REPORT ON PHYSICAL THERAPY, POSITIONING, AND THERAPEUTIC EQUIPMENT SERVICES AT THREE STATE FACILITIES IN MINNESOTA: FARIBAULT, ST. PETER & WILLMAR

This report is a summary of my findings regarding the adequacy of physical therapy, positioning, and threrapeutic equipment services at the following three facilities in Minnesota: Faribault, St. Peter & Willmar. The findings presented herein are based on a five day tour of the three facilities, which included observation of treatment, interviews with staff, attending an ISP meeting, observation of clients' daily activities, review of records and documents, and my own assessments of clients and their equipment. My itinerary was *Faribault* on monday and tuesday (July 21 & 22); *St. Peter* all day wednesday and thrusday morning (July 23 & 24); *Mankato* on wednesday evening to see ; *Willmar* on thrusday afternoon and friday till 2:00 p.m. (July 24 & 25). I was met at the airport by , on monday morning and accompanied to *Faribault*. He introduced me to , who became my primary contact person while at Faribault. I completed the rest of the tour on my own, contacting at *St. Peter* and at *Willmar*, as pre-arranged by . These gentleman introduced me to the appropriate staff members in their facilities and assigned personnel to accompany me. At the outset of this report, I would like to remark that I was greeted warmly and treated courteously at each facility. The staff members were cooperative and I

was accommodated in everything requested.

The focus of my visit was on those individuals with physical and sensory handicaps, specifically the multi-handicapped individual. The purpose of my tour was to determine each facilities effectiveness in:

a. the assessment process and interdisciplinary planning for these individuals;

b. the provision of appropriate and effective physical therapy services, including the sufficiency of adequately trained staff to provide these services;

c. the provision of appropriate positioning programs and equipment, both commerically and individualized, to meet the needs of the clients.

My main findings in response to these questions, which are basically the same in all facilities, are as follows:

a. Physical therapy evaluations are inadequate, goals and objectives are not written in measurable behavioral terms, treatment programs are incomplete &/or inappropriate, and the utilization of a true interdisciplinary process is not reflected in the clients records &/or ISP.

b. Physical therapy services are not adequate to meet the needs of these clients, impeding them from obtaining increased developmental and functional skills, and increasing their deformities and disabilities. The physical therapy staff is insufficient, both in numbers and knowledge, to provide appropriate therapeutic services to these clients. In addition,

all other staff members are inadequately trained to carry out the appropriate physical management and positioning programs necessary to work effectively with these indviduals.

c. Clients are poorly positioned due to inappropriate equipment and positioning programs, causing further harm to many of these clients.

The remainer of this report will be a review of the facilities and will provide substantiation for the above findings.

FARIBAULT REGIONAL CENTER - JULY 21 & 22, 1986

Primary contact -

Buildings visited - Willow, Birch, Elm (Linden), Hickory, SNF

ST. PETER REGIONAL TREATMENT CENTER - JULY 23 & 24, 1986

Primary contact -

Buildings visited - Bartlett 1 North, Day Program Services & Residential Living Services

WILLMAR REGIONAL TREATMENT CENTER - JULY 24 & 25, 1986

Primary contact -

Buildings visited - Viking, Residential & Day Activity Areas

A. THE ASSESSMENT PROCESS AND INTERDISCIPLINARY PLANNING:

According to the records, physical therapy did not complete an evaluation, nor was it listed as a member of the interdisciplinary teams that served the six clients I was requested to review at *Faribault*. The only P.T. report located in the files was one completed on July 11, 1986 for for an upcoming annual. For multiply-handicapped individuals, this one fact alone makes planning for them inappropriate. [Note: There were some good sensory-motor evaluations completed by O.T. at Faribault. However, they did not address all of the areas a comprehensive and appropriate P.T. assessment would, nor were they able to recommend a complete and appropriate treatment program for many of the multi-handicapped clients. While it appears that O.T. is doing its best to cover for P.T., they should not be expected or required to do so. Each profession has an area of expertise that is unique unto itself, and it is important to the client that he receive services from both.]
In *St. Peter* and *Willmar* P.T. reports were completed on all of the selected clients, and P. T. was present at their ISP/IPP meetings for all but at *Mankato* and at *St. Peter*.

However, in reviewing the P. T. assessments, I found them to be inappropriate &/or incomplete for this population of clients. The following problems were evident in many of the P.T. assessments I reviewed:

- Developmental skills are being reviewed from a normal sequential prespective without regard to the neurological, sensory and muscular-skeletal status of the individual.

- Gross motor development is not broken down into sequences, or small enough increments, to appropriately evaluate the clients level or to be usefull in programming.

- The clients postures and movement patterns are not being recognized as a factor in increaseing deformity, disability and health problems, and consequently little is being done to alter their effect.

- Skills that have already been achieved and are pre-requisites to the next skill level are not being identified and used as the necessary building blocks in programming, thereby inhibiting clients from increasing their developmental &/or functional skill levels. (I evaluated several clients at all three facilities whose present skill level and potential are not being identified. Consequently, they are receiving treatment programs that require less skill then they presently have, and are being inhibited from developing the next highest skill.)

- Muscular-skeletal status is not being fully documented so that changes can be recorded and recognized in a timely manner, to allow intervention to take place to inhibit the progress of, &/or decrease, deformity.

- The need for speciality consultations, i.e. orthopedics or neurology, is not being addressed, and some clients are going for long periods of time without theses services.

- The necessary muscle strength, co-contraction and proximal stability of the joints are not being appropriately evaluated, or considered a necessary component and pre-requisite, for increased developmental skills.

- The appropriateness of a clients equipment is not being evaluated,

nor is there an explanation of what that equipment is, or how and why it is to be used.

- The P.T. reports do not reflect any analytical thinking in regards to the cause and effect relationships that a clients neurological, muscular-skeletal status, and posture & movement patterns have to his health, developmental and functional skills, abilities, disabilities, potential and selection of therapeutic equipment.
- There is no summary tying everything together, stating the client's major problems, how they are related, how they should be prioritized, what type of intervention is recommended, and what his short and long term goals and objectives are.

The treatment plans are equally lacking in completeness and appropriateness. They are a listing of activities at best, and non exsitent or with "no programming recommended" at its worst. Below are componets that should be included in a P.T. treatment program, but were not present in the ones I reviewed.

- There were no measureable behavioral objectives stated in any of the P.T. reports I reviewed, or any indication of how progress and the effectiveness of their programming was being measured.
- Activities are not explained as to why they are selected, what they are working for, or how, when and where they are to be done.
- Appropriate physical management and positioning programs that should be used throughout the clients day by all staff working with him, are not being identified, developed or taught.
- Necessary equipment and its proper use is not identified.
- Contra-indications &/or cautions that must be considered for that

clients health and safety are not recognized or stated.

- There are no indications of when, and under what circumstances, to contact the P.T. for program changes.

There is no indication that real interdisciplinary planning is taking place for any of the multi-handicapped clients, whether P.T. was represented or not, at any of the facilities. In reviewing the records and observing an ISP/IPP (at Faribault) it is evident that the process being used is not interdisciplinary but multi-disciplinary. The multi-disciplinary approach is where many different professionals meet and give their individual reports, but do not enter into a process of shareing and discussing the information and arriving at a synthesis of the findings to serve as a basis for determing and priortizing the clients primary needs. In the interdisciplianry process, the same group of professionals may meet, but goals and objectives are determined from this "systhesis of information" and reflect overall primary needs of the client. The involvement of several disciplines may be needed to meet one goal, but this one goal may have incorporated several goals of many disciplines. In other words, in the muti-disciplinary process the client is fragmented, with every discipline having goals and activities for the client to meet; but in the interdisciplinary process, the client is seen as a whole and a few goals will combine the clients major needs into a few functional activities.

A review of any of the records will reveal a listing of separate goals and activities (i.e. gross motor skills, head control, receptive communication skills, expressive communication skills, leisure skills, socialization

skills, eye contact, eating skills, etc.), with no indication of what the clients primary goals are, or that an interdisciplinary process took place that would combine several of the separate goals into only one or two goals with activities to accomplish the same things. An example would be from St. Peter. The primary goal, as I see it (but I'am only one member of the interdisciplinary team), is to increase ability to respond to her environment in a more appropriate and effective manner by increaseing her sensory-motor, communication, and socialization skills. All five of her present goals could be achieved in one activity and one interdisciplinary goal. Placing her in an appropriate position in the right environment, you could increase her head control (#1) at the same time that she increases her response to her environment and develops her leisure skills by responding to a preferred toy (#2), improve her socialization skills (#3), maintain eye contact (#4) and improve her receptive communication skills (#5) with staff & other residents. The position that she is placed in, the stimulus of the toy and objects for eye contact, communication and socialization, and the environment and staff working with her, can all be changed to give her variety and a different emphasis, but will still accomplish the same five goals in one activity.

B. THE PROVISION OF APPROPRIATE AND EFFECTIVE PHYSICAL THERAPY SERVICES, INCLUDING THE SUFFICIENCY OF ADEQUATELY TRAINED STAFF TO PROVIDE THESE SERVICES:

According to the discussions that I had with the staff at the three institutions, there is not a sufficient number of physical therapists or P.T. aides/assistants to provide appropriate therapy services to the multi-handicapped clients. This is especially true at *Faribault* where there are only two and a half RPT's, one P.T.Assistant, and five P.T. Aides (of which one is assigned to adaptive equipment) to provide therapeutic services for 250 multi-handicapped clients and meet the acute care needs of all 600 clients. At *St. Peter* there is one part time RPT and no P.T. aids to provide therapeutic services for 26 multi-handicapped clients and meet the acute care needs of all 150 clients. *Willmar* has one full time RPT and no P.T. aides to provide therapeutic services for 35-40 multi-handicapped clients and meet the acute care needs of all 110 clients.

I realize that in the consent decree (# 49, page 14) the ratio of therapists to client is 1:50 for the multi-handicapped. It is my experience that this ratio is insufficient to meet the needs of this population. IF a therapist had nothing else to do but evaluate and work with clients, this ratio would allow him only 48 minutes/week/client to meet all of the clients needs. We have found that a more realistic ratio is 1:24 for an RPT, with 2 aids/assistants, to more effectively serve the multi-handicapped population. Even with this ratio, and with the assumption that the RPT has nothing else to do BUT client related responsibilities, a ratio of 1:24 only allows an RPT 1 hour and 40 minutes/week/client to

complete the following client specific responsibilites for each client in his case load; complete a comprehensive evaluation; determine measureable objectives; develop a treatment program; set up an appropriate physical management and positioning program (with at least three alternative positions); write reports; train the P.T. aide; train all staff on physical management and positioning; obtain, monitor, work with & care for therapeutic equipment; work with the interdisciplinary team; attend the ISP; attend all other required meetings; order commercial equipment for therapeutic positioning and activities; attend orthopedic clinic; monitor the use of, and care for, any braces or orthodics; attend to feeding needs; review and monitor programs with the aides; answer any emergency requests; provide acute care as needed; and attend to any other need that might arise.

For a facility like *Faribault* there should be a staff consisting of one P.T. Director and one Clinical Supervisor who are experienced therapists that can direct the department; 9 to 11 RPT's, 8-10 for habilitation of the multi-handicpped, (depending on the severely of disability in the higher level buildings), and 1 for acute care; 20 to 22 aides; and a therapeutic equipment service with 1 or 2 therapeutic equipment specialists, 1 or 2 designers, and a fabrication facility. I realize that it will be difficult to obtain this number of therapists, but it is important to identify what complete and appropriate therapeutic services are, so that the facilities can strive to eventually obtain enough staff for appropriate services to meet the needs of the clients.

St. Peter would need appropriately 1 & 1/2 RPT's with 2 aides, and access to an appropriate therapeutic equipment service, to meet the

habilitation and acute care needs of their population.

Willmar would need 2 to 2 & 1/2 RPT's with 2 to 3 aides (depending on acute care needs), and access to an appropriate therapeutic equipment service, to meet the habilitation and acute care needs of their population.

A major problem with the P.T. services at all three facilities has already been reflected in the area of assessment and interdisciplinary planning. A client can only receive an appropriate, comprehensive and effective physical therapy treatment program after he has received an appropriate and comprehensive evaluation, and it is intergrated into his total daily program through the interdisciplinary process. Until that time, physical therapy services will not be effective. I have already listed the problems found in the evaluation reports and treatment recommendations that I reviewed.

I did not observe any active P.T. treatment programming taking place, except for a few higher level clients seen at *Faribault* on ambulation or wheelchair mobility and transfer activities. There were some clients being positioned, which is not considered active treatment, but even the majority of these were not appropriate or therapeutic. In observing and speaking to the RPT's at each facility, especially *St. Peter* and *Willmar*, I have to question their competence to treat the multi-handicapped client.

The therapists at *Faribault* appeared to provide more services for the higher functioning multi-handicapped and acute care clients, rather then the moderately and severely involved ones. Perhaps they feel that working with the higher functioning group is a better use of their time, they may be uncomfortable and/or unfamiliar in treating the more involved clients. Of the higher functioning clients only : of Elm and

of Birch really appeared to be getting all that they needed.

of Hickory are functional individuals but need some adjustments to their wheelchairs to improve their positioning and increase their opportunity for functional skills. In observing

and

of Willow, and of Birch, and at SNF, I did not see any active treatment. A review of their records revealed incomplete &/or inappropriate therapy and positioning programs and therapeutic equipment. Again, it is quite apparent that Occupational Therapy is assumming P.T. responsibilities for these clients, doing the best they can, but not being able to truly meet the needs of the clients.

In observing and working with clients at *St. Peter* it became quite apparent that clients were not receiving appropriate therapeutic services. Clients such as

and displayed good potential for increased developmental skills when I worked with them, but it had not been recognized by the therapist or other professional staff until I demonstrated it. A record review revealed incomplete and/or inappropriate P.T. evaluations, therapy and positioning programs, and therapeutic equipment for these and other clients. It appeared to me that the Correctional Therapist, , was assuming many of the RPT's responsibilities. Again, this does not truly meet the needs of the clients because the knowledge base and skills are different between the two professionals. Another concern that surfaced at *St. Peter* was the need for timely Orthopedic evaluations. According to R.N., has not been seen in 9 years for her sciolosis. When

..., RPT [redacted]ted an Orthopedic consult, said that he did not feel it was necessary. While it is true that her sciolosis may not be progressing, unless there are some baseline x-rays with some periodic follow-up films, that can not be accurately determined. Also, since she is ambulatory it would be important to determine if her body alignment could be improved and her gait pattern more normalized. of *Faribault* was finally seen in Aug. 1979 for a severe sciolosis, but is reported that she had not been seen by an orthopedist in the 23 years before that. of *Willmar* has not been seen in 9 years for a severe sciolosis, and she is reported to have health problems that may be related to it.

I visited at Sexton Home-North in Mankato and talked to the staff working with him there. In discussing his programming and any problems he might be having, the staff at Sexton mentioned that they were concerned that his ability to walk may be decreasing. A review of his programming indicates that he receives range of motion exercises at bathing and bed time, participates in an exercise class at the house two times per week for stretching and reaching, and ambulates with a walker with , COTA twice a week. I asked why he was not receiving the activities listed in his PT-OT-CT Orders of Dec. 11, 1985, which are quite appropriate for him, and was told that as of May 19, 1986 , RPT had reduced his program with to only ambulation. It is my opinion that he should be receiving the additional activities listed in Dec. 1985, and any other gross motor activities that are available to him in his home and in the community, to increase his gross motor skills and keep him as active as possible. I do not know if,

and/or why, his walking is decreasing, but I would suggest an orthopedic evaluation to determine the appropriateness of surgery for his hip and knee flexion contractures, and to obtain a baseline for possible boney changes in the hips that may, or potentially could, be causing him problems in ambulation. If surgery would allow him to walk more upright, and would not be a threat to his health or present skill level, I would suggest that his interdisciplinary team strongly consider it. It is possible that it would improve him physically, increase his gross motor skills, and improve his appearance with a more normal gait pattern.

The clients at *Willmar* are not receiving therapeutic services for habilitation. , RPT, therapist at Willmar for six and a half years, said that he "does not have a lot of agressive developmental type of therapy." He states that he "just wasn't trained that way" and that he is not a "developmental therapist." mentioned that he has never turned anyone away with a doctors referral, but stated "I don't want to get out there and say 'here I am'." When I asked him why he was working at Willmar, he stated that when he became disatisfied with his salary at Rice Hospital he wanted to change jobs, but did not want to move out of the area because of family concerns, and that Willmar was the only positon available in the area that would meet his needs.

He states that as far as positioning is concerned, he only looks at it in terms of drainage and preventative health, and that his job is to be a "preventor of over agressive positioning." While he stated that he has "generalized positioning programs" for every multi-handicapped client, he apparently does not use positioning as a form of therapy, either passively or actively, to decrease deformity and/or increase skill. The reason he

gave for this is because "these clients are over 30, their joints are tight and have not had stress and they aren't able to communicate." He then gave me an example of a lady from Cambridge in her late 20's who had an agressive P.T. program for hip flexion contractures which he felt did more harm then good. From his explanation of the program he's probably right, because the program appears to have been inappropriate.

He summed up his "philosophy" of treatment for these individuals with the statement: "What are you going to gain from these people who are older, were born with a neurological problem, are on the lower end of the I.Q., and haven't done anything for years?" He ended our conversation with, "I know I am negative, but I don't want to appear that I am not willing to learn." He then challenged me to show him a difference and prove that I knew what I was talking about. Apparently others had come advocating a similar philosophy, but were not able to produce results to satisfaction to convince him that active therapy and appropriate positioning would benefit this client population. We did go out onto the units, and in working with and discussing various clients with him, it is apparent that he has not had the training or experience to work appropriately with this population, nor has he been introduced to, or convinced of, the philosophy that change for the better can indeed take place with these clients, regardless of age, severity of disability, neurological status, or degree of retardation. However, he openly recognized and admitted that the clients needs were not being met and that more could be done for them when I demonstrated and discussed various therapy techniques, therapeutic positioning and therapeutic equipment of several clients with him. It is quite possible that if

were given the opportunity to work with a highly skilled therapist, who processed the above philosphy and was experienced in all therapeutic aspects of working with the multi-handicapped, that he could be trained as a competent therapist with this population.

A similar issue concerning orthopedics surfaced at Willmar, as it did at St Peter. According to staff and the records, . has not been seen by an orthopedist for nine years. She is a quadraplegic with no purposeful function, has a severe sciolosis, (which the residential staff feels may be progressing), and scissoring of the lower extremities. Again, I find it hard to believe that baseline x-rays and follow-up films of her sciolosis, to at least keep track of its progression, have not been taken in over nine years. This is especially true when we consider the fact that these are usually the years when a sciolosis progresses the fastest. Additionally, some of her fragile medical condition may be due to the severity of her sciolosis and subsequent deformities, the position she is held in, and the fact that she is not receiving an active therapy program (passive range of motion is not considered active therapy), or appropriate positioning and therapeutic equipment.

is a client that could benefit from good active therapy (to decrease spasticity, increase active range of motion, increase upper extremity skills, increase co-contraction, and increase proximal stability, as foundational to developing gross motor and functional skills) positioning (sidelying and prone, but not sitting because he is unable to do so approriately), and appropriate therapeutic equipment (his present equipment appears to be increasing his deformities). He appears to have good potential for semi-fine motor skills, but is not presently being

programmed [redacted]. From what the staff reports they have tried several different programs that he would accomplish within the first session, but would then become bored and uncooperative after a couple of weeks and refuse to do the program. From hearing this report and working with , it appears that he has unrecognized skills and abilities that a good interdisciplinary team should be developing into functional skills.

is another client that appears to have potential, but needs appropriate therapy in order to increase his functional skills, wheelchair mobility and possibly standing transfers. I realize that he has previously been seen by an orthopedist concerning his hip and knee flexion contractures, and that intervention was not recommended, but this issue should be reconsidered as he displays the ability for transfers and his SIB's remain under control. He also needs some adaptations to his wheelchair to make it appropriate.

can walk independently but looks like an "accident about to happen," and considering her age it could be extremely detrimental if she fell. It may be possible to improve her gait by strengthening and increasing her range of motion in the right leg, increasing stability of the hips, increasing total body strength, improving her posture and increasing her endurance. Certainly her age and behavior will be a factor, but for health reasons and ease of care it will be extremely important that she continue to be as upright and mobile as long as possible.

walks independently with a walker. However, it is a very slow reciprocal gait with equinovarus of the foot and pelvic elevation on the right side. In June of 1984, from Gillette Children's

Hospital recommended that she would benefit significantly from bilateral heel cord lengthening. This was apparently discussed by the team at Willmar and it was decided that they would not go ahead with the procedure, because it would not benefit her significantly compared to the trauma and discomfort it would cause. This certainly is a judgement call that could go either way, but is also an issue that should seriously be discussed and re-evaluated each year. This is especially true if she has continued community involvement and/or is considered for community placement.

Additionally, I have great concern about the fact that P.T. has stated in each of the records for moderately and severely involved clients, that the client "will not require another P.T. evaluation until ___ of 1969." That is a duration of three years between evaluations for two clients with potential ., that should have ongoing and ever changing therapy programs; and one client) with health problems, that are partially due to her deformities and poor positioning, that should be constantly monitored for changes and health status.

C. POSITIONING PROGRAMS AND EQUIPMENT:

One of the most obvious deficiencies at all three facilities is the lack of appropriate client positioning and habilitation activities throughout the day. Besides the harmful effects on the cognitive, behavioral and social functioning of the clients due to inactivity, many clients were placed in positions which were causing their physical deformities to worsen. A neurologically normal individual, if left confined in one position for an extended period of time, will experience muscle tightness and joint stiffness. (Everyone experiences this sensation when stretching muscles they haven't stretched in a while. Normal people move enough, however, that the condition does not become permanent). If confined long enough, even normal muscles will adapt to the shortened position and can no longer be stretched to the full range the joint is capable of. This condition is a type of deformity called a contracture and requires surgery for correction or remediation. Such a condition would occur in normal individuals during an extended period of confinement, such as being immobile in bed without proper attention to alignment of joints. This same debilitating process is happening to many clients in the three facilities in Minnesota who are not being positioned properly (which includes nearly all of the multi-handicapped clients who cannot move normally for themselves). The process is more rapid and sure for these clients because they are affected neurologically. Brain damage predisposes them to maintain a certain position but this predisposition can in most cases be overcome by appropriate positioning. For example, I observed many clients like

of St. Peter who have plantar flexion contractures, that is, the

ankle movement is limited so that his toes point down and the ankle joint cannot be moved so that his toes point upward. Many of the clients that I observed do not have shoes on to prevent such foot deformities from occurring, and then there are no footrests on their wheelchairs to prevent the existing plantar flexion contracture from worsening. Brain damage did not directly cause these contractures, but immobility did. Because brain damage increases the likelihood of immobility or decreased mobility, the chances of contractures among this population are greater. However, this process can be interrupted with proper positioning techniquies and treatment programs. Unfortuately, the multi-handicapped clients that I observed in Minnesota are not receiving these services. This results in a great number of clients with contractures and other deformities such as those processed by (who has a windswept deformity - legs in knee flexion and hips rotated to one side, sciolosis - a curvature of the spine, and hypertension of the head); observed was with a severe kypho-sciolosis - a rounded back with a curvature of the spine, and multiple contractures of the hips, knees, elbows, and left wrist); (who has hip and knee flexion contractures and looks as if he has sat too long); and (who has a pelvic obliquity and windswept deformity).

During my tour I observed very few multiply-handicapped clients who were positioned appropriately in their wheelchairs or other positioning devices. The clients that I observed fell into two categories: those who are in inappropriate equipment and those in correct equipment who were not positioned in it properly. The number of clients in the former category far exceed those in the latter. It is a difficult task to find mass-produced,

commercially available wheelchairs to fit developmentally disabled clients. Most wheelchairs are made for a larger and more normally aligned and mobile client. The needs of the developmentally disabled, especially the severely involved who have deformities and abnormal movement patterns, are so individual as to defy mass production. It simply is not a lucrative customer population for wheelchair manufacturers. In order to meet this need, however, other facilities have developed a service which provides customized equipment to clients. Such a service would include evaluation, design and fabrication of positioning devices on an individual basis. The three facilities I observed in Minnesota, however, do not have such a service and, although they have access to a facility in the state that attempts to meet this need, it still falls far short of what is necessary for these clients in order to prevent further deformity and promote skill development. They have the beginning of this service, but several components are lacking that would make their service appropriate and effective. <u>The first component lacking is the knowledge base of the clients therapist.</u> In order for a therapist to effectively evaluate and treat a client he must first be able to correctly evaluate the clients neurological, muscular-skeletal, and developmental status. He then completes an analysis of the cause and effect relationships of what he has just observed and determines how and why they are affecting the client. The appropriate intervention/ treatment to inhibit, decrease, &/or reverse the clients status is determined and a program is initiated. It is from this frame work that the therapist determines the therapeutic objectives for the client and applys the basic principles of seating and positioning, to determine the <u>type</u> of equipment necessary to meet those objectives

and promote appropriate positioning. The other components necessary for an appropriate therapeutic equipment service is:

* A philosophy that is consistent with equipment being therapeutic, not adaptive; that it is an interdisciplinary process; that it is only one treatment modality and must be used in conjunction with a treatment program, thereby never standing alone; and that it is dynamic and ever changing, requiring consistent monitoring and re-adaptations.
* Knowledge of the appropriate principles of seating and positioning
* A therapist who has been trained as a "therapeutic equipment specialist" to precisely evaluate and apply the basic principles of seating and positioining to the specific needs of the client and, based upon the goals and objectives determined by the interdisciplinary team, determine what properties need to be present in the equipment to make it therapeutic;
* A designer who has also been trained in therapeutic equipment and knows how to work closely with the therapists, being able to take the properties prescribed by the "therapeutic equipment specialist" and draw up a design for all of the components of that equipment to meet the specific therapeutic needs of the client;
* A versatile fabrication facility that can make the equipment according to the design specifications of the designer.
* A system that consistently monitors, re-evaluates and re-adapts the equipment according to the needs of the client, as the client changes.

A few of the clients had appropriately prescribed wheelchairs and were sitting in them well, such as Others had appropriately prescribed wheelchairs, but they had either been positioned in them

incorrectly or they needed some minor adaptations, such as

who needs adjustable height desk armrests and the seatbelt positioned so that it will fit tightly across his ASIS to keep him in a good sitting postition. There are other clients who have nice wheelchairs, but they are inappropriately prescribed and the client can not sit in them correctly, such as : - whose seat depth is too long and the footrests and seatbelt are in the wrong position. Clients who are not too deformed and/or are able to do more for themselves are easier to find equipment for. There are clients who do have appropriately prescribed wheelchairs, but many of these clients are not positioned appropriately since the staff has not been trained in how to position and stabilize a client's pelvis in the seat.

There are many wheelchairs that have been "adapted" for the client and have an assortment of products in them like sciolosis pads, adductor wedges, chest straps, head rests, and even full seating inserts such as a vac pac - bucket seats , sitting support orthosis - SSO , or totally molded seats

. These things, in and of themselves, are not necessarily wrong, but it depends on the philosophy and process by which they were determined as to whether they are appropriate or not. Much of the equipment appeared to have been "adapted" to the clients deformities and disabilities instead of being developed as "therapeutic equipment," which is designed to be a modality of the therapy program and bring about a decrease in deformity and an increase in skills. This difference in philosophy is an important distinction to be made because it will definitely affect the approach to the development of the equipment and the

effectiveness of the equipment in the clients behalf.

Another very important component that must be considered in making equipment "therapeutic" and more effective for the clients, is the set of principles for seating and positioning that a therapist uses to determine the properties and design of the equipment. If these principles are not correct, or there are no principles by which the therapist determines the properties of the equipment, the equipment will be ineffective at best, but more likely detrimental to the clients muscular-skeletal status and skill development. Most of the seating equipment and positioning programs that I observed in the three facilities in Minnesota were developed <u>without</u> adhereance to an appropriate set of seating and positioning principles (such as and . who are in equipment that does not allow them to utilize the potential they have and increase their developmental/ functional skills and decrease the effects of their deformities). Most of the clients that I observed who were placed in a "sitting" position, were slideing down in their chairs and rotating their pelvis posteriorly, causing excessive pressure on the sacrum and coccyx, which are common sites of skin breakdown. If the therapist had followed appropriate principles of seating, the clients pelvis would have been properly aligned (level and de-rotated) and stabilized in a normal slight anterior tilt with equal weight bearing on the ischial tuberosities, allowing the clients to better utilize and/or increase their abilities to control their heads, trunks and upper extremities.

In addition to a need for customized wheelchairs, there is a need for customized "pre-seating devices. These are positioning devices for clients who can not yet achieve a sitting position (usually due to

deformities) and must increase alignment or range of motion before they can be adequately seated. These devices must always be individually designed for a particular client. The facilities in Minnesota do not have this type of service available for their clients. (Clients such as , and might be able to benefit from this type of equipment).

Not all positioning programs require customized equipment to be effective. What they do require is a good evaluation of the client, with analysis of their needs based on appropriate principles of positioning and developmental programming, and some basic commercial positioning and gross motor equipment, such as firm sidelyers, bolsters, rolls, wedges, mats, and etc.

The facilities in Minnesota have some of this equipment and have initiated some positioning programs for many of their clients. However, the majority of the positioning I observed was not correct (such as

). If the client hasn't received an appropriate evaluation that has clearly analyzed the cause and effect relationships, and the therapist doesn't process the knowledge of appropriate principles of positioning, the client will not recieve an appropriate therapeutic positioning program that will inhibit and/or decrease his deformities and increase his developmental/ functional skills. Additionally, the majority of the equipment being used for positioning was too soft to hold the client in appropriate alignment, thereby allowing him to fall into his deformities instead of benefiting from prolonged stretch and the force of gravity to decrease the deformities. At a minimum, each client should have at least

three alternative therapeutic positions to be placed in, and all staff should be trained specifically in those programs for that client. The positioning program should be very specific and include the following components: which position the client is to be placed in; the reason for that specific position and what it will accomplish; the appropriate alignment of each body part; what equipment is to be used and exactely where it is to placed; specific problems or concerns that need to be considered in placing the client in that position; under what conditions the position would be contra-indicated; the activities the client should be participating in while in the position; any medical concerns that need to be considered; during what programs and the length of time he can remain in it; where to look for possible pressure points and skin breakdown; how to determine if the client is uncomfortable or has not been placed in it appropriately; and a monitoring system to determine client change and the effectiveness of the position. Clients should have positioning programs with the above components written out and readily accessible to all staff working with him. These should be located either on the clients wheelchair and/or on his living and program units. Most of the positioning programs I found were not well described and would not be appropriate for non-therapy staff to use. They tend to be just listings of possible positions, with no thought of what their effects will be on the client, or any instructions on how to do them correctly (such as IPP that lists 17 possible positions, some of which are totally incorrect due to her sciolosis and neurological status).

Since physical management and positioning is everyones responsibility, all staff members working with the clients should be trained in how to do

it appropriately. In order to be truly effective it should be done consistently thoughout the clients day in all programs and activities. In observing and interviewing the staff it is quite apparent that they are not being trained to understand and carry out the programs that have been developed. When I asked several staff members why they were positioning clients in a certain manner and what they expected the client to do while in that position, they stated that they "did not know." In Faribault and St. Peter, when asked what alternative positons they would place the clients in as part of their therapeutic programming programs, several staff members mentioned the "client's position of choice" as an alternative position to be used throughout the day. Considering the fact that clients will get into their "position of choice" as often as possible, and that it is probably the position that brought about many of their contractures &/or deformities, I hardly think that it should be considered an "alternative" position or that the client needs any help in getting into it. Once again I have to question the philosophy and competency of the therapists. Since there were no positions suggested that promote development, strengthening and decreasing deformity, I question rather or not the therapists are recognizing the potential of the clients to benefit from this type of positioning, and/or their ability to use it as an effective treatment modality.

D. SUMMARY AND RECOMMENDATIONS:

1. Hire physical therapy staff based on an assessment of specific client needs irrespective of current resources.
2. Further training for the physical therapists in the following areas:
   a.) appropriate and comprehensive evaluations, including the ability to analyze client needs based on cause and effect relationships, to determine appropriate intervention to meet those needs.
   b.) expectations and treatment for the habilitation of the moderately and severely multi-handicapped.
   c. principles of positioning, and the use of positioning as foundational for increased development, strength, health, programming, and inhibiting and/or decreasing deformities.
   d.) determing and stateing goals and objectives in measurable and behavioral terms, so that the effectiveness of treatment and the progress of the client can be determined and monitored.
3. A true interdisciplinary approach to programming
4. A standardized training program, with client specific orientation, for all staff in physical management and positioning.
5. Development of a "therapeutic" equipment service which includes a full time therapist and designer trained as specialists in the field of "therapeuic equipment," and a fabrication facitity to produce the individualized equipment.
6.) Develop a system where therapists can order wheelchairs and client specific equipment directly from the vendor, so that it can be obtained in a timely manner and will be therapeutically correct for that

particular client at that particular time. It is reported by the therapists that equipment is presently going through the "bid system." This is unsatisfactory because it often takes several years to obtain the equipment and prescriptions are often changed by someone in the fiscal office, who can get a "deal", but who does not know the therapeutic needs of the client. Appropriate equipment is prescribed for a client based upon his specific measurements and needs at that time, and if it is not obtained in a timely manner or the prescription is changed, the equipment is no longer appropriate.

7.) Obtain sufficient gross motor and positioning equipment to meet the therapeutic needs of the clients.

8.) Develop therapeutic day programs for each client.

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Oct. 1986