude that the evidence does not prove the clinical effectiveness of multi-sensory pool hydrotherapy, but it does provide a springboard for new research.

Overall the literature hints at the benefits of multi-sensory pool therapy for paediatric patients. This conclusion is based on the findings of papers and the expert opinion, which concur on ...

- the claimed benefits and method of operation of land-based M.S.E.'s
- the nature of the sensory impaired P.M.L.D. population
- the general benefits of hydrotherapy

This combines the benefits of hydrotherapy and land-based M.S.E.'s together to produce a rationale for the use of a multi-sensory pool, which is neither truly scientific nor rigorous, but it is the only option available at present.

The overriding impression is of physiotherapeutic activity being undertaken without scientific proof and so much claimed on the basis of so little evidence. One could hardly envisage it being countenanced if the approach involved a new drug, so why is it happening with a therapy? As Thurtle and Wyatt (1999) note the onus is on nurses and therapists everywhere to "explore the evolving evidence and ask pertinent questions, participate in research and\or instigate it".

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Ultrasound and the Treatment of Children with Osgood Schlatter's Disease

- Review of Literature

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The following literature review will examine the evidence surrounding Osgood Schlatter's disease (OSD), its current management and treatment. It will look closely at the evidence to support the use of ultrasound treatment in paediatrics and OSD, examining the history surrounding its use within physiotherapy. Ultrasound therapy and its effects on epiphyseal plates (growth plates) and fractures will also be discussed.

Osgood Schlatter's Disease

Description

Osgood-Schlatter's disease (OSD) was described initially by both Osgood of Boston and Schlatter of Zurich in 1903. At the time they considered OSD to be a partial avulsion of the tibial tuberosity occurring during adolescence.

OSD affects adolescents usually between the ages of 10 and 15 years (Traverso et al, 1990). It affects boys more than girls, with a history of participation in sport and often a rapid growth spurt.

Kujala et al (1985) noted the prevalence of OSD in children to be 12.9%, although as high as 21.1% in sports active children.

Pain around the tibial tuberosity is the most common presenting complaint. Pain is reproducible on palpation of the tibial tuberosity, on knee extension against resistance, during squatting, running, jumping, kneeling and ascending or descending stairs (A K Chang, 2002). Physically a visible soft tissue swelling can be palpated over the proximal tibial tuberosity, and pain may be felt at this site on direct pressure.

OSD is a self limiting condition whose natural course ends with closure of the proximal tibial epiphysis between the ages of 14 and 16 years (Mital et al, 1977)

Epidemiology

Mital et al (1980) and Ogden et al (1976) state that OSD could be the consequence of micro avulsions caused by repeated traction on the anterior portion of the developing ossification centre of the tibial tuberosity.

Haywood et al (1996) whilst reviewing previous literature states that avascular necrosis and trauma are the two most widely held views of the cause of OSD.

The theory of avascular necrosis is poorly supported in the literature. Mital and Matza (1977) believed that OSD was caused by a circulatory problem in the ossification centre of the tibial tuberosity. The lack of blood supply to the area was thought to cause a weakening of the tissue, which may then react pathologically to normal loads. Ogden et al in 1976 disagreed. They found the tibial tuberosity to have an excellent blood supply, and stated that they could not find the appropriate conditions to support an avascular theory for OSD.

The more popular and supported theory regarding the etiology of OSD is that of overuse and trauma. Kujala et al (1985) state that repeated traction at the site of an apophysis will eventually lead to an apophysitis.

Haywood et al 1996 reported repetitive loading at the tibial tuberosity (as in sports activities), may lead to the strength of the growth cartilage at the apophysis to be exceeded. The very obese child may also suffer, as this would also involve increased loading at the tibial tuberosity. This is further supported by Chang in 2002, who feels this is more likely when the skeletal system is growing disproportionately to the musculoskeletal system. During the adolescent growth spurt children will loose some of their flexibility. This sudden increase in height results in disproportionate growth, as the bone to muscle-tendon length relationship places increased stress on the muscle-tendon-bone connection.

The main processes which appear to lead to the child or adolescent developing OSD are therefore growth and increased activity.

"The child is not merely a small adult"
(Haywood et al, 1996)

Growth in the child occurs at the cartilaginous epiphyses which develop at the ends of long bones, some after birth. Secondary ossification sites eventually appear in these epiphyses. Once full growth has been completed these epiphyses fuse, and the growth plates are obliterated. This occurs at different stages and at different anatomical sites. The tibial tuberosity closes at age 19 years in both

females and males, although female closure may relate to menarche.

During growth the child has vulnerable areas within their musculoskeletal system which are prone to injury, such as the epiphysis, growth cartilage, and often the over stretch muscle-tendon units which are disproportionate in length to the growing bone.

The adolescent growth spurt usually occurs between the ages of 11-13 years for girls and 13-15 years for boys (Lahey, 1993 in Haywood et al, 1996). This time period is concurrent for that of the onset of OSD.

Anatomical and developmental reviews of the knee show that the tibial tuberosity is a downward projection of the anterior lip of the base of the proximal tibial epiphysis. The tubercle of the tibia develops from the upper epiphysis of the tibia by ossification of a tongue-like process extending downward over the anterior surface of the diaphysis (Irowa, 1987). Tibial tuberosity development occurs in four stages (Ogden et al, 1976). The first is a cartilaginous stage with the development of a separate epiphysis at the tibial tuberosity. In the apophyseal stage a secondary ossification centre develops in the distal portion of the tibial tuberosity. This joins to the ossification centre of the proximal tibial epiphysis during the epiphyseal stage. Finally, in the bony stage there is closure of the adjacent growth plates (proximal tibial and tibial tuberosity) (Haywood et al, 1996). During this tibial tuberosity development, an increase in overall height, resulting in a disproportionate muscle-tendon length relationship, combined with increased sporting activity can produce stress on the weak tibial tuberosity. This can lead to the development of OSD.

Current Treatment

Treatment for OSD has consisted of non-steroidal anti-inflammatory drugs (NSAIDS), local steroid injections into the tibial tuberosity and cast immobilisation (Ogden et al, 1976). Others state that NSAIDS are of no benefit and that immobilisation produces weakening of the tissues (Mital et al, 1980). Periods of immobilisation with on going skeletal growth may also increase the already disproportionately short muscle-tendon units. This may then lead to a flare in OSD symptoms on return to sporting activity.

Haywood et al describes rehabilitation to include; ice therapy over the tibial tuberosity in the early stages to reduce swelling. Pulsed ultrasound is described, applied at a low intensity ($0.5W/cm^2$) so that the underlying growth plate is not disturbed. Although what disruption is to be expected with either pulsed or continuous ultrasound treatment is not discussed. Quadriceps stretching is started, and Thabit et al in 1992 state that this will reduce the pull of the patella tendon on the tibial tuberosity as the length tension of the muscle-tendon unit is improved. Mital et al (1977) report the importance of a graduated quadriceps strengthening program, once improved quads length is achieved.

Ultrasound

Therapeutic ultrasound is one of the many rehabilitation interventions available for reducing pain and inflammation (Brosseau et al, 2002). Early studies by Wood and Looms in 1927 investigated the interaction between ultrasound and living tissue. Biological effects included enhanced blood flow, increased membrane permeability, altered connective tissue extensibility and nerve conduction.

Hartley (1993) describes ultrasound as a form of mechanical energy consisting of high frequency vibrations. Hartley went on to comment that these vibrations result in acoustic streaming and radiation forces, both enhancing the flow of particles from one side of a cell membrane to the other. Thus ultrasound increases cell permeability.

Therapeutic ultrasound involves using high frequencies of ultrasound (0.75 MHz - 3MHz). These are produced by piezoelectric transducers. Williams in 1987 describes these as a disc or cylinder of either natural material, such as quartz, or a synthetic ceramic, which has been polarised during the firing process. If an alternating voltage is applied across this transducer, it will change its dimensions by a very small amount. If this transducer surface is in contact with a liquid or solid body it will impart energy to that body, causing it's molecules to be set into an oscillation. Thus producing a wave of acoustic pressure.

Ultrasound is said to have effects during all stages of inflammation and has many effects on human tissues. Dyson, 1987 found that ultrasound releases histamine from mast cells. This may follow the increased calcium ion diffusion across the cell membrane causing degranulation. It is in this way that ultrasound can accelerate normal resolution of inflammation, once the initial stimulus is removed. Evan (1980) stated this acceleration in reducing inflammation could also be due to the gentle agitation of the tissue fluid which may increase the rate of phagocytosis and the movement of particles and cells. The granulation stage starts after approximately 3 days after injury or onset of repair. Connective tissue framework is laid down by

fibroblasts for new blood vessels. Harvey et al (1975) demonstrated that ultrasound can promote collagen synthesis from these stimulated fibroblasts.

For example, Haar in 1999 describes two types of mechanism which are commonly used to explain the effects produced by therapeutic ultrasound. Haar classes them as thermal and non thermal, but explains that it is often extremely difficult to identify positively the mechanisms involved in producing biological change, and to isolate non-thermal effects from thermal ones.

It has been demonstrated that a single treatment with therapeutic ultrasound can stimulate the release of histamine from mast cells by degranulation, both in vitro (Hashish, 1986) and in vivo (Fyfe and Chahl, 1982). Histamine encourages healing. Dyson in 1985 suggested that this may be due to the increased transport of calcium ions across the cell membrane by ultrasonically induced membrane perturbation.

Reports of the therapeutic benefits of ultrasound have often been based only on qualitative evidence. Highly collagenous tissues may be heated preferentially (Haar, 1999) and it is often these tissues that a physiotherapist is treating. These include; superficial cortical bone, periosteum, menisci, synovium and capsules of joints, myofascial interfaces, intermuscular scars, fibrotic muscle, tendon sheaths and major nerve trunks (Haar, 1999). Heating of these tissues leads to; increased circulation, thus reduction of swelling and pain; increased extensibility of collagenous soft tissues; and encouragement of overall healing. Many authors acknowledge that the extent of physiological response to heating may depend on a number of factors, these are; maximum temperature achieved, rate of temperature rise, time of heating and heated volume/tissue type. (Crawford et al,1996; Chan et al 1998; Haar, 1999).

Other beneficial effects thought to arise from ultrasound therapy include an increase in extensibility of collagenous structures, such as tendons and scar tissue, a decrease in joint stiffness, pain relief, changes in blood flow and decrease in muscle spasm (Haar, 1999).

Therapeutic ultrasound is also shown to give a positive effect during the stage of proliferation, when fibroblasts are stimulated to synthesise more collagen, the fibrous protein which gives soft connective tissue its tensile strength (Williams, 1987). As well as stimulating the fibroblasts activity, therapeutic ultrasound can also affect endothelial cell activity in such a manner that in chronically ischaemic tissue, new capillaries are formed and the circulation is seen to be restored faster than in the absence of ultrasound (Hogan et al, 1982). Initially these circulatory effects were attributed to the deep thermal effects, but Dyson et al in 1968 had stated that the introduction of pulsed ultrasound largely eliminated the rise in temperature within tissues, stating that non-thermal effects are also present.

Williams in 1987 has different thoughts about the thermal effects surrounding therapeutic ultrasound. He states that:

"The temperature rise caused by the same time-averaged intensity of ultrasound is the same, or in certain circumstances even higher, when the energy is given in a pulsed mode instead of as a continuous wave."

He goes on to reject the statement quoted in some physiotherapy textbooks, who state that pulsed ultrasound produces less heating than continuous wave ultrasound. (Low and Reed, 1990).

There has been only one review (systematic) looking into the effects of ultrasound on a particular pain/syndrome (Brosseau et al, 2002). This review examined trials which investigated the effects of ultrasound on Patellofemoral pain syndrome. Due to the lack of good quality trials, only one article was suitable for inclusion (Antich, 1986). It examined 86 knees in 53 patients. The method was a randomised open trial comparing ice therapy alone with ice therapy and ultrasound therapy over a 13 week treatment period. The overall conclusion and outcome of the review reported there was insufficient evidence from both a quality and quantity point of view for the inclusion of ultrasound in evidence based recommendations.

Binder in 1985 examined the effects of therapeutic ultrasound in treating soft tissue lesions. This was a randomised controlled trial including 76 patients with lateral epicondylitis, 38 of whom were randomly allocated to receive ultrasound and 38 to receive placebo. The study found 63% of patients treated with ultrasound and 29% of placebo patients had improvement in symptoms. This difference was significant at the 1% level. They concluded ultrasound therapy enhances recovery in most patients with lateral epicondylitis.

In 1986 Hashish et al investigated the use of therapeutic ultrasound to reduce inflammation following dental surgery. They used a double-blinded randomised controlled study including 150 patients. Reported results were not analysed on an intention to treat basis, with information regarding approximately 75 patients not discussed. They concluded facial swelling, pain and inflammatory blood markers were significantly reduced in both the treatment and placebo groups, and reported the

majority of the anti-inflammatory activity was attributable to the placebo effect. Therefore they could find no evidence that ultrasound treatment was beneficial following dental surgery.

Bradnock et al 1995 compared high frequency ultrasound with long wave ultrasound therapy and placebo in the treatment of acute ankle sprains. Gait measurements were taken pre and post treatment. The treatments were not blinded, so the trial was not a good quality randomised controlled trial. The study concluded that response to therapy for ankle sprains was greater in the low frequency range (less than 1MHz), and there was no significant difference seen between the high frequency and the placebo ultrasound therapy.

Ebenbichler et al in 1998 investigated the effects of ultrasound in the treatment of carpal tunnel syndrome. The trial included 45 patients with mild to moderate bilateral carpal tunnel syndrome. The study design was a randomised controlled trial with ultrasound treatment to one wrist and placebo ultrasound to the other. Both the patients and the physiotherapists were blinded to the intervention. The patients were followed through to 6 month follow up. The authors concluded that improvement in symptoms was significantly more pronounced in actively treated wrists than in those receiving placebo.

In 1996 Crowford et al examined the effects of ultrasound in the treatment of heel pain. This was a randomised double-blinded placebo controlled trial, and included 26 episodes of pain in patients who were experiencing planter heel symptoms. Pain levels were re-scored on a 10 cm visual analogue score at start and completion of treatment. The authors reported a 30% improvement in the group receiving ultrasound therapy and 25% improvement in the placebo group. Their conclusion stated:

"Therapeutic ultrasound at a dosage of $0.5W/cm^2$, 3MHz, pulsed 1:4 for 8 minutes is no more effective than placebo in the treatment of planter heel pain."

However the dose of therapeutic ultrasound was very low and equal to 2 minutes of continuous treatment.

Ultrasound and Bone Growth – Fracture sites

"The stimulation of bone growth by physical means has been investigated for many years."
(Duarte, 1983, p 153)

As early as 1957 Fukada et al discovered the piezoelectricity of bone, initiating further research and experiments around fracture healing.

A meta analysis in 2002 (Brusse et al) reviewed the effects of low intensity pulsed ultrasound therapy on the time to fracture healing. They identified 138 studies, of which 6 met their inclusion criteria. 3 of these used repeated subjects/data. The 3 suitable studies included 158 fractures in total, and demonstrated that the time to fracture healing was significantly shorter, by 64 days, in the groups receiving low-intensity ultrasound therapy, than the controls.

Tsai et al (1992) concluded that ultrasound therapy acted during the secondary bone healing or callus formation stage, where a stress-induced potential, lead to a piezoelectric effect on the callus tissue or fresh fracture. They also noted that attempts with extremely high intensities of $75W/cm^2$ lead to hypothermia, destroying tumour cells via transient cavitation in tissue (Somner et al, 1982).

Ultrasound and Bone Growth – Epiphyseal Plates

There are no known studies investigating the effect of ultrasound therapy on epiphyseal plates or in paediatrics in general.

Low and Reed (1990) describe 5 contraindications to the use of therapeutic ultrasound within physiotherapy. They state that since ultrasound has been shown to affect tissue repair (Dyson, 1976; Fyfe and Chahl, 1982), it is possible that it could affect abnormal tissue activity, so that it might encourage neoplastic growth and provoke metastases. For this reason physiotherapist do not use ultrasound therapy over tumours or tissues in pre cancerous states. A short comment is also made;

"It may be wise to avoid the epiphyseal plates."
(Low and Reed, 1990, p 158)

although no information has been found to justify or support this statement within this literature review.

Heat has been shown to be a product of therapeutic ultrasound (Antich, 1986), and its effects discussed detrimentally, yet it is often the increase in circulation as a result of this increase in heat, a physiotherapist requires during treatment (Chan et al, 1998; Haar et al, 1999). Heat and its resultant circulation increase may lead to the spread of bacterial or viral infection (Low and Reed, 1990). Therefore local infection is a contraindication for the use of ultrasound therapy. Although again a comment is made with regard to the lack of evidence to support this statement.

Vascular problems, such as an enlarging haemarthrosis or haematoma should be avoided, as circulatory increase may provoke further haemorrhage (Low and Reed, 1990). Physiotherapists are also advised no to treat areas of

tissues which have undergone radiotherapy for at least 6 months following irradiation.

"Implants such as cardiac pacemakers should not be given any ultrasound therapy, as the sonic vibration may interfere with the pace makers stimulating frequency."

(Low and Reed, 1990, p 160)

The epiphyseal plates throughout the lower limb vary in their time of appearance and closure. Some more distally placed epiphyseal plates open as early as 25 weeks, whilst more proximally situated plates (around the pelvis) don't appear until approximately 15 years of age.

There is therefore a lack of studies investigating the effect of ultrasound therapy on the epiphyseal plates and its effect in the treatment of Osgood Schlatters disease were the driving force behind this study.

Literature Review Conclusion
Two questions were identified.

1. Is ultrasound therapy safe for use in the treatment of Osgood Schlatters Disease?

2. Is ultrasound therapy effective in the treatment of Osgood Schlatters Disease?

The first question was that of safety. Was there evidence to demonstrate that therapeutic ultrasound was detrimental over the area of epiphyseal plates and hence not suitable for use in children. Would therapeutic ultrasound increase or decrease the activity of the epiphyseal plate and hence result in an increase or decrease of tibial length in those children treated?

The second question was efficacy. If there is lack of evidence to suggest ultrasound therapy in children is safe and effective in treating OSD. Do children treated with ultrasound therapy complain of less pain from their OSD? and do they return to sport sooner than their peers who were not actively treated.

From the literature it has been shown, that there are no known studies investigating the effect of ultrasound therapy on epiphyseal plates or in treating paediatric conditions.

Dyson (1976) and Fyfe and Chahl (1982), after stating ultrasound has been shown to effect tissue repair, do make a cautionary note that ultrasound therapy may affect abnormal tissue activity and may encourage neoplastic growth. From this information a widely available physiotherapy textbook (Low and Reed, 1990) suggests it is wise to avoid the epiphyseal plates. Neither provides evidence to support their statements.

The completed study attempting to answer the questions highlighted above will be published shortly.

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APCP Matters

NATIONAL COMMITTEE MATTERS

News from National Committee

The National Committee met on Friday 9th July at CSP, Bedford Row, London. Lesley Smith, Chairman, welcomed new members and alternative representatives. The committee now includes representatives from the neonatal and critical care affiliated groups. Committee business included;

- Sally Braithwaite will chair a DCD meeting at CSP on the 15th September. Members of NAPOT will be invited to attend
- Terry Poutney has completed a review of the evidence for the Hips evidence based summary. The guideline will now be revised.
- Mary Harrison and a team of physiotherapist from North East Region attended ARC and seconded motions presented. One motion concerned payment for the use of rooms at CSP. It was argued that rooms should be free to CSP members
- A group of Neuromuscular physiotherapist expressed interest in becoming an affiliated group of APCP.
- The Neonatal Support group will hold a national conference on 28th and 29th October in Edinburgh Committee members continue to receive and respond to a wide range of correspondence from members.

Gill Holmes, PRO presented information on progress towards the development of the APCP website. Nigel Senior joined the meeting to discuss iCSP which is moving from a regional to a national system with links to other physiotherapy sites. At present over 500 physiotherapists are registered on the paediatric network. CSP will continue to work with clinical interest groups to develop the interactive network.
Prabh Sulaman, PRO at CSP joined the meeting and asked APCP to identify paediatric physiotherapists to act as expert spokespersons. She would like to work with APCP to identify and explore newsworthy topics to increase public awareness of the profession
Future APCP conferences are being planned for Wales in April 05, the CSP congress in October 05 and Scotland in November 06.

Your chance to get familiar with the up-dated regional constitution -

APCP CONSTITUTION
January 2004

1. **TITLE**
   The Title of the Association shall be THE ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

2. **OBJECTIVES**
   The objectives of the association shall be as follows:
   1. To provide a forum to promote the exchange of ideas between those interested in paediatrics
   2. To promote best practise for those working with children and young people
   3. To promote and facilitate continuous professional development and educational opportunities in paediatric physiotherapy
   4. To encourage research and development in paediatric physiotherapy and related field to enhance the research base of physiotherapy
   5. To develop and maintain links with other relevant organisations in the UK and overseas
   6. To represent paediatric physiotherapy on behalf of the CSP
   7. To promote paediatric physiotherapy

3. **MEMBERSHIP**
   Membership will consist of:
   Full Membership
   - Full membership of the Association will be open to physiotherapists who are members of the Chartered Society of Physiotherapy. They will have full voting rights. An annual subscription as authorised by the Association will be paid. Physiotherapists who are not members of the Chartered society of Physiotherapy will be Associate members.

Associate Membership

- Associate membership will be open to persons who, in the opinion of the Executive committee, are suitably qualified professional people working in the field of paediatrics. These persons will be nominated and seconded by full members of the Association. Associate members do not hold voting rights. An annual subscription as for full members applies

Assistant Membership

- Physiotherapy Assistant membership will be open to physiotherapy assistants who are paid members of the Chartered Society of Physiotherapy and working in the field of paediatrics. The annual subscription will be half of the full subscription as authorised by the association. These members will have full voting rights. Physiotherapy assistants who are not full members of the Chartered Society of Physiotherapy have the right to become Associate members as detailed in Associate membership. Annual subscription will remain at half of full subscription

Overseas Membership

- Overseas members are welcome as Full or Associate members with voting rights as appropriate. An annual subscription as for full members applies

Student Membership

- Student membership will be open to physiotherapy students. The annual subscription will be half that of the full subscription. Student members do not have voting rights

Honorary Members

- The retiring chairman of the Association will automatically become an Honorary member. Nominations, with proposers, seconders and full details, will be sent to the Honorary Secretary for the national committee meeting three months prior to the Annual General Meeting (A.G.M.) of the Association. The National Committee will then have the sole right to submit the names of the persons thought suitable to the A.G.M. of the Association for possible election, usually by a show of hands. If fulfilling the criteria for full membership Honorary members will retain full voting rights.

4. COMMITTEES

A: National Committee

The National Committee will consist of up to 16 nationally elected full members; one locally elected full member from each APCP approved region, and a representative from each affiliated group. From this group the required officers will be elected. National Committee members will serve for a term of 4 years and will be eligible for re-election for a further term of 4 years only (8 year rule). Members will then only be eligible for re-election to National Committee after a period of 2 years has elapsed.

The National Committee will comprise of

Executive Committee

- Chair
- Vice Chair
- Treasurer
- Secretary

The executive committee officers will manage the day to day affairs of the Association on its behalf and report action to regular National Committee meetings. The Chair will hold office for two years. The Vice Chair will serve for two years as chair elect. All other officers will normally hold office for two years and will be eligible for a further term of two years. They will not then hold any other office within the Association for at least two years. If an executive officer is due to retire from the National Committee (under the eight year rule), they may be co-opted to continue their term of office for one year only.

Elected Officers

- Journal Editor
- Public Relations Officer (PRO)
- Membership Secretary
- Education Liaison Officer
- Research Officer
- Publications Officer
- CIG Liaison Officer
- Diversity Officer
- Committee Members (up to four)

Elected officers will normally hold office for two years and will be eligible for a further term of two years.

Regional Representatives

Each Regional Committee will elect a representative to National Committee. In the event of a Regional representative being elected to an executive or elected office, that region will elect a new representative to National Committee. Time served as a regional representative will be included as part of the eight years term of office.

Co-Opted Members

The National Committee will have the right to co-opt members to fulfil specific functions, as it deems necessary. The number of co-opted members will not exceed one-third of the National Committee members. Co-opted membership will be reviewed annually prior to the AGM. Co-opted members will have full voting rights.

Sub Committees

These will be formed as deemed necessary by the National Committee. The Chairman of such committees will be a National Committee member, but other committee members will be members of APCP with appropriate expertise. They will be approved by the National Committee

Voting

Voting for members of the national Committee will be as follows:

1. APCP members seeking election to National Committee will be proposed and seconded in writing to the Honorary Secretary of the Association at least one calendar month before the AGM. If there are more applications than vacancies, posts will then be filled by a paper ballot at the AGM.
2. The Regional Representatives will be elected by the Regional Committees and notification must be sent to the Honorary Secretary of the Association
3. A Liaison Officer will be elected by the committee of each Affiliated group and notification must be sent to the Honorary Secretary of the Association.
4. All executive officers will be elected by the National Committee as necessary during the year
5. Co-opted members will be elected by the National Committee as necessary during the year
6. Election of Committee members will be based on a single non-transferable vote. Proxies will not be allowed. The Chair will have a casting vote in addition to an original vote

Honorarium

The following National Committee members will receive an annual honorarium the value of which will be agreed by the National Committee and reviewed annually;

Executive committee

- Chair
- Vice chair
- Treasurer
- Secretary
- Diversity officer

Elected officers

- Journal Editor
- PRO
- Membership secretary
- Education officer
- Publications officer
- CIG Liaison officer

B: Regional Committee and Affiliated Groups

The number and location of these shall be at the discretion of the national committee in response to request from the membership. Within each region or Affilated group there will be elected a Committee to consider the local business of the Association in conjunction with the National Committee.

Each Regional Committee/Affiliated group will elect a Chair, Secretary, Treasurer and Regional representative/Liaison officer and any other officers they deem necessary.

An A.G.M. will be held prior to the National A.G.M. and reported to the National Committee by the Regional representative/Liaison officer.

5. ANNUAL GENERAL MEETING

The Annual General Meeting (A.G.M.) will normally be held in the last 4 months of the year.

Notification of the date, time and venue of the AGM will be made in an appropriate publication not less than three months prior to the meeting.

Reports will be submitted by the Chairman, Treasurer, Research officer, Education Liaison Officer and PRO.

All members of the national committee should be present at the AGM. At least 3 of the five executive committee members must present otherwise the AGM must be postponed and rearranged at the earliest convenient date. If a regional representative is unable to attend the National AGM then a substitute must attend.

6. PROCEDURES

1. Minutes will be taken at all meetings of the Association. These records or reports will be made available to all members of the Association on request.
2. Admission to the AGM will be by a show of current membership cards
3. The Quorum will be one quarter (25%) at meetings of the National Committee. At the AGM the quorum will be 30 members or 5% of the membership excluding the National Committee whichever is smaller at the time.
4. A special meeting of the Association may be convened by the Chair, or by a requisition in writing signed by not less than 20% of ordinary members of the Association. Notification by post will take place fourteen days before the meeting. The business at such meetings will be limited to the agenda.
5. Items for the agenda of an ordinary meeting of the Association must be submitted in writing to the Honorary Secretary at least one calendar month before the date of the meeting. Provision for any other business may be given.
6. The rules of debate at all meetings of the Association will correspond to those of the CSP
7. Notice and agenda for all meetings of the Association will be sent in writing to those persons eligible to attend by the Honorary Secretary of the Association, at least fourteen days before the meeting
8. Any amendments to this Constitution must be submitted in writing for consideration at the AGM, and agreed by at least two thirds of the voting members present.
9. All Regional group, Affiliated group accounts and National accounts are required to be submitted for examination by the second week in January each year. A report of the examined annual accounts will be available at regional and national AGM's. The APCP accountants will be adopted at the AGM.

7. CESSATION

A recommendation for the cessation of the Association will come from the National Committee to the AGM and will only occur if agreed by at least two thirds of the voting members present. Any funds remaining after completion of all accounting procedures will pass to the Chartered Physiotherapists Benevolent Fund.

A recommendation for merger of the Association with another SIG will come from the National Committee to the AGM and will only occur if agreed by at least two thirds of the voting members present. Any accounts remaining after completion of all accounting procedures will pass to the new group.

Nothing in the Constitution, either expressed or implied, will conflict with the Charter and Bye –laws of the Parent Society. No action will be taken by the Association in any matter affecting the general policy of the CSP, without the consent of Council.

CONSTITUTION
(insert region) APCP REGION

1. TITLE

(insert region OF THE ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS (APCP)

2. OBJECTIVES

1. To be the local group for APCP members in the **(insert region)**
2. To elect a representative to APCP National Committee

3. To promote, by whatever means possible, at a regional level , e.g. by conference lectures and public meetings, the general work of the APCP and continuing professional development (CPD) of APCP members
4. To improve communication and understanding between various authorities e.g. health, education, local voluntary organisations and other authorities with reference to paediatric physiotherapy.
5. To collaborate with APCP National Committee in all matters affecting the interests of APCP
6. To promote the work and philosophy of APCP at a regional level by dissemination of information to members
7. To host and organise the annual APCP conference on a rotational basis with other regions. to enable members to keep abreast of developments in paediatric aids and equipment via trade exhibitions, without endorsement of any particular product(s)

3. MEMBERSHIP

Membership will consist of members of the APCP living or working in the **(insert region)**

4. AGM

The Regional Annual General Meeting (AGM) will be in the same year, prior to the APCP AGM (usually at the APCP conference). Minutes of the previous AGM will be made available prior to the meeting. All APCP members from the region will be invited to attend. All members of the Regional committee will usually attend the AGM. If at least three office bearers cannot be present at the AGM it will be postponed and rearranged at the earliest convenient date.

5. COMMITTEE

The committee shall consist of a Chairman, Secretary Treasurer and Regional Representative plus an appropriate number of ordinary committee members no less than two. The Chairman may also be the regional representative. The committee shall have the right to co-opt members as necessary. Committee members will be elected for a four year period, and then may offer themselves for re-election for a further term of four years. Members will then only be eligible for re-election after two years have elapsed.

The committee members will be proposed, seconded and elected at the AGM and the committee then elects the officers after this meeting. Officers will be elected within the committee, and will stand for two years, with the option of two further years. Committee members can be co-opted to fill vacancies that occur. Co-opted members should stand for election at the next AGM.

A committee member is expected to attend all meetings where possible. Apologies for non-attendance at a committee meeting or AGM should be sent to the Secretary. If a member fails to attend two meetings without informing the committee, they shall be deemed to have resigned.

The committee, where possible should reflect the region it represents.

6. RECORDS

A record of business proceedings is to be kept at the AGM and other meetings. These are to be made available to all members of the (insert region) APCP on written request and enclosure of a stamped addressed envelope.

7. QUORUM

The quorum will be three committee members including at least one office bearer at committee meetings and ten members excluding the committee at the AGM.

8. AMMENDMENTS TO THE CONSTITUTION

Any amendments to the constitution are to be adopted at the AGM, following consultation with the AGM

This is an appendix to the APCP National Constitution and must be taken in context with the National Constitution

DEVELOPMENT OF INTERACTIVE APCP WEB-SITE

Nearly 3 years ago under the guidance of the then chair Di Coggins, APCP developed and launched its own web-site. This was open to members of the public, other help professionals as well as physiotherapists who were both members and non-members of APCP. It proved to be a success and APCP was probably one of the first CIGs to have their own web-site.

As it is with objects of this nature there is a learning process and due to the lack of technical support and expertise combined with limitations of the original design APCP has recognised the need to develop a new site. This is currently under development with the support of Rob Ledger and his team at the CSP. The site is being designed with a launch date in mind of Congress October 2004.

The new site will have both open and closed pages with a one way link to ICSP. Members of the public, non-APCP members and other health professions will have access to the open pages with some limited information being available loadable form.

APCP members will be able to access the closed pages with the help of a password made available on payment of APCP annual subscription. The password will be changed on an annual basis at the time of membership renewal. Included in this section is access to publications in a downloadable form and a journal section with abstracts from the journal. It is not planned to publish the journal in its entirety on the web-site.

There will be a further closed page to which members of the National Committee only will have access and it is perceived that this will be how the committee will communicate cutting down on postage and stationery costs.

Members of National Committee feel quite excited about the web-site development and hope that members will feel the same way.

More information will be released closer to the launch date.

Gill Holmes
APCP PRO

Research and Education

RESEARCH

I find myself with a blank page and a feeing of panic that I have now to follow Sarah Crombie as APCP's Research Officer. I am sure that all APCP members will join me in congratulating Sarah on raising the profile of paediatric physiotherapy by providing support, advice etc to those of us who are involved or starting out in research. Thank you Sarah for all your hard work – also for being there to help me settle in! Good luck with your own research.

So how did I find myself in this position? Perhaps I'd better not elaborate too much but it may help to explain a little about my research interests and experience. In 2003 I finally – and I mean finally as it took an inordinate amount of time – finished my MSc. My background is paediatric orthopaedics with a special interest in limb lengthening and limb reconstruction using Ilizarov external fixators. Have you ever wondered what happened to your patients when they grew up? Well I set out to find out about the physical, occupational and psychosocial function of young adults who had undergone Ilizarov procedures as children. One of the great things about getting on a bit is that you have been around professionally long enough to see your patients grow up! The findings were fascinating and gave us excellent data to help families make informed choices, about what to expect for their child as an adult. A frequently asked question but often the answer is unknown! On the back of this I got to present the findings at a European and an American orthopaedic meeting – now I need to publish, as disseminating research findings is so important.

I am also involved in a survey of knowledge and beliefs of by paediatric physiotherapists about children's pain. A big thank you to those of you who kindly filled in the questionnaires. Data analysis is now going on and once we have results etc Kuan Ooi, a Senior Pharmacist at GOSH and I hope to present our findings.

Now back to business:

Research Bursary:
Several people have responded, which is very pleasing. If any of you are interested but haven't so far applied please remember that the closing date is October 1st. If you would like to discuss your potential proposal or would like advice please do give me a call. As you know there will be another opportunity next spring so perhaps you need a bit more thinking time but please consider applying then.

Research Meeting:
We are hoping to hold a half day meeting in the South in the autumn to give people in the area an opportunity to present and discuss their research, perhaps get help and advice from others, find out the best design for their research question or simply to share experiences. We are hoping that it will be an informal but informative occasion and if it is successful perhaps we will be able to roll it out to other regions. As yet arrangements have not been finalised so please keep an eye open for an announcement in Frontline.

APCP Research Data Base:
Please could I encourage you to register your research interests with us as it is always very useful to have an up-to date list of what is going on. Often people ask if there is anyone else looking researching a certain topic and often we do not know. I know that there are several small studies being carried out throughout the country on the same topic – how much richer the findings would be if there was some collaboration going on between centres to give more power to your findings.

Child Health Specialist Library:
This is one of the resources provided via the National electronic Library for Health (NeLH). The publicity says that it is 'the quickest and easiest way to keep abreast of all the best evidence and information available'. Always a cynic I gave it a go and I was impressed as it was even easy for a technophobe like me! There are Clinical Guidelines, research information, e-journals and on-line textbooks, systematic reviews and loads more. Try it! **www.nelh.nhs.uk/childhealth**.

Jeanne Hartley

Regional Reports

TRENT

I should like to start by thanking Trent APCP committee members for covering in my absence over the last 9 months, and for all their hard work in organising the recent questionnaire.

Over the last year you may have been involved in a short questionnaire, which was run in the Trent region. We thank you for your involvement. It attempted to examine the needs and views of APCP members in Trent regarding courses which were offered. From the results it appeared that as a region, we were providing topics which were of interest to the members. Constraints such as child care, study leave and part-time working appeared to be the main reasons for poor attendance. As a committee we have therefore decided to run just 2 courses a year, aiming them as centrally to the region as possible. There will be a mix of mid-week and weekend courses, and they will be advertised as soon as humanly possible. This of course will be improved with the launch of the new APCP web site later on this year.

We have a paediatric normal variances course planned for October. This will include both neurology and orthopaedic patients, and aspects of paediatric knee pain. Further information will be advertised in due course.

CLARE HILL

LONDON

The London Branch committee has seen quite a few changes in the last few months. We have sadly said goodbye to Kate Beattie, our chair, who is moving to the North of England with her husband, and expecting a new baby. We wish them well in their new life and thank her being so efficient and keen. Also Jeanne Hartley has left to join the national committee as the Research officer, which is very exciting. We welcome 3 new committee members; Vathana Thillainathan, Valerie Peat and Cristina Rafter (who was immediately elected secretary at the AGM!) and are still looking to fill 2 vacancies. If you are interested and want to find out more please contact me.

Due to the success of our evening lecture format we have decided to continue with this in the Autumn and Spring programme. We had some excellent suggestions for topics from the very well attended AGM (thank you).

Our first Lecture will be 'Pharmacological management of spasticity in children with complex hypertonus'. Our speaker is Dr Lucinda Carr, Consultant Paediatric Neurologist at Great Ormond Street Hospital, who will discuss drug management of spasticity in children with neurological conditions with particular relevance to overall physical management. This should be very relevant to anyone working with children with CP. This will be on Thursday 23rd September at The Wolfson centre. Mecklenburgh Square. London. WCIN 2AP. 6.00 for 6.30pm. Places will be limited and only confirmed on receipt of a cheque. Cost £5.00 members £10.00 non members. Contact Stephanie Cawker or Lesley Katchburian at the above address or on 0207 905 2943/4 for availability.

Other planned topics are Sleep systems, Obesity in Childhood, HIV in children and The Ponseti approach to treating talipes- 'the evidence'. Confirmed dates will be advertised. If you have any other burning topics please contact the committee.

As I am still getting into the role of Regional representative I have little else to report, but please do contact me if you have any news to share in the region.

STEPHANIE CAWKER

NORTHWEST

This year is flying by; I can't believe we are already in September. Hope you all enjoyed your summer.

Just a brief mention once again of Conference held earlier this year in Liverpool. The organising committee have received an overwhelming amount of feedback from members who attended the conference all of which was very positive. Comments have included "the best ever" and "setting the standard for the future". I hope I can be forgiven for once again thanking the committee for all their hard work (some of which remains ongoing)

The PMLD Study Day went ahead in June, 16 of the available 20 places were taken. The feedback on the day was very positive with people requesting more of the same.

Our next Study Day is "New Perspectives in Paediatric Hydrotherapy" which will be held on Wednesday 27th October (repeated 28th if sufficient interest). Full contact details were in June's journal – phone Sue Booth on 01204 304230 for an application form. The day will be led by Heather Epps Clinical Specialist in Paediatric Hydrotherapy and Margaret Roberts, Bleasdale House School.

A first for us is a study day being held in November which NW Region APCP is supporting in conjunction with NAPOT. I understand that there is a full advert for this study day in this edition of the journal but I'll give you brief details. It is on Therapeutic Goal Setting with Children including the PEGS Tool. It will be held on Monday 22nd

November 2004 in Lancaster. For more information and applications please contact fiona.simpson@wyrepct.nhs.uk or phone Sue Watson on 01253 306168.

NW Committee will be meeting again in September. If anyone has any issues they wish to raise locally or with National Committee and any ideas for future study days please contact me or any member of committee. Don't forget we are there to represent your views and we can only carry things forward if we hear from you.

I'll speak to you again in December (can't believe what I've just written, told you the year was flying by)

ELAINE LLOYD

EAST ANGLIA

Hopefully everyone has had a good summer (despite the weather, although the sun is actually shining as I write this!).

First, I must thank Jeanne Hartley who spoke on our study day in June on Torticollis, Erbs Palsy, and Talipes. This was a popular topic, the day was well attended, and feedback was extremely positive. We had a really good day, and Jeanne certainly deserves our admiration and thanks for speaking for the whole day on all three topics.

Our next study day will be on 8th October in St Albans, on Sensory Integration.

Please see the separate announcement in this journal for further details.

We have a busy programme planned for next year. In response to membership requests, early in the new year, we are proposing to run a day on independent wheelchair mobility, looking at how wheelchair design and training influence this, and at some of the different types of wheelchair that are available. We will also be inviting some wheelchair suppliers to come and demonstrate or exhibit.

Another topic which has been requested is Pilates, particularly in relation to DCD. We are exploring this, with a view to running a day in March. In June, we are looking into covering strength training.

Following the changes to the national constitution, which has changed the national AGM to October, we will be moving our AGM to the autumn, when we are planning to run a two day course on Managing Children with Complex Needs.

Other topics in the discussion stage include Chronic Fatigue, Inclusion, and baby assessment.

We are also hoping to set up an informal research interest group in the autumn, so that we can support each other and share our ideas and experiences.

I will try to keep you all updated by post, with newsletters and study day announcements!

SUE COOMBE

NORTH EAST

The summer term has been uneventful as regards the NE APCP. The next committee meeting is not until after our study day in October, Also there was a decision last year not to run a summer study day, as attendance had been so poor in previous years.

A provisional date for your diaries – 27th April 2005. It is hoped that the AGM and Study day on 'Hip Management' with Terry Pountney will be held at York District Hospital. **N.B**. This will be on a weekday as requested by the majority of members.

Please remember to notify the membership secretary of any change of name, address etc. if you wish to continue receiving your Journal (comes direct from publishers), fliers etc.

Finally, I hope that you have all had a lovely summer whether you managed a holiday or not! I look forward to seeing many of you in Harrogate on 2nd October for the Paediatric Hydrotherapy day.

MARY HARRISON

SCOTLAND

The regional committee held a meeting on Friday 4th June. On the agenda was a discussion on our role as the communication link to geographical areas with paediatric staff bases throughout the whole of Scotland. We were able to identify gaps in our communication network to APCP members in Ayrshire and West Lothian. At the next regional committee meeting on the 3rd September we hope to have representatives from both these areas. All committee members received a bullet point handout with feedback from the national committee meeting and the AGM held during APCP Conference in Liverpool, with a copy of the extracts from the Conference programme to take back to their region.

Since our AGM in March of this year, our treasurer Sarah Paterson has resigned and Ann Kendall, the regional committee representative for Argyll and Bute, has bravely agreed to support this vital office in the interim until the next AGM.

The regional committee welcomed the plan to hold the APCP Conference in Scotland in 2006 and it was agreed that the venue should be in Glasgow (it was in Edinburgh, last time) which has excellent

conference facilities, good transport links and is an interesting and welcoming city. Contact has been made with Greater Glasgow and Clyde Valley Tourist Board and they have provided us with a conference organiser who is gathering information to the spec provided.

Plans were finalised for our Study Day on the 26th November at the Engine Shed in Edinburgh. The programme includes a presentation from Dr Margaret Mayston entitled The Tools in the Physiotherapists Tool Box.

ALISON M GILMOUR

WALES

Many apologies for the absence of a report from the Welsh rep in the last two issues of the journal, due to ill health. Hopefully back to normal now!

There has been a lot of interesting academic activity within this region over the last few months. A profile system workshop was held in Ysgol Erw'r Delyn, Penarth led by Dr Christine Meaden F.C.S.P.. Dr Meaden is an international and Olympic assessor of disabled people in the sporting world. Twelve physiotherapists and three sports co-ordinators attended and were trained to assess and classify disabled sports men and women for local and national D.S.E. competitions. If any other therapists would like to undertake a similar training day, Dr Meaden can be contacted on www.chris@meaden.co.uk.

Mrs Pennie Ayres Superintendent Physiotherapist at Ty Hafan Children's Hospice at Sully near Cardiff organised a networking day for Paediatric Physiotherapists and Occupational Therapists working in the hospice movement from all over the UK. The day was most productive. A similar day is planned for the spring of 2005, to be held in Hope House, Oswestry, Shropshire. All therapists interested in working in this area are welcome and should contact Alexis Watkin at Hope House, Oswestry, Shropshire. The above training was not organised directly under the auspices of A.P.C.P. but we wish we had done, and may do so in the future as we now have the contacts.

Our day course with Elaine Owen on Gait Analysis sadly had to be cancelled, but we are hoping to run that one again in 2005. In October this year, Jill Bowerman from Eveswell Clinic in Newport will speak on Outcome Measures. By the time that you read this, a date, time and venue will have been circulated and we hope to see as many of you as possible.

As you can imagine, the major efforts of the committee are directed towards organising the forthcoming A.P.C.P. Conference in 2005 in Swansea. Further information about the programme can be found elsewhere in the journal, and I'm sure that you will feel that the course content sounds very exciting. We will be offering day tickets as well as the whole three-day package, which may be useful to some. All accommodation will be in single rooms with en-suite facilities. Please encourage attendance, the more the merrier, and help us to have a great A.P.C.P. Conference in Swansea 2005.

JILL WILLIAMS

WEST MIDLANDS

We recently ran a successful Orthopaedic study day along with our AGM in March 2004. This was over subscribed and we will hopefully be able to run something similar in the future. At present we are involved in organising the Introduction to Paediatrics course in the west midlands in October 2004.

If anyone has any ideas for future topics or is keen to have the support of the local committee in running a course or study day please get in touch with me.

LINDSAY RAE

INAUGRAL MEETING OF PHYSIOTHERAPISTS WORKING IN PAEDIARTIC INTENSIVE CARE

Following a number of meetings of Paediatric Physiotherapists interested/working in PICU in the North West the idea of forming a National Special Interest Group was raised.

In order to gain insight into how such a group might be formed, look at ways to access funding and to gain professional standing advice was sought from the Neonatal APCP Subgroup.

On 27th April 2004 a national meeting was held in Manchester which was attended by Adare Brady, Chair of APCP. Over the course of the day it became apparent that affiliation to APCP was the way to take this forward and this motion was carried unanimously following a vote by those attending.

The next step in the process is to elect a committee in line with the constitution of APCP subgroups. Under the constitution anyone wishing to serve on committee needs to be a full member of APCP. Nominations have been sought from those interested in being on the committee and the next stage will be a vote.

Looking to the future a study morning has been organised to take place in Bristol on Monday 11th October. This will be followed by a committee meeting. The day is open to anyone whether a

member of APCP or not and promises to be a very informative session. Topics to be covered will include sedation in PICU and meningococcal septicaemia, speakers to be confirmed.

Further details can be obtained from: Christina Linton, Clinical Specialist, Bristol Children's Hospital 0117 927699 bleep2720.

Anyone wishing to join the group or find out more of the objectives the group wish to achieve please contact Dave Morgan at Royal Manchester Children's Hospital 0161 276 2344 or by e-mail at dave.morgan@cmmc.nhs.uk.

DAVE MORGAN
Senior Physiotherapist (PICU)
Royal Manchester Children's Hospital

NEONATAL SPECIAL INTEREST GROUP

(Affiliated to the APCP)

There have been no particular meetings since the committee meeting in March, however a lot of hard work has been going on in the background. As we prepare for our first Conference to be held in Edinburgh in October, we are looking forward to an exciting 2 days with an excellent programme. Please take note of the flyers on the interactive site, and in this issue. Hurry up and get your applications in to avoid disappointment!

Also, Peta Smith our Chair has continued to represent us in all manners of ways at all levels in the media and in new projects and government directives.

With National Physiotherapy week falling in the week of the 7th July we were able to highlight the regular issue surrounding the non-use of baby walkers, especially with premature and at risk babies. Peta Smith, our chair worked with BLISS to put together a press release and there was also a small write up in the 21st July issue of Frontline. Following on from this Peta has been contacted by a reporter from a very high class parenting magazine "Junior, Pregnancy & Baby" also wishing to put together an article.

Following on from the article published in BAPM by Sally Jary, Peta has had contact from the AHP rep of BAPM, who is a Dietician. We are hoping that this will lead to a joint meeting in the future, possibly early next year.

There was a meeting in July where Peta represented the group at the Skills for Health, Childrens National Workforce Competence Project, Maternity and Care of the New-born which is focusing on the competency of those working with and in the specialist field of neonates including these very sick and vulnerable babies. This will be followed up in September and pilot studies will be carried out.

Update on the leaflets with BLISS – The 1st drafts have been amended and sent out to parents for reading, hopefully the advance copies will be ready for the Conference in October.

A new MSc module in Neonatal Care is due to start in September at Sheffield Hallam University. This will involve 5 taught days between September and December with a possible 15 credits at M level. Peta Smith, Allie Carter and Fiona Price will be some of the Tutors. For more information contact Adele Leake at Sheffield Hallam University on a.c.leake@shu.ac.uk

Finally, HAVE A GREAT SUMMER AND SEE YOU IN EDINBURGH !!

APPLICATION FORM FOR A.P.C.P. PUBLICATIONS – 2004

2003
Special Educational Needs
Code of Practice 2001
Guidance for Paediatric Physiotherapists £10.00

2002
Paediatric Physiotherapy
Guidance for Good Practice £5.00

Obstetric Brachial Plexus Palsy
A Guide to physiotherapy management £10.00

Hip Dislocation in Children with Cerebral Palsy
A guide to physiotherapy management £7.50

Evidence Based Practice
- 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

Paediatric Manual Handling – Guidelines for Paediatric Physiotherapists £10.00

Human Postural Reactions – Lessons from Purdon Martin by Dr J Foley £5.00

Baby Massage £1.50

The Children Act 1989 "A synopsis for Physiotherapists" £1.00

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Book Review

The Treatment of Gait Problems in Cerebral Palsy.

Edited by James R Gage
2004 Mac Keith Press ISSN: 0069 4835,
ISBN: 1 898683 37 9

In his introduction James Gage notes after reviewing his first book *Gait Analysis in Cerebral Palsy* that although after 10 years the principles of treatment have changed very little, the methods of treatment have changed a great deal. Whilst he felt that it was time for another attempt at reviewing the gains made in treatment it was apparent to him that he could not do this alone as the field was now too broad and diverse for one individual to adequately cover it. To ensure that the new book had sufficient depth and breadth of scope to do justice to all the developments taking place within this field he got together a group of people whom he viewed as authorities in their respective disciplines to author the component chapters.

With this aim in mind Jim Gage has built on and improved his first book. A comprehensive, authoritative text has been put together which will be a resource for all health care professionals, whatever their discipline, involved in the management of children with cerebral palsy whether or not they work in the field of motion analysis.

The book is broken down into a logical sequence of five sections reflecting the philosophy of treatment. These are Clinical Background, Patient Assessment, Gait Pathology in Cerebral Palsy, Treatment and Assessment of Outcome. The number and quality illustrations, diagrams, photographs and computer generated images has been increased which has added to the book's usefulness and clarity of explanation. Also included in a CD-Rom containing dynamic figures that are referred to in the text which further enhances the usefulness of the book.

Under clinical background Warwick J. Peacock clearly and concisely takes the reader though the central nervous system discussing the anatomy, role and function of structures within the brain. Adre J. du Plessis in a well referenced chapter discusses how major developments in basic neuroscience, medical technology and neurodiagnostic technology have advanced understanding of early-life brain injury and their clinical manifestations. Spasticity and its natural history is discussed by Peacock with reference to the role of various systems within the central nervous system. It is only after having prepared the reader with a foundation of neurology that normal gait is examined.

In Patient Assessment, the physical examination of the patient is described including the various tests and measures used to assess muscle tone, muscle strength, joint and bone deformity. I found the quality of illustration in this chapter disappointing particularly when compared to the graphics elsewhere in the book. Following manual assessment is the assessment of the patient using technology and the Motion Analysis Laboratory is described followed by chapters on Kinematics and Kinetics of normal gait. Dynamic Electromyography in the normal and pathological is exmined including a paragraph on the changes in muscle structure and function in Cerebral Palsy (CP). Energy expenditure in C P is the remit of Jean Stout and Steven Koop who cover the multiple factors contributing to the increase in energy expenditure in this patient population. Allison Arnold and Scott Delp, leaders in the field of computer modelling, examine the role of musculoskeletal models in patient assessment and their subsequent treatment. They believe that musculoskeletal simulations are necessary to help explain the biomechanical causes of movement abnormalities and the consequences of common interventions and that this information is essential for the development of improved treatment plans.

I found the section on gait pathology in C P written by Jim Gage himself with support from Michael Schwartz and Sylvia Ounpuu particularly useful. Topics such as lever-arm dysfunction, moments and motions and positional abnormalities were all explained with the use of clear diagrams supported by photographs of actual subjects. Specific gait problems are covered and Sylvia who has worked on identifying patterns of gait pathology illustrates the typical gait patterns seen in patients with CP stating that these concepts are applicable to any gait pathology.

Treatment is broken down into general non-operative interventions including physiotherapy (with a frank discussion regarding alternative therapies), orthotics, and spasticity management prior to a discussion on the specific types of cerebral palsy and their treatment interventions. Crouch gait is considered important enough to deserve a chapter of its own.

Appropriately the book ends with a look at outcome studies as this is the only way of optimising treatment methods, exposing underlying principles, confirm existing clinical beliefs and debunk persistent and pervasive myths.

The treatment of gait disorders in cerebral palsy is complex and multifactorial and in *The Treatment of Gait Problems in Cerebral Palsy* the clinician has a reference work to assist them in the management and treatment planning of this client group. James Gage has attempted and succeeded in providing a scientific basis to the treatment of gait problems in cerebral palsy.

Gill Holmes
Supt Physiotherapist / Gait Laboratory Manager
Alder Hey Gait Laboratory

IN OTHER JOURNALS

NAPOT

2004, vol 8, no 1, Spring

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

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

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

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

Back-Up Trust. A Taylor. 23-24

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

2004, vol 8, no Summer

Paediatric Occupational Therapy in the 21st Century: A Survey of UK Practice. Part Three. Models of Practice. Dr Greg. Kelly. 5-8

Dynamic Lycra Splinting. Development and Application of Local Guidelines. Ruth Ball, Debbie McLaren and Chris Sneade 8-10

The Clinical Usefulness of Canadian Occupational Performance Measure (Law et al 1994) within a Community Paediatric Setting Clare Brown 11-13

Association of Paediatric Chartered Physiotherapists

Introduction to Paediatrics

18th to the 21st of October 2004

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

This course aims to;

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

Touchbase conference centre, Birmingham.

Cost £260 - including lunch each day

For details contact. Mary Harrison email Harrwhit@aol.com stating "APCP intro paeds" in title bar. or tel. 01423 866373

TRENT REGION A.P.C.P. STUDY DAY

THURSDAY 14th OCTOBER 2004

10.00am – 3.00pm

Walk This Way

LOUGHBOROUGH HOSPITAL
EPINAL WAY, LOUGHBOROUGH

BIOMECHANICAL ANALYSIS OF THE KNEE JOINT IN PAEDIATRICS
STANDARDISED ORTHOPAEDIC TESTS, WHAT IS NORMAL?
ORTHOPAEDIC AND NEUROLOGICAL SLANT

FACILITATORS: CLAIRE HILL AND
SUZANNE LAWRENCE

COST: MEMBERS £20, NON MEMBERS £25

LUNCH & PRESENTATION BY THERAPY WORLD

CLOSING DATE – 21ST SEPTEMBER 2004

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NAPOT NORTH WEST / APCP NORTH WEST TRAINING EVENT

Supported and hosted by
Morecambe Bay, Preston and Wyre PCT's

Therapeutic Goal Setting with Children - including use of the PEGS tool

(Perceived Efficacy and Goal Setting System)

Speaker -
Carolyn Dunford. Clinical Specialist/Research OT

Monday 22nd November 2004

Lancaster House Hotel, Lancaster

£50 NAPOT/APCP members
£70 non-members
Lunch included

- The day will include:
- Theory and practice of goal setting with children who have a variety of physical conditions
- Forum for joint OT and PT discussions
- Opportunity to view and purchase PEGS kit at a discounted price

For more information and application form
e-mail fiona.simpson@wyrepct.nhs.uk or
telephone Sue Watson on 01253 306168

Closing date for applications 15th October

A.P.C.P. Conference Wales 2005

To be held at
Swansea University

Thursday 31st March 2005
to
Saturday 2nd April 2005

ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPIST NATIONAL CONFERENCE 2005 UK
FAMILY CHOICES – CHILDREN'S VOICES

THURSDAY 31st March 2005 - Consent

01.15 – 1.30 p.m.	Welcome in Welsh and English
01.30 – 1.50 p.m.	Peter Clarke "The role of the Children's Commissioner for Wales"
01.50 – 2.35 p.m.	Geraldine Hastings MSc Physiotherapy Lecturer UWIC - Consent
02.35 – 3.15 p.m.	Carolyn Dunford MSc Clinical Specialist OT – Perceived Efficacy Goal Setting System
03.15 – 3.45 p.m.	Tea – Exhibition and Posters
03.45 – 4.45 p.m.	Professor Priscilla Alderson Social Science Research Unit, Institute of Education, University of London – How we gain consent from Children time to be confirmed
04.45 – 5.15 p.m.	Professor Richard Williams, Professor of Mental Health Strategy, Welsh Institute for Health and Social Care, University of Glamorgan. Topic to be confirmed
18.00 – 19.00	Cheese and Wine exhibition. Celebrity to be arranged

FRIDAY 1st April 2005 - Participation

09.00 – 10.00 a.m.	Dr Peter Rosenbaum MD, FRCP(C) Professor of Paediatrics, McMasters University, Ontario , Canada Reasearch Chair in Childhood Disability. CanChild Centre for Childhood Disability Reasearch – Family Centred Services
10.00 – 11.00 a.m.	Mary Law PhD, OT(C)), Professor and Associate Dean (Health Sciences) Rehabilitation Science, Co-director, CanChild Centre for Childhood Disability Research, McMasters University, Ontario- Participation
11.00 – 11.30 a.m.	Break and Exhibition and Posters
11.30 – 12.00 a.m.	Liz Atter Senior Physiotherapist Specialising in DCD - Moving into Leisure Centres
12.00 – 12.30 p.m.	Consultant Orthopaedic Surgeon (speaker to be confirmed) and Dawn Clabon Clinical Specialist in Casting and Orthotics - Ponsetti approach to treating babies with Talipes
12.30 – 1.30 p.m.	Lunch and Exhibition
01.30 – 2.00 p.m.	John Morgan Director of the Federation of Disability Sport Wales -Sports Disability
02.00 – 2.30 p.m.	Caroline and Gemma Leech Mother and Child – Experiences of Healthcare

Practical Workshops 2.30 – 3.30 p.m.	**Practical Workshops 4.00 – 5.00 p.m.**
PEGS	PEGS
Plastering Neurological	Plastering Talipes
Manual Handling	Manual Handling
Rebound	Rebound
Sports Disability Development Officer	Sports Disability Development Officer

Speaker to be confirmed - Treatment of Cerebral Palsy with Botulinum Toxin Principles, Clinical Practice, Atlas - Lecture "Choices in the Clinical Management of Botulin Toxin" -

3.30 – 4.00 p.m.	Tea – Exhibition and Posters
7.00 Reception	7.30 Dinner with Roy Noble as the Dinner Speaker

SATURDAY 2nd April 2005 - Choices and Voices

09.00 - 9.45 a.m.	Bernie Henderson IT Specialist in Education - Alternative Communication and Triangle NSPCC – Video Two Way Street Training video about communicating with disabled children and young people. Video to be confirmed
09.45 – 10.30 a.m.	Jenny Carroll Director of Bobath Cwmru Physiotherapist – Topic to be confirmed
10.30 – 11.00 a.m.	Coffee – Exhibition and Posters
11.00 - 11.45 a.m.	Vivienne Funke-Travlos, MCSP, MSc, Physiotherapist - MOVE
11.45 - 12.30 a.m.	Snap Cymru
12.30 p.m.	End of conference address – National Committee

The APCP Conference 2005 is taking place in SWANSEA, a city surrounded with stunning beaches and breathtaking bays including the Gower Peninsula, with its sandy beaches and limestone cliffs, and The Mumbles, renowned for its collection of good pubs and restaurants.

The conference is to take place in Swansea University, located only metres from Swansea's beautiful seafront and bordered on three sides by Swansea's largest park, offers first class facilities with a ravishing setting overlooking the Bristol Channel.

The accommodation includes campus en suite singles, all refurbished to a high standard. In the higher rooms you'll enjoy views of Swansea Bay that are truly outstanding. There is also an onsite university bar, a variety of quality meal and snack outlets, the prestigious Talesin Arts Centre and The Egypt Centre.

"A city with so much to offer and renowned for it's welcome or, as we say, croeso."

Registration Information

Registration is being handled by the Conference Services Office at University of Wales Swansea. All enquiries regarding registration and accommodation should be addressed to Conference Services, Fulton House, University of Wales Swansea, Singleton Park, Swansea, SA2 8PP, Tel: 01792 513126/295665, Fax: 01792 295675 or Email: conferences@swansea.ac.uk

Further information about the Swansea campus can be found at www.swansea.ac.uk/conferences/

Please complete the appropriate booking form (Delegate or Exhibitor) and return with full payment to the above address. Registrations will not be processed without the full payment and we will not be issuing invoices.

Registration form and payment must be received by **28th January 2005**, to avoid the late registration fee.

Final closing date for registration is 11th March 2005.

On receipt of registration form and full payment, joining instructions will be sent to you.

Accommodation is in single ensuite rooms on campus. Rooms are supplied with all linen and towels, tea and coffee making facilities, telephone and are serviced daily.

Delegate Registration:

Please complete the registration form, choose from Package 1, 2 or 3 and indicate your workshop choice and if you would like to attend the Friday night Conference Dinner.

The Conference Dinner will be a 'Tastes of Wales' gala evening and will include a Welsh themed menu along with entertainment, after dinner speaker, a band and late bar.

Conference Services
Swansea University

CONFERENCE DINNER & ENTERTAINMENT

A taste of Wales including:

Welsh Male Voice Choir

ROY NOBLE – After Dinner Speaker

and

Dancing to the early hours with
Y Mabon
a Welsh Folk/Pop Group

Don't forget to book your place – see conference booking form.

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Symmetrikit Postural Care Pathway

The Family Centred Approach to Postural Care

Course and Pathway Co-ordinator : Claire Johnson

Tutors
John and Liz Goldsmith, David Hill, Claire Whittle, Stuart Moore

A forum for therapists developing 24 hour Postural Care

The Verzons Country House Hotel, Nr Ledbury, Herefordshire

6th, 7th & 8th October 2004

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

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

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ASSESSMENT AND TRAINING
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REASSESSMENT AND RETRAINING

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

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

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

Space is Limited

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

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 Jeanne Hartley, Physiotherapist Dept., Great Ormond St. Hospital, London WC1N 32JH. This information will be used to inform you of reseach 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.


CHARTERED SOCIETY OF PHYSIOTHERAPY
APCP
DIGNA SEQUI

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In this issue :