ASSOCIATION OF

PAEDIATRIC

CHARTERED PHYSIOTHERAPISTS

NEWSLETTER

ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS

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EDITORIAL

Chris Young, Editorial Board

In recent years there has been a dramatic improvement in prognosis for very pre-term babies. Immediate concern centres upon maintaining respiratory function. In some neonatal intensive care units, (NICU's) the physiotherapist may be involved and in others she may not be permitted across the threshold! Arguments, put forward by neonatologists upholding the latter policy, include their preference for preterm babies to be given all necessary care by nurses experienced in the general handling of these infants. As it is, without question, an area of particular expertise - we must be able to demonstrate very precisely that we have the necessary skills and understanding required to be a valuable addition to the team.

Once respiratory function is no longer the overriding anxiety, attention may be focused on posture and positioning. It is widely recognised that preterm babies often demonstrate different motor patterns to term babies. This may be partly due to the extended position that gravity imposes earlier than nature intended, and upon the immature musculo-sceletal system. In some units, advice on advantageous positioning is the province of the occupational therapist (especially in the USA) and in others it falls to the physiotherapist. In some instances, the therapist may not be involved at all until some months or years later when the child presents with a developmental problem.

Clearly there is much work and research to be done to establish necessary and valuable intervention approaches at the appropriate time. It is an exciting time for therapists to be involved in NICU's - let us take up the challenge and add our contribution to the knowledge and policy development which will enhance the quality of life for babies born too soon.

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Copy for the November Newsletter must be with the Editor by 1st October

The Editorial Board does not necessarily agree with opinions expressed in articles and correspondence and reserves the right to edit material submitted.

THE ORIGIN AND DEVELOPMENT OF THE BOBATH CONCEPT

JENNIFER BRYCE MCSP, BOBATH CENTRE

Mrs Bobath was trained at a school for gymnastics in Berlin. This was not the "acrobatic" type seen nowadays. There she was taught about the analysis of normal movements and about various ways of relaxation. She was taught to feel and evaluate degrees of relaxation not only on tight muscles but its effect on the strength and activity of the antogonists. This was done by a special way of "handling a person", of inducing movements in response to being moved. This was the base that she used with her work with patients with abnormal co-ordination of movement many years later. She obviously had a flair for this kind of work and was invited to teach at the school in which she trained. Because of Nazism she had to leave the school so she did some additional training in remedial exercises.

By this time it was 1938 and she knew she had to get out of Germany. Once in London and in order to obtain a work permit she had to prove that she had some knowledge of therapy not already done in Britain. By luck she was introduced to an eminent orthopaedic surgeon and was able to show him the exercises she did with children with flat feet, knock knees and poor posture. He was so impressed that he offered her a job at a children's hospital where he was a consultant.

She also did some private work for other doctors and was asked by one of them to treat a man with a severe right hemiplegia who did not like the sort of treatment he was already receiving and wanted some "Swedish massage" on his arm. Not wanting to upset his physiotherapist it was agreed that Bertie would treat his arm whilst the other physio treated his leg. This was the start of what was to become known throughout the world as Bobath or NDT. Like so many innovative ideas it was born quite by accident but given credence because of Mrs Bobath questioning mind and her determination not to give up.

On this patient she made the discovery which led her into an unknown field. Without knowing what she was doing she started to vibrate the patient's deltoid. Realising this was not changing anything she began to try to move his arm. The patient was fearful of movement at the shoulder because of pain, the arm was stiff and heavy. She tried to extend his elbow only to find strong resistance to the movement. When she asked him to relax of course he couldn't. When she released her pull on his arm she found **he pulled** into flexion again. In fact there was abnormal assistance to flexion. When she told him to stop pulling there ensued an argument because he said he wasn't pulling. She began to realise that he had no awareness of the sensation of pulling and that she had to be able to make him aware so that he could stop pulling himself. This was the beginning of inhibition. Gradually she found that if he could stop pulling into the predominant pattern of flexion she could then increase the range of extension at the elbow without resistance. She realised for the first time that by pulling into flexion the patient reinforced his spasticity, and that spasticity was not an unalterable state which could only be treated by stretching spastic muscles. Her sense of touch, her knowledge of what a movement should **feel** like set her on the road she was to follow.

Her previous training had taught her that in a relaxed state there should be no undue resistance or assistance to a passive movement. It occurred to her that as long as there was undue assistance in one direction there would be resistance in the opposite direction.

She also noted that if the elbow was flexed the hand was also tightly fisted. However when the elbow could be extended without resistance the hand would open spontaneously. She had discovered without realising it that spasticity was co-ordinated into patterns but it took her many years of experimentation to find that the more proximally she worked on the body the more influence she could have on the limb as a whole.

Reflex Inhibiting Postures

Working in a children's hospital she had the opportunity to try out some of her ideas on children with cerebral palsy. Again she found that by counteracting the established patterns of spasticity she could reduce muscle tone. Now all her energy went into observing and trying to understand the very different problems of children with spasticity. Again she could see that spasticity was co-ordinated into patterns involving the whole body and that these patterns varied according to the position of the child in space or the head in relation to the body. By varying the position of the child she found she could influence both the degree and predominant patterns of spasticity. Why was this so? It was at this point that Karel was drawn into the field. Like most doctors at that time he had been taught that spasticity was an unalterable state and he did not first believe his wife's claim to being able to change it. Only by watching her work did he become convinced. Bertie always needed answers to her questions and she plagued Karel into searching the literature to find the answers for her. From the work of Magnus on the decerebrate animal Karel found that changes of tone could be explained by static reactions which involved more than one segment of the body or the whole body. It followed, therefore, that if hypertonus was the result of released abnormal reflexes or reactions and this hypertonus could be influenced by positioning it would be logical to call these position "reflex inhibiting postures". The child could then be moved within these postures and more normal tone would ensue. Once tonus was more normal the child would be able to move. Unfortunately, unlike the adult, the child did not know **how** to move never having had the experience of normal movement. All he knew was abnormal movement and this was all he could use. So it was back to the drawing board. What constituted normal movement and how did it develop?

Normal movement - co-ordination of: facilitation of: development of:

The central nervous system is an organ of integration. Muscles are always activated in patterns in the performance of even the most selective movements. Hughlings Jackson (1958) stated "Nervous centres represent movements, not muscles. From negative lesions of motor centres there is not paralysis of muscles but loss of movements". This was the explanation Karel and Bertie needed to understand that a lesion of the brain does not result in paralysis of single muscles but an interference with the normal co-ordination of muscle action. Again turning to Magnus and Scaltenbrand gave explanations for their observations on the co-ordination of normal movement. Normal movement was dependent upon the normal postural reflex mechanism which consisted manly of two types of automatic reactions, righting and equilibrium. These develop in a definite sequence of events the former being present from birth and the latter appearing around the sixth month. These reactions provided the basis for the modification of primitive patterns of movement through rotation and selectivity by giving the child the sensori-motor experience on which to base more voluntary activities. The questions now arose "if the child with cerebral palsy had never experienced the sensation of normal movement because of the interference of abnormal reflex activity, how could the experience be given to him?" Once the hypertonus was reduced through the use of reflex inhibiting postures it was essential that the child be moved in such a way that he could react actively, albeit automatically. Control was still needed to maintain reduction of postural tone and yet the child needed to be able to move. The realisation that certain points of the body such as the head and neck were not only responsible for determining abnormal patterns but also for normal postural reactions led to the use of key points of control. These were parts of the body from which abnormal reflex activity could be controlled and normal reactions facilitated.

The term "facilitation of movement" was chosen to define techniques of obtaining inherent automatic movement patterns in response to handling, in contract to movements performed at request. (Bobath & Bobath 1964 The Facilitation of Normal Postural Reactions and Movements in the Treatment of Cerebral Palsy). The learning of movements, like other processes of learning, takes place with the help and guidance of sensory messages, ie the child does not learn movements but experiences the sensation of movements. Through handling the child with cerebral palsy learns to adjust actively to the change of position imposed on him through the key points. Changing the position of the head in relation to the body, or one body part on another, produced a response of the whole body to right itself. In this way the child could learn sequences of movement such as rolling, sitting up from prone, side sitting etc., all activities which involved rotation within the body axis. This rotation broke up the total patterns both primitive and abnormal and made more selective activity of the limbs possible. Facilitation of movement required great skill on the part of the therapist as she needed to adjust her actions to those of the child in a constant interplay between action and reaction. This was exciting and dynamic but some therapists became so fascinated with their ability to produce activity on the part of the child that they forgot about the necessity for inhibition. In mild cases and young babies pure facilitation worked very well but in all other children where there was any abnormal quality of tone the results were not so good.

Facilitation of righting and equilibrium reactions also led to a misunderstanding of normal development. It was thought that a child first had to roll before he could sit, sit before he could crawl, crawl before he could stand etc. Bertie soon realised that normal development was not the attainment of one milestone after another but a more simultaneous development of many activities which reinforce each other to culminate in a "milestone". For example, the child that rolls is also the child that is pulling himself to stand. The more she studied normal children at different stages of development the more she saw not only the great variety of movement patterns each child had at his disposal but also the wide variation in age of attainment. (Bobath, B. The Very Early Treatment of Cerebral Palsy 1967).

Functional Skills

The next stage in the development of the treatment was the recognition that inhibition of patterns of spasticity and facilitation of more normal automatic reactions did not lead directly to functional skills. The handling came to be seen as a set of exercises which did not carry over into everyday life. The treatment as it stood did little to improve prehension, manipulation or articulation of speech. A more direct transition of treatment into daily activities was needed. Systematic preparation for specific skills was incorporated into the treatment requiring a thorough analysis of each task the child was expected to perform. This necessitated assessment of the individual child's needs rather than an assessment based on his abnormal reflex activity. It meant looking at what the child could do and how it did it before seeing what he could not do and why.

(Bobath K & B Management of the Motor Disorders of Children with Cerebral Palsy.

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This is where we are today. We look at the functional skills and how they are performed. We look at the primary and secondary abnormal patterns and analyse how they have come about. Are they the result of proximal instability or spasticity or a mixture of the two. We look at the associated reactions and the effect they have on functional activities. We look at compensatory patterns to see if they are preventing potential activity in the more affected parts of the body. As the face of cerebral palsy changes so must our techniques. We are no longer seeing the type of children we saw fifteen or even ten years ago. However, the concept still holds true. We are still seeing the problem as one of abnormal co-ordination of posture and movement.

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STROKING, EMOTION AND COGNITION: 11 YEARS ON

Elvidina Nabuco Adamson-Macedo Ph.D. C. Psychol. AFBPsS

The International-League for Essential Nutrition and Stimulation*

The first Premature Baby Unit was set up by Pierre Budin in 1895, in Paris. As McIntosh1 (p 135) points out "Neonatal care is emotive and spectacular for the general public but in the early days parents were not made welcome in the neonatal setting, and medical and particularly nursing staff took on the role of parents providing care for small infants until they were ready to go home." Fortunately this situation has changed; nevertheless there are still many other countries where the mother continues not to be welcomed. The reasons are unchanged from 100 years ago in that a 'well-intentioned' isolation is advanced in justification; these include minimising the risks of infection through complete separation, gowning, sterilizing procedures and physical restrictions imposed by incubators, monitors and heat shields.

At least two studies [2,3] reported that the handling of preterm infants in special care produced distress, a finding which has been used to justify 'minimal handling' both by staff & by parents; this work was not challenged at the time, thereby inducing a lack of interest in the stimulation of the preterm infant. These were the extant practices in Britain when this author began her studies, in 1980.

Whilst Obstetrics, Neonatology and Monotoring of the preterm infant continued to flourish, the psychological needs of the babies and their parents remained quietly ignored. The gap between Medical needs and psychological needs grew greater.

The purpose of this article is two-fold:- to challenge traditional views that, (1) handling is necessarily a disturbance that has noxious effects, and (2) that preterms are unresponsive. Rather, they are human beings who can experience emotion, pain and pleasure, and can respond intelligently to the environment. This has been this author's learning experience with at least 135 premature babies recruited from 4 different Neonatal Units in Britain, from 1980 to 1986.

1. Preterms: foetuses or 'underdeveloped' fullterms?

There were two distinct views of the preterm based on implicit theories of preterm neurobehavioural development; in the first view 'prems' were seen as foetuses, and they were expected to have the same developmental level as that of a foetus of equivalent gestational age. In the second view, preterms were seen as underdeveloped fullterm babies.

In the first case, researchers tried to mimic the womb environment by providing tactile-kinesthetic or auditory stimulation.[4] The results of these researches, suggested that simple changes in the physical environment could improve physical and neurobehavioural outcomes of the preterm baby. As a consequence, oscillating waterbeds were introduced, [5] lighting was reduced, [6] heart beat recordings and other intrauterine sound were used. [7,8] In Britain, the use of a simple enhancement of the baby's environment, known as 'nursing the baby with lambswool' was investigated; these results also showed an increase in growth rate of the infants. [9]

Those researchers who held the view of the preterm as an undeveloped fullterm, exposed the babies to visual, auditory and tactile experiences which were more appropriate for a normal newborn, e.g.. bright shapes, faces, mobiles, recording of mothers speech, etc.[4,10] Positive growth and developmental outcomes, were also reported by this group. They included weight gain, decreases in the incidence of physical complications (especially respiratory difficulties), reduction of apmoea attacks, decreased crying, and faster developmental progress.

However, both sets of views reported outcomes only; little attempt was made to explain the mechanisms which governed the positive outcomes. The study carried out by Scott and Richards did put forward the explanation that the infant's increase in growth rate was due to less energy expenditure, since the infants were nursed with lambswool and were calmer than others under normal conditions. These authors also suggested additional positive effects such as improvement of the image of the baby in the eyes of the parents and other caretakers.[11]

2. The development of TAC-TIC

2.1 Rice Infant Sensory Motor Stimulation Programme (R.I.S.S.).[12]

The original intention when starting research in this area was to apply techniques originally developed by Rice, who worked with preterm infants after discharge from hospital, to babies still in incubators. This author was attracted to this work because it seemed to combine elements of the stimulation programme from both of the contending viewpoints described above. Thus, there was visual and auditory stimulation as well as rocking and touching. It seemed that the preterm should be viewed as a human being in a unique environment, rather than as an unusual foetus or fullterm baby.

Very soon it was realized that the procedures would need modifying; the main reasons were (1) the environmental constraints of working with small babies in their incubators, e.g. location, clothes and position of the baby, and (2) realization that the babies themselves were giving feedback relevant to the stimulation they were receiving; thus babies would stretch their arms and limbs, 'smile', and 'purr'.[13,14,15] Persistent comments made by parents and staff confirmed this author's impression that the babies were enjoying the experience.

In this way a programme was developed which was called TAC-TIC (Touching and Caressing, Tender In Caring); it focused only on Tactile Stimulation, and had a very specific sequence of movements and manual application based on the responses of the babies themselves.

2.2 Why Stroking?

The developmental sequence of sensory systems proposed by Gottlieb is (a) tactile, (b) propiovestibular, (c) visual, and (d) auditory. Tactile sensibility is reported as early as 7.5 weeks postconceptional age, [16,17] hence it is not surprising that tactile stimulation has been the most 'popular' of the types of stimulation.

Cutaneous receptors include both deep-lying propioceptors and tactile receptors, both of which are sensitive to pressure. Moreover, both deep and light cutaneous pressures have been found to elicit different responses in the preterm infant, [18,19] This leads to speculation that two distinct functional systems may be at work, the one elicited by weak and the other by strong stimulation. TAC-TIC is aimed at the funtional system which is sensitive to light and delicate pressure.

2.3 Definition of 'Stroking' and description of TAC-TIC

Stroking is a monomodal type of sensory tactile stimulation, and is much misconstrued in the literature;[20] it has different meanings to different authors. The precise definition of stroking is "....to pass the hand (or the finger tips)* softly in one direction over by way of caress......" (SOED on Historic Principles, 1968, Third Edition); this is the sense in which the word is used in TAC-TIC.[7]

TAC-TIC is a sustematic sequence of 22 movements covering all parts of the body. These are gentle and smooth stroking movements on the areas of the head and face (8), neck (2), upper limbs (arms, palms, fingers-3), torso (6), and lower limbs (legs, feet and toes-3). Whether the stroking is done with the palm or with the finger tips is determined by the part of the body which is being stroked, e.g. the mouth areas and spine can only be done with the finger tips.

There are four principles underlying TAC-TIC: they are *Gentleness, Rhythm, Equilibrium and Continuity* (GREC), and they are briefly explained below.

Gentleness cannot be overemphasized when we are working with tiny babies, especially the ones under ventilation. 'Gentle as a butterfly' should be the message conveyed by stroking.

Rhythm, in a properly executed TAC-TIC session, is a 'silent dance'. Each movement is carried out at the same speed, and the spacing between movements is constant so there is a 'rhythm' to the sequence.

Equilibrium occurs because there are movemnts which are very soothing and others which are more alerting; a balanced structure will not be over stimulating or disturbing.

Continuity arises because there is always at least one hand gently touching the baby's skin (not heavily placed on the skin). The message transmitted is that of continuity of the same gentle experience.

3. Physiological effects of the application of TAC-TIC focusing on babies under ventilation assistance.

Results of studies,[7,13,14,15] with babies not under ventilation showed significant improveemtns in weight gain and several neurobehavioural measures after TAC-TIC was given. This author was thus encouraged to see if the technique could be applied to higher risk infants, i.e. very low birthweight babies under assisted ventilation. Moreover oxygen therapy has to be managed with great care; too low may be fatal or cause permanent brain damage, whereas too high can (in preterm infants) be followed by retrolental fibroplasia and blindness.[21] Thus, the earlier the baby is 'weanned' off the ventilator the better in terms of risk of damage. For this reason levels of oxygen in the blood stream, as measured by transcutaneous oxygen partial pressure (Tc PO^2, kilopascals), was used as a reliable measure[22] in this author's study of the effects of TAC-TIC on babies under oxygen therapy; a computer-linked monitoring system was employed for the continuous collection of physiological and environmental data.[23] Without sharp fluctuation higher Tc PO^2 signals no distress and indicates that the baby is receiving oxygen through the blood stream more efficiently.

Figure 1 shows the effects on the level of Tc PO^2 in one premature infant under assisted ventilation. TAC-TIC was given 30 times and monitored on 16 occasions spread over 9 weeks at approximately two-to four-days intervals. The values given are the mean kilo-pascals reading for all sessions monitored before [Mean = 5.73; Standard Deviation (S.D.) = $^{+}$-1.5], during (Mean = 5.74; S.D. = $^{+}$-0.9), and after stimulation (Mean = 6.2; S.D. = $^{+}$-1.3); the mean (%) of oxygen requirement was 40 (S.D. = $^{+}$-8.4).

Fig. 1. Mean Tc P02 for before, during and after stimulation (total of 16 sessions monitored in one infant).

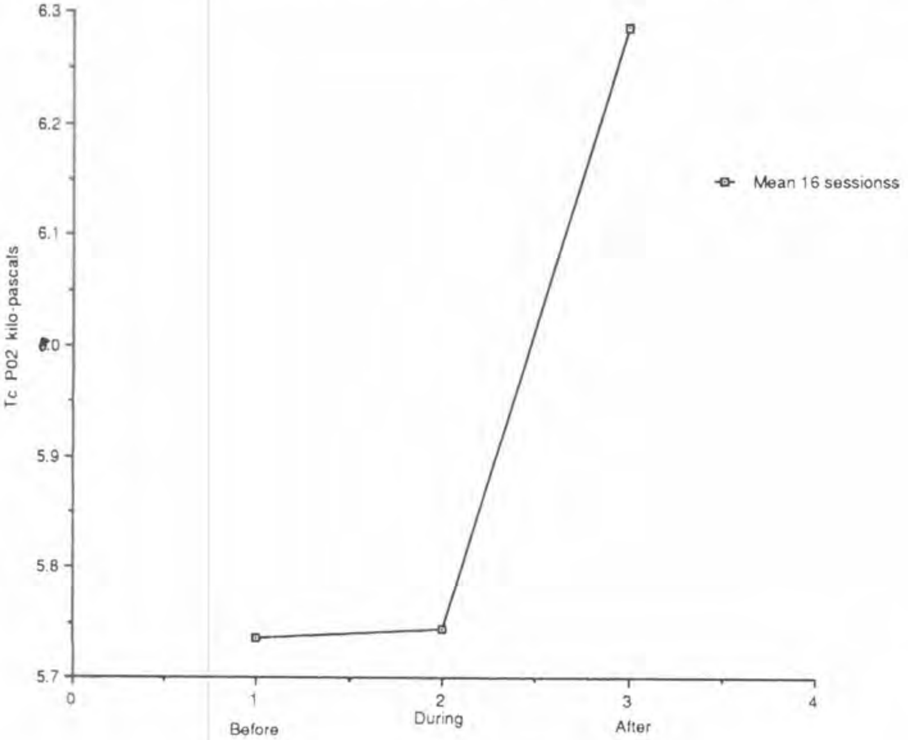
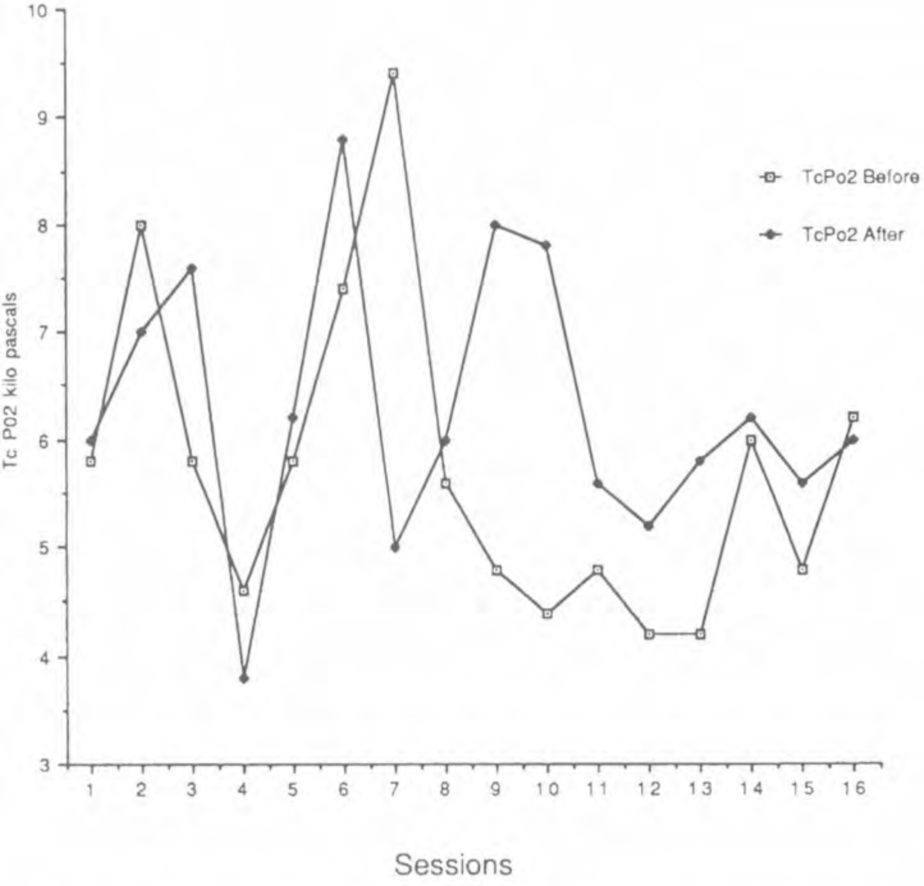


Figure 2 shows the effects of TAC-TIC on the level of Tc PO^2 in a premature infant under assisted ventilation before and after the stimulation session. Tc PO^2 levels was higher after TAC-TIC, although this difference did not quite reach significance (using related sample t-Test, df = 15, t = 1.5, p>0.5, p<0.1). This infant was part of a pilot study which recruited 9 other babies. Work with a larger sample is currently being analysed (Adamson-Macedo, de Roiste and Wilson, in preparation).

Fig. 2. Tc P02 levels before and after 16 sessions in one infant (26 wks. gestational age, 670 g.)



An interesting observation from the pilot data is that Tc PO^2 levels seemed to vary less during TAC-TIC, than either before or after the TAC-TIC within the 16 sessions (Standard Deviation before +/-1.5, after = +/- 1.3.. units and during = +/- 0.9. Measures of Variance are being studied in the data to see if this effect holds; if this should be the case, the possibility that TAC-TIC has a stabilizing effect would be supported.

Hypotheses concerning the reasons why TAC-TIC gives rise to physiological changes have been put forward in earlier publications.[7,13] It is this author's view however that although these measures are very important, the emotional benefits of the programme stand in their own right; the focus of this article is now addressed to this controversial area.

4. Why was TAC-TIC pleasant?

A baby is neurologically capable of experiencing pain at birth, and probably before;[24] it has been pointed out that "his intelectual and emotional perception of pain can only be surmised, since babies cannot tell us how they feel."[25] (p 61). There are many ways of 'telling' things to one another, including non-verbal communication, and that is exactly how the babies communicated with this author. Facial expressions of a baby in pain (grimace) which has been subjected to a traumatic stimulus, such as heel-prick or rough handling, are different from the facial expressions of contentment and joy during the stroking; motor responses associated with pain, i.e. 'startles', are rarely noticed.

Daniel Stern[26] has tried to capture the essence of what it is that is being perceived and communicated when non-verbal expressions of affection are transmitted, for instance between a mother and her baby. He argues that feelings have a shape or pattern, so that when a mother says "there, there," at the same time as stroking the baby's back, a pattern of crescendo and diminuendo is being transmitted both by the pattern of the voice and by the pressure of the touch. These ideas can be applied to explain the soothing and pleasurable effects of TAC-TIC. This is why the same stroking procedures applied by different people produce a multiplicity of 'touching patterns' giving rise to different reactions. The same can be applied for the multiciplity of 'handling' during medical procedures.

5. A new conceptualization of stimulation

The fundamental message which may be drawn from the results of this work carried out from 1980 to 1986, is that stimulation, has to be **appropriate.** *Appropriateness* not only refers to the maturational stage of the baby but is defined by the baby through feedback. This can be subtle and, in consequence, the adult need to be receptive and sensitive in order to understand the messages being communicated.

6. Future directions

Many avenues are being explored such as the participation of the mother and father in the administration of TAC-TIC. This allows parents to become more involved with care of their babies. There are also other programmes developed in Britain, such as Aitken's (1989), which proposes a Reciprocal Model of Infant-Caregiver Interaction.[27]

Perhaps the most surprising results are those of a follow-up study currently under way, in which significant differences in performance in certain cognitive tests are being found between children of 5 - 9 years of age who were in the original TAC-TIC programme, compared with matched groups.[28] If these findings are confirmed by further studies then this will support the idea that early, **appropriate** sensory stimulation (ESTIM) is a fundamental part of normal development.

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PHYSIOTHERAPY ON THE NEONATAL UNIT

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MAYDAY UNIVERSITY HOSPITAL, CROYDON

Physiotherapists are not always involved in the care of babies on neonatal units. Practice on such units which do have physiotherapist attachment varies widely. In order for us to justify involvement, particularly in neurodevelopmental care, we need to examine and further evaluate our methods in a rigourous and scientific way. Having said that, this article will not cover treatment methods in any detail, but correspondence and any information regarding on-going neonatal research by therapists would be welcomed.

Here, the aim is to give an overview of physiotherapy involvement on one Special Care Baby Unit (SCBU), or Neonatal Unit (NNU) of 24 cots, 4 of which have intensive care facilities for newborns. The unit is covered by one Senior I and Senior II therapist.

The therapists aim to provide a service to any baby on the NNU who may need them. Respiratory, neurodevelopmental and orthopaedic conditions are referred by both nursing and medical neonatal staff. The caseload at present is predominantly pre-term babies who require ventilatory assistance. Physiotherapy time on the unit varies widely each day from half an hour to three hours, depending on caseloads.

Babies referred with respiratory problems receive a daily assessment of their condition from the physiotherapist. Close liaison occurs with medical and nursing staff to determine the infant's overall condition and any changes in respiratory function. The physiotherapist will normally carry out one chest treatment each day to all babies requiring respiratory physiotherapy. Any changes to treatment plans are then discussed with the nursing staff, and doctors as necessary, to ensure appropriate management. Good communication is vital as chest therapy is then carried out by the nursing staff until reassessment by the therapists. Each baby is treated according to its needs rather than with a set 'chest physiotherapy procedure'. 'On call' service is not provided to the pre-term babies on NNU.

Physiotherapists advocate the positioning of babies to avoid extreme, end of range postures and to encourage flexor tone development. [1]

All babies fulfilling a set of criteria (agreed by therapists and consultants) should be referred to the therapists for neurodevelopmental assessment prior to discharge. Further therapy involvement may be initiated following discussion of the assessment by the therapist with the baby's consultant paediatrician. Infants who have required artificial ventilation, or other neurodevelopmentally distruptive proceedures, for a long period of time, and those who are specifically referred with neurodevelopmental concerns will be assessed and treated (as appropriate) by the therapists whilst on the unit.

As with any form of paediatric physiotherapy, it is important to involve the family and to keep the parents informed of the physiotherapy techniques used and why their baby needs them. If the parents are interested, 'Tactic Stroking; [2] is demonstrated and the parents encouraged to use it as they wish.

A crucial part of the physiotherapy role on the neonatal unit is the liaison with medical and nursing staff, with specific teaching sessions to the nursing staff. Regular sessions are held on subjects such as respiratory physiotherapy, suction techniques and positioning. It is planned that new nursing staff should spend some time with the therapist as part of their induction to the unit with the aim of ensuring a standard level of physiotherapy care.

In summary, there are four main facets to physiotherapy involvement on the Mayday Neonatal Unit: liaising, teaching, assessing, treating. A fifth element is becoming part of our involvement, and should certainly not be considered a case of 'last and least important' - that of practice evaluation and research.

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EARLY IDENTIFICATION OF BABIES WITH CEREBRAL PALSY

ISOBEL THOMPSON, SENIOR PHYSIOTHERAPIST,

ROYAL BELFAST HOSPITAL FOR SICK CHILDREN

(The following script is taken from a talk given to nurses at a Neonatal Nurses Conference)

Before plunging into the subject of early identification, we need to look at the definition of cerebral palsy.

The World Commission for cerebral palsy defines it as -

"a persistent but not unchanging disorder of movement and posture due to dysfuntion of the brain, excepting that caused by progressive disease present before its growth and development are completed".

PERSISTENT means that Cerebral Palsy is lifelong. It cannot be cured. We must Always keep this in the back of our minds when we are dealing with young babies. Many of our babies present with transient alterations in tone and reflexes which might lead one into a wrong diagnosis of cerebral palsy. It might even be better to go so far as to define cerebral palsy as those children who have presistent abnormal tone, reflex pattern and motor function at and beyond the age of 2 years.

NOT UNCHANGING is of course a double negative and means that movement patterns do in fact change or alter.

The hazard which has adversely affected the brain has affected an immature brain and even though the brain has experienced some insult it will still continue to develop and mature. Not only will development and maturation alter movement patterns, but intervention by physiotheraputic techinques has also the potential for altering movement patterns.

DISORDERS OF MOVEMENT AND POSTURE

This is seen as difficulty in the control of movement. These difficulties may be apparent in any part of the body. They may exist as stiffness for example in the spastic child or they may appear as unwanted movement as the case of the athetoid or ataxic child.

DYSFUNCTION OF THE BRAIN

The location of the damage within the brain will determine the type of disorder. For example - a problem in the motor areas will lead to spasticity - a problem in the basal ganglia will lead to athetosis - a problem in the cerebellun will lead to ataxia. But often things are not just so cut and dried. The insult may be of a more global nature and we may find that the baby has a mixture of disorder such as spasticity with athetosis. There can also be additional problems due to cortical damage such as visual impairment, auditory impairment, epileptic fits or mental retardation.

WHAT DO WE KNOW ABOUT THE CAUSES OF CEREBRAL PALSY?

It has been interesting for me recently to look through the charts of all the babies we have seen with cerebral palsy in the past 3 1/2 years and to tabulate some of the problems they have encountered.

In the **Pre-natal** period, many of the problems stem from the mother such as

- Maternal infections e.g. rubella, toxiplasmosis.
- Maternal high blood pressure.
- Pre eclampsia.
- Ruptured Membranes.
- Premature labour.

The baby may also have an abnormal development of the brain.

In the **peri-natal** period such problems as -

- Short gestation
- Small for dates.
- Small Head.
- Initial Asphyxia.
- Poor apgar scores.
- Respiratory Distress Syndrome.
- Apnoeia attacks.
- The need for elongated ventilation.
- Anoxia

were prevalent.

In the **neo-natal** period one noted -

- Continuing apnoeia attacks
- Infections.
- Intraventricular Haemorrhage sometimes leading to Hydrocephalus and needing the insertion of a shunt.
- Other intracranial bleeding.
- Excessive neonatal jaundice.
- Fits - salam
  Jacksonion
  Myotonic jerks.

In the **post-natal** period from one month onwards -

- Infections and
- Accidents are the greatest causes of Cerebral Palsy.

I feel that it is of importance to note that it is not necessarily just one thing on its own which would seem to be the cause of cerebral palsy but it may be a combination of events and circumstances.

To summarise, cerebral palsy is a persistent disorder of movement and posture due to brain dysfunction. It takes place in the pre natal, perinatal or post-natal periods. It is an insult on an immature nervous system which afterwards continues to develop in the presence of the damage.

What criteria do we use to identify cerebral palsy?

A well documented history of the pregnancy, the birth and the baby's condition in the perinatal and neonatal period can alert us to these babies who would be most 'at risk'.

Firstly, it is necessary to obtain the Maternal History. The number of siblings, abortions or miscarriages and any history of problems with other siblings. Whether the mother has had any problems during her pregnancy, and the type of labour and delivery.

Secondly, the Neonatal History. The gestation, birth weight and apgar scores. Whether the baby was required ventilation and for how long. Other respiratory problems? Infections?

If there has been an intraventricular haemorrhage and if so the grade - whether it led to surgical intervention.

Prolonged jaundice, hypoglycaemia and history of fitting movements or fits.

Another point of interest is the length of time spent in the Neonatal Nursery. Usually the iller the baby, the longer the stay in the Nursery.

It is useful too to note any investigations carried out especially those pertinent to Brain Dysfunction and also to note the main points of concern.

A bad history, however, does not necessarily lead to cerebral palsy but rather acts as an early warning to those of us involved in follow up and identification.

Credit must go to the expertise of the neonatal staff which prevents or at least ameliorates what would otherwise be very serious on-going problems in some very sick babies.

NEUROSENSORIMOTOR ASSESSMENT

It is important in the first 2 years and especially in the first year to correct the baby's age in accordance with is gestation.

For example if a baby has a chronological age of 6 months but was 13 weeks premature - we need to correct this baby's age to 3 months when doing a physical examination.

Our assessment is carried out under 4 headings.

1. Neurological Items.
2. Primitive Reflexes.
3. Postural responses.

and 4. Motor Attainments.

Under **Neurological Items** look at the muscle **tone** in the arms and the legs. If spasticity is present the tone will be high. The **tendon reflexes** are examined. The easiest one to examine is the knee jerk. These will be brisk in the presence of spasticity.

Tremor is sometimes seen in the younger baby and ankle **clonus** may be illicited. A persistent **squint** is often found in older babies with problems.

Vision is very important to the physiotherapist and time is spent in the initial stages trying to acquire good fixing and following.

The Primitive reflexes are examined. The **moro** reflex is normal until a baby is about 6 month's old. A moro reflex persisting beyond that is abnormal. The moro reflex disappears as a baby gains voluntary control of head flexion and is replaced by the landau reflex.

The Assymetrical Tonic Neck reflex is never really strong in the normal infant but would be at its most prevelant at 2 months of age.

A strong or persistent ATNR is always abnormal.

The Palmar Grasp reflex should have disappeared by 3 months so that a baby is easily able to release a toy placed into his hand.

The Plantar Grasp on the other hand may persist up to 9 months.

The tonic labyrinthine reflex, that is, when the baby is placed in supine the body takes up an extended posture and when placed in prone the body takes up a flexed posture, is only present in the normal baby in prone and should have completely disappeared by 3 months. If it is seen in supine it is always abnormal.

The third group are postural responses.

Placing reactions are present at birth and persist. When the dorsum of the foot or hand is drawn across the lower side of the edge of the table the limb first flexes above the table and then extends and is placed in extension on to the table.

In **ventral** suspension and **vertical** suspension the head posture and righting reactions are noted, e.g. when the baby is held upright he should hold his head balanced in the mid position and the legs should be loose.

The spastic child will hold the legs rigidly extended and adducted and it will not be easy to push the legs apart.

The **parachute** reaction in the arms - that is where the baby is tipped forward face downwards and the arms come out to save him - should be present from 9 months and similarly the parachute reaction in the legs present from 4 months.

Perhaps for the physiotherapist the most exciting part of the assessment and the area of greatest diagnostic significance is the assessment of **Motor Attainments.** We are continually asking ourselves - how far along the line of normal physical developmental milestones has this baby gone?

We start our assessment in the **supine** position. We examine head control by pulling the baby up to sit and noting head lag or the activity of neck flexors and then place the baby from sitting to lying and note how well he holds onto his head.

In the **prone** position we look for head extension - can the baby lift his head? and how long can he keep it up?

Does he take his weight in the forearm propping position? - the 3 to 4 month position or can he push right up on to 2 straight arms? - the 6 month position.

We then place the baby in **sitting** and look at the head posture. Is the head held in mid-line or is it held forwards, backwards or sideways? Are the arms held up or down? Are they used for propping? Does he have a normal leg posture good hip flexion, abduction, straight knees and dorsiflexed feet or are the legs tending to turn in, hips to adduct, knees to flex and feet to plantar flex. Has he sitting balance? Can he take up sitting from lying? Can he turn round when sitting? Has he protective extension when tipped sideways?

We next look for mobility - Can he roll over? Can he creep on his tummy or crawl up on hands and knees? Can he pull up to stand?

How does he stand? - with a good firm posture? or does he prance - likes to be up on his toes even perhaps with his legs crossed?

Not only is the ability of a baby to perform important to us, but we need to know why the baby is unable to perform. The whole of this final section of motor attainments reflects back to the earlier areas of assessment - the muscle tone and the presence on inappropriate reflexes and postures.

(Isobel then continued to present details with slides of the aims of treatment of the preterm baby.)

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FURTHER READING

Motor Problems Among Children of Very Low Birthweight

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British Journal of Occupational Therapy

March 1989 52 (3) 97-99

Adaptive Positioning Intervention for Premature Infants: Issues for Paediatric Occupational Therapy Practice.

Bellersville - Reid, D & Jakubek S.

British Journal of Occupational Therapy

March 1989 52(3) 93-95

Posture of Low-Risk Preterm Infants between 32-36 weeks Postmenstrual age.

Vles J.S.H. et al

Developmental Medicine & Child Neurology 1989, 31, 191-195

General Principles of Intervention for the Preterm Infant.

Kirschbaum MJ & Winkelman P.

Developmental Disabilities Vol 8 No. 3 Sept'85

Positional Support for Premature Infants

Updike C. et al

American Journal of Occupational Therapy

Oct'86 Vol40 No.10 712-716

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A PARENT'S VIEW - CAROL VAN TOOREN

My son Mark was born in June 1981. He was my second child and I carried him to term after yet another uneventful pregnancy. Labour was also fairly straightforward and lasted approximately 9 hours, after which time Mark eventually made his appearance, weighing 3.250 kgms.

I was visited by the resident doctor the following morning who promptly told me that after having examined Mark he was somewhat concerned about his condition. Apparently, soon after birth he became oedematus and informed me that he would have to be moved to a Special Care Baby Unit for tests and further observation. As the hospital where he was born, The Gilbert Bain, in the Shetland Islands, had no Special Baby Care Unit, it was the customary practice to fly problem babies to the Scottish Mainland, and to the Special Nursery at the Aberdeen Maternity Hospital. Within two hours of my being informed of this worrying news, my husband and I, plus Mark, were driven to a local airfield on the Island where a small 2-seater plane was waiting to transport us to Aberdeen, equipped with pilot and nurse on board. The flight took approximately 45 minutes and upon landing at Aberdeen Airport an ambulance was waiting to drive us on the short journey to the hospital.

Mark was immediately placed in an incubator in the Baby Care Unit and tests were carried out and his condition monitored around the clock. As well as being oedematus he was also found to have a very large liver and a degree of cardiac failure was thought to have ensued soon after birth. Throughout our 10 days stay in the hospital the care and attention we both received was excellent and I could see him whenever I wanted and feed him on a regular basis . After 4 days spent in the Baby Unit he was transferred to a cot and allowed to spend the rest of the stay with me in the Post Natal Ward. The oedema eventually settled within about 10 days and no particular cause was mentioned to explain this event. His liver also returned to normal and X-Rays on his heart proved normal also. He was indeed a mystery to everyone at the time. As for me, I was just ecstatic to be able to take my normal, healthy child home with me!

Throughout the whole traumatic ordeal the staff at the hospital, and in particular, David Lloyd, the Senior Lecturer in Child Health in charge of the Special Nursery, kept me regularly informed on what was going on and I was never made to feel left in the dark at any time.

We flew back on a commercial flight to Shetland exactly 10 days after our arrival in Aberdeen. It had certainly been an experience for us, but one, nevertheless, that I was glad to put behind me.

Some months later we were able to discover the probable cause of Mark's problems at birth when, at a routine examination, he was found to be suffering from an attack of paroxysmal tachycardia. In all probability he suffered such an attack during birth, which would explain all the classic symptoms of heart failure soon after. I am happy to say that although he still suffers periodic attacks of tachycardia, he is, at the same time, a perfectly healthy, normal and physically active 10 year old.

INTRODUCTORY LETTER

Dear Dr. McKinlay,

I have enjoyed reading your article on Treatment for children with Cerebral Palsy in the recent APCP Newsletters.

Many of the aspects you have included in the article are frequently discussed amongst therapists - early intervention, reasons for referral, management at home and school, 'magic thinking'.

In the present climate of change within the NHS, physiotherapists are now having to justify all aspects of their work, within the restrictions of tight budget control, limited resources and poor facilities. Physiotherapy for all children is much more than increasing mobility - the holistic approach encompasses not only the whole child physically, but that child with his family, in his own environment. The role of the paediatric physiotherapist in supporting, counselling and encouraging the family cannot be separated from handling and treating the child over many years, through periods of crisis and adjustment. This is particularly relevant for community therapists working in the child's own home. It is often to the physiotherapist that the parents turn with difficult questions, and discuss their hopes and fears for the future of their special child.

The printing of your article this year is very timely with the APCP conference occuring as 'Part III' is published. The workshops on the Sunday morning give physiotherapists an opportunity to discuss these important aspects of their work. We look forward to your contribution as the final lecture of the conference, when I know you will stimulate thought and lively discussion on these and other 'Topical issues in Community Paediatrics'

Your sincerely,

Lyn Horrocks

We now complete the series of three parts entitled 'Therapy for Cerebral Palsy'. Our thanks again to W.B. Saunders and 'Seminars in Orthopaedics', Vol.4, No.4 (December) 1989, pp220-228 for permission to reproduce this article in our Newsletter, and our thanks to Ian McKinlay for his continuing interest in our work.

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THERAPY FOR CEREBRAL PALSY

PART III

Ian A. McKinlay

ADVISORY SERVICES FOR SEATING AND APPLIANCES

An appliance and seating advisory service needs an team approach for the best results when children have complex problems. Therapists' contributions are based on regular observation of the child's posture, tone, and movement at home or at school. They will be familiar with the circumstances in which the appliance for seating is to be used and will have suggestions to make concerning modifications. The orthopaedic specialist can judge the priority to be given to specialist provision from knowledge of the natural history of the condition and the degree of deformity which is likely to require surgical intervention.[86,87] Orthotists or bioengineers can judge the most economical and effective ways of making adaptations.[88] Parents and children must be consulted about the acceptability of solutions proposed, and there should be follow-up to audit the advice. In general the simpler, cheaper, more readily available and more comfortable the equipment supplied, the likelier it is to be used.

Sometimes families accumulate a diversity of chairs and appliances. This can stem from pursuit of the latest promotions at exhibitions or in magazines. It can also result from an expression of unresolved grief - anger about the family's predicament being expressed as dissatisfaction about equipment. Therapists or orthopaedic specialists may be able to identify and deal with this but it can be helpful to involve a physician (paediatrician, paediatric neurologist, or psychiatrist).

RESEARCH

The advent of gait laboratories gives therapists a considerable research opportunity.[89,90] The physiological cost of walking can be estimated using a telemetry record of the heart rate during exercise and at rest and relating the difference to walking speed. Suggestions for treatment, whether surgical, orthotic, or by physiotherapy, can be tested and evaluated [91]. Although many laboratories are very expensive to set up and their use is oriented towards research rather than a clinical service, therapists can contribute to their use. [92] At a much simpler level, more could be made of detailed case studies in view of the individuality of most affected children.

PHYSICAL EDUCATION

Physical education is a compulsory foundation subject in the British national curriculum, but this does not apply to children in nursery schools or nursery classes or to children over 16 years, the compulsory schooling limit. It need not apply to pupils under 5 years in reception classes. The curriculum applies to children with special educational needs attending mainstream schools, although pupils with a formal written statement of these special educational needs may be allowed some modification or even exemption from the full requirements of the curriculum in the light of expert advice and with parent's consent. Head teachers have the right to decide that the provisions of the curriculum need not apply to other pupils for up to 6 months with the agreement of the education authority, the school governors, and the parents. The nature of the provision to be made must be described and the local authority must decide whether to arrange assessment with a view to preparing a formal written statement or must state how the requirements of the curriculum will be met after 6 months. The national curriculum attainment targets need not be applied to pupils attending special schools.

If physical education is thought to be so important as to make it a required subject for mainstream pupils, it is difficult to argue that it is less important for disabled pupils. Modification of the content of the curriculum and setting specific aims may be required for pupils with disabilities. Though some education authorities may have the expertise to plan this, it will usually be therapists who are best trained to advise or sometimes to carry out the programme. To accommodate a disabled pupil within a class group without causing a sense of failure or embarrassment is difficult but worth addressing before deciding that withdrawal for individual therapy is needed. If a classroom assistant has been provided for the disabled pupil, the therapist will teach that colleague until confidence is established then withdraw towards periodic review.

COMMUNICATION WITH PARENTS

A concern about school-based therapy is communication with parents, who may work during the day or live some distance from school and have transportation difficulties. There should be appointments from time to time for parents to be brought up to date, or a diary can pass between home and school and may be helpful if several teachers are involved. Any staff changes should be noted promptly, and a regular written report is helpful.

COMMUNICATION WITH TEACHERS

The therapist should try to communicate with the class teachers directly, rather than through the head teacher alone. This will be of mutual benefit, although health staff must be sensitive to all the other demands made on teachers. Advice that is clear and practicable is likely to be carried out. Time spent communicating with teachers will reduce a therapist's availability for individual pupil contact, but acting as a consultant has a greater influence on the child's general activities than working through a withdrawal programme. Opportunities for periodic review by physical contact and observation are necessary. Therapists can probably achieve more through short intensive programmes than continuous help. Imaginative application of relaxation techniques,[93] music,[94] and swimming[95] will sustain interest.

GROUP PROGRAMMES

Although therapy for children with cerebral palsies conducted through mainstream play groups, nurseries, and schools can provide social benefits for children and parents, there is a need for audit regarding educational, physical, emotional, and social outcome. The case for children with disabilites having the opportunity to meet in groups from time to time should be considered. Although they differ from one another, they will have difficulties in common and may feel less disadvantaged knowing that there are others who share their predicament. Parents, too, may benefit from contact with one another, and voluntary societies can be helpful in facilitating that. It is one of the requirements of the British 1981 Education Act that health professionals should make parents aware of such agencies when a child's disability is first diagnosed. Some therapists, teachers, and voluntary groups have arranged holiday clubs, sports coaching, and access to sports facilities, including swimming, skiing, or horse riding, as well as weekly social meetings for physically disabled and able-bodied children and adolescents.

It should not be supposed that young people will make friends because they share a disability. Indeed, they may have prefudices about other disabilites (eg, epilepsy or mental retardation). A good deal of adult involvement is required to facilitate the running of groups, particularly as many such children may be relatively deficient in social skills that require initiative, persistence, or resilience. They are not used to making the first move, dealing with critical views of their efforts, or lack of protection from insults. Therapists who run groups need to be prepared for difficulties and need access to advice from a psychologist. They may also need help from a social worker if parent groups are run in parallel.

PROLIFERATION OF PROFESSIONALS AND THE DEVELOPMENTAL THERAPIST

There is a problem of the proliferation of professionals with an interest in disability. Parents can be inundated by appointments from doctors, dental services, orthotists, audiometricians, appliance services, psychologists, and therapists, of whom there are several types. One of the attractions of the Peto system is that the conductors oversee the whole programme: self-care, language, posture, and movement. There are large vested interests in the preservation of professional boundaries, and the care of children forms a small part of the basic training of each group. However, might it be possible, within local services, for an individual child and family to relate to one developmental therapist whose expertise is agreed to be the most relevant? Whether that therapist has been trained as a speech pathologist, occupational therapist, or physiotherapist, it should be possible for that person to take questions to colleagues and deal with the simpler demands, somewhat like a general medical practitioner.

CONCLUSIONS

In a climate of change in educational policy, professional audit, and resource management the role of therapists is likely to change. There will be less prolonged individual treatment and more consultancy for assessment and advice to parents and colleagues. Treatment programmes are likely to concentrate on short-term specific rehabilitation goals which have been agreed upon by children and their parents. The importance of the psychological dimension of management needs to be recognised by therapists and those who refer to them. Present evidence does not suport expenditure of extravagant resources for intrusive, excessively time-consuming novel remedies.

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CONDUCTIVE EDUCATION AT CLAREMONT SCHOOL, BRISTOL

Carole Hurran B.A., M.C.S.P., Supt. Physiotherapist, Southmead H.A.

Introduction

This paper will describe how the principles of Conductive Education have been applied in a Local Authority day school for physically handicapped children from 2+ to 11 years of age.

Background

Claremont School was started by a small group of parents in 1953 at a time when there was no educational provision in Bristol for children with severe forms of Cerebral Palsy.

In 1966 Ann Smith the Superintendent Physiotherapist heard Ester Cotton talking on a method of education for motor impaired children being used in Budapest. After visits and collaboration with Dr. Hari and Mrs. Cotton the Headmistress, Miss Ram, introduced a pilot scheme at Claremont and a gradual process followed of imitation, learning and modification to produce 'The Bristol Adaptation' of the Peto Method (Smith 1970).

Staff training has continued over the years, enabling us to maintain the basic principles throughout the school while being flexible to meet changing needs and provide for a wide range of disabilities.

Preparation for School

Children attend from the whole of Avon, and a few from out of County. Two Bristol Children's Centres now run Peto style mother and baby groups in addition to the usual therapy input and this has helped children settle into the school system more easily. It has also resulted in better understanding of the system by outside professionals.

The Team

The system at Claremont has always relied on the input of a transdisciplinary team to assess children's needs, set objectives and plan programmes. (Titchener J M 1988)

Each class has a teacher and assistant full time and a physiotherapist for between 9 and 18 hours per week depending on the need. There is also one full and one part time speech therapist for the school. All therapists are employed by Southmead Health Authority but all function as integral parts of the class team.

Any member of the team should be able to lead or 'conduct' the group at any time so that the activities run smoothly with the right balance of education, physical, speech and communication work being built in to the daily routine. In order to achieve this all staff must be willing to do **anything** and be very flexible about their own professional role. Each will naturally control content of the part of the programme in which they have particular expertise but at the same time be willing to take on board other professionals' views and ideas so that there is agreement on how best to achieve all the objectives for each child within the group.

Programme Planning

Team meetings for each class are held regularly to discuss problems and plan and update individual and group programmes. Extended team meetings including parents are held in the Autumn term to bring together all the aims for each child and plan for the year. Children's progress is reviewed in the Spring and again in the Summer at the Annual Review.

Joint planning enables group work to give learning opportunities for appropriate cognitive, physical and speech development. Staff aim to motivate each child to develop skills in all areas of development, with an emphasis on learning in functional situations throughout the day at home and at school (Bobath).

Many aspects of the National Curriculum key stage 1 are covered by the content of well planned task series and are not regarded as 'time out' from educational work but as part of a unified, child-centred programme enhancing active learning (Williams).

Structure of the School

There are 74 children in 8 classes.

I. Van Neste Assessment Nursery - for pre-school age children with developmental delay and speech and language disorders. Most of these children will move to other schools between 5 & 6 years of age.

II. The main part of Claremont School is run on C.E. lines. The majority of pupils have Cerebral Palsy and a few have Spina Bifida and other motor disorders. There is a full range of physical disability from total dependence to relatively mild co-ordination and perceptual problems.

Classes are arranged chronologically into nursery, infant and junior sections. Children are not segregated for education by disability. Physical groups may be across infant and junior classes to be more effective, both in providing optimum numbers and in economic use of time.

Speech Therapy groups work on the Derbyshire language scheme, the development of oral skills and control of drooling in addition to individual programmes to develop feeding, speech and communication skills. Speech development and breathing control is integral in all task series.

Treatment, education and care are not considered separately but as parts of a whole and the whole day is used for learning. (Jernqvist).

The Nursery Classes

Children usually start on a part time basis often on an assessment place and parents are asked to come in and work with their child for 1/2 day each week to help, liaise with the team and learn how to continue the programme at home.

The Daily Programme in the first nursery class aims to teach the children that they are safe and secure and provides the motivation to learn. The basic requirements of life are the first things to be learnt - feeding, drinking, toileting, communication, play, changing position and developing upright posture. Perceptual training continues during individual and group activities.

Mothers help in the nursery plinth class

The pattern of each day is very similar with individual learning time, plinth group, standing and walking tasks, lunch, potty training, free play time, and nursery activities such as painting and water play. Themes, stories and role play are used to motivate and interest the children and make the routine enjoyable and purposeful. Tasks are adapted so that even the most severely physically disabled can take part.

Speech regulation (often with songs) is used to direct and assist movements, aid concentration and create a rhythm in which to move. Spastic children need time to complete a movement in correct pattern and athetoids move quickly, then hold the position during the rhythmic counting or singing. Facilitation is used as necessary to teach what is required and promote good quality movement with verbal or 'hands on' inhibition of undesirable patterns.

Positive 'feedback' is given to the children with the promotion of conscious active learning and clearly defined goals which must have significance for the individual concerned. (Hari).

An atmosphere of calm helps prevent undue increase of hypertonus and aids concentration during activities and this has to be balanced with the right amount of stimulation to motivate function.

The programme is more varied in the second nursery class but with plinth groups for the less mobile, and groups for all to improve balance in sitting, standing and general mobility plus hand function and pre-writing skills. Individual and group work continues to develop cognitive, speech and communication skills.

Learning to use the pot, sit and maintain grasp

Individual Physical Programmes

These are timetabled between group work, or first thing in the morning or at play time. Children will also practise individual tasks at the end of plinth and standing classes as appropriate. Those at risk of contractures and deformities will have specific physiotherapy techniques to relax and stretch tight muscle groups, and these are always part of the home programme.

Children having surgery return to school as soon as possible after and have intensive physiotherapy as required.

Infant Classes

The first infant class is in a large double room with partition allowing all activities to occur within the room. Physical groups are held daily and split according to level of function and timetabled to give each child individual and group teaching and therapy time. Physiotherapists generally run the physical groups with help from other staff, parents and volunteers.

Splinting and positioning aids are used for those who have difficulty with trunk control and posture, and mobility and communication aids are introduced when it is clear that these will enhance learning and ultimate independence.

Wheelchairs are not normally used within classrooms and children are given time to walk with help as appropriate.

Junior Classes

At this stage when most children have had 4 years of fairly formal conductive education the emphasis is on maintaining skills learnt, which may still require frequent practice and refinement, and learning to transfer skills in different situations and environments. Speech regulation will still be used to help a child through a difficult manoeuvre, but children will mostly use 'inner speech' and be encouraged to think through actions that are not yet automatic.

Depending on the needs of the individual the balance between physical and educational work will have gradually altered so that more time is given to academic subjects with whatever aids are necessary to allow this.

Riding, Halliwick swimming and 'structured' games are part of the physical education plus the development of self help and organisational abilities. In all daily living activities time is given for children to function independently, or with as little help as is necessary.

Two Way Integration

Children ready to move into mainstream schools are prepared carefully for the transition and usually begin with one or two days at first, with support from teachers and therapists. Early specialist help enables them to develop the self confidence and physical abilities that they will need in their mainstream schools. (Todd J E)

Training is offered to mainstream school staff and is essential in the success of integration to meet the child's needs.

An 'outreach' teacher visits other schools to advise on specific learning problems and some children with perceptual and co-ordination problems who have been experiencing difficulties in their mainstream schools come into Claremont part time for extra help at infant or junior level.

Conclusion

The major benefit of the system at Claremont has been to bring staff together to share and develop skills and provide for the children a carefully structured, holistic programme of education. The aim is a well balanced, confident individual with an independent attitude who will go on to attain his or her maximum potential in all areas of development.

This is Orthofunction in the true sense of the word; it represents not only certain skills of motor function but also the ability to solve problems and take responsibility for individual development and creativity. (Hari)

The system continues to change and develop to meet new ideas and new demands and it is essential to keep an open mind, avoid complacency and continually evaluate and compare in order to maintain and improve standards. Parents above all need to be partners in decisions on education and treatment and understand the choices available to them in this country to meet their child's needs.

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CHAIRMAN'S REPORT

MARY CLEGG

It is my pleasure to welcome you all here today - the 18th Annual General Meeting of the Association.

The constitution requires us to hold the AGM at this time and as you are aware, we usually combine this with the Annual Conference. However, with the World Conference of Physical Therapy being held in this country later this year, the Committee felt it was appropriate to link our own Conference into this, giving the opportunity to overseas therapists with an interest in Paediatrics to attend our Conference. We hope perhaps that we may be able to welcome some of our own overseas members to this, when it is held in Cardiff in August. We thought it right to arrange a Study Day alongside the AGM and I would like to take this opportunity of thanking on your behalf all our speakers and afternoon Chairman, for helping to provide such an interesting day. AGM's can often be rather dull. The name for today "The challenge of change" must surely be an echo of words we are constantly hearing. We went through an Industrial Revolution, perhaps today with all the changes in Health, Education, and the Social Services extending into Local Government, we could liken it to a Social Revolution. I am sure that often we all feel tired by the constant new requirements and pressures that are put upon us, but wasn't it Shakespeare who wrote - "there is a tide in the affairs of men which taken at the flood lead on to fortune"?

We must look upon these times as a challenge to achieve. It is important to meet challenge with an open mind, embrace it and put it to our advantage.

With these thoughts let us think about our own Association. Whispers came up through the Membership about concerns over local meetings, failing attendances and ever increasing pressures from our working environments. Perhaps now is the time to take stock of what our Association does, what it represents and does this fit in with what the Membership requires? We have been growing up, and we are now 18 - adulthood. With growing and continuing responsibilities should we be taking more note of what is happening around us and planning more for the future - rising to meet the challenges of these changing times. Your National

Committee has begun to debate some of these issues and we would welcome your thoughts through your Regional Reps.

Turning to the activities of your National Committee, the individual reports will give you more detail. However, I would like to highlight one or two things.

The Newsletter must surely be one of the most appreciated of publications for therapists working in paediatrics. The Editorial Board under the Chairmanship of Jenny McKinlay put in a great deal of work to maintain its high standard. Our thanks go to them for all their efforts. Don't forget, the Newsletter gives you, the Membership, a forum to express your views - use it, the Editorial Board will welcome it!

Caroline Dunn the PRO cannot be with us today - a happy reason - her daughter is getting married. She heads up the Regional Reps, and her Report follows later. Our thanks to Caroline and all the Regional Reps for all their hard work. Their close links to the Membership are invaluable and they do an important job which requires tact, persistence, determination, and is not always easy. The theme of our working week-end in early November last year was "How to market ourselves" I am sure you will agree that it is important to do all we can to raise the profile of the Association. Those who use the services and skills we can offer usually want more and more and then we are overworked and frustrated. Marketing our skills is not only about raising the image of Paediatric Physiotherapy but also about encouraging young members of the Profession to look at Paediatrics as their area of interest, and so we grow. Caroline and her team are now preparing a leaflet, similar to the one we are already have, developing some of the themes we discussed in marketing for you all to have available for information.

The job of the Membership Secretary can be an onerous task and Jean Lamond does this job with understanding and cheerfulness. She is extremely skilled at prodding us to pay our membership fee. She reports that there has been and continues to be, considerable interest in our Good Practice Guideline Document. We had to print a further 1000 copies. Thank you Jean for all your help. Money, costs and inflation are things we hear about all the time. Making the books balance and keeping us all in line on the financial front is done in a very firm competent manner by Lyn Weekes, our thanks to Lyn, her Report follows later.

We continue to have many requests for booklets published by the APCP. Carol Foster is presently looking at which need up-dating and suitable subject areas for more, - again any ideas would be welcome. Carol would be delighted to hear from you. This is a time consuming task but judging from the enquiries from both within and outside the Membership, a very worthwhile one - thanks Carol.

During my year in office I have been kept in line by the Secretary - no easy feat, when I work one side of the Midlands, live the other side and am often difficult to track down. Michele Lee our Secretary has a tremendous workload which she always manages to do with a charming smile behind which there is an extremely efficient person. She must be to be managing the job of Secretary, a full-time job and a delightful baby boy - Thomas, thanked us for a small gift when he was born last July. Thank you Michele for all you do for the Association, the National Committee and myself.

Training is the foundation stone of our knowledge and as you know my special interest. Exciting things are happening and Sandra will enlarge on this in her Report. Kath Jenkins our Professional Representative to the DOH says in this week's Therapy, how much she would like to see joint training of the therapy professions at post registration level if possible. As she retires I can only reassure her that this is being addressed. Her support to the Association during her time in office has been greatly valued, and our thanks to her. We wish her a long and happy retirement. My thanks to the Education Sub. Committee.

Finally, we as therapists had a sad loss this year with the death of Dr and Mrs Bobath. Words cannot express what we all feel and the gap that will remain for many years to come. Their work was recognised the world over, and many peoples lives were enriched by their lives. The Association sent a donation of £100 to the Centre.

To finish - my thanks to you the Membership for your support and to all Members of the Committee.

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P.R.O. REPORT

Caroline Dunn

We all feel a little strange this year because of our unusual timetable. Having had the AGM with a study day in mid April (almost the first and last day of Summer), we are now all getting keyed up for the Cardiff Conference. This Conference, as the Membership will realise, comes on the heels of the International Conference in London, at the end of July. It is a joint meeting with the Respiratory Care Group and a new and exciting departure for us. The committee running the Conference has been working ever harder and surely all their efforts will be handsomely repaid.

One of my responsibilities is to look after our Overseas Members, who now receive a news-sheet with their Newsletters. It would be very good to think that some of these members might attend our conference, and certainly hope that should they do so, our hospitality will be waiting for them.

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ABSTRACTS

Title: **Outcome of 100 randomly positioned children of very low birth weight at 2 years.**

Author: Ulrich Aebi, Jacqueline Nielsen et al, Bern, Switzerland

Source: Child Care, Health and Development Vol.17. No.1 Jan/Feb 1991 pp 1-8

Premature children often show a tendency to adopt extensor motor patterns during their first year of life and are considered to be at high risk for abnormal development. It has been considered useful to position such children in fixed a position in order to minimise the development of extensor patterning.

In this study 100 children with birth weights of 1500 grams or less were followed up between Sept. 1980 and Feb. 1984. They were assigned at random into 2 groups - one group being placed in a position of continuous flexion, by means of a specially made plastic shell - those in the other group being postioned in any random position. Those in the flexed position were placed thus from 7th day post natally until their discharge.

All children were seen at the age of 12 weeks post term, and then were reviewed at regular intervals by the same examiner - the techniques used followed lines as set by Illugworth and Touwen.

Neuro developmental therapy commenced in early life with children with abnormal motor patterns or developmental delay, treatment being given once a week.

All children were assessed at the age of 2 years post term, 19 children were found to be physically handicapped, with spastic cerebral palsy of variable severity but with hemiplegia. Those children nursed neo natally in the flexed position shared no significant difference of developmental outcome.

However it was found pre natal influences had considerably more significant influence on developmental outcome namely:-

maternal age

smoking

use of drugs

method of birth

medical problem during pregnancy

Results showed pre natal optimality has a greater statistical bearing on developmental outcome than any per natal and post natal influence.

Intervention with N.D.T. was useful in that developmental aberrations were rapidly recognised and in cases of rapid normalisation, of symptoms, progress was more speeded up.

Title: **Clumsiness in Children - Do They Grow Out of it.**
A Ten-year follow up

Author: Anna Losse, Sheila Henderson, David Hallet, et al Institue of Education,
University of London, WC1 St Georges Hospital, London, S.W.17

Source: Developmental Medicine and Child Neurology 1991 Vol 33 pp 55-68

"Clumsy" children are those who experience exceptional difficulty with tasks requiring motor co-ordination. Over the past decade there have been a number of studies involving such children but most have been about their early development and have not followed their subjects through to puberty. As many parents are still led to expect physical signs to disappear with maturation, it was felt more precise information was needed.

Ten years ago two of the present authors conducting a detailed study of children selected by teachers as having poor co-ordination. This present study undertook to re-examine these subjects, now teenagers, to determine their current motor, psychological and educational status.

Method

A control group was used, information was gained via:-

1. Stockman Test Battery and scoring system

2. Henderson Revision Test of Motor Impairment
3. Weschler Intelligence Scale
4. Perceived Competence Scale
5. School Records
6. Interest Questionnaire and Interview

Results

Those teenagers designated clumsy differed substantially from the control group especially in items 1,2 and 5

Most common problems were found in:-

handwriting, art design and technology

home economics

practical science lessons

In all assessments involving academic, social and emotional states the "clumsy" children scored lower than the control group - they being less competent academically and behaviour problems being more common

Discussion

The authors comment the results were more negative than expected - problems recognised at 6 years of age were still present at the age of 16. There is little published work on the efficacy of different types of intervention - Children when first helped made significant progress but this was not maintained when the programmes were completed.

Attitudes of schools to these children vary and needs further investigation. The authors feel minor motor difficulties in childhood should not be ignored but help should be continued to teenage years.

The question is how can this help be provided most effectively.

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COURSES

Oct. 31st **Principles and Practical Application of Postural Management**

The Study Day will consist of lectures and video workshop relating to the assessment and prescription of treatment and equipment for children with motor handicap. The course will describe a method of assessment and treatment based on a normal developmental model of physical ability. Equipment for postural control in lying, sitting and standing will be demonstrated.

Fee: £15 includes coffee, lunch and tea.

Applications (with fee - cheques payable to 'Rehabilitation Engineering Unit', to Mrs. D. Blake, Secretary, Rehabilitation Engineering Unit, Chailey Heritage, North Chailey, Nr. Lewes, E. Sussex BN8 4ER (Tel: 082-572 2112 Extn. 210.)

Please send s.a.e. for details and application form.

Hare Association for Physical Ability

16th November **Postural Competence**

HAPA is holding its second study day on 16th November as part of the association's remit to teach the theory of physical ability, as first expounded by Noreen Hare, MCSP and encourage its wider use.

The study day focusses on early postural development and the education of posture in young adults who have cerebral palsy; the effect of posture on cognitive function and appropriate equipment for postural management.

Speaker will include Anne Amos MCSP, Elizabeth Green, MB. ChB, DCH, Roy Nelham BEng, CEng, MIMEng, Catherine Mulcahy, BSc. DipCOT, SROT and Tracey Poutney MCSP.

Cost: £20 for members of HAPA, £25 for non-members.

Venue: Portland Training College, Mansfield, Nottinghamshire

For further information and application form, please contact Jenny Barnes MCSP, Information Officer HAPA, Physiotherapy Department, Leicester Frith Hospital, Groby Rd., Leicester LE3 9QF Tel: 0533 872231 Extn 3299

I-LEWIS (International League for Essential Nutrition and Stimulation) IV Symposium and AGM

Friday 30th August at Royal Hospital for Sick Children, Edinburgh

Speakers include: Neil McIntosh, William Cutting, Peter Howie, I. Crombie, Sheila Gibson, Ken Aitken, Aine de Roiste, Stephen Collins, Jane Ridder-Patrick, Joan Buns, Christina Del Propre, G. Alvis.

Topics include: Measuring Pain in the Neonate; Homeopathy in the Perinatal Period; Immunisation impact on the world; The Protective Effect of Breast Feeding Against Infection: Vitamin and Intelligence: Infant-Caregiver Reciprocal Model of Interaction; A TAC-TIC intervention with both Mums and Dads of preterm infants; Sucking pressure as a dependent variable in early infancy; The Naturopathic Approach; Infant Feeding; Aromatherapy in pregnancy, babyhood and childhood.

Fee: £10 (students); £14 (members) £18 (Non-members) £25 (Late fee after 9th August.)

For further details, contact Symposium Secretariat at 39 David Rd., Dalbeattie, Kirkcudbrightshire, DG5 4RE

CASTLE PRIORY COLLEGE - NB all charges reduced by 20% as from 1st June 1991

27/132 24th September

The Sherborne Movement Method for children with special needs.

27/133 24th September

Bereavement; implications for people with learning difficulties

27/157 25 - 27th October

Video Recording Techniques

27/164 1 - 3 November

Clumsiness in children

27/170 8 - 10 November

Perception - a Hidden Handicap

For further details of the above courses at Castle Priory College, contact them at Wallingford, Oxfordshire, OX10 0HE Tel: 0491 37551/26350

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HERE AND THERE

An Appreciation of Penny Robinson's term on Committee

Penny Robinson, the CSP Director of Professional Affairs, has been both a Committee member and co-opted member of Committee for some time. Penny now feels that she must resign in order to make space for other activities.

On behalf of us all, I would like to thank Penny for all her assistance during that time, and to indicate how much we have valued her presence on the Committee. She has given us advice and encouragement, has reminded us of our responsibilities in addition to giving us an occasional 'smack on the wrist' if she thought our performance was falling short in any way. Penny has pushed us to ever more exacting standards of performance and professionalism as our Association has grown. This has been reflected in the activities of the association. Now that she is no longer on the Committee, I feel that there will always be a still small voice saying "Is this how Penny would want it done?"

Very many thanks Penny.

Caroline Dunn, PRO

THANKS

The APCP would like to express their grateful thanks and good wishes to retiring chairman Maggie Diffey, who has served the maximum term on National Committee and now stands down. Maggie's quiet diplomacy and tact will be missed. Always welcoming to new faces, her warmth and concern for others enhanced the fellowship shared by committee members. As Chairman, Maggie enabled people with differing talents to work together as a complementary team. Her gentle manner and droll humour proved an inspiration especially in times of intense debate.

Maggie - on behalf of the APCP membership, we thank you for all your hard work and participation in developing the association further. We wish you well in the future - you will be missed by your friends on national committee.

Thanks also go to Michells Lee (Secretary) and Viv Williams (Vice Chairman) for their contribution over the years to the Editorial Board. The responsibilities of executive committee members are great, and require much dedication of personal time and effort. Both have given such dedication willingly, and we will miss them, their good sense of humour and practical assistance. Michelle and Viv, you may have left the Editorial Board, but you are still very actively with us in your current positions, and we wish you well.

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A letter of thanks has been received from the Bobath Centre following receipt of the £100 we, as an Association, donated after the sad deaths of Dr. and Mrs. Bobath. Viv Williams attended the funeral as an APCP representative.

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Your Editor would like to apologise for the slight muddle over the application forms for the April AGM in London. By not requesting that applicants send a s.a.e., some folk were left unsure about their places. Some of us still have to learn from experience, and your editor is one of these! My apologies for any inconvenience caused.

Editor.

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Write Away

The penpal club backed by the Royal Mail hopes to help children and young people with special needs in Britain make friends through letter writing. Write Away aims to break down barriers by putting young people in touch with one another by any means of communication which travels by post - pen and paper, braille or audio cassette.

For a token membership fee of £1, young people from 5 - 18 will receive a special Write Away folder with pen, paper and envelopes, and the name and address of their specially selected penpal. These details are also available on audio cassettes and braille. The Royal Mail backs the club by providing the Write Away pack, the use of a computer to help match penpals and offering general advice and support. Each member will be matched as closely as possible by computer with a penfriend of their choice. Members will be able to contribute to regular Write Away Newsletters and future plans for the club include outings to meet penfriends and holidays and exchanges.

Children and Young people interested in joining, or people who could spare some time and/or donations to help the club, should contact: Hilary Wainer and Nicolle Levine, Write Away, PO Box 175, New Ash Green, Dartford, DA3 8PQ Tel: 081 452 3330.

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Red Letter Day for therapists in Northern Ireland

April 27th, 1992 is to be a Red Letter Day for 23 paediatric therapists in Northern Ireland. These are the therapists selected to attend the full 8-week Bobath Course to be held in Belfast for the first time. We have chosen to restrict the intake to local physiotherapists, occupational and speech therapists which will give our provice a unique ratio of specialised multi-disciplinary staff treating neurologically impaired children.

In order to bring this prestigious course to Belfast, our Committee has obtained the generous backing of many eminent medical personnel, some who wrote on our behalf and others took our case forward to government bodies. Also, many civil servants, some known to us and others not, took our case further and we have been given financial support for this venture amounting to the sum of £27,320. Fleming Fulton School (catering for children with physical handicap) has most generously offered to accommodate the Course while Torbank School (catering for children with special needs) is to provide extra practical experience.

We would like very much to thank the many people involved both in the background and in the front line for their support and the faith shown in the therapy professions involved in the Bobath concept. Much remains to be organised before next year, but now with the biggest hurdle (finance) behind us, we look forward with anticipation to the completion of this project.

Annual Conference

1992

University of East Anglia - Norwich

26th - 28th March 1992

The Neurologically Impaired Child

Speakers & Delegates from Europe and the UK

REGIONAL REPORTS

South West

Carole Hurran, 23 Bayswater Ave., Westbury Park, Bristol BS6 7NU

Our Study Day at Poole on Gait and Walking Problems attracted 45 people and was a successful and very interesting day. Thanks to Gill Smith and team for organising it.

There will be an Introductory Course on Sensory Integration on Sept. 14th, given by Jenny French and organised by the Gloucestershire S.I. Group - details from Linden Clark at Chamwell School, Gloucester.

A study day has been arranged on 'The Role of the Physiotherapist in the Neo'Natal Unit. Sat. 28th September, 1991 at Basingstoke District Hospital. Details and application forms (SAE please) from Mrs. F. Corkhill, Childrens Unit, Basinstoke District Hosptial, Aldermaston Rd., Basinstoke, Hants. RG24 9NA before 13th Sept. Tel: 0256-473202

South East

Miss Terri Fearn, 38 Woodland Close, Peacehaven, E. Sussex BN10 7SF

The Study Day on 15th June was excellent. Enrique Valles ran a good session on 'Behaviour Modification', and another on 'Counselling'. We felt he would be well worth inviting to speak again on a future course. There was also a session on 'portage' given by both parents and professionals, and it was good to see how well all worked together as a team. Sadly the study day was not that well attended.

For the Autumn, we are planning something on 'orthopaedics'. More details later. We hope you will come, meet other APCP members and give us ideas on what you would like for a study day.

We had our AGM on 15th June. Joyce Seccombe has resigned from the committee. We would like to thank her for all her hard work over the last few years. We have welcomed two new members onto the committee.

London

Rowenna Hughes, 87 Norbury Hill, London SW16 3RU

In June, an excellent workshop was held at Queen Elizabeth Hospital, Hackney, on 'Inhibitory Casting.' The course was over subscribed but the 16 fortunate people who attended had a very informative course. It was led by Roz Boyd, Research Physiotherapist - Wolfson.

Sat. September 14th will be a study day at Northwick Park Hosptial on 'Congentical Abnormalities from Birth - Adults.'

On Thursday November 7th, an evening lecture will take place at the London Hospital on 'Development of Hand Function. It will be taken by Sheila Eden, Occupational Therapist.

Future courses are being planned for 1991, but the committee and members are disturbed by some of the changes that are taking place in the Physiotherapy Services in the London Hosptial due to the re-structuring of the National Health Service. All physiotherapists should be aware of the changes.

East Anglia **Jackie Reynolds, Church Farm House, Ornsby St. Michael, NR29 3LN**

A Study Day will be held on October 8th in Chelmsford on the Principles and Practical Application of Postural Management. This will be presented by the team from Chailey Heritage, and has been arranged by Elva Mason. It should be an interesting day and we hope will be well supported.

Another study day is planned for the New Year.

Our major activity is the preparation for the conference 1992 in March and plans are making good progress. The programme will shortly be available and application forms will be included in the November Newsletter.

We hope that people will enjoy visiting Norwich and look forward to welcoming members to East Anglia. The committee is filled with apprehension and anticipation, excitement and a good proportion of nervous tension!

Trent **Jenny Gill, 42 Britannia Ave., Arnold Rd, Nottingham**

Trent reports that there's nothing to report! (Thanks for letting us know - Editor)

West Midlands **Carol Foster, Physiotherapy Dept, The Children's Hospital, Ladywood Middleway, Ladywood, Birmingham B16 8ET**

A successful evening meeting was held in the Dance and Drama Studio of Victoria School Northfield on June 19th - some fifty teachers and physiotherapists gathered for an open discussion on Conductive Education. The panel of speakers consisted of Margaret Adams from Evesham and Janet Steel from Victoria (both physiotherapists), and Mrs Barlow from Green Hall Nursery Staffordshire, and Patsy Tinley of Victoria (both teachers).

A further meeting on Sensory Integration is planned for either Sat.21st or 28th September - venue may be 'Sense', Calthorpe Rd, Edgbaston. This will be circulated throughout the region when date and speakers are confirmed.

In the New Year, a series of orthopaedic evenings are planned.

Thanks to all interested West Midlands paediatric physios who have joined the APCP - please let me know of any news, views or items you would like to add to the Regional Report.

Wales **Barbara Bowen, Children's Assessment Centre, East Glamorgan Hospital, Church Village, Nr. Pontypridd, Mid Glamorgan**

Congratulations to our previous rep. Liz Atter on the birth of her son James earlier this year. Our thanks to Lyn Horrocks who stepped in to take over as rep. again when Liz retired.

In June at East Glamorgan Hospital members met for an enlightening talk by Julie Williams MCSP on 'Physiotherapy for the physically handicapped child in schools in Canada'. Julie had just returned from Canada as part of her 2 year course for the diploma in management studies. The subject of her dissertation was 'Providing a physiotherapy service for physically handicapped children in schools'.

The conference committee led by Lynne Horrocks are engrossed in last minute preparations for the '91 conference in Cardiff. The evening highlights include a civic reception hosted by the Lord Mayor on Friday 2nd August followed by a meal at the Llandaff Celebrity Restaurant, St Davids Hall, and conference dinner on the Saturday at Cardiff Castle. We look forward to welcoming you!

North West

Alex Winney, 14 Langley Rd, Spital, Bebington, Wirral, Merseyside L63 9HW

At the present time, the North West is having a quiet spell. The next committee meeting is at the end of July and hopefully then there will be more decisions made regarding future courses.

APCP N.W. Sweatshirts have been designed and will be on sale shortly; Look out for them at the next N.W. Study Day!

North East

Carrie Jackson, 4 Abbotsway, Moncaster Gate, York YO3 9LB

A course on 'The management of deformity' was held in Leeds on July 6th with thirty branch members attending. This represents about one third of the branch membership which is encouraging. A further course is planned for the autumn to look at our role in mainstream and special schools vis-a-vis the National Curriculum and The Children Act. This is an area of great change for all of us at present, so we hope the course will attract many applicants.

Scotland

Lyn Campbell, 19 Craigmount Ave North, Edinburgh EH12 8DH

Our next study day will be held on Sat. 5th October, 1991 in the Lecture Theatre of the Queen Mothers Hosptial, Yorkhill, Glasgow. The topic will be 'From S.C.B.U. to SCHOOL'

Organisation for the 1993 Bobath Course continues and details have been sent out to managerial Physiotherapists, Occupational and Speech therapists for discussion with their staff.

At our recent A.G.M. Anne Harnden and Joyce Cummings retired and we would all like to thank them for their hard work.

If you have any suggestions or comments, please do let us know.

N. Ireland

Ruth Graham, 75 Ravenhill Gdns., Belfast BT6 8EQ

At present, the committee is planning next years' programme. Details are not yet finalised, and will be forwarded to members as soon as possible. The committee are hoping to establish a local news sheet to accompany the newsletter. The aim would be to interchange ideas, pass on general information, exchange info about local physiotherapy events or anything else which would be of interest to members. If you have any ideas, please let me know.