ASSOCIATION OF

PAEDIATRIC

CHARTERED PHYSIOTHERAPISTS

NEWSLETTER

Association Of Paediatric Chartered Physiotherapists

Newsletter No.69 November 1993

RESEARCH ISSUE

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EDITORIAL

Jill Brownson M.C.S.P. - Chairman A.P.C.P.

Research and the "Publication of our rationales put our practices to the acid test". Anne Perry wrote this in the August '92 edition of Physiotherapy and this edition of our Journal looks at aspects of research undertaken in paediatrics.

Research enables us to evaluate and validate our treatment methods. It is not acceptable for treatment techniques just to be passed on without question. The prospect of undertaking research is however a daunting one.

Dissertations with a study or research base now form a major part of degree studies but for those of us not taking part in research the ability to read about it critically and evaluate it is a fulfilling learning experience.

Fascinating material was submitted for publication from experienced paediatric physiotherapists and also students. This issue comprises research articles, dissertions and reports.

The value to paediatric physiotherapists of participating in research, reading and using it to evaluate our practice and undertaking it to further our awareness cannot be over-emphasised.

When you do use research as a basis for a local study or when you undertake or participate in a research project please let the A.P.C.P. Membership Secretary know in order that a Data Base can be compiled and be of use to other members.

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INFORMATION GUIDELINES

Three of the Information Guidelines produced by the Chartered Society of Physiotherapy are specifically to help members who are interested in or who are involved in research:

Guideline	9	'Introduction to Research'
Guideline	10	'Literature Search - what to look for and where to go.
Guideline	11	'Sources of Funding and How to Apply.

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THE CHARTERED SOCIETY OF PHYSIOTHERAPY at Bedford Row has a resource room and a Physiotherapy Index listing all relevant articles from the Medical Information Service of the British Library.

Advice can also be sought from Dr. Catherine Sackley, the Research Development Officer at C.S.P. about the presentation of research proposals, the presentation of grant applications and a wide range of other issues.

COPY FOR THE FEBRUARY 1994 JOURNAL MUST BE WITH THE EDITOR BY 17TH DECEMBER 1993

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

The Board reserves the right to edit material submitted.

LETTERS TO THE EDITOR

ICAC
Initiative on Communication Aids for Children
Project Director: Ann Bernadt

Dear Editor,

I am writing to introduce myself as the Director of the Initiative on Communication Aids for Children and to tell you something about our work.

The Initiative, which is jointly funded by the Department of Health and Department for Education, will run until approximately March 1995.

ICAC has been set up to facilitate and monitor the coordination of augmentative communication services for children nationwide. A working party will draw up guidelines for good practice in the assessment of children who may need communication aids. We shall also act as an information base about services throughout the country and will be producing a regular newsletter.

Above all ICAC exists to bring together professionals, voluntary organisations and carers who are concerned with children who are in need of augmentative communication aids, so that they benefit from multiprofessional assessment and support in order to help their communication both from a social and educational perspective. We hope to facilitate the working together of professionals in every Health Authority and Local Education Authority.

Colleagues are probably aware of the Aids for Communication in Education Centres (ACE Centres) in Oxford and Oldham, the Centre for Micro-Assisted Communication (CENMAC) in Greenwich, and of Communication Aids Centres (CACs), particularly at the Wolfson in London, at Newcastle and Southampton, the Centre for Human Communication in Birmingham, and Chailey Heritage. Expert advice will continue to be provided by these centres, but for the needs of all children to be met it is essential that there are local teams who are aware of children's communication potential and who can assess their needs.

The need for training is evident and this is one of the aims of the Initiative. Already £2m per annum has been provided nationally from 1991-94 by the Department for Education through the GEST programme for IT in schools to support children with communication difficulties. Local Education Authorities have used these funds in a variety of ways, but training for assessment and in the use of computerised aids has been strongly encouraged, as well as purchase of equipment. Some Local Education Authorities have bought in speech therapy time as part of their bid.

I have attended a number of multidisciplinary training days and should appreciate hearing of any which colleagues might be planning. I am happy to advise colleagues who are considering setting up such days, or to come and speak about ICAC. I shall be organising Training Days myself in various parts of the country as the Initiative progresses.

Yours sincerely,
ANN BERNADT - Project Director

The *ICAC* Newsletter

336 Brixton Road, London SW9 7AA
Tel: 071 274 4029 Fax: 071 274 7840

Editor: ..... Ann Bernadt
Design: ..... Steven Knopf
Print: ..... Lamport Gilbert

The *ICAC* Newsletter is published three times a year, near the beginning of each academic term, and is distributed free to our mailing list. The next issue will be January 1994 and *ICAC* is interested to hear from anyone who wishes to contribute an article or publicize training. Letters are also welcome. In the first instance please contact Ann Bernadt at *ICAC*.

If you wish to be put on our mailing list please write to Steven Knopf at *ICAC* detailing your position, the organisation for which you work, your mailing address, telephone/fax number and the education/health authority (or trust) in which you work.

We are grateful for permission to publish the following article which first appeared in Developmental Medicine and Child Neurology 1992, 32, 25-39.

EFFECT OF INCREASED EXPOSURE TO PHYSIOTHERAPY ON SKILL ACQUISITION OF CHILDREN WITH CEREBRAL PALSY

E. Bower
D.L. McLellan

Mrs. E. Bower is Research Fellow, Southampton University Research Unit.

D.L. McLellan is Professor of Rehabilitation, Southampton Rehabilitation Research Unit, Southampton General Hospital, Hants. SO9 4XY.

Over the years there have been repeated calls for research into the effectiveness of physiotherapeutic procedures for the management of cerebral palsy (Bax and Mac Keith 1967, Mead 1968, Taft 1972, Pless 1976, Pearson 1982).

Three major studies have been undertaken on children with an established diagnosis of cerebral palsy (Wright and Nicholson 1973, Scherzer *et al.* 1976, Palmer et al. 1988). All three used the traditional group-research model, involving comparison of two groups of children and a variety of assessment scales, some of which were of questionable validity (Rosenbaum *et al.* 1990). One study has been undertaken on students with severe mental impairment and cerebral palsy (Sommerfeld et al. 1981).

All four studies were either negative or inconclusive in their results, but this has not discouraged continuing calls for physiotherapy by the parents and carers of children with cerebral palsy. Since the process by which skills are acquired in cerebral palsy is not understood, current neurophysiological knowledge is not helpful in predicting - except in the broadest terms - which method or which child will do best. Therefore, the various methods have to be assessed empirically; each school of treatment has a different emphasis, some of which are summarised in Table 1.

Differing treatment methods have not always specified either how often or for how long the treatment should be performed. Doman *et al.* (1960) specified that each movement prescribed must be performed by the family passively on the child for at least five minutes at least four times daily. The Bobaths (1984) emphasised that the frequency of treatment should depend on the severity of the condition and the need to prevent or ameliorate contractures, but that treatment sessions must be supplemented by good parental and carer management. Vojta (1984) has written that the therapist needs to see the younger child two to four times a month - or every four to six weeks for an older child - if parents are correctly instructed to carry out the treatment routines. He also specified that if there is no significant improvement in the course of one year treatment should be terminated. Hari and Tillemans (1984) have written that therapy should be replaced by an all-embracing educational process which should consist of an all-day learning programme.

The type of therapy most children in the developed world receive may be described as the 'eclectic school' (Levitt 1982, Scrutton 1984), comprising periods of passive corrective handling and positioning, active movement and motor skill training along developmental and functional lines. The training includes negotiating with the child and parents a programme of

TABLE I
Differing emphases among most widely known treatment methods for cerebral palsy

School of therapy	*Theories covering selection of goals*
Phelps	Muscle strengthening, bracing and orthopaedic surgery
Temple-Fay	Progressive phylogenetic movement patterns, first passively then actively - developed further by Doman *et al.* (1960)
Kabat	Proprioceptive neuromuscular facilitation of diagonal and rotational movements
Rood	Sensory stimulation for movement in an ontogenetic developmental sequence
Bobath	Neurodevelopmental treatment using inhibition of abnormal reflexes and facilitation of normal movement
Vojta	Reflex reactions, especially creeping, stimulated by touch, stretch, pressure and resistance
Portage	A home-education programme comprising 580 developmentally progressive skills for children from birth to six years, taught by a visiting teacher and practised by parents with the child
Peto	Movement, language and function in an all-embracing day-long educational process in groups led by a 'conductor'

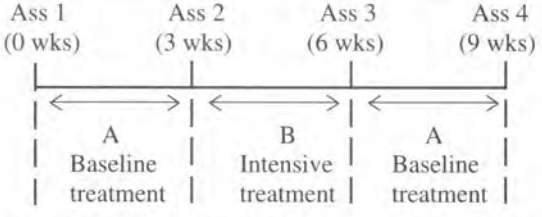

Fig. 1. *Study design. Ass = assessment, at which measurements were taken for each child.*

TABLE II
Description of children*

Case	*Age*	*Developmental motor age*	*Additional disabilities*
A	2 yrs	0-6 wks	Vision, hearing, communication, epilepsy
B	4 yrs	3-6 mths	Vision, communication, hydrocephalus, epilepsy
C	4 yrs	9-12 mths	Cardiac problems, vision, communication
D	9 yrs	12-15 mths	Vision, communication
E	9 yrs	6-9 mths	Communication
F	11 yrs	6-9 mths	Vision, communication
G	12 yrs	9-12 mths	Vision

* All children had quadriplegic cerebral palsy and severe learning difficulties.

management and guide-lines to be followed at home. Most treatment for cerebral-palsied children is conducted on a one-to-one basis with the therapist. The amount of therapy most children in the developed world receive represents a pragmatic compromise between what the children can take, the relative importance of the other demands on the child's time and the amount of time available from a therapist or teacher.

The purpose of the present pilot study was to employ controlled single-case methodology in an attempt to demonstrate the effect of periods of increased exposure to physiotherapy on the rate at which motor goals were achieved.

Method

The children acted as their own controls on a withdrawal A-B-A single-case experimental design (Fig. 1) (Martin and Epstein 1976, Wilson 1987). The protocol was approved by the ethical committee of Southampton General Hospital.

Patients

The study children were the seven youngest children in a school for children with cerebral palsy, as diagnosed by Wessex consultant paediatricians. All seven children had quadriplegic cerebral palsy and severe learning difficulties (Table II). There were four boys (B, D, E and G) and three girls (A, C and F). Four children had spastic cerebral palsy (A, B, D and G) and three had mixed cerebral palsy (C, E and F). Two had relatively mild quadriplegia (C and D).

One child had no apparent situational understanding and no apparent useful vision (A), one had limited situational understanding (C) and one had a very low attention span (E).

A used neither hand for purposeful movement, B, C, E and F used their left hands preferentially for purposeful movement, and D and G used their right hands preferentially for purposeful movement. B and C disliked the prone position.

One child, D, had had bilateral adductor tenotomies and derotational osteotomies, F had a left dislocated hip, and A, B, C, E and G were all at risk of hip dislocation.

Location

The study was conducted in a school for multiply disabled children with severe learning difficulties. The unit employs one experienced physiotherapist for 24 hours per week and one experienced physiotherapist for 18 hours per week for its 38 patients, aged two to 19 years.

Provision of therapy

Therapy was provided by the children's usual physiotherapist and supplemented as necessary by the research physiotherapist (E.B.), using eclectic methods and directed towards objectives that were agreed before the trial between the child, the parents, both therapists and the child's class teacher.

Identification and formulation of goals

Two realistic and useful short-term goals were chosen for each child and formulated in such a way as to be specific and measurable (Table III). By specifying a time or distance to be achieved it was possible to express progress towards the goal in percentages. For example, a child unable to sit unsupported might be set the goal of sitting unsupported for 30 seconds: if the child learnt to sit for 15 seconds the goal was 50 per cent achieved, for 30 seconds 100 per cent and for 45 seconds 150 per cent achieved.

The two goals were not necessarily progressive or related to each other. When formulating

the goals all the physiotherapists knew how much extra treatment would be given, but the school physiotherapists did not know at which stage it would be given. The school physiotherapists were also asked to document their over-all treatment regimes during the study period, bearing in mind the goals selected, but not concentrating exclusively on them. Home-management and treatment programmes relevant to the two goals were suggested to each child's carers and continued throughout the treatment periods.

Supplementary therapy

In order to minimise personal bias, we would have preferred all the therapy to have been given by one person and all the measurements to have been taken by a different person. However, with such a system the child would be unfamiliar with the assessor, which could affect performance and seriously bias the apparent outcome. To overcome this problem the assessments were agreed by all the therapists involved. The additional treatment was given by the research physiotherapist and it resembled as closely as possible that documented by the school physiotherapists. This enabled both therapists to be familiar with the child.

The study lasted nine weeks (Fig. I). During the first three-week period the children received their usual amount of physiotherapy from the school physiotherapists. This was supplemented, as is routine in the school, with horse-riding and hydrotherapy. During the second three-week period, each school day the children received one hour of intensive individual physiotherapy from the research physiotherapist, plus the usual supplement of horse-riding and hydrotherapy. During the third three-week period the children reverted to the same treatment given in the first period by the school physiotherapists, plus horse-riding and hydrotherapy. Details of the amount of physiotherapy treatment given were documented over the nine weeks (Fig. 2).

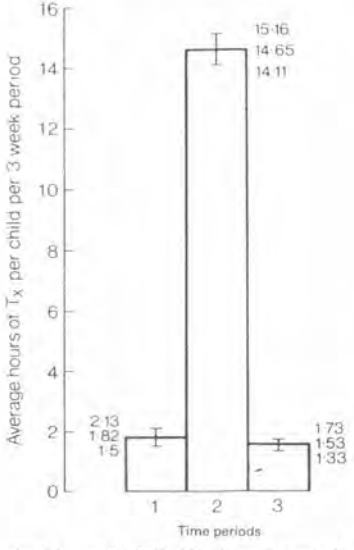

Fig. 2 *Mean hours therapy received by each child (N = 7 each period). Bar lines indicate + SE.*

Assessment

Table III summarises each child's baseline condition and agreed goal. The goals were easy to understand and could be monitored daily by all the therapists, as well as by the parents,

teachers and carers involved: thus the outcome was formulated by negotiation and mutual agreement. In practice there was very little, if any, divergence of opinion.

Formal measurements for each child were taken by the research physiotherapist and approved by the school physiotherapists during the week before the commencement of the study, and at the end of the first, second and final three-week treatment periods (see Fig. 1).

The following information was recorded:

(1) performance of the two specific measurable goals set individually for each child.

(2) Gross Motor Function Measure (Russell *et al.* 1989). This is a selection of 85 items arranged in five groups - *(a)* lie and roll, *(b)* crawl and keel, *(c)* sit, *(d)* stand and *(e)* walk, run and jump. All items can be accomplished by a normal five-year-old child. The starting position is described and the progession from it, *e.g.* lie supine - roll to prone over right side, was scored through the following stages: 0 = does not initiate rolling, 1 = rotates head and shoulders and/or hips to initiate rolling, 2 = rolls part-way to prone, 3 = rolls to prone over right side.
The child is allowed three attempts and the score is counted only if no hands-on help is given.

(3) Index for Daily Living Functions (Mahoney and Barthel 1965).

(4) Oswestry Scale of Grading Spasticity (Goff 1976).

(5) Range of Passive Joint Motion (American Academy of Orthopaedic Surgeons 1966).

(6) A questionnaire for parents, teachers and carers specifically designed for this study (Appendix). The questionnaire was explained to the parents, teachers and school carers at the same time as the goals were discussed. Each parent, teacher or carer was requested to place a cross on a 10cm line to indicate the degree of the child's difficulty with nine situations. A new form was given to each parent, teacher or carer at each of the four assessments and collected within two days. The score was calculated by measuring the position of the cross on the line of each item and calculating the means of the scores for parents, teachers and carers.

Results

Status of the children before treatment

Table II lists the children's chronological and developmental motor ages at the beginning of the study.

Additional therapy

During the first treatment period the usual amount of therapy given by the school physiotherapists amounted to 35 minutes per week on average per child, plus 30 minutes per week of horse-riding and hydrotherapy. During the second period the therapy given by the research physiotherapist amounted to five hours per week on average per child, plus 20 minutes per week of horse-riding and hydrotherapy. During the third treatment period the usual amount of therapy given by the school physiotherapists amounted to 30 minutes per week on average per child, plus 20 minutes per week of horse-riding and hydrotherapy.

Type of therapy

The therapy given in this pilot study was largely of the 'eclectic school', described earlier. Goals in the category 'achieve a state' were treated principally by techniques of repeated

TABLE III
Children's goals and baselines

Case	*Baseline*	*Goal*
A	1. Cries constantly unless sitting propped on mother's lap or sofa.	1. Tolerate 60 mins handling by therapist, incl. use of prone wedge, side-lying board, chair, standing frame, and arm and leg gaiters.
	2. Feeds on mother/carer's lap.	2. To be fed in specially adapted chair at all meals.
B	1. Sits on potty for 2 secs.	1. Sit on potty for 1 min independently without (a) extending or (b) falling to right.
	2. Holds head erect for 4 secs.	2. Sit with support at trunk (either through or around thorax) and maintain midline head orientation for 1 min without head falling (a) to right, (b) forward or (c) backward.
C	1. Walks with rollator around in a circle to right.	1. Walk 5 steps with rollator without manual guidance towards a goal.
	2. Bottom-shuffles for mobility; does not get to stand alone.	2. Pull to stand at furniture from sitting on (a) chair, (b) potty and (c) floor.
D	1. Stands for 15 secs.	3. Stand upright for 1 min without calipers with both hands holding onto bar.
	2. Occasionally wears calipers if brought to school.	2. (a) Wear calipers all day at school, except between 11.30 a.m. - 1.30 p.m., (b) stand with calipers between 9-10 a.m. at school, (c) walk with calipers on between 10-11.30 a.m. and 2-3 p.m. at school instead of using a chair to move about.
E	1. Stands for 10 secs.	1. Stand holding onto ladderback chair for 1 min.
	2. Sits for 6 secs.	2. Sit on stool with head in midline and both arms propping for 3 mins.
F	1. Cries if left hip moved.	1. Peroneal care without crying.
	2. Stands on right leg with total weight taken under both arms by assistant.	2. Weight-bear on right leg, holding onto ladderback chair with both hands.
G	1. Sit to stand: needs 2 people to help him up.	1. Sit on chair independently, holding onto bar with both hands: stand up and sit down again independently.
	2. Stands for 10 secs.	2. Stand holding onto bar with both hands, with head in midline: maintain independently for 1 min

passive corrective handling and positioning. Goals in the category 'establishing a daily programme' were encouraged by effective equipment, demonstration and continual involvement of the physiotherapist, and the use of such strategies as star charts.* For the category 'achieve a motor skill' goals were treated principally by repeated active movement (Held and Hein, 1963, Held and Bauer 1967) and skill training along functional lines.

* Charts designed by the physiotherapist onto which the child or carer attaches a star on each occasion on which the prescribed programme has been implemented. They can act as a reward for the child, a reminder for the parent, teacher or school carer and a monitoring device for the physiotherapist.

Goals

A range of different goals was selected. All were chosen with a view to alleviating practical management problems experienced by the parents, teachers and carers, were compatible with the individual child's disabilities (Bobath and Bobath 1975) and fell within each child's developmental motor age-range, as shown in Table II (Sheridan 1975). We were able retrospectively to categorise the goals into three groups.

We have called the first *achieve a state.*

An example of this is A's first goal. A cried constantly unless propped on her mother's lap or on the sofa; her goal was to tolerate 60 minutes of handling by the therapist, including corrective positioning *(a)* in prone wedge, *(b)* on side-lying board, *(c)* on a chair, *(d)* in a standing-frame and *(e)* using arm and leg gaiters.

The second category was called *establish a daily programme.* An example of this is A's second goal, which was to be fed at all meals in a specially adapted chair (prescribed to try to prevent hip and spine deformity) rather than in the parent's or carer's lap.

The third category we called *achieve a motor skill.* An example of this is B's first goal, which was to sit on a potty independently for one minute without extending or falling to the right. Before treatment he was able to sit on a potty for only two seconds without falling off, making it impossible to train him for continence on the potty. The children's goals and first baselines are listed in Table III.

Time courses of goal achievement and involvement of caregivers

CATEGORY 1: 'ACHIEVE A STATE'

Two children (A and F) had one goal each in this category (Table III). During the first, baseline, period A progressed by 30 per cent and F progressed by 25 per cent towards their goals. During the second, intensive period they both achieved their goals, but during the third period they regressed by 25 per cent towards baseline (Fig. 3). Both goals involved an increase in tolerance of handling without crying. For A the crying was probably due to apprehension and for F due to pain.

The two children were markedly different in chronological and developmental motor age, intellectual capacity and physical ability; but both required that their parents, teachers and carers be taught good handling techniques, including as full a range as possible of passive and active movements, and that these techniques be regularly practised and updated as necessary by the physiotherapist.

CATEGORY 2: 'ESTABLISH A DAILY PROGRAMME'

Two children (A and D) had one goal each in this category (Table III). During the first, baseline, period A made no progress towards the goal and D progressed by 10 per cent towards the goal; during the second, intensive, period they both achieved their goals; and during the third period they both regressed by approximately 25 per cent towards baseline (Fig. 3).

Both goals involved the use of equipment to facilitate daily living activities (A, feeding; D, mobility) and to prevent developmental deformity (A, hip and spine deformity; D, hip, knee and foot deformity). In one case the child needed to be put into the equipment and in the other the equipment needed to be put on the child. The two children differed markedly in chronological and developmental motor age, intellectual capacity and physical ability, but both required effective equipment and its use by parents, teachers and carers needed continuing support and monitoring by the physiotherapist.

CATEGORY 3: 'ACHIEVE A MOTOR SKILL'

Six of the seven children had a total of 10 goals in this category (Table III).

B's first goal involved sitting. B achieved 50 per cent of his goal during the first treatment period, 100 per cent during the intensive period and continued to progress to 200 per cent during the third period of the trial. B's extension pattern when sitting on the potty was broken and he realised that if he held onto his trousers he did not fall to the right. His second goal involved mid-line head orientation when sitting. He achieved 50 per cent of this goal during the first treatment period, 100 per cent during the intensive period and he maintained this through the third period of the trial. He suffered from hydrocephalus and it was difficult for him to hold his head up. B was cared for by his widowed grandmother, who had few other demands on her time so could practise tasks with him.

C's first goal involved walking: she achieved it during the first treatment period and maintained it through the intensive and final periods of the trial. However, C had limited situational understanding and was unable to overcome her asymmetry by correcting the position of her rollator by pulling it to the left after each step. She also had visual problems.

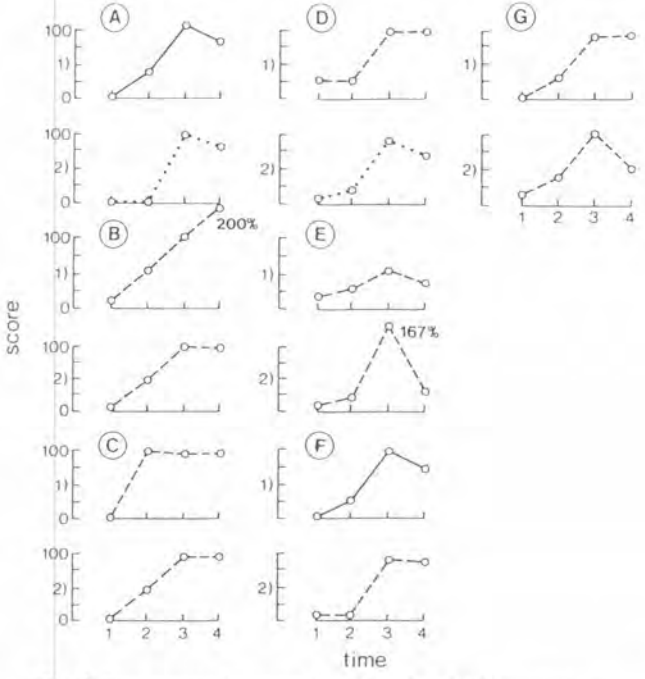

Fig. 3. *Time courses (treatment periods) of goal achievements: 0-0 achieve a state; 0•••0 establish a daily programme; 0 - - 0 achieve a motor skill.*

Her second goal involved pulling to stand at furniture. She achieved 50 per cent of the goal during the first treatment period, 100 per cent during the intensive treatment period and maintained it throughout the third treatment period. C learned to grasp and pull upwards using two hands, but was unable to move around furniture owing to her limited situational understanding, inability to overcome her asymmetry and visual problems. C was in the care

of a widowed grandmother, with few other demands on her time, who had time to practise tasks with her.

For D's goal, involving standing, he maintained his baseline measurement during the first treatment period, achieved the goal during the intensive treatment period and maintained it during the third treatment period. D lived with his parents and other siblings. His mother had back problems and his father worked long hours, so D needed to try to stand. He had undergone hip surgery and his hip and knee extensor muscles were weak; he was also becoming increasingly flexed at the knees, following a growth spurt. He was the least severely affected child in the study.

E achieved a 5 per cent gain in his goal involving standing during the first treatment period, 50 per cent of his goal during the intensive treatment period and regressed by 25 per cent during the third treatment period. Standing was quite an advanced skill for his developmental motor age of six to nine months, taking into account his very low attention span and flexion problems at the knees. E's second goal involved sitting. He achieved a 10 per cent gain during the first treatment period and 167 per cent during the intensive treatment period, but during the third treatment period he regressed by 140 per cent. E had a very low attention span and needed constant practise to maintain an ability. He lived with his parents and other siblings.

F's goal involved standing. She maintained her baseline measurement during the first treatment period, achieved her goal during the intensive treatment period and maintained it during the third treatment period. F knew that if she could not learn to bear more of her weight

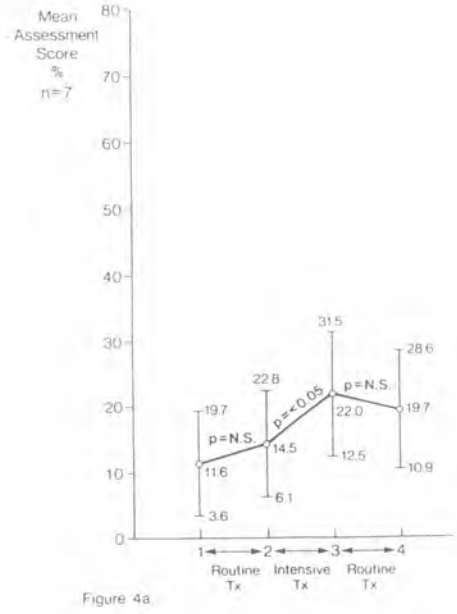

Figure 4a

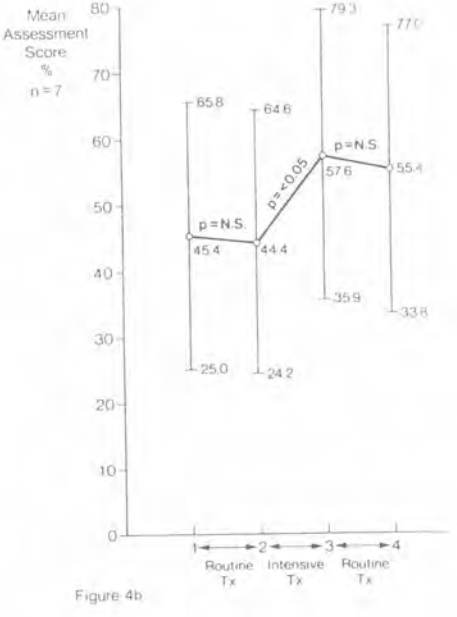

Figure 4b

Fig. 4. *Gross Motor Function Measure scores of children for (a) goal areas and (b) non-goal areas. Bars indicate 95 per cent confidence limits; p values by Wilcoxon rank paired test.*

she would no longer be able to stay with her weekend and evening 'Auntie'. Both her parents worked. Her left hip was dislocated and painful, but she learnt to weight-bear on her right leg, supporting herself with only two hands forward and grasping a bar. This ability regressed during the third treatment period due to lack of practise in stretching two hands forward and grasping the bar. Her right arm was much stiffer than her left. F lived with her parents and other siblings.

G's first goal involved sitting on a chair holding onto a bar, pulling to stand and sitting down again. G progressed by 20 per cent during the first treatment period, achieved the goal during the intensive treatment period and maintained it during the third treatmentperiod. He learned to put two hands forward and grasp the bar, pull to standing and sit down again in the intensive treatment period, and was able to maintain this during the third treatment period by relying principally on his right, less affected, arm for long enough to get himself up and down.

G's second goal involved standing: he progressed by 20 per cent during the first treatment period and achieved the goal during the intensive treatment period, but regressed by 50 per cent in the third treatment period. G learned to stand, holding onto the bar with two hands, during the intensive treatment period of the study, but this ability regressed during the third treatment period due to lack of practise in stretching two hands forward and grasping the bar. His left arm was much stiffer than his right arm; in addition, reflex clasp-knife flexion in the lower limbs and his increasing weight were disadvantages. G lived in residential care and was looked after by a variety of care-workers. He hoped to be adopted, but knew that this depended on a certain level of independence.

Figure 3 represents the consensus view of the children's achievement.

Changes in Gross Motor Function Measure

Six of the seven children had increased scores for the identified dimensions into which the motor skill goals fell (Table IV):

TABLE IV
Gross Motor Function Measure scores*

Case	*Goal areas*	*% maximum score at each assessment***			
		1	2	3	4
A	Sit	0	5.3	10.5	7
B	Sit	14	15.8	26.3	24.6
C	Stand, walk	7.7	12.6	22.4	18.8
D	Stand, walk	15.4	15.4	15.4	15.4
E	Sit, stand	21.1	24.5	35.7	32.2
F	Stand	0	0	8.3	8.3
G	Sit, stand	23.3	27.6	35.3	31.8

* Absolute change in skills obtained during nine-week treatment period using relevant sections of Gross Motor Function Measure (Russell et al. 1989).

** See Figure 1.

TABLE V
Gross Motor Function Measure scores*

Case	Non-goal areas	% maximum score at each assessment** 1	2	3	4
A	Supine, prone	0	0	6	12.3
B	Supine, prone, standing	30.1	33.8	54.1	32.4
C	Supine, prone, sitting	43.8	41.1	72.1	78.5
D	Supine, prone, 4-point position sitting	71.7	73.2	81.3	79.2
E	Supine, prone, 4-point position	54.8	56.0	63.4	65.9
F	Supine, prone, sitting	61.1	61.1	76.0	69.4
G	Supine, prone, 4-point position	56.0	45.4	50.2	50.0

* See Table IV.
** See Figure 1.

D was the only child who did not have an increased score. Figure 4a illustrates that the Gross Motor Function Measure scores of the children for the categories into which goals fell during the intensive period reached significance ($p<0.05$). Many of the individual goals set were concerned with physical abilities affecting toileting and feeding regimes. These set goals tended to fall into the sitting and standing categories, but in no case were identical to Gross Motor Function Measure items.

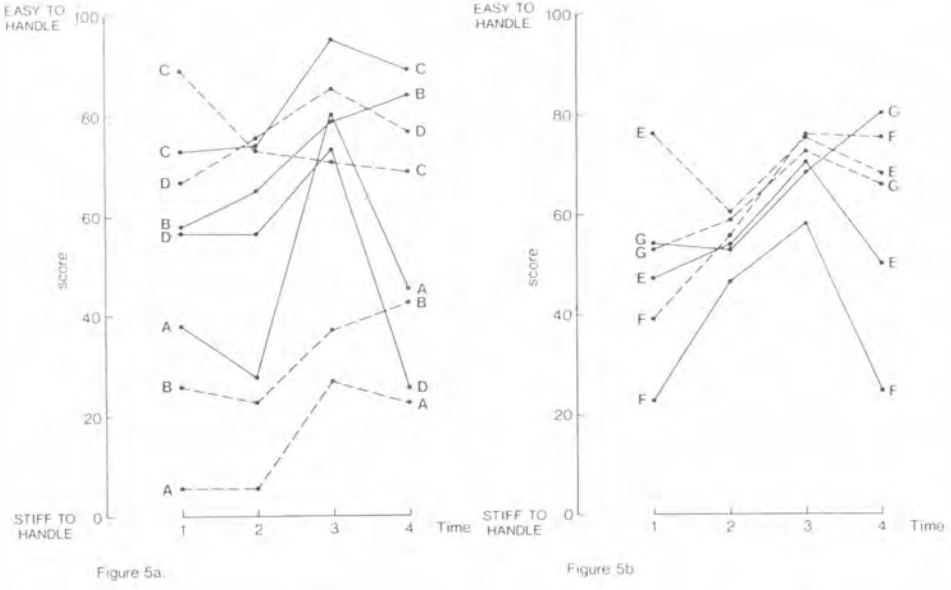

Figure 5a. Figure 5b

Fig. 5. *Mean questionnaire results from parents and teachers/carers for (a) children A, B, C and D and (b) children E, F and G: •-• means score (N = 9) of parents ' questionnaires; •—• mean score (N = 9) of teachers'/ carers' questionnaires.*

In all seven children, increased scores were also recorded for the non-goal areas (Table V): Figure 4b shows that the children's scores reached significance during the intensive period, using Wilcoxon rank paired test ($p<0.05$).

After the intensive period the children showed increased abilities in goal and non-goal categories of the Gross Motor Function Measure as outlined below:

A

Goal areas. An increase in pulling to sit and head control when sitting.

Non-goal areas. An increase in symmetrical posture in supine and in the ability to lift her head off the table in prone.

B

Goal areas. An increase in ability to sit on a chair or stool and to seat himself on a low stool.

Non-goal areas. Increases in the following abilities: left-leg kicking and left-arm reaching in supine, left-arm reaching in prone, lifting head off the table in prone, rolling from prone to supine over right side, pulling to standing with furniture and in the ability to stand while holding onto furniture.

C

Goal areas. Increases in the following abilities: standing momentarily alone, standing while holding onto furniture and lifting the right and left foot individually, lowering herself from standing to the floor and walking with one hand held.

Non-goal areas. Increases in the following abilities: symmetrical posture in supine, left- and right-arm reaching in prone, lifting head off the table in prone, rolling from prone to supine over left side, sitting on a stool and getting from standing to sitting.

D

Goal areas. None.

Non-goal areas. Increases in the following abilities: left- and right-leg kicking in supine, left-arm reaching in prone, extending left arm forward from the four-point position (on hands and knees), crawling forward reciprocally, side-sitting to the right and left, turning to the left and touching a toy behind when sitting.

E

Goal areas. Increases in the following abilities: reaching sitting from left-side lying, sitting on the floor and touching a toy placed in front and to the right and left sides behind, right and left side-sitting, sitting on a chair or stool, seating himself on a stool and pulling to stand with furniture, standing momentarily alone and lowering himself to the floor.

Non-goal areas. Increases in the following abilities: symmetrical posture in supine, left-and right-leg kicking in supine, right-arm reaching in prone, creeping forward on stomach and maintaining the four-point position.

F

Goal areas. An increase in the ability to pull to stand with furniture and to stand momentarlily alone.

Non-goal areas. Increases in the following abilities: symmetrical posture in supine, right-arm reaching in supine, right-arm reaching in prone, pivoting to the right and left in prone, pulling to sit, sitting on the floor, side-sitting to the right, moving from sitting on the floor to prone, and sitting on a stool.

G

Goal areas. Increases in the following abilities: sitting on the floor and touching a toy placed in front, side-sitting to the left, getting to prone from sitting on the floor, sitting on a chair or stool, and pulling to stand with furniture.

Non-goal areas. Increases in the following abilities: left-leg kicking and left-arm reaching in supine, and creeping forward on stomach.

Index for Daily Living Functions

Only one of the seven children (C), showed any change, and this was for one grade on two functions: transfer and ambulation.

Spasticity and ranges of joint motion

Improvement in spasticity during the intensive treatment period was noted for six children, of whom four regressed during the third phase. One child (B) also showed an improvement during the first treatment phase. No changes in joint ranges of more than 10° were observed. Pain was reduced for one child (F).

Opinion of parents, teachers and school-carers

Thirteen of 14 of the parents, teachers and carers preferred the treatment given during the second (intensive) period to either of the other phases. Figures 5a and b illustrate the comparisons between parental opinions and teacher and carer opinions during the three different treatment periods.

The continuing improvement in B's parent (grandmother) and teacher/carer scores during periods two and three may reflect his continuing progress in his goal 1 - sitting on a potty. The regression in C's teacher/carer score during periods two and three may reflect C's inability to progress further with her goal 1 - walking with a rollator. The maintenance of F's teacher/carer score during periods two and three may reflect her ability to maintain goal 2 - to bear weight on her right leg. The continuing improvement in G's 'parental' opinion during periods two and three may reflect the fact that it actually was a consensus view of a variety of different carers in the residential establishment in which he was cared for while awaiting possible future adoption, if he achieved sufficient independence.

A spent only one day at school each week. During the intensive period she received treatment at home on the other four days. She received regular weekly Portage therapy at home during the entire study period. B spent four days at school each week. During the intensive period he received treatment at home on one day each week. B and C were each cared for by their widowed grandmothers and G was in residential care. A, D, E and F lived with their parents and all had siblings.

Discussion

This pilot study provides evidence that increasing the intensity of physiotherapy can accelerate the acquisition of motor skills. The duration of the study was relatively short, so studies over longer time-periods are needed to check that progress does not slow down or even give way to regression if treatment of this intensity is continued for longer periods of time.

Our impression was that the very process of defining the goals, un-ambiguously and precisely, assisted the work of the therapists and parents involved; some of the improvement achieved during the baseline periods might reflect this.

Nevertheless, not all children showed improvement from baseline, nor did all the intensive periods of therapy increase the rate of progress towards the goal. This is evidence that the differential change we observed cannot be explained by non-specific motivational or 'Haw-

thorn' effects, but did indeed result from the additional physiotherapy.

In a school such as the one in which the pilot study took place it was impossible for anyone involved to be unaware of the intensive therapy once it had started. The consensus system of goal-setting and assessment worked because there was excellent co-operation between all involved. It is very difficult to resolve the opposing requirements for masking and familiarity between child, therapist and assessor. In future studies over longer periods of time a 'multiple baseline across behaviours' model of single-case experimental design would help further eliminate bias.

Although the children were very tired at the end of the three-week intensive period, one factor which may well have influenced goal achievement in this group of children was the constant repetition of activities (Haskell and Barrett 1989).

Goals in the category 'achieve a state' and associated with ease and tolerance of handling regressed during the third treatment period. This suggests that the more a child moves or is moved the easier such movement may become; however, improvement is maintained only by regular repetition otherwise it may regress.

Goals in the category 'establishing a daily programme', and associated with child and carer compliance in the use of specially adapted equipment, orthoses and functional acitivity programmes, regressed during the third treatment period. This suggests that continued compliance with additional tasks or equipment may require continued support, motivation and monitoring.

Goals in the category 'achieve a motor skill', exemplified in this study by sitting, pulling to stand, weight-bearing and walking ability, were maintained if they could be incorporated into the child's daily living activities without requiring increased assistance from the carers. This suggests that the motor-skill goals associated with daily situations will consolidate and can continue to develop, even if the treatment is given less frequently, if these activities are understood by the child.

These conditions, if confirmed by further studies, would be helpful guidelines when planning strategies of therapy and timetabling programmes for children. It is clear that reinforcement by carers, parents and teachers is particularly important for the first two categories, and measures designed to increase their compliance should add to the effectiveness of treatment (Arney 1987).

The standard test batteries we used helped to delineate the general pattern and level of disability, but were not sufficiently sensitive to detect many of the 'real-life' goals achieved. The Gross Motor Function Measure (Russell et al. 1989) is the only validated scale in this area for children with cerebral palsy. However, it does not measure pull to standing from a chair or stool, the only method by which the quadriplegic children in this study could get from sitting to weight-bearing. The scale specifies that the function should be maintained for a designated period, varying from three to 10 seconds, but in practice this is not long enough to be useful for functions such as undressing or toileting. However, the Gross Motor Function Measure proved very useful for highlighting additional skills achieved during the intensive treatment period - especially an increase in symmetry, limb use, abilities in prone and sitting balance - and can be recommended for use in conjunction with goal-setting.

The Index for Daily Living Functions was not designed for disabled children and is not sufficiently sensitive to adapt for this population. The Oswestry Scale of Grading Spasticity was designed with children with cerebral palsy in mind, but it depends to an undesirable degree upon subjective assessment, and uncontrollable extraneous factors often influenced the child's performance. However, the children generally did appear to move or be moved more easily

during the intensive therapy period. The Range of Passive Joint Motion is well documented and many physiotherapists are familiar with it. However, hand-held goniometers are not a very reliable method for measuring joint motion (Stuberg et al. 1988). Joint motion appeared to be easier in the existing ranges, and pain and apprehension decreased during the intensive period of physiotherapy treatment.

The questionnaires indicated that parents, teachers and school-carers believed that deterioration had taken place during the third phase, even though this was observed objectively for only three of the 10 motor-skill goals and for seven of the total of 14 goals. This might suggest 'withdrawal symptoms' of a psychological nature and the need for continuing support. It is also possible that subtle physical changes did occur that were recognised by parents, but which defied our assessment system.

The evidence of this study supports the concept that certain functions can be maintained only by regular practise. It follows that some of the motor achievements of the children could have been re-achievements, and one would expect a former skill to be regained faster than a new skill is acquired. We did not specifically record this point in our assessment, and in retrospect this would have been helpful. No parent or therapist mentioned that this had happened; therefore we are not able to comment on whether it contributed to the results.

This pilot study presented fewer practical problems than we had expected. The parents, carers, teachers and the children co-operated well, and appeared to be pleased that the study was taking place. The necessity to formulate all the goals precisely imposed a discipline on the therapists which at times was perceived as 'very rigorous'. Not all goals can be delineated with such precision, which means that the previous direction of therapy may have been changed

Appendix

QUESTIONNAIRE

To be filled in by: (a) Parents (b) Teachers (c) Carers

Is It Easy Or Difficult? (please mark X on the line)

	As stiff as could possibly be	Normal/ easy to move
1. To put child into a lying position		
2. To put child into a sitting position		
3. To put child into a weight-bearing position		
4. To undress child		
5. To wash child		
6. To toilet child		
7. To dress child		
8. To feed child (incl. giving a drink)		
9. To carry child		

subtly by the study. This in itself would not have contributed to differences between the three phases of treatment, but would have increased the rate of change during routine treatment phases and contributed to the favourable responses of the staff.

Acknowledgements

This study was made possible by financial support from the Wessex Medical School Trust and The Spastics Society of Great Britain. The authors would like to thank all the children, parents, carers, teachers and therapists involved in the study.

* *Correspondence to first author* at Level C, West Wing, Southampton General Hospital, Tremona Road, Southampton SO9 4XY.

SUMMARY

This pilot study reports the effects of increased exposure to standard physiotherapy on seven children with quadriplegic cerebral palsy and severe learning difficulties. The children's progress toward certain goals was accelerated during the period of intense physiotherapy, but progress toward other goals was less consistently affected. These skills were mantained, and in some cases improved upon, when therapy became less frequent, provided they were associated with daily functional activities understood by the children and not requiring increased assistance by the carer. The identification of specific, measurable goals can help establish the effectiveness of treatment for such children and may in itself have beneficial effects on compliance and outcome.

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Eva Bower, Research Fellow in Paediatric Physiotherapy, and Professor Lindsay McLellan, Europe Professor of Rehabilitation, both from the University of Southampton Rehabilitation Research Unit have been jointly funded by the Department of Health to undertake a 2 year research project entitled "The effects of Intensive Physiotherapy and Formalised Negotiation of Goals Upon the Rate of Motor Skill Acquisition in Children with Cerebral Palsy". They wish to express their thanks and appreciation to the many physiotherapists and families spread over 17 different health districts who have agreed to cooperate with them in this project.

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THE RELATIONSHIP BETWEEN SCOLIOSIS AND LEARNING DIFFICULTIES. A RESEARCH PROJECT.

Frances Martin MCSP BSc Hons.

Frances is currently Superintendent Physiotherapist in charge of Physiotherapy Services for People with Learning difficulties within Worthing Health District. She previously worked for the Spastics Society. This research (edited with her permission) was major component of her BSc Hons. completed in 1992.

ABSTRACT

The purpose of the study was to explore the relationship between scoliosis and learning difficulties. There have been many studies into prevalence of scoliosis in conditions such as Down's Syndrome and Cerebral Palsy.

Children with a severe learning difficulty who also exhibit spinal deformity have not been considered as a separate population.

The hypothesis is that a child with a learning difficulty is likely to present with scoliosis.

INTRODUCTION

Scoliosis is a deformity of the spine which can be life threatening if it progresses and is left untreated (Bleck1991). Many types of conditions predispose to spinal deformity. Much research has been done into the cause of the most common form - idiopathic scoliosis, which affects apparently healthy individias. However there have been few studies into the underlying cause or prevalence of spinal deformity in individuals with a learning difficulty. The novelty of this study therefore suggested that a screening programme would be the most effective initial procedure, in order to discover the prevalence of scoliosis in a population of school age children with a variety of diagnoses, including learning difficulties (as identified by the educational statementing procedure), but with no specific diagnosis.

A review of literature was undertaken to establish any common ground with previous studies.

A screening process was undertaken using standard observational tests and the Adam's forward bending test. 230 children were screened and the collected data recorded on an assessment sheet. The presence of kyphosis or lordosis was not noted.

HYPOTHESIS

The hypothesis claims that the cause of the intellectual impairment (as a symptom) may also cause scoliosis (as a symptom) at a high prevalence rate. This hypothesis has seldom been considered directly in studies to date, perhaps because the specific population present as 5% of total school age children (Chaplais 1984).

LITERATURE SEARCH

Spinal deformity has been recognised in man since earliest times. Cave drawings provide evidence of scoliosis and attempts to treat it. Hippocrates first applied the term 'skoliosis', a greek word meaning 'curve', to any spinal deformity and devised methods of bracing. Since then, many types of treatment have been tried, for example, in the 7th century, Paul Aegina is known to have bandaged torsos, and Ambroise Pare in 1582, instructed armourers to forge

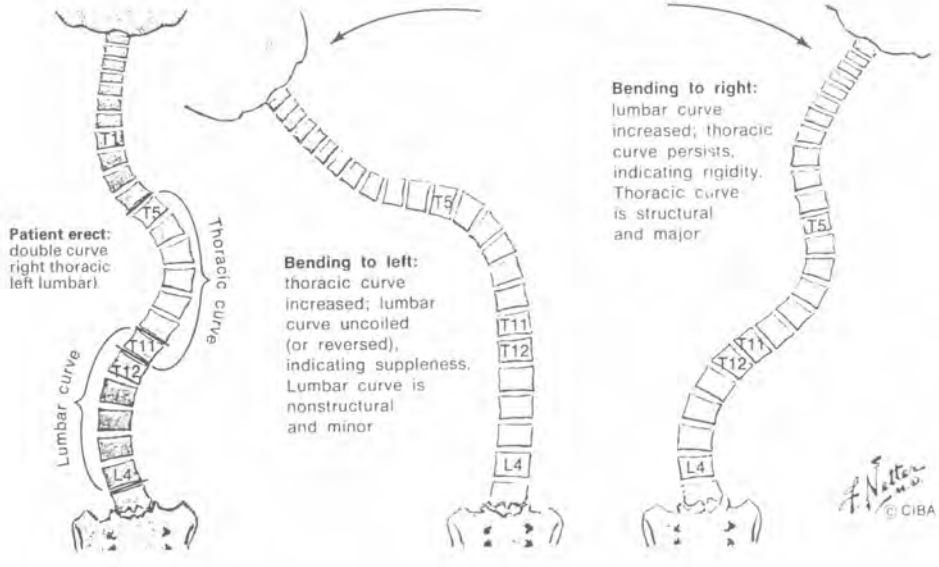
cuirasses that were moulded to fit trunks of scoliosis patients. (Keim, 1978).

In 1914, Russel Hibbs performed the first spinal fusion and in 1949 Blount and Schimidt designed the Milwaukee Brace - still the gold standard of bracing. (Levine 1990).

Since then, many different types of brace have been developed, and surgical intervention has become sophisticated as new materials become available. (Gunnoe 1990). Scoliosis represents a classic orthopaedic challenge and Nicholas Andrey's 'crooked tree', the adopted symbol of orthopaedics, is believed to be an international symbolisation of the scoliotic spine. (Byrd, 1988).

Scoliosis is defined as lateral curvature of the spine and can be seen as a symptom rather than a disease. It is a complicated deformity characterised by both lateral curvature and vertebral rotation, which can lead to problems involving the heart and lungs once the curve progresses past 50 degrees (Bleck 1991). Scoliosis if found in 1 in 250 normal children and is usually 'spotted' in the years of greatest growth in the first two years of life and adolescence (Mehta 1988). There are seven times as many girls as boys diagnosed as having idiopathic scoliosis (cause unknown), the most common, followed by congenital scoliosis such as failure to form vertebrae correctly, neuro-muscular scoliosis such as is found in cerebral palsy, and finally in genetic conditions such as Rhetts Syndrome (Moe 1978).

Sidebending for Radiologic Differentiation of Structural from Nonstructural Curves



Scoliosis can be broadly divided into structural and non-structural types. A non-structural curve is non-progressive, milder in degree and shows a lumbar or thoraco-lumbar curve pattern. Discrepency in leg length may be the cause of a lumbar scoliosis with convexity to the side of the short limb. The importance of the non-structural curve is that it may evolve into a progressive structural curvature which may then require special treatment. The back should be observed at regular intervals during growth periods and checks made that the curve corrects

on side bending, and no rotation is present. Structural scoliosis fails to resolve on side bending and is characterised by a fixed rotational prominence on the convex side of the curve, which is best seen with the patient in the forward bending position. The vertebrae are rotated into the convexity of the curve. (Goldstein 1973).

There are three basic types of spinal deformity; scoliosis lordosis and kyhposis, classified according to magnitude, location, direction and etiology, but despite the longstanding acknowledgement of the condition, scientific communication in the field did not become widespread until the Scoliosis Research Society was established in the United States in 1966 **(Levine 1990)**

For this study we shall only consider scoliosis, the magnitude of which will not be measured.

In infantile idiopathic scoliosis boys are more commonly affected than girls, and the curve is more often a left thoracic type. The condition resolves itself in 80% of cases. **(Burrows 1991)**

Lloyd Roberts and Pilcher (1959) put the resolution rate at 92%. The condition is, curiously, more common in England than America. **(Keim 1978; Goldstein 1973).**

Juvenile Idiopathic Scoliosis may appear in mid childhood and is thought by **Burrows (1991)** to be either a case of late presenting infantile scoliosis or early presenting adolescent scoliosis. This is not born out by other researchers, who have rated a higher prevalence of juvenile idiopathic scoliosis in the United Kingdom than America **(Dell 1987; Keim 1978).** Dell, and Mannnherz (1988), have reported a higher ratio of boys in this category and a greater number of right thoracic curves **(Keim 1978)**. **Figueiredo and James (1981)** reported mental deficiency as the most commonly associated disease, of which 2% had epilepsy.

Adolescent Idiopathic Scoliosis is the most common type - as much as 80%, and is found in seemingly otherwise healthy individuals (Burrows 1991). Goldstein (1973) puts the prevalence higher at 85%.

Adolescent girls are 10 times more likely to suffer scoliosis, the most common curve being right thoracic and left lumbar pattern (Goldberg 1990). These findings are fairly universally reported throughout the literature reviewed. There are further classifications of primary and secondary, or major and minor curves. Keim (1987) claims that right-sided thoracic curve is always major, although there can be a double major curve in the right thoraco/left lumbar pattern.

The North American Scoliosis Research Society classified a scoliosis curve to be 11 degrees upwards on X-ray diagnosis, using Cobb's angle (Levine 1990). This is an attempt to eliminate so many minor degree curves which may or may not be significant.

From these accounts it can be deduced that adolescent girls are more likely to develop a right sided thoracic curve, and the age of detection is important in the type of spinal deformity present. This evidence suggests certain category groups. Accounts so far have focused on definite features. These features allow clean cut diagnostic type differentation. However, this begs the question of incidence parameters.

There are several risk factors which should be considered in deciding whether a scoliosis may progress. According to Bleck (1991) curves of 50% become seriously disabling and life-threatening at skeletal maturity, and will continue to increase.

Individuals who are bed-ridden, suffer from spastic quadraplegia or cannot sit independantly, run a high risk of rapid progression. Dickson (1988) wrote in the Lancet that 90% of infantile scolioses resolved, and 10% progressed.

A method of differentiating between progressive and non-progressive scoliosis was devised by **Mehta (1972)**. This involves measuring the rib-vertebral angle difference (RVAD) which, if calculated at 20% or more on X-ray, indicates a progressive curve. After 2 months,

another X-ray is taken and if progression in degree is noted the scoliosis progression is confirmed.

Other risk factors are commonly held to be significant:

1. **Family history.**
   Colwell, Hall and MacEwan (1972) in a study, reported 15% of subjects had a positive family history.

2. **Sex.**
   Female dominance is constantly reported in adolescent idiopathic scoliosis at 3.8 - 1 **(Mannherz 1988)** but male dominance in juvenile and infantile scoliosis **(Tolo and Gillespie 1978).**

According to **Brunnell (1988)** the most significant prognostic factors for curve progression are:

growth
menarche
The Risser sign.

Burrows (1991) has further identified risk of progression by highlighting the individual presenting with thoraco-lumbar curves, followed by individuals with thoracic curves and finally individuals with double major curves.

However, **Levine and Goldberg (1990)** believe it is the individual with a right thoracic curve who runs the greatest risk of progression.

It used to be thought that idiopathic scoliosis (as opposed to congenital or neuromuscular) halted with full maturity. We now know that significant numbers continue to progress, causing pain and disability as the individual grows older. The scoliosis increases by 1-2 degrees per year and 5-8 degrees during pregnancy. (Keim 1978).

It is possible to conclude from this that although the etiology of scoliosis is ill-defined, certain patterns and trends can be observed:

1. Scoliosis in the general population is not uncommon.

2. The age and onset seems important to outcome, with infantile and juvenile scoliosis being more prevalent in boys than girls, and adolescent scoliosis more prevalent in girls than boys.

3. Progression is most likely in a right-sided thoracic curve, and in individuals with neuro-muscular, congenital or genetic conditions where the prevalence is higher than in an apparently healthy population.

4. Early intervention has been seen to be most effective in halting progression and correcting deformity.

It was generally agreed in a paper published by the Scoliosis Health Care in 1990 that screening of mainstream schoolchildren detected 2-10% of the population had spinal deform-

ity with 3 in every 1000 teenagers severe enough to need surgery. **(U.K. Sauk 1981).**

Studies have been done to discover the prevalence of scoliosis is sub-populations such as Cerebral Palsy and Down's Syndrome, but little literature exists regarding the prevalence of scoliosis in individuals with a learning difficulty.

The first step towards discovering this is to screen children who fall into this sub-population.

Once an individual has been identified in a screening programme they are referred for further diagnostic tests.

The least invasive is Moire Topography; a photographic technique to define body content. The technique is relatively new and only available in certain specialist centres.

The most common second step is to X-ray the spine in the erect position, antero-posteriorly and laterally, and measure the film for Cobb's angle and the Risser sign.

Fig. 2

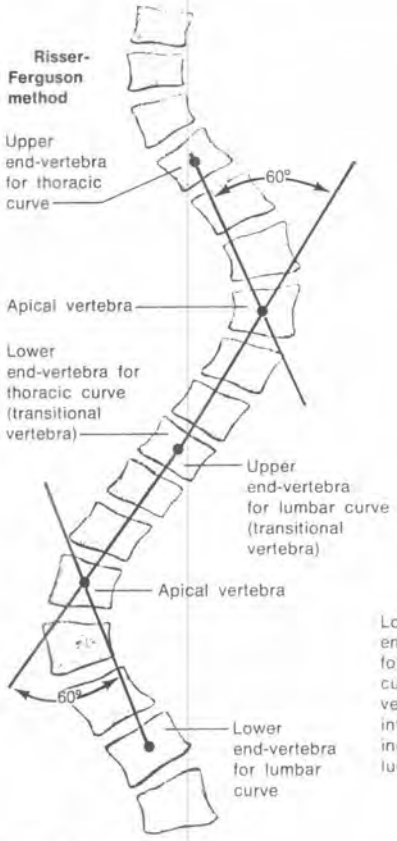
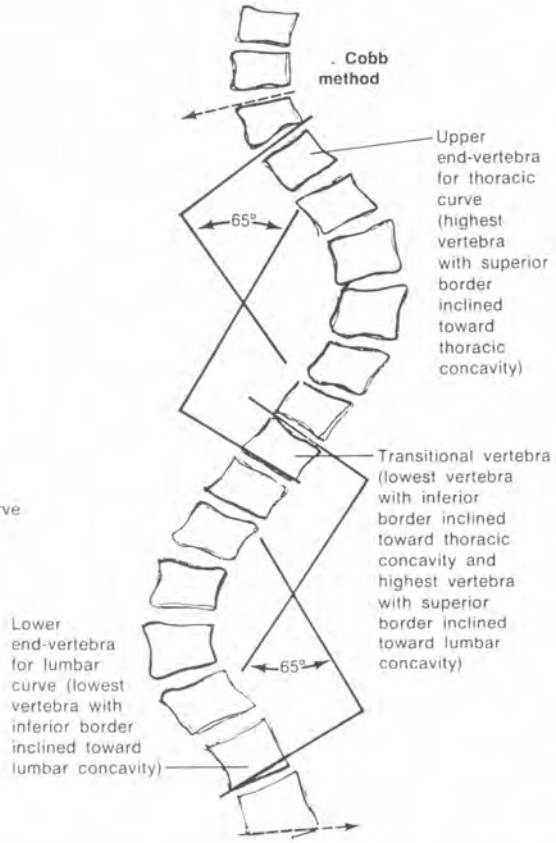


Fig. 3



Risser sign

This is calculated by measuring the excursion of the iliac epyphsis antero-posteriorly. The capping of the iliac epyphsis is divided into quadrants, with Risser grade 5 representing complete ossification (Fig. 2). Significant curve progression is rare after Risser 5. (Merenda 1989)

The Adam's forward-bending test was then performed.T

The subject stands as previously described and bends at the hips to approximately 90 degrees, with the arms dangling and the palms together.

From posterior and lateral vantages, the observer looks for unequal floor to finger-tip distance, asymmetry of scapular prominence, unilateral rib hump deformity or gross lateral deviation of the spine.

Observations were transferred to the Assessment Sheet, which also recorded:

age
sex
diagnosis (if any)
additional handicap - epilepsy, sight or hearing loss
ambulant or non-ambulant

SCREENING

1. Erect posture Analysis.
   a) Shoulder height asymmetry
   b) Asymmetry of scapular prominence
   c) Asymmetry of arm to thigh length
   d) Unilateral high hip
   e) Non central head over gluteal cleft

2. Adam's forward bending test.
   Stand with knees locked and bend at hips approx 90' arms dangling.
   a) Unequal floor to fingertip length
   b) Asymmetry of scapular prominence
   c) Unilateral rib hump
   d) Gross lateral deviation

A Key Chart was designed in order to translate the data onto a computer disk for further analysis.

The scoliosis was classified as right thoracic, left thoracic, right lumbar or left lumbar.

The children were divided into four age bands:

3 - 7 years, 8 - 11 years, 12 - 15 years, 16 - 19 years.

Statistical tests were performed on the collected data, and prevalences, trends, and co-relations observed.

RESULTS

230 subjects were screened in four separate schools for children with a learning difficulty (137 boys, 93 girls).

A data collection 'key' chart was designed using nominal values in order that the new data could be subjected to frequency counts and interferential analysis to test significant differences.

A frequency count derived from the raw data indicates that the prevalence of scoliosis was calculated at 68.7% of the population screened.

The most common diagnostic type was non-specific learning difficulty 44.7%, Epilepsy (16.9%) presented as the most common additional handicap. Ambulant children outweighed non-ambulant children by 6:1.

Interferential statistical tests were applied to the raw data and probability calculated in order to discover correlations, patterns and trends in the presentation of scoliosis in school age children with a learning difficulty and to test the hypothesis that to be statemented as having a learning difficulty also means there is a greater likelihood of scoliosis being present.

The Chi squared test was considered the most appropriate for the nominal data and the Kendal Tau C test for mixed, unboxed nominal/original data.

DISCUSSION

The primary goal of this Study was to discover the prevalence of scoliosis in school age children with a learning difficulty.

The population addressed was 230 children in schools catering for pupils who had been assessed as having a learning difficulty, considered to be severe in many cases.

However, the level of physical handicap was such in non-ambulant subjects (13.4%), that their cognitive abilities must have been adversly affected.

Within the population were 137 boys and 93 girls.

44.7% had learning difficulties but non-specific diagnosis.
20.4% Genetic deficit
18.7% Cerebral Palsy
16.1% Down's syndrome.
Within all the diagnostic categories boys outnumbered girls.

In the United Kingdom, screening of children for spinal deformity has been undertaken in isolated cases as a result of specific investigations. No general policy has been formed.

It has been the researcher's experience that there is a low awareness amongst health professionals as to the nature and prevalence of scoliosis, not only in specific conditions, but also in the general population. This experience is corroberated by the findings of the charity 'ARISE', based at the Royal National Orthopaedic Hospital at Stanmore, Middlesex, whose stated aim is to raise awareness of spinal deformity amongst medical professionals and carers. Awareness campaigns have been mounted over the last few years by the Scoliosis Association (UK) to address the same problem.

The gradual change in emphasis in health care from intervention to prevention, i.e. reactive to pro-active, has seen the emergence of many more screening programmes with the necessary support services. The internal market now operating in the National Health Service makes the allocation of resources according to predictive need, a primary task for the provider of those resources.

CONCLUSION

An attempt was made to look beyond the researcher's clinical focus in testing the hypothesis that a child with a learning difficulty is highly likely to also present with a scoliosis.

In a population of 230 children the prevalence rate of scoliosis was 68.7%, which is significantly higher than reports in literature from screening programmes of children in mainstream schools. An assumption could be made that his high level of scoliosis might be expected in non-ambulant children without sitting balance, but the population studied was predominantly ambulant, therefore the hypothesis is supported by these results.

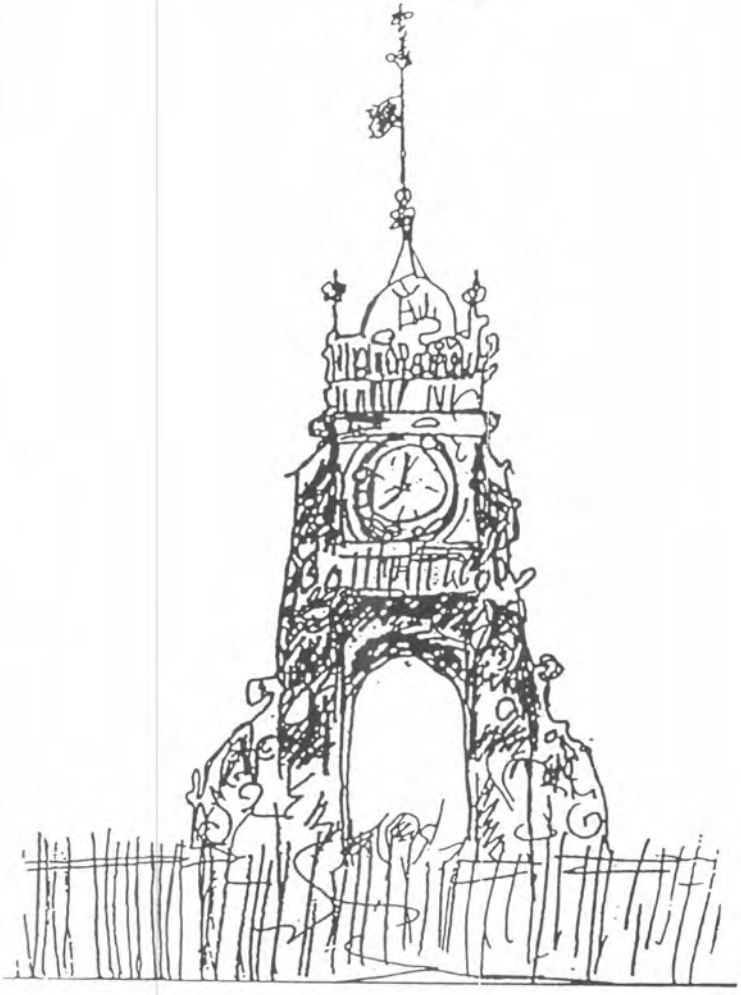
Having argued that most spinal deformities have a basic genetic cause, it is also argued that non-specific learning difficulty, when associated with scoliosis, may also be genetically linked.

The results of this study have wide ranging predictive and resource implications. The resource implications include treatment, both on-going and interventional (surgery), man-power, allocation of orthoses and special seating systems. However, the predictive value of the Study should most importantly heighten awareness of all health care professionals working with children in this population, to the likelihood of scoliosis.

The Study presented with problems of data collection, reliability and accurate curve definition, but the results suggest that further investigation should be undertaken.

The researcher recommends that a routine screening programme should be instigated in order that early intervention, the results of which are well documented, may be undertaken with these vulnerable individuals.

CONFERENCE 1994
CHESTER



THURSDAY - SATURDAY
7th - 9th April

COMING OF AGE
21 Years Of A.P.C.P.

PROVISIONAL PROGRAMME

THURSDAY 7th APRIL

12 noon - 1.30	**Registration** Lunch optional extra
1.45	**Conference Opening and welcome**
1.00 - 2.00	**The Changing face of C.P.** Prof. P. Pharaoh MD MSC FFPHM
3.00 - 4.00	**Genetic Counselling** Dr. A. Fryer BSc. MD MRCP
4.00 - 4.30	**TEA**
4.30 - 5.30	**Ultrasound Detection** Pre & Postnatal diagnosis Mr. M.J. McCormack, Consultant Obstetrician Dr. N.P. Murphy, Consultant Paediatrician
Evening	**Trades Exhibition & Entertainment**

FRIDAY 8th APRIL

9.30 - 10.15	**Bronchio-pulmonary displasia and its effects** Dr. N.J. Shaw, Consultant in Neonatology
10.15 - 11.00	**Respiratory problems in the Physically Handicapped Child** Dr. H. Lewis, Consultant Paediatrician

PROVISIONAL PROGRAMME

11.00 - 11.45	**COFFEE**
11.45 - 12.45	**Paediatric Neurosurgery** Mr. P. May, Consultant Paediatric Neurosurgeon
1.00 - 2.15	**LUNCH**
2.15 - 3.15	**Workshops** - Session 1
3.15 - 3.45	**TEA**
3.45 - 4.45	**Workshops** - Session 2
Evening	**Sherry Reception & Conference Dinner**

SATURDAY 9th APRIL

9.00 - 9.45	**A.G.M.**
10.15 - 10.45	**Retinopathy of prematurity** Mr. D. Clark, Consultant Ophthalmologist
11.00 - 11.45	**Visual Stimulation** Ms. J. Swift, Orthoptist
11.45 - 12.15	**21 Years of A.P.C.P.**
12.15	**Closing Address** Jill Brownson MCSP Chairman A.P.C.P.

Lunch optional extra

WORKSHOPS

1. **The visually impaired child**
2. **Integration from Special to Mainstream School**
3. **The hearing impaired child**
4. **"In the best interest of the child"**
   The Children's Act - 3 years on
5. **Bad Ragaz applied to Paediatrics**
6. **Gymnastics for the learning disabled**
7. **Intervention Studies & the Problems of Research**
8. **Specialist seating for the handicapped**
9. **The M.O.V.E. Curriculum**
10. **Caring for the child with C.P.**
    Comparison of parents & therapists conceptions

For further information contact:-

Miss Alex Winney
Dorin Park School
Wealstone Lane
Upton
Chester CH2 1HP

Tel: 0244 373884

THE DYNAMIC FOOT ORTHOSIS

Elaine Curtis MCSP
Paediatric Physiotherapist, The Childrens Unit, The Royal Surrey County Hospital, Guildford, Surrey.

DYNAMIC ANKLE FOOT ORTHOSIS - TONE INHIBITING

In January 1991 I read an article in "Developmental Medicine and Child Neurology". Dynamic Ankle Foot Orthosis were mentioned, I had never heard of these. There was an address in Seatlle to write to for information.

I received articles written by a Physical Therapist called Nancy Hylton who had developed DAFOs over a period of eighteen years, from tone relieving casts.

Asking round about DAFOs a Finnish Physio told me she had used them and "they worked".

After more correspondance with Nancy, I was invited to the Childrens Therapy Centre of Kent, Seattle, Washington to observe for a week and learn how to make DAFOs.

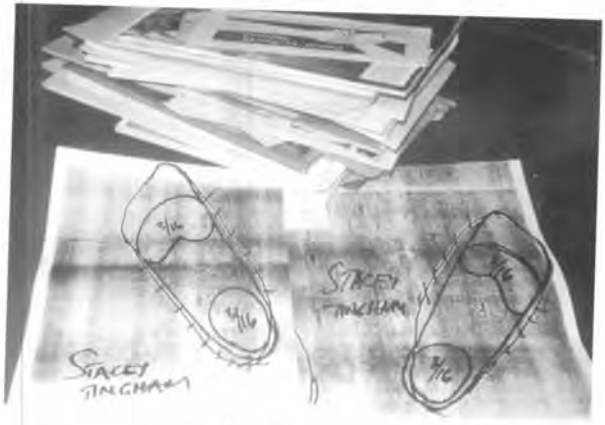
THEORY

Support under the medial arch, the peroneal notch and the "button" behind the metatarsal heads form a stirrup giving stability to the subtalar joint. This stabilises inversion and eversion and provides grading for plantar and dorsiflexion, allowing balance reactions at the ankle and foot. The toes are in slight dorsiflecion, this plus the stability improve postural and tone control.

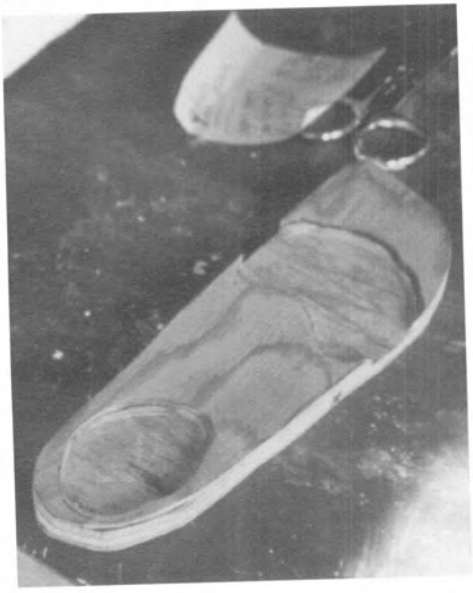
FABRICATION

A Drawing is made of the foot with first and fifth metatarsal heads the medial arch and peroneal notch marked (illustration a). A foot board (illustration b) with routed areas is contoured with plaster of paris to correspond to the arches of the foot. (illustration c) This is then held on to the sole of the foot over stockingette with tape, trim lines and padded areas are marked and with the foot held in alignment and stabilised on the footboard a plaster cast is applied similar to that for a conventional AFO to include the footboard (illustration d). From this a mould is made and positive mould over which thin polypropylene is stretched to make the DAFO (illustration e). Straps with D rings and a toe loop are added.

A. Drawing Of Foot



B. A Foot Board



C. Board Contoured With Plaster

D. Plaster Cast Including Footboard

E. The Dynamic Foot Orthosis

USES AND RESEARCH

They have been used in cerebral palsy, and other conditions with increased tone, spina bifida and other conditions with low tone, and progressive conditions such as muscular dystrophy. They have also been used in adult hemiplegia and multiple sclerosis.

My immediate thought was I would like to see the results in a gait laboratory. This has already been done in the States with what I thought were dramatic results from the research paper.

Andrew Tagg Orthotist and myself have made one pair to date. These were for a two year old with amyotonia congenitia, who stands with her feet so everted she is almost on her medial malleoli. She has been in Piedro boots and is pushing these right over into eversion. In DAFOs she has started to roll her foot back into a neutral position, but we are remaking, as we have not got the polypropylene thin enough. We are also currently making DAFOs for two hemiplegic children in place of their AFOs.

F. Soft Dynamic Foot Orthosis

Soft Dynamic Foot Orthosis (illustration f) can also be made using the same technique as that used for the foot board. I have used these successfully on five children to date, inside canvass shoes, with children who would have had Piedro boots or at the very least conventional insoles inside Startright boots.

References

1) The use of Dynamic AFO's and their impact on balance and upper body function. Nancy Hylton Neurology Report.

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3) Dynamic Casting Manual. Nancy Hylton.

4) Effect of a tone-inhibiting dynamic AFO on the foot-loading pattern of a hemiplegic adult: a preliminary study. Karen Mueller, MS, PT, Mark Cornwall, PhD, PT, Thomas McPoil, PhD, PT, David Mueller, PT, CPO, Jane Barnwell, MD. Journal of Prosthetics and Orthetics, Volume 4, Number 2, pp 86-92.

TOWARDS INTEGRATION

Andrew Farren, B.A. (Hons.), M.Ed., Headteacher,
Chamwell School, Gloucester

The following article relates to a presentation given by the writer at the 1993 Annual Conference of the Association of Paediatric Chartered Physiotherapists - "Stepping Out for Equality" - at Bath University. It is not a transcript but reflects the main content of the talk, and also describes the current organisational arrangements at Chamwell School.

Chamwell School

Chamwell School serves the whole of Gloucestershire being the L.E.A.'s provision for those pupils requiring a special placement for reasons of physical disability. The school aims to promote the integration of its pupils into the mainstream sector, part/full-time, whenever this is appropriate. Since the Autumn of 1990 the interdisciplinary team has included Peto Institute trained conductors and this has had a particular impact with regard to the educational experiences being offered to pre-school; early-years children. A substantial amount of preparation and awareness with regard to conductive education took place for all those concerned - including parents - prior to the start of the pilot year 1990-1. More recently the school has become a regional "School For Parents" within the Spastics Society National framework.

The structure of the interdisciplinary early years team

The early-years team is lead by a British teacher with a degree in Special Education who is also a fully qualified Peto trained conductor. A second qualified conductor, Hungarian, has been a member of the team since the inception of the provision in the Autumn of 1990. A senior paediatric physiotherapist is jointly funded by the school and the Severn NHS Trust and is designated as "School For Parents Team Leader" having particular responsibility for promoting programmes with children and their parents both within the school and in the families' homes. A nursery nurse has been receiving additional training alongside the physiotherapist within the Spastics Society School for Parents training programme and represents another important full-time element of the early-years personnel.

Additionally, a part-time nursery nurse contributes to the implementation of programmes. Another teacher leads a programme for a small number of children in the nursery who have Profound and Multiple Learning Difficulties and who require an appropriate alternative approach.

The children

The nursery provision at Chamwell School caters for up to 25-30 children who attend for varying numbers of sessions each week according to their needs and progress. At present around 20 of the children are receiving an education which draws strongly on conductive principles. Most of the children in this group are attending for the major part of the week and their programmes are implemented very much on a through-the-day, through-the-week basis with continuity and consistency being emphasised. The remaining children are receiving an education which is more sensory-orientated as appropriate to their needs.

Conductive education based learning programmes

From the outset the intention of the early years team has been to incorporate the status of trained conductors into the already rich and well structured programmes offered within the school's nursery. The unique training received by conductors at the Peto Institute has meant that these additional team members have been able to offer a perspective for the education of pupils with cerebral palsy which has complemented and enhanced the approach of the established teachers, physiotherapists and nursery nurses. The fact that the head of the team is dual qualified and has two well-developed strands of experience has enabled a pragmatic and balanced programme to be developed. It is also worth noting that although the programmes emphasise childrens autonomy, independence and development with the minimum of aids, early access is nonetheless offered to the children with regard to information technology as this is another particular strength of the school's overall provision.

The conductive education based programmes take place firmly within the context of the life of the whole school. The children participate in all major school events, benefit from a hydrotherapy pool and enjoy a broad range of experiences on educational visits. Their early years curriculum is designed to lead them into relevant National Curriculum work when they achieve school age whether they transfer to mainstream schools or continue at Chamwell School.

The writer believes that the operational principles of Conductive Education - integrated programmes (group and individual) delivered by an integrated staff group with an emphasis on the child as a whole person who develops problem solving abilities and who learns to generate skills from one situation to another in real situations - are entirely consistent with the central tenets of the best of British special education practice. There are also strong similarities in the thinking behind the use of rhythmical intention and the well established approaches of structured language/movement programmes in the UK context.

Above all else the early-years team at Chamwell School have been concerned to demystify the media image of Conductive Education and to enable parents to have access to a local provision which they want and trust rather than to feel they must make a trip to Budapest in order to feel they have done their utmost for their children. (This is in no sense a criticism of the expertise at the Institute in Budapest). It was in fact the enthusiasm of parents in the locality which instigated the development of Chamwell's provision initially and there has been active interest and support from many families throughout the last four years. It has not been a case of making claims of instant success or of exaggerating the effectiveness of one approach against another. Rather, there has been a recognition of distinctive skills and strengths amongst the teachers, conductors, physiotherapists, nursery nurses and parents involved, and the development of programmes which have evolved through learning from each other and from a strong sense of mutual respect. There have been good results with the children, some of whom have returned to mainstream settings. It is not possible to prove whether or not the same gains would have been made without the presence of conductors. However, there is evidence of the growth of a far more integrated approach amongst team members and parents and a high level of commitment to further develop the provision. It has become clear that there is a need to extend the model of working beyond the nursery and certainly into the primary phase of the school for those children for whom the approach continues to be appropriate and who require Chamwell's programme for an extended period.

In conclusion

It is interesting to comment on the way that attitudes seem to have shifted generally with regard to Conductive Education over the last five years or so. Initially viewed as "challenging or threatening" (depending on who you were and what you did five years ago!), Conductive Education has certainly had a catalytic effect in a substantial proportion of UK Schools meeting the needs of children with motor impairment. The intensity of arguments concerning the respective merits of different professional disciplines and approaches seems to have diminished considerably to be replaced with a calmer desire to evaluate practice and outcomes for children in more detail.

The "Chamwell experience" offers an opportunity to understand the significance of conductive education in a very ordinary setting and has allowed experienced professionals and parents alike the opportunity to learn together and to apply common sense interpretations to an approach which has all too often been subject to misrepresentation and misunderstanding. At the same time a significant number of children have benefited from a consistent and uninterrupted pattern of education in a style desired by their parents. Importantly too, a good level of liaison between Chamwell School and local mainstream provisions ensures the best possible chance of long term integration into regular schools. The Conductive team has made it a priority to offer support to children and their educators in the mainstream setting during and following the period of their transfer. It has been pleasing to observe the acceptance of the approach locally amongst colleague professionals, including primary school teachers/class-room assistants and the children's paediatricians. There would seem to be considerable evidence of genuine appreciation of what conductive education really is rather than what it is sometimes imagined to be.

EARLY PHYSICAL INTERVENTION

I. Gregorius MCSP
Physiotherapy Department, Wilfrid Sheldon Children's Centre,
St. Giles' Road, London, SE5, England.

INTRODUCTION

'Clumsy' children are a heterogeneous group (1) whose retarded motor performance gives cause for concern and is often exhibited in the absence of definite neurological abnormality (2). In recent years, long term functional effects, such as under-achievement and diminished quality of life, have been linked with early motor incoordination (3,4).

It has been postulated that intervention could be more effective if educators and clinicians were able to identify children with developmental problems at pre-school level (5). This is problematic however, because the way motor difficulties evolve and are expressed is so varied in individuals (1).

Evidence suggests that social and environmental factors - such as low socio-economic status, family stress, single parent status and youthful childbearing - all influence perceptual-motor development and function. The relationship is complex and may be direct or indirect (6). Predictive studies in this area are equivocal and it is appropriate to look at the effects of single risk factors of deprivation on the progress of normal development both individually and in clusters (7).

One aim of this study - reported here - was to examine the links between low scores on the Foundations and Coordination indices of the Miller Assessment for Preschoolers (5) and scores on a questionnaire of environmental and social deprivation; to look at both single risk factors and a combination of factors. The hypothesis was that those who scored low on the Foundations and Coordination indices of the MAP would have a higher incidence of environmental and social deprivation.

METHOD

Subjects

The population consisted of 103 children living in a densely populated, multi-ethnic, inner city area in Britain. The 60 girls and 43 boys, aged two years nine months to five years eight months were selected from five establishments on the basis of availability. Children already receiving intervention for special needs were excluded from the study.

Materials

The Miller Assessment for Preschoolers (MAP) (5) was selected for administration to subjects. The MAP test provides a comprehensive clinical framework and was designed to identify children who demonstrate mild to moderate developmental delays. It comprises 27 items divided into five performance indices covering a broad spectrum of sensory and motor, cognitive and combined abilities. The indices of interest - Foundations and Coordination - included neurological, sensory integrative and neurodevelopmental items and tests of gross, fine and oral motor abilities respectively.

A questionnaire, modified from Gubbay (1975) (8) was used to collect information from parents on subjects' family circumstances, developmental milestones and medical history. Most variables were dichotomous, some were ranked - a high score indicating greater deprivation - and some were nominal.

Procedure

Subjects were seen once at the establishment they attended. They were tested at their chronological age level to gain an overall percentile performance score. Parents were given a semi-structured interview.

Analysis

The relationship between scores on the MAP test and factors in the parent-interview schedule was investigated. Statistical analyses of data included both parametric and non-parametric tests. The statistical package used was UNISTAT -III (C) (9).

RESULTS (to date)

The mean scores and observed range for the MAP subtests are shown in Table 1. The mean scores for some single factors are shown in Table 2.

TABLE 1 - Mean scores on Foundations and Coordination indices.
(N = 98; 58F, 40M)

	Group mean (percentile)	Observed Range Min.	Max.
MAP Foundations	44.95	2	99
MAP Coordination	41.86	4	44

TABLE 2 Means scores of single factors. (N = 90; 53F, 37M)

	Mean	S.d.	Min.	Max.
Age subject (months)	52.0	8.0	33.0	67.0
Age mother at subject's birth (years)	25.4	6.2	16.0	44.0
Birth Weight (kg)	4.1	1.3	1.2	12.5

English was the first language of all but two subjects.

The available date was analysed by regression analysis using a Pearson-Spearman-Kendall matrix. Some interactions between factors reached significance: gender and Foundations were negatively correlated (Spmn corr. coef. = -.2291, p = .015) with girls having generally higher percentile scores than boys; mother's age at subjects birth correlated positively with Coordination (spmn. corr. = .2574, p = .007); and English language and Coordination scores were inversely related (spmn corr. = -.2293, p = .015).

Data on developmental milestones, medical history and family circumstances requires further analysis.

The Student's 't' and the Mann-Whitney 'U' tests were used to analyse between groups data. Some significant differences in the ages of subjects and their mothers were found. There were no significant differences in Foundations or Coordination scores.

DISCUSSION

Full discussion of the results will be possible once data analysis is complete. The results to date are consistent with the experimental hypothesis: subjects born to younger mothers had poorer Coordination scores, as did subjects for whom English was the second language.

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4. Losse A, Henderson SE, Elliman D, Hall D, Knight E, Jongmans M (1991) Clumsiness in children - do they grow out of it? A 10-year follow-up study. Developmental Medicine and Child Neurology 33:55-68.
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8. Gubbay SS (1975) The clumsy child: a study of developmental apraxia and agnostic ataxia. WB Saunders Co. Ltd., London.
9. Unistat Ltd., P.O. Box 383 London N6.

INDIVIDUAL AND TIME RELATED VARIATION IN CONDUCT AND PERFORMANCE DURING PHASIC GROUP THERAPY

The study aimed to evaluate the effects of an integrated physiotherapy and clinical psychology treatment approach on the motor performance and conduct of a small group of children with "clumsiness". Their behaviour was observed over a period of 20 weeks in order to determine whether it varied with different levels of physiotherapy input.

The study in which four subjects participated, was both descriptive and experimental. Detailed descriptions of assessment procedures and management statistics were included and results gave an account of the characteristics of each subject in addition to visual representation and statistical analysis of their response to treatment. No attempt to analyze the casual factors was made.

There were two experimental hypotheses:

(1) that subjects motor scores would be positively affected by both physiotherapy only and by the combination of physiotherapy and psychology intervention, that there would be a greater degree of change with the latter and that there would be some interaction between the two.

(2) that subjects conduct would be positively affected by the combination of psychology and physiotherapy intervention.

The hypothesis that subjects motor scores would be positively affected by both physiotherapy only and by the combination of physiotherapy and psychology intervention was realised by three subjects. The data also suggested that in two of those there was a greater degree of change with the latter.

Evidence to support or refute the hypothesis that the subjects conduct would be positively affected by the combination of psychology and physiotherapy intervention was inconclusive.

INGE GREGORIUS MCSP

The Wilfrid Sheldon Children's Centre, St Giles Road, London SE5 7RN

RESEARCH REPORT

PASSIVE SMOKING IN CF FAMILIES - PRELIMINARY FINDINGS

D Rogers, L Millar-Jones, HC Ryley, MC Goodchild
Physiotherapy Department and Cystic Fibrosis Unit,
University Hospital of Wales,
Cardiff
UK

Passive smoking has been associated with growth suppression and an increased frequency of chest infections among normal and asthmatic children. To investigate the effect on CF patients, we have compared 22 CF children (mean age +/ - 1 SD = 9.97 +/- 5.02 years, 20 families) exposed to passive smoking with 23 CF children (9.04 +/- 4.40 years, 21 families) not exposed. The study is on-going.

Aspects investigated were height and weight standard deviation scores (SDS); respiratory function tests (RFT) with FEVI, FVC, PEFR and FEF 50%, all as % predicted; pulse oximetry (Sa02); colonisation with Pseudomonas aeruginosa; courses of treatment with intravenous antibiotics; Shwachman and Chrispin Norman scores.

Analyses were done by group comparisons, irrespective of age and also with the use of age (within 1 year) and sex-matched pairs (n = 14 pairs) by Mann Whitney U test and chi squared test as appropriate.

Results by group analysis show no significant differences between the passive smoking and non-smoking subjects; however there is a trend for the non-passive smokers to be heavier, taller, to have better RFTs, fewer courses of intravenous antibiotics and better clinical and x-ray scores. By matched pair comparison, the non-passive smokers are significantly heavier ($p = 0.042$), taller ($p = 0.025$) and have better Shwachman scores ($p = 0.029$).

We plan to develop this study to take further account of the many factors which have impact on the clinical state of the patient, and to present data on approximately 100 patients from all over Wales, at the next European Cystic Fibrosis Conference in Paris 1994.

P.R.O. REPORT - OCTOBER 1993

I have received a P.R.O. newlsetter from the CSP and the briefing documents from the CSP on next years centenary which I have photocopied for everyone. I wondered if APCP should do anything for the centenary. I am open to ideas but wondered along the lines of in cooperating the history of APCP which we could publish for our members.

I have also received a press release from the CSP on the "back pain week" which I have already circulated to all the regional representatives and have photocopied for the other Committee Members.

The meeting on Outcome Measures took place with the Superintendents in London on September 22nd. The Dyspraxia one is complete and ready for trial. The other areas being looked at are neuromuscular, neurodevelopmental, orthopaedics and respiratory. All groups have made very good progress and hope to have their outcome measures complete in three months time. It is also hoped that they will be completed and ready for use in 18 months time.

I have received a letter and video from Wendy Murphy on her work at Ormerod School in Oxford on a holistic approach to treatment. Anyone wishing to see the video should contact her at Westleigh, West End, Chipping Norton, Oxon OX7 5EX.

MICHÈLE LEE
Public Relations Officer

PUBLICATIONS REPORT

Weekly requests are still being received for publications, principally - The Children Act 1989.

Advert for the Children Act 1989;

Therapy - Oct. 1993
Journal - Nov. 1993

Our new publication entitled 'Dyspraxia - A Handbook for Therapists' has now been received for quations and 'galley' proofs. Further information to follow. It is hoped it may be available for Conference 1994 in Chester our 21st year!

CAROL FOSTER M.C.S.P.
Publications Officer

REPORT OF THE C.I.G. LIAISON COMMITTEE

The July meeting was attended by Rowenna Hughes as Carol Foster was unable to attend - Apologies for the absence of a report.

The next meeting is to be held on 18.10.93 before the Professional Practice Meeting

A full report of both meetings will be circulated to all national and regional reps in November for printing in the spring Newsletter.

CAROL FOSTER M.C.S.P.

COURSES

NOVEMBER 13 - Southampton - 9.45 a.m. - 4.15 p.m.

PAEDIATRIC RESPIRATORY CONDITIONS - NEUROLOGICAL, ASTHMA, CYSTIC FIBROSIS

Mrs. C. Ireland MCSP, Superintendent Paediatric Physiotherapist, Southampton University Trust Hospital, Tremona Rod, Southampton SO9 4XY (tel: 0703 796459)

The speakers at this study day will include Professor J.O. Warner, Professor of child health; Dr. Chris Rolles, consultant paediatrician, Southampton University Trust Hospitals; Dr. John Heckmatt, consultant community paediatrician, Watford General Hospital; Mrs. Fennella Noble, senior I respiratory physiotherapist and Mrs. Rachael Gregson, research physiotherapist, Southampton University Trust Hospitals; and Miss Laura Erwin, senior I neurology. The Hospital for Sick Children, Great Ormond Street.

Fee: £20 APCP and ACPRC members, £22 others, includes coffee, lunch and tea, to be sent with application, payable to 'Physiotherapy Trust Fund'. Applications to Mrs. Ireland in the physiotherapy department. **Closing date November 5.**

NOVEMBER 12-14

Castle Priory

BEHAVIOURAL DIFFICULTIES IN CHLDREN WITH SPECIAL NEEDS - *a workshop on behaviour modification, observation technique and goal planning.*

Cost: £225 + £39.38 VAT. Apply to Castle Priory, Thames St., Wallingford, Oxford OX10 OHE. Tel: 0491 837551.

NOVEMBER 12-13 - The Portland Hospital, London W1

MOVEMENT ASSESSMENT IN INFANTS UNDER 12 MONTHS

Kate Roylance, Superintendent Physiotherapist, The Portland Hospital, 207-209 Great Portland Street, London W1N 6AH (tel: 071 580 4400 ext 2098)

A practical course designed to give paediatric physiotherapists skills in the objective measurement of motor development in term and pre-term infants. Participants must be experienced in working with infants under one year. Lecturer: Roslyn Boyd, superintendent paediatric physiotherapist, Newcomen Centre, Guys and St. Thomas' Hospital.

Fee: £120, includes Movement Assessment of Infants (Chandler) manual from US, comprehensive course notes, lunch and refreshments. Please send written application, fee (payable to the 'Portland Hospital'), and SAE to course organiser for course programme and pre-course reading. 20 participants and waiting list for future courses.

NOVEMBER 19-20 - Medical Centre, Derriford Hospital, Plymouth
11 a.m. - 6 p.m. Friday 9.30 a.m. - 1 p.m. Saturday

CONTROVERSIES IN CEREBRAL PALSY

Mrs. P. Punch, Trengweath Trust, Trengweath School, Hartley Road, Plymouth, Devon PL3 5LP (tel: 0752 770 978)

The Trengweath Trust is a Plymouth Charity, one of whose aims is to raise awareness of cerebral palsy issues. The course brings together nationally known figures at the frontier of cerebral palsy research and clinical care. It is intended to update knowledge for doctors, physiotherapists, and others with an interest in this field. Among the speakers will be Dr. Hari, director of the Peto Institute; Mr. Gwyn Evans, director of the locomotion research laboratory at the Robert Jones and Agnes Hunt Hospital in Oswestry; and David Scrutton from Guy's Hospital.

Fee: £40, specialists £90, includes coffee, lunch and tea, to be sent with application, payable to 'The Trengweath Trust', please send SAE for application form from course organiser. Multidisciplinary. Students welcome. **Closing date November 12.**

NOVEMBER 19 - London E1
9 a.m. - 4 p.m. Registration 9.15 a.m.

WORKSHOP ON METHODS OF TALIPES STRAPPING

Paediatric Physiotherapy Department

Mrs. D. Coggings, Community Physiotherapy, The Royal London Hospital (Mile End), Bancroft Road, London E1 4DG (tel: 071 377 7874)

This one-day course/workshop is aimed at paediatric physiotheapists involved in the treatment of structural talipes. The course will include three different approaches to conservative treatment; the footplate/plastering method with Ros Boyd, the Robert Jones strapping and the Mr Catterall velcro method, with practical sessions on all three. The surgical approach will be discussed and a talk given by a paediatric orthopaedic surgeon.

Fee: £30, to be sent with application, payable to 'Chest Course Fund'. Please send SAE, no application form required. Multidisciplinary. Students welcome. **Closing date November 1.**

NOVEMBER 25 - London SW16
9.45 a.m. - 4.15 p.m.

SWALLOWING IMPAIRMENT

Mandy Fader, BHHI, Crown Lane, London SW16 3JB (tel: 081 670 8261 ext 2242)

'Current trends in the management of neurological dysphagia'. This symposium is aimed at therapists and other healthcare professionals working with people with neurological disabilities. Sessions will include assessment, radiological techniques, swallowing programmes, risk management and nutrition.

Fee: £35 (includes lunch), £40 after October 31, to be sent with application payable to 'BHHI' or for further details contract organiser at above address.

NOVEMBER 25

Castle Priory

VISUAL IMPAIRMENT AWARENESS WORKSHOP

This workshop is designed for people with little or no knowledge of visual impairment. It will give an understanding of the different types of sight loss and causes. Training will be given on how to guide a visually handicapped person.
Cost: £60 + £10.50 VAT.

NOVEMBER 27 - Cardiff
10 a.m. - 4.30 p.m. Registration 9.30 a.m.

HAEMOPHILIA STUDY DAY

Haemophilia Chartered Physiotherapists Association

Mrs. F.M. Hall MCSP, Physiotherapy Department, University Hospital of Wales, Heath Park, Cardiff, South Glamorgan (tel: 0222 747747 bleep 5486)

This study day is designed for members of the Haemophilia Chartered Physiotherapists Association and other interested physiotherapists. Its aim is to update participants in several aspects of the management of patients with haemophilia, and related bleeding disorders, to promote valuable discussion and exchange of ideas. Some of the topics to be covered will include HIV update in orthopaedics, paediatrics and haemophilia, neurological management of patients with HIV disease. This will be followed by a short business meeting.

Fee: £30, includes coffee, lunch and tea, to be sent with application, payable to 'HCPA'. Please send SAE, no application form required. Students welcome. **Closing date November 12.**

Thames Street, Wallingford, Oxfordshire OX10 OHE
Telephone: Wallingford (0491) 837551 * 826350
***Facsimile: (0491) 826359**
196/22/93. £32 (plus £5.60 VAT.) 29 Nov. - 2 Dec.

Castle Priory

INTRODUCTION TO COUNSELLING

- A course for those with little knowledge of counselling. It defines counselling, its skills and contexts, offers practice opportunities, sets the scene for the certificate courses.
Course numbers limited to 20. Tutor: John Pratt.
210/117/93 15 Dec. 1993

BEREAVEMENT COUNSELLING.

A one day course will examine basic counselling of bereaved people, address the 'Whole Person', and introduce delegates to the stages of grief.

INSTITUTE OF CHILD HEALTH

(University of London)

PHYSICAL DISABILITIES

24 - 26 January 1994

Course Director: Professor Brian Neville

The course is intended for professionals with some basic experience of disability, and has sessions devoted to comprehensive assessment and management of cerebral palsy, neuropathic bladder, arthrogryposis, osteogenesis imperfecta and chronic juvenile arthritis.

Course fee: £180 - including lunch and refreshments

CEREBRAL PALSY/DIPLEGIA

11 February 1994

Course Director: Mr. David Scrutton

Whilst all children are individuals, some grouping of disorders can help with understanding a child's likely prognosis and response to treatment, and also the management strategies which might be most likely to succeed. Diplegic cerebral palsy is not uncommon and, in spite of its variations, forms such a group. The course will cover aspects of physical treatment and management including orthopaedic surgery and orthotics. It is primarily for physiotherapists and community paediatricians and one of the aims is to provoke discussion on treatment priorities.

Course fee: £60 - including lunch and refreshments.

For further information please contact:

The Continuing Education Office, Institute of Child Health,
30 Guildford Street, London WC1N 1EH.
Tel: 071 829 8692 (direct line) Fax: 071 831 0488

INSTITUTE OF EDUCATION and INSTITUTE OF CHILD HEALTH

Children with Physical Difficulties in Ordinary Schools: Medical and Educational Teamwork

28 February 1994

Course Directors: Dr. Helen McConachie and Mr. Chris Robertson

The aim of the course is to promote clearer understanding of the roles of various medical and educational professions in meeting the needs of children who have physical or neurological disorder and who attend ordinary school. The problems posed by epilepsy and hemiplegia will be included. However, the main focus will be discussion of models for joint working with medical information on particular conditions given as handouts.

Course fee: £35

For further information please contact:

Deborah Harper, Inset Department, Institute of Education,
20 Bedford Way, London WC1H 0AL
Telephone : 071 612 6591

Do You Wish To Advertise A Course?

Please send any available information on courses for inclusion in further editions to

JACKIE REYNOLDS,
LARK COTTAGE, CRATFIELD, NR. HALESWORTH IP19 0BN.

This should be in two weeks before the deadline.

British Association of Bobath Trained Therapists

Provisional Programme

ANNUAL GENERAL MEETING

University of Wales (Cardiff), Staff Dining Club

Saturday 13 November 1993

9.30	Registration and Coffee
10.00	A.G.M. (Members only)
11.00	**DR. ANDREW EVANS** (Consultant Paediatrician/ Senior Lecturer in Child Medicine) **"Neurophysiology of Athetosis"**
11.45	**JENNIFER BRYCE, M.C.S.P.** (Principal of the Bobath Centre, London) "Bobath Classification of Athetosis"
12.45	Lunch
*1.45	Choice of Workshops, led by:- **MARIAN BROWNE** *(Speech Therapist)* **JENNIFER BRYCE** *(Physiotherapist)* **JUDY MURRAY** *(Occupational Therapist)*
*2.45	Choice of Workshops, led by:- **MARIAN BROWNE** *(Speech Therapist)* **JENNIFER BRYCE** *(Physiotherapist)* **JUDY MURRAY** *(Occupational Therapist)*
3.45	Tea and Discussion
4.30	close

** Places for Workshops allocated in order of applications received*
Fee: £20.00 (Members)/£30 (Non-Members) - Tea, Coffee & Lunch included.

FEE TO: Sue Bearne, 49 Efford Road, Higher Compton, Plymouth PL3 6NF
Telephone: (0752) 779832 (home) or (0752) 771975 (work).

HERE AND THERE

1. **RESEARCH AND WRITING SKILLS**

Butterworth and Heineman have published two practical, accessible and well referenced books of particular interest to physiotherapists interested in gaining and improving their writing and research skills.

1. **PRACTICAL RESEARCH** - *A Guide for Therapists by Sally French, Lecturer, Department of Health, Welfare and Community Education, Open University.*
Contents include: Starting research; Developing research ideas; Ethical issues; Writing a research proposal; Reviewing the literature; Sampling and Research methods; Survey techniques and Experimental designs; Basic statistical concepts; Observation; Documentary research; Reporting and denominating research findings; Writing a research report.

Paperback: £12.95

2. **WRITING:** *A Guide for Therapists by Sally French, Lecturer, Department of Health, Welfare and Community Education, Open University and Julius Sim Principal Lecturer, School of Health and Social Sciences, Coventry University.*
Relevant to students and teachers alike, this book provides the information and guidance necessary to help succeed in all aspects of writing for example, preparing research reports, clinical notes or student assessments. It gives advice on avoiding stereotypical language and the use of bibliographic reference.

Paperback: £12.95.

Books may be ordered from: Lucy Barter, Butterworth-Heineman, FREEPOST, Oxford OX2 8DP.

2. **OTHER PUBLICATIONS**

a) **The Scottish Downs Syndrome Association** has produced the first three booklets in a new series called 'Living with Downs Syndrome'.

- **Your Baby Has Downs Syndrome'** - *an introduction for parents and relatives.*

- **'Getting to know a child with Downs Syndrome'** - *a short leaflet for relatives and friends with some practical ideas.*

- **What is Downs Symdrome?** - *a booklet for students, parents and professional workers.*

Further Information: CATHIE ROWAN,
Scottish Downs Syndrome Assoc., 158 Balgreen Road, Edinburgh EH11 3AU.

2a. **WHAT ABOUT US?** - Sex Education for Children with Disabilities - a booklet for **parents** putting the view of the disabled child simply and positively.

Available, priced £2 from: Secretary, Homes and School Council, 40 Sunningdale, Mount Eccleshall, Sheffield S11 9HA.

3. **EEZI COMFI-SITTER**

A parent came up with this bright idea which she purchased from Index, price £9.99. Her one year old child has Cerebral Palsy and the Occupational Therapist and I were having difficulty in seating him correctly in his pushchair and car seat.

The insert is of strong material and inflatable to varying degrees. There are three separate zones to support head in mid-line, trunk and hips. It is used in conjunction with a shoulder harness.

The Comfi-Sitter can be used as a changing mat or in a high chair.

Index Cat. No. 12, page 309.

JEAN BURROUGHS
Snr. Physiotherapist, C.D.C. Ormskirk, Lancs.

How to use your EEZI TM Comfi Sitter

The best way to keep baby snug and safe cradled on a cushion of air

Your EEZI Comfi Sitter cradles baby snuggly and safely in a car seat, pushchair, highchair or lowchair. Its unique design has 3 COMFORT "ZONES" that inflate separately to provide as much support as is needed for Baby's head, side, back and bottom. The heavy gauge PVC has a flocked velour, velvety finish for extra comfort. It's soft, durable and simply washed clean.

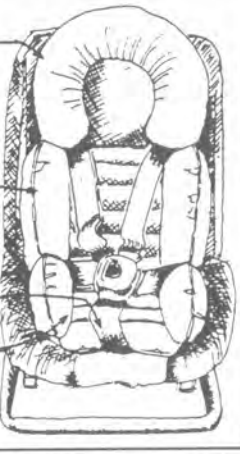
1. Inflate each COMFORT "ZONE" as required to suit Baby.
2. Ensure air valves are securely inserted and then push in to be flush with the Comfi Sitter.
3. Shoulder Harness - in use ensure our valves face away from Baby.
4. When used in a car seat, push chair or highchair fitted with integral safety harness, ensure that the applicable harness is fitted around Comfi-Sitter as illustrated.

Carefully made in W. Germany exclusively for EEZI International Ltd.
Place Farm, Bury Road, Stuston, Diss, Norfolk IP21 4AD.

ZONE 1
ROUNDED "HALO" PILLOW SURROUNDS BABY'S HEAD FOR PROTECTION FROM BUMPS WHILST PREVENTING ROLLING FROM SIDE TO SIDE.

ZONE 2
BACK SUPPORT AND SIDE REDUCES SLUMPING INTO AN AWKWARD POSITURE.

ZONE 3
AIR FILLED SEAT ALLOWS HEIGHT ADJUSTMENTS WITH SIDES FORMING PADDED ARM RESTS THAT SECURE BABY SNUGLY ON EITHER SIDE.



EEZI™

OTHER USES

HIGHCHAIRS AND SEATS
PROVIDES EXTRA SUPPORT FOR BABY IN HIGHCHAIRS AND NEW CHAIRS.

PUSHCHAIRS
HOLDS BABY SECURELY AND SNUGLY IN A PUSHCHAIR.

CHANGING MAT
USE AS A CHANGING MAT THAT HELPS PREVENT ROLLING OR AS A SUPPORT CUSHION FOR NAPS.

4 **NEWS FROM WINCHESTER:** Maureen Woods tells us that the Royal Hampshire County Hospital Paediatric Physios have made a video entitled:

'MOTOR COMPONENTS TO NORMAL MOVEMENT IN THE FIRST YEAR'.

It is presented and directed by Helen Stevens who has done the South African Baby Course as well as Bobath. It is available on loan from the Physiotherapy Department, or can be purchased from the Teaching support and Media Services, Southampton University, Highfield, Southampton SO9 5MH.

The video lasts 38 minutes and costs £10.00.

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5. **NEWS FROM WALES**

The Department of Genetics, University of Wales has conducted a three year research programme into early screening for Muscular Dystrophy. A multi-professional study day was held to discuss the outcomes of this research. Contact Barbara Bowen for details.
A meeting of physiotherapists will be held to discuss pre-symptomatic treatment.
With the aid of a grant from the Welsh Office, Viv Williams organised a day at Dyffryn Conference Centre to set standards for audit. Professionals, parents and Voluntary Organisations from all over Wales were invited.

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6. **DEVON AND EXETER SPASTICS SOCIETY** have launched a feeding and swallowing advisory service. Contact Mr. S.C. Johnson. Tel: (0392) 468333.

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7. **JABADAO**

NATIONAL DEVELOPMENT AGENCY FOR SPECIALIST MOVEMENT WORK

FIRST MOVES

A programme using movement for professionals who work with children of five and under: September 1993 - March 1994.

JABADAO would love to hear from any paediatric physiotherapists who are interested in using movement in their work. The programme is concerned with movement and dance as a key way that a child learns about itself, the world and other people in it, as well as ways of extending and maintaining range of movement and supporting emotional and social development in the all-important early years.
Areas of work include:

Dance and the Special Child
Working with Downs Children
Integrated Groups
Physical Disability - working in wheelchairs
Working with Autism
Multisensory work - environments for moving
Building and maintaining movement range

We are interested in providing tailor-made packages to suit your situation; perhaps in coming to work alongside you with your children, or providing a training day for a group of physiotherapists.

Contact Pat Hilton, JABADAO, 45 Elder Road, Leeds LS13 4DB. Tel: (0532) 562287.

8

6699 VOCAL

336 Brixton Road, London SW9 7AA
Telephone: 071-274 4029
Fax: 071-274 7840

Voluntary Organisaitons Communications and Language is a registered charity which brings together organisations concerned with communication disability.

Aims:-

1. To facilitate and monitor the co-ordination of augmentative communication services for children, to examine assessment, provision and support and, in particular, to draw together health and education professionals, voluntary organisations and carers.
2. To produce guidelines for good practice through the establishment of a working party.
3. To collect, collate and disseminate relevant information on service providers.
4. To develop regional networking and training programmes.

9

HOWIE THERAPY CYCLES (Scotland) LTD

have developed a new range of

Therapy Vehicles. An edited description by Christine Lawson BSc MCSP. Sen. Physiotherapist Scottish Council for Spastics, of the Howie Dual Cycle follows:-

The Dual Cycle is basically two cycles joined together in parallel, i.e. one alongside the other.
One side of the bike is designed for the able-bodied person, the other for the disabled partner.

There are 3 different seats on the Dual Cycle (disabled side) only one is used at a time.

1. A baby car seat for the very small or particularly disabled child, offering complete security and stability.

2. A small saddle for very small to medium sized children.

3. A larger saddle suitable for a medium child to adult

In general the bike is very stable - even with only one person on it - as it is effectively a 4-wheeler vehicle. The bike is quite wide but is surprisingly manoeuvrable. At Stamore House School we use it both inside the school corridors and outdoors.

On a therapeutic level the bike encourages better balance - a back rest with chest strap for children with poor head and back control can be added, although we have found in most cases the child can be assisted to sit without this. The bike encourages an even grasp with both hands, the handlebars can be shifted closer to or further from the body.

The child also gains the experience of good weight transference from side to side and very importantly a reciprocal movement of the legs. Eventually the support and guidance from the helper can be reduced and the child takes more control for themself. The benefits of this type of therapy cycle is that even very severely disabled children can use the bike.

Again like the Howie Cycle this bicycle has become an important but fun aspect of physiotherapy treatment at the school and as said about the trike the bikes give our children alot of fun and a different view of life inside and outside the school but is also a good form of controlled therapeutic exercise.

The Howie Therapy "Dual Cycle"

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Details of other models and a video are available from the Editor.

REGIONAL REPORTS

South West: **Carole Hurran, 23 Bayswater Ave., Westbury Park, Bristol BS6 7NV.**

Thanks to everyone who returned questionnaires - an unprecedented 31 responses which is getting on for a third of members in the region. The information on study days which you would like organised is as follows in order of popularity:

Paediatric Audit, Gait Analysis, Postural Management, Splinting, Outcome Measures, Halliwick Swimming, Sensory Integration, Dyspraxia, Respiratory Care, Research Methods. Other suggestions made by members included: Cystic Fibrosis, Asthma, Conductive Education, Read Codes.

If anyone is interested in organising a course locally please let me know as it may save duplication of subject matter or clash of dates. The Regional Committee will be meeting to plan next year's AGM and Study Day on **Friday November 12th at 2.00 p.m., in the Childrens Centre, Odstock Hospital, Salisbury**. Several people have expressed an interest in joining the Committee and I hope will be able to attend.

About two thirds of members would prefer to pay APCP subs by Direct Debit, which is useful to know as this option is under consideration at present. Please remember to renew your membership subs in good time for 1994, and don't forget to claim tax relief for it along with CSP and State Reg. fees. Every little helps!

South East: **Sheila Minet, Old Knowle, Frant, E. Sussex TN3 9EJ.**

Our study day on AIDS held in June was not well attended, which was a shame as it was highly praised by all who did come.

The next study day is on November 6th on Juvenile Chronic Arthritis, which will be followed on February 26th by a study day on 'Splinting and the Cerebral Palsied Child'.

London: **Rowenna Hughes, 87 Norbury Hill, London SW16 3RU.**

The study day in September: "Variations on a Halliwick Theme" was a great success. It was well attended with positive feedback from the group. The committee was pleased with the response to this course after the lack of applicants on some previous study days.

Future Lectures:

November/December - Evening lecture on Auditing/Outcome Measures. The Committee feel this is now becoming an everyday part of a physiotherapists working day.

Februray - Study Day - Early Motor Skills

Any suggestions for future topics on study days and evening lectures will be welcomed.

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

A study day on Clinical Audit is planned for January 12th. Our AGM will be in early March and will be included in a day on A.F.O.'s. Details from Jackie Reynolds. Everyone in East Anglia is obviously very busy as I have not had any other item of information to include.

Trent: **Jenny Gill, 42 Britannia Avenue, Arnold Road, Nottingham NG6 OEB. Trent**

The current membership in the Trent Region is 72. A study day on 'Legal Issues' and Standards of Practice was held in Leicester on October 16th. 'Sharing Days' are being planned for early next year in Sheffield and Leicester. A small gift was presented to Noreen Hare in July on behalf of the Trent membership in appreciation of her longstanding work for A.P.C.P.

West Midlands: **Carol Foster, Physiotherapy Dept., The Childrens Hospital, Ladywood Middleway, Ladywood, Birmingham B16 8ET.**

The West Midlands Branch Committee continues to work to arrange events for the local branch members:

The dates for the Autumn splinting course are as follows:-

Tuesday 12th October. Symetrical Hip Splinting - Brian Hopkins

Wednesday 3rd November. A.F.O.'s - a discussion led by Phil Rees.

Thursday 25th November. Indications for, and Physiotherapy Intervention during below knee plastering - Pauline Christmas.

Venue: Victoria Schoo1, Bell Hill, Northfield.

Cost: A.P.C.P. Members £2.00, Non-Members £2.50

Coffee: 6.30 p.m., Lecture: 7.00 p.m.

Looking forward to the A.G.M. in 1994 it is hoped that Dr. Helen Roper will address us on Neuro Muscular conditions - to be confirmed.

Read Coding for Physiotherapists is well on the way to being completed - only one more meeting is envisaged.

Patient Focused Care/Anticipated Recovery pathways. Is anyone involved with P.F.C.? Please telephone me with your comments or concerns on 021 454 4851, ext. 6396, or write to me with any documentation being used.

Wales: **Barbara Bowen, Children's Assessment Centre, East Glamorgan Hospital, Church Village, nr. Pontypridd, Mid Glamorgan CF38 1AB.**

A study day on A.F.O.'s was held in August at Dyfaty School, Swansea. This was one of the best attended study days to date. It was organised locally by Julie Harvey, Committee member. Perhaps other areas could follow Julie's lead as it proved so successful.

Do let your views be known by filling in the enclosed questionnaire.

Our 'Christmas Do' at a local vineyard is to be held on November 25th. Not as previously advertised. Ring myself or Chris Batchelor for last minute bookings. We'd love to see you.

NADOLIG LLAWEN!

North West: **Alex Winney, 14 Langley Road, Spital, Bebington, Wirral, Merseyside L63 9HW**

Next year's AGM is to be held on Saturday March 5th 1994, at the Post-Graduate Centre, Warrington District General Hospital. It is to follow its usual format, where we will have the AGM first thing and then a half study day on Syndromes. These will include some of the lesser known ones. We hope to have a Paediatrician speaking on the syndromes and a panel of Therapists discussing treatments, experiences etc; with comments from the

floor. Application forms will be sent out in a separate mailing in January. The North West, as you know, is to host the Paediatric Conference on behalf of the National Committee next year and you all should have application forms with this Newsletter; we would love to see as many North West members as possible. Also included in this edition are Membership renewal forms, please complete and return them quickly.

We are putting courses on hold until autumn to give ourselves a slight breather after Conference. Ideas that have been put forward so far are: 'Myopathies', 'Head Injuries', and 'The Intensive Care Survivors'. Please let the North West Committee know of any other topics that you think would be interesting or useful for future Study Days.

North East: **Liz Hardy, 45 Kestrel Close, Norton, Stockton-on-Tees, Cleveland TS20 1SF.**

There is good and bad news for North East branch members. The good is that there is to be a study day on "Management of Head Injuries in Children and Young Adults" at Leeds on Saturday February 12th 1994. Apply early as places are limited. The bad news is that your committee are still trying to organise the planned autumn study day "Neuroanatomy and physiology - revision and update". We are having difficulty finding suitable speakers. Any suggestions or offers to me as soon as possible please.

The committee would like to wish everyone a Happy Christmas - and how about making a New Year's resolution to attend more of our interesting and low-priced study days!

Scotland: **Lyn Campbell, 19 Craigmount Avenue North, Edinburgh EH12 8DH. Tel: 031 539 0619.**

The second part of the Halliwick course was held in September and was well attended and enjoyed.

The committee is now becoming very involved in the initial planning for Conference in 1995 and are at present trying to find a suitable logo, title and speakers.

We are not planning to hold another study day until next year but this will probably be held in conjunction with the AGM.

N. Ireland: **Elizabeth Harty, 43 Ardress West Road, Tullyroan, Dungannon, N. Ireland BT71 6N9.**

Our congress in Belfast has been and gone - what a wonderful coming together of our 400 physiotherapists from the British Isles and further afield. Congratulations to all those who were involved in such a mammoth event, and a special thankyou for all those from "across the water" who made the effort to visit our shores.

However, sadly, what a missed opportunity for some of our profession closer to home who did not attend. Did they not realise the significance of such an occasion which will not take place in Northern Ireland for anothe 30-40 years? Were they not encouraged by their managers?

Waken up! Carpe Diem! - seize the moment.

There is nothing so damaging and pathetic to our profession as a dull, bored, tunnel visioned physiotherapist who will not make the effort to broaden his or her outlook!

Our future events will include:

- A Study Day on Counselling Skills by Dr. Jarleth Benson, Psychiatrist in the Royal Victoria Hospital, Belfast on 20th October.
- Evening meetings in Fleming Fulton School, Belfast on 8th November.
- Management of Spinal Deformities by Dr. Adare, Orthopaedic Consultant, on 17th January 1994.
- Behavioural Modification by Dr. Pat Donnelly on 17th January 1994.
- Study Day on Seating Management organised by Action Design in February in Musgrave Park Hospital, Belfast.

A.P.C.P. MATTERS

The A.G.M. of the Association will be held on Saturday 9th April 1994 at Chester.

There will be vacancies on the National Committee. Nominations are invited (proposed and seconded by A.P.C.P. members) in writing to the Hon. Secretary at least one calendar month before the A.G.M..

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C.S.P. CONGRESS REPRESENTATIVES CONFERENCE

5 **Motions were submitted. 2 rejected.**
3 accepted, 2 of which were composite with other groups.

Our two representatives presented 2 motions and seconded a third.

MOTIONS FOR REPRESENTATIVES CONFERENCE

B5 The CSP should strongly campaign for the maintenance of a rotational system among junior and senior II physiotherapy staff, by actively supporting and advising physiotherapy managers working in NHS trusts to ensure staff development and to uphold the broad base of clinical expertise in a wide range of specialities. **APCP accepted.**

G29 The specialist physiotherapist should have his/her particular expertise protected within trusts. The CSP should encourage trusts to acknowledge the role of the therapist with specialist skills, within both hospital - and community-based practice. **APCP accepted.**

G30 The CSP should encourage physiotherapy managers to acknowledge that there are clear boundaries between adult mental handicap services and paediatric services, and ensure that the two specialities are not managed as one. **APCP rejected.**

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MEMBERSHIP MATTERS

Application Forms for 1994 Membership are enclosed in this November Journal.

As previously mentioned, we are asking you to provide us with added information about yourself and your place of work, in order to assist us with answering the many questions we, as a National Committee, are asked.

Filling in the back page of this form is completely voluntary on your part, but we hope you will be willing to help us with our Data Base.

As you know, we do not have a Direct Debit facility, and so we are dependent on you to remember to renew your membership each year.

1993 was the year we gave all our 1993 members copy of the synopsis of the Children Act. Any additional copies wanted can be purchased from our Publications Officer, Mrs. Carol Foster, MCSP, Physiotherapy Dept., The Children's Hospital, Ladywood Middleway, Birmingham B16 8ET.

I look forward to receiving your cheques (payable to 'APCP') for £16.00 as subscription for 1994.

JENNY MCKINLAY, MCSP
3 Stanley Gardens
Sanderstead
South Croydon
Surrey
CR2 9AH