

RESEARCH

Taking Steps to Maximize Therapy Gains

Introduction to the Steps to Independence® Program Part I

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NDT Instructor Bonnie Boenig has been involved in the Steps to Independence® Program. The results and interpretations will follow in future articles.

Maximizing therapy time is a popular topic of discussion among therapists as insurance benefits become more limited and children's needs become increasingly complex. With medical technology's ability to offer expanded information about the development, interactive functions, and plasticity of the systems of the human body, and with therapy skills becoming more sophisticated and precise, therapists want to offer best practice service to assist the child of today to be the productive adult of tomorrow.

In my teaching of NDT courses and in workshops on other subjects, a hot topic of discussion is the optimal frequency and duration of treatment. The discussion often takes into account what we call "windows of opportunity" in the development process, when we might consider increasing the frequency and intensity of therapy to maximize the benefits during that period of time when the child is most likely to make lasting improvements in his or her functions.

How Much Therapy?

Following surgical intervention, botox treatment, and baclofen pump implantation, it is reasonable to think that increased frequency and intensity of therapy would be beneficial because major impairments have altered. Less obvious, but equally critical, are transitional periods that occur as a natural part of growth and development, such as growth spurts; increased time spent in vertical sitting/walking positions; the introduction of sedentary times as the result of increased time spent in the classroom; cognitive growth; psychosocial awareness, which increases intrinsic motivation; puberty; and onset of adulthood.

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As therapists working with children who are constantly changing and growing, we know that the biological foundation for motor skills is not stable over time. All of the body systems change at different times. Biologically, there are differences in (1) rate of growth, (2) magnitude of growth, (3) sensory processing, (4) flexibility, (5) strength, and (6) speed of response (VanSant, 1989).

The discussion of late has become an exercise in futility, as we know that it is the insurance reimbursement structure and number of allowable visits that will ultimately dictate the type and frequency of therapies, overriding our judgment and recommendation as to the best practice for a particular child. Since most families are unable to afford to pay out of pocket for additional therapy services, the provision of the optimal amount of therapy and the combination of therapies has become a juggling act between therapists' recommendations and insurance/third party coverage/reimbursement.

More often than not, therefore, therapists are in the position of generating recommendations as to frequency and duration of therapies, as well as combinations of state-of-the-art techniques and technology, but then compromising and creating alternative plans, never really knowing what the differences in outcome would or could be.

The Value of Intensity

Over the past two years, my involvement with United Cerebral Palsy (UCP) in Cleveland, Ohio, and its Steps to Independence® program has allowed me to see and experience firsthand the benefits of bursts of intensive therapy. Steps to Independence®, a unique intensive treatment developed by UCP therapists, is based upon a model developed at the Euromed Rehabilitation Clinic in Mielno, Poland. It was initiated as a pilot during the summer of 2001 and expanded into a year-round program in 2003. Incorporated into the therapy plan for some of the children is the use of the Thera-Suit (TheraSuit LLC in Keego Harbor, Michigan), and the Universal Exercise Unit (T.A.W. Industries, Goodrich, Michigan).

The Steps program is currently offered in two formats: a three-week program providing five days of treatment for 2.5 to 3 hours per day or a four-week session, consisting of 2.5 to 3 hours, three days per week. In most instances, the child is provided co-treatment, combining physical and occupational therapies during the entire time spent in session, with speech therapy incorporated as a consult service. The functional goals for the duration of the intensive program are derived from the priorities established by the parent and child and coincide with the goals being worked on in the traditional model of therapy that the child is currently receiving.

The treatment planning process is dynamic. A treatment plan is established following compilation of the results of the initial evaluation; however, the specific combination of modalities and the focus on particular areas of the body and activities is reassessed and modified on a continuous basis to synchronize with the child's daily accomplishments. Children in the program are treated with a combination of modalities that may be considered traditional or typical, along with equipment and technology that may be less familiar in some therapy settings.

Strategies include, but are not limited to: massage; traditional range-of-motion stretching and strengthening techniques; mat activities that include an emphasis on movement for transitions from one position to another; yoga poses; and practice of components of the targeted functional goal. Functional electrical stimulation, taping, splinting, and adaptive equipment are also considered and included in individual treatment plans.

The program often incorporates the Universal Exercise Unit, which is utilized in two different ways. The first application uses a system of pulleys and cords to isolate and strengthen selected muscle groups. The second application uses bungee cords attached to a waist "belt," as well as arm and/or leg bands for assistance and/or resistance to movement, primarily in upright positions. The adjustable bungee cords provide the desired degree of support, and the bounce in the bungee cord offers an

additional feedback to the child. With the support and security offered by the apparatus, children are motivated to move and play in a variety of challenging positions, leading to improved balance, coordination, and sensory-motor integration.

NDT makes a Difference

In my role as a consultant, I train therapy staff and am directly and indirectly involved with treatment, offering a foundation of NDT philosophy and treatment concepts to augment the assessment and ongoing treatment process. Combining NDT with an established intensive therapy program seems to offer exceptional results in functional gains for children with all levels of disability. UCP's Steps to Independence® program has provided me with the opportunity to observe the significant benefits of blending NDT concepts with innovative technology and non-traditional therapy equipment, making the most of the intensive burst of therapy. NDT has offered UCP therapists a springboard for individualizing standard treatment plans to maximize gains made during the Steps session. The problem-solving approach and the attention to assessing and treating multiple systems have enriched the process of achieving the targeted functional goals addressed in the intensive therapy session.

Albert Einstein is known for the following quote: "If we knew what we were doing, it wouldn't be research." Therapists can make predictions as to what might happen with additional therapy, or what might happen if those services are less than what is deemed appropriate, but without documented instances to offer as proof, we can't say that we "know." While pediatric therapy research often presents the dilemma of the control group, UCP is in a unique situation, with a built-in control. Records documenting the duration, frequency, modalities, and results of treatment children received prior to entering the Steps program allow UCP to easily compare the effectiveness of traditional and intensive therapy.

In future issues of the NDTA Network, I will share some of the remarkable achievements children have made during their Steps sessions. The case studies we are now retrospectively compiling provide the critical information necessary to refine the model, moving it to the next level. A case study design protocol will be piloted during a Steps session this spring, with data collection to take place during the expanded summer Steps session.

UCP is a 501c(3) non-profit organization and relies in large part upon grant funding to support its mission of providing therapy services to any child in need, regardless of ability to pay for services. The benefactors of the Steps to Independence® program have offered therapists and families alike the opportunity to test out hypotheses and to challenge the extent of possibilities for children with a variety of physical challenges. So far, from the data we have seen, the program has been very successful and a comforting confirmation of what therapists know in their hearts and hands that they can do when given the opportunity to treat without constraint.

The more we learn about how and why children respond as they do, the more responsible, selective, discretionary, and prudent we can be in our recommendations as to levels of therapy intensity and combinations of

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