

Collaborative

Strategies

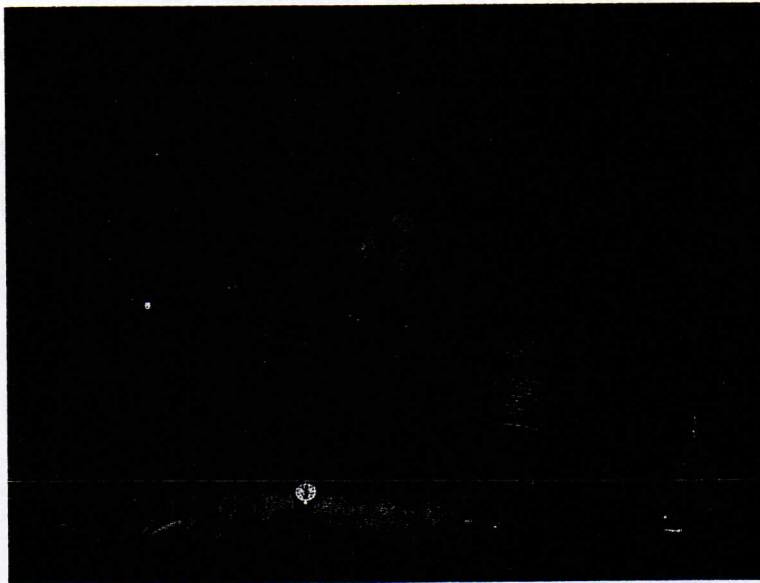
Maddie's Story

Inclusion Through Physical and Occupational Therapy

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Maddie's giggle turns to laughter as her special education teacher opens an end-of-the-year gift she brought to class. This day marks the end of a successful third-grade year at Mountain High Elementary. "Thank you, Maddie," Mrs. B. calls out as she holds up a white gift box. Maddie's cheeks instantly blossom. Maddie pulls back on her joystick, her wheelchair engages and she heads toward the back of the classroom. Her short ponytail, held up with a powder blue tie, swishes as she positions herself at her desk. Maddie is successfully integrated into a general classroom.

Madeline, who prefers to be called Maddie by her friends, was brought into this world 13 weeks earlier than expected. The trauma she suffered as a result of her premature birth left her with a diagnosis of spastic quadriplegic cerebral palsy. Maddie has impaired control and coordination of both her legs and her arms, accompanied by a learning disability. She is able to use her left hand. Her right hand is held permanently in a flexed position, and it can only help to stabilize objects. Her trunk is weak, which makes holding her head up for prolonged periods difficult.

Given Maddie's limitations, when it was time to enroll her into kindergarten, Maddie's parents did not know what to

expect. "Even though Maddie is confined to a wheelchair, we wanted her to grow up experiencing the same things other kids her age experience," explains Maddie's mother. "We could not see putting her in a special school when mentally she was age appropriate." The early intervention professionals empowered the family to enroll Maddie into the public school near their home.

Immediately, Maddie's parents requested that rehabilitation services participate as individualized education program (IEP) team members. "We knew therapy would play a critical role in her success at school," explains Maddie's mother, "after all, they had been treating her since she was 4

WITHIN AN INCLUSIVE PHILOSOPHY, SCHOOL-BASED THERAPISTS FILL A VARIETY OF ROLES: SCREENERS, EVALUATORS, PROGRAM PLANNERS, CLINICIANS, CONSULTANTS, AND EDUCATORS.

months old." The team felt that Maddie's annual goals could be met in the general education classroom. The family was pleased to find that although Maddie was the only child in her class with special needs, the IEP team embraced this inclusive philosophy (see box, "Related Services and the Law").

**ACCORDING TO THE IDEA
AMENDMENTS OF 1997 (P.L. 105-
17 SECTION 1400), IT IS AT THE
DISCRETION OF THE PARENTS AND THE
DISTRICT TO INCLUDE INDIVIDUALS
WITH SPECIAL EXPERTISE ON THE
IEP TEAM.**

Maddie's inclusion plan was designed by an IEP team consisting of the IEP manager, the special education teacher, the classroom teacher, the gym teacher, the child psychologist, the speech-language pathologist, the occupational therapist, the physical therapist, Maddie's mother, and Maddie herself.

Like Maddie's parents, many parents request that therapy be provided at school. Yet most do not understand the therapist's role in the educational environment. Similarly, many administrators and educators face the challenge of inclusion without knowing what related services can offer. Many question how related services fit into the educational model:

- What services do therapists provide?
- How does the team use the support of related services to achieve their goals?

This article presents the story of Maddie to exemplify the use of physical and occupational therapy in school and the teamwork required to achieve inclusion and to facilitate a comprehensive educational program.

Related Services in an Educational Environment

Before the passage of the Education for All Handicapped Children Act of 1975 (P.L. 94-142, Section 89), physical and occupational therapy were independent programs in many states. These programs were based solely on the therapist's evaluation and assessment, followed by treatment in a separate therapy room. Many students receiving therapy, however, were not able to generalize their new skills back to their classroom; outcomes were less than optimal (Lins, 1981). It is now understood that transfer of a skill must be actively programmed through practice in the natural environment (Campbell, McInerney, & Cooper, 1984; Haring, 1988; Karnish, Bruder, & Rainforth, 1995; Steinbeck, 1986).

Related Services and the Law

An inclusive philosophy embraces the belief that all students are valued and have the right to belong and contribute to the community. Studies show that segregation of students with special needs is detrimental to their academic and social performance (Baker, Wang, & Walberg, 1994-1995; Wang & Baker, 1985-1986). Because of findings like these, the philosophy of inclusion of students with severe disabilities is gaining support as a "best educational practice" (American Occupational Therapy Association, 1989; American Physical Therapy Association, 1995; Eichinger & Downing, 1992; Ryndak, Downing, Morrison, & Williams, 1996).

Yet we cannot assume that the act of seating a child like Maddie in a general classroom will improve the outcome of her education. Students with special needs require support services for successful integration into the general education classroom (Lamorey & Bricker, 1993; Wolery & Wilburs, 1994). Part B of the Individuals with Disabilities Education Act (IDEA) Amendments of 1991 (P.L. 102-119 Section 105) provides such support under the title "related services." Physical therapy and occupational therapy are included in these services (Rapport, 1995).

According to the IDEA Amendments of 1997 (P.L. 105-17 Section 1400), it is at the discretion of the parents and the district to include individuals with special expertise on the IEP team. These amendments suggest that related services personnel should attend IEP meetings if appropriate. Either the parents or the district may request that a therapist be part of the IEP team based on indicators related to the student's needs. Indicators may include

- Diagnosis.
- History of therapy services.
- Specific mention of factors in the referral relating to functional deficits in areas covered by related services.

Maddie met all three criteria, a diagnosis of spastic quadriplegic cerebral palsy, a history of rehabilitation services in preschool, and needs covered by such services. Once related services are involved in a student's plan, they are also involved in reassessment as determined by the prior multidisciplinary team.

In some cases, a student with a disability may not be eligible for services under IDEA. This student is still eligible for protection under Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112 Section 794) and Title II of the Americans with Disabilities Act of 1990 (P.L. 101-336 Section 2); (Lowe & Effgen, 1996). Both civil rights laws broaden a student's eligibility for receiving related services in school (National Information Center for Children and Youth with Disabilities, 1991). Under these statutes, a student may be eligible if he or she has a physical or mental impairment that substantially limits one or more major life activities. Intervention under these laws focuses on supporting the student's needs to ensure that he or she is not denied or excluded from public education. For example, a reasonable accommodation could be providing physical therapy as a sole intervention, if that is all the student requires.

If a student needs adaptations or accommodations under Section 504, an accommodation plan or service agreement must be drawn up. This is a simple plan that outlines the adaptations or services to be provided to the student and the length of such services. The signatures of both the parent and the district representative or instructional leader are required to make it legal.

Roles of Service Providers

Within this inclusive philosophy, school-based therapists fill a variety of roles: screeners, evaluators, program planners, clinicians, consultants, and educators. At a minimum, therapists conduct screenings. Screenings involve surveying groups of students at school in any natural environment, such as in the classroom, on the playground, or during gym class, in an attempt to identify previously undetected problems. A district can incorporate screenings as part of its Child-finder Policy. If the team identifies a student with needs via a screening or an alternate referral method, an assessment, program planning, and treatment may follow, with proper parental permission and a physician's order.

Differences Between Service Providers

Each therapy service provides a specialty area for evaluation. Despite this division of labor, there are numerous areas of overlap that either service can address, such as environmental accommodation needs, adaptive equipment and adaptive technology needs, or transportation safety issues. In general, however, *physical therapy* evaluates areas of sensory and gross motor functioning of the nervous and musculoskeletal systems:

- How the student coordinates body positions to complete specific tasks.
- How the student moves in the environment.
- What obstacles to mobility the student faces within the classroom, playground, physical education, or extracurricular environment.
- The student's equipment needs to facilitate mobility within the school.

Occupational therapy evaluates areas such as the following:

- Small object manipulation.
- Handwriting.
- Organizational skills.
- Learning behavior.
- Body and space orientation.
- Oral-motor skills.
- Activities of daily living, such as dressing, bathing, and toileting.

THE ENTIRE IEP TEAM MUST DEFINE THE STUDENT'S GOALS, RELATED TO HIS OR HER EXPECTED LEARNING AND EXPERIENCES THROUGHOUT THE SCHOOL YEAR.

Misconceptions About Roles of Service Providers

Misconceptions exist about what services therapists can provide in a school environment. Educationally relevant services may be different from services provided under a more traditional medical model. For example, Maddie's school-based physical therapist instructs teachers and paraprofessionals in transfers and handling techniques, works with them in setting up positioning for Maddie during different activities, develops physical education activities that enhance Maddie's participation, and works directly with Maddie in her natural environment to facilitate her skills. At home, Maddie receives additional physical therapy, unrelated to her school therapy, to relax her tightened muscles and improve her overall strength.

Goal Setting and Decision Making

Educationally relevant therapy services depend on the functional goals that are identified by the team for the given school year. The entire IEP team must define the student's goals, related to his or her expected learning and experiences throughout the school year. Goals cannot be discipline-specific or the program becomes fragmented. Based on these established student-focused goals, the team then decides what the student's needs are and the least restrictive environment to achieve such goals.

Only after the team has defined educational and placement components do related services personnel address the general supports that they will provide to achieve the already defined learning objectives (Giangreco, 1995). A treatment program established by a school-based therapist must meet the requirement of assisting the child with a disability, enabling the child to benefit

from the special education program (*Federal Register*, 1992). Factors that contribute to school-based treatment decisions include the following:

- The student's age and disability.
- Therapeutic goals.
- Academic performance.
- Social skills.
- Family and teacher concerns.
- The student's own feelings about the particular therapy service.

The effectiveness of the school-based therapist's intervention is measured by the student's accomplishment of his or her educational goals (McEwen & Shelden, 1995). See Figure 1 for the general supports provided to Maddie to facilitate the achievement of her learning goals in her educational environment.

Types of Services Provided in the Educational Environment

Direct Services

Therapists can provide treatment services directly or indirectly to a student. With direct services, the therapist is pri-

A TREATMENT PROGRAM ESTABLISHED BY A SCHOOL-BASED THERAPIST MUST MEET THE REQUIREMENT OF ASSISTING THE CHILD WITH A DISABILITY, ENABLING THE CHILD TO BENEFIT FROM THE SPECIAL EDUCATION PROGRAM.

marily responsible for providing the intervention. This hands-on treatment is designed to address identified problems interfering with the student's education (Martin, 1990). For a therapist to maintain a direct therapy program, he or she must exhibit an ongoing professional competence in the use of specific treatment procedures that cannot be performed by others (American Physical Therapy Association, 1989). Direct services are effective when the therapist works with the student to facilitate an activity as it occurs in the natural environment, such as in the classroom, on the playground, or during gym (Bundy,

Figure 1
Maddie's Intervention Plan: Outcomes That Involve Related Services Support

| Learning Outcomes | | | | |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| One | Two | Three | Four | Five |
| Maddie will independently complete her morning routine from exiting school bus to storing her belongings, and preparing for class. | Maddie will use computer at desk to complete 25% of her work independently. | Maddie will attend to educator and focus on task at hand 70% of the time during classroom activities, requiring only minimal assistance 25% of the time to refocus attention despite competing sounds, sights, or actions. | Maddie will participate with classmates in 50% of the physical education activities. | Maddie will participate at least 25% with basic self-care tasks during school. |

| General Supports | | | | |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| One | Two | Three | Four | Five |
| Physical Therapy Direct Service | | | | |
| Instruction in maneuvering wheel chair off bus, over school grounds, and into classroom. | Work on postural control and stabilization of upper body to improve use of hands and head control for desktop work. | Work on postural control to improve head, torso, and shoulder stability to allow eyes and hands to move yet still attend to class activity; work on coordination of breathing during activity to maintain focus on task. | Instruct in maneuvering and positioning self during activities; assist in teaching various gross-motor activities. | Work on increasing in-dependence with transfers on/off toilet. |

| Physical Therapy Indirect Service | | | | |
|----------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Work with bus driver to assure safe exit from bus. | Instruct aide in techniques to facilitate proper posture at desk. | Consult with educator regarding strengths and limitations during class. | Work with educator to supplement activities with components appropriate for inclusion; train educator and aide to facilitate participation in group activities; work with administrators to ensure accessibility to both indoor and outdoor activity areas. | Teach aide toilet transfers; recommendations made for adaptive toilet and sink to be installed in bathroom. |

| Occupational therapy direct service | | | | |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Work on organizational skills and efficiency during routine. | Introduce computer at desk with adaptations; work on fine motor coordination and equipment use. | Work during class on attention to task—refocusing techniques. | Work on upper extremity coordination to increase participation during group play. | Introduce and instruct in use of adaptive and modified equipment to facilitate independence in hygiene activities of daily living. |

| Occupational therapy indirect service | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Work with teacher to set up achievable AM schedule; suggest reorganization of materials in classroom to make them more accessible; instruct classroom aide in routine and necessary cues to initially assist with completion of routine. | Instruct educators and aide in computer use, adaptations needed and current limitations; instruct aide and family in techniques to assist with use of device. | Instruct educators and aide in cues to assist with attention to task and identify appropriate reinforcers; make recommendations for environmental changes that will reduce distractions. | Instruct aide to assist with participation in activities. Work with educator to supplement activities with components appropriate for inclusion. | Teach aide use of adaptive equipment and how to assist with the activities of daily living. |

Figure 2
Therapy Service Models

| |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direct Service Model |
| One-on-one therapy* |
| The therapist treats the student in a separate therapy room or a segregated portion of the classroom |
| Small group therapy* |
| The therapist treats several students with similar needs at one time. |
| One-on-one therapy (inclusive) |
| The therapist works with the student during a classroom activity to facilitate his or her participation. Therapy can also occur during activities in the gymnasium, on the playground, or at a community site. |
| Small group therapy (inclusive) |
| The therapist works with the student with special needs and a group of his or her classmates on an educationally appropriate activity. The activity also promotes the therapeutic goal for the student with special needs. For example, the therapist leads a craft project that facilitates the fine motor manipulation for all students, yet the project is modified to include and instruct the student with special needs. |
| Indirect Service Model |
| Consultation |
| The therapist recommends and instructs educators, paraprofessionals, or caregivers to carry out therapeutic programs. This may include instruction modification, activity enhancement, environmental modification, adaptation of materials, routine or schedule alterations, or team member training. |
| Monitoring |
| The therapist maintains contact with the student to monitor his or her status. Effective monitoring consists of check-ups scheduled on a regular basis in the student's educational environment. |
| <i>Note:</i> *Restrictive model of treatment used only as a last resort. Therapy should be provided in a manner that facilitates integration with peers. |

1995). This type of service has its limitations and can be disruptive to the student's participation in school if it is not used judiciously. Direct therapy should be supplemented with educator and family consultation to ensure that student needs are identified and addressed on an ongoing basis (McWilliam, 1995).

Indirect Services

If direct services are deemed too restrictive or are inappropriate for a student, a second option is to provide indirect treatment through consultation and monitoring. Consultation involves the therapist instructing other team members in carrying out programs that have therapeutic value for the student (Effgen, 1990). This is an appropriate service mode when

- School personnel are qualified to carry out the therapists' plan.
- The student's educational needs would be met as well or better than through direct services.
- Therapy can be provided in the least restrictive manner through general school activities (Hanft & Place, 1996).

Once a successful indirect program is established, the therapist monitors its progress. *Monitoring* involves periodic reviews of the student's ability. The therapist ensures that the student is maintaining his or her achieved skill level, continues to train and supervise persons providing the ongoing interventions, and reassesses changes that may require equipment or program modifications.

Misconceptions About Indirect Services

Many educators and parents feel that indirect services are not as beneficial as direct services. This is a misconception. The therapist continues to provide a service; the only difference is the approach. It has been shown that students who receive indirect services achieve a similar level of goal attainment when compared to students receiving direct services (Dunn, 1990). See Figure 2 for a summary of direct and indirect services provided by therapists in the educational environment.

Combination of Services

Often, a therapist provides a combination of direct and indirect treatments, depending on the student specific goals. Maddie receives a combination of therapy services because her team meets her learning objectives through a variety of approaches. One of Maddie's learning outcomes for the year is for her to begin using assistive technology, specifically using a portable computer at her desk to complete at least 25% of her work independently. The IEP team felt that for Maddie to be able to keep up with required assignments, she would need access to a computer as a writing tool. This would enable her to participate more independently in both classroom instruction and homework assignments, as well as enhance her learning.

**MADDIE'S INCLUSION PLAN WAS
DESIGNED BY AN IEP TEAM
CONSISTING OF THE IEP MANAGER,
THE SPECIAL EDUCATION TEACHER, THE
CLASSROOM TEACHER, THE GYM
TEACHER, THE CHILD PSYCHOLOGIST,
THE SPEECH-LANGUAGE PATHOLOGIST,
THE OCCUPATIONAL THERAPIST, THE
PHYSICAL THERAPIST, MADDIE'S
MOTHER, AND MADDIE HERSELF.**

**A PHYSICAL OR OCCUPATIONAL
THERAPIST MUST EXHIBIT AN ONGOING
PROFESSIONAL COMPETENCE IN THE
USE OF SPECIFIC TREATMENT
PROCEDURES THAT CANNOT BE
PERFORMED BY OTHERS.**

To achieve this goal, the IEP team determined that the technology had to be integrated with good, consistent instruction from all related team members. Direct support from the therapists, the teachers, and the aide was deemed necessary while Maddie learned this new skill. The therapists work with Maddie while she is in the classroom completing her assignments. They work with her on posture and coordination, as well as her use of the equipment. This includes making adaptations to her desk space at school and her workspace at home to consistently optimize her independence with the computer.

Direct assistance from both the occupational therapist and the physical therapist is not only important for Maddie's success, but also important for training the other paraprofessionals and Maddie's family on how to assist her with her special needs and adaptations while using the equipment. When the therapists are not present in the classroom, the teacher, the special educator, and the classroom aide carry out activities the therapists have outlined and planned for Maddie's increased participation and independence during specific classroom activities. This type of

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"role release" is encouraged and is ethical if it benefits the student (Rainforth & Roberts, 1996).

Importance of Peer Support

Besides the therapist's support, Maddie's teacher also uses other supports to assist Maddie including collaboration between educators, adaptation of instruction method and curriculum, and peer support. Maddie does not have a full-time aide to assist her. One full-time aide is assigned to Maddie's classroom—she works primarily on supporting Maddie's needs, yet she also assists the teacher with other classroom duties. Ideally, Maddie's support will progress

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Bethesda, MD 20824-1220
Phone: 800-668-8255
Fax 301-652-7711
URL: <http://www.aota.org>

American Physical Therapy Association
1111 North Fairfax Street
Alexandria, VA 22314
Phone: 703-684-7343 or 800-999-APT A
Fax 703-684-7343
URL: <http://www.apta.org>

from predominantly direct, adult intervention to the use of more natural forms of assistance such as peer partners throughout her day. As a student gets older, it is important to minimize his or her dependency on any one individual to ensure success in both academic and social environments (Hubbard-Berg, 1993).

Providing Related Services as a Transdisciplinary Team

The transdisciplinary team model has been effective in inclusive environments (McDonnell, 1993). This type of teamwork from educators, assistants, parents, and therapists made the integration of Maddie into a general classroom possible. Each member's function was

clarified from the beginning of the inclusion process. Professionals shared their expertise among the team to facilitate a comprehensive educational program. This emphasis on interrelationships and a focus on goals helped to develop the foundation for Maddie's support. The team then further identified potential gaps, overlaps, or contradictions in service delivery to ensure a successful outcome.

Along with this framework, ongoing communication with the team has been essential during the selection, acquisition, adaptation, and training of the assistive technology device Maddie has started to use this year. Communication has also been important for maintaining a consistent approach to meeting Maddie's and her family's changing needs throughout the year. "The team must keep in mind that the student is part of an entire family unit," stresses Maddie's mother. "Therapists and educators need to try to grasp the entire picture of what the rest of the child's life is like. If these children are viewed in isolation the entire process will fail."

Final Thoughts

Maddie will be starting fourth grade in the fall. The IEP team will meet again to discuss her goals for fourth grade, as well as visions for her future. "I know Maddie will do something related to helping relationships—she is very supportive of cultural diversity," Maddie's mother reflects.

Maddie, however, is not waiting for the IEP team to reconvene to discuss her future. "I know I want to do something with my life," assures Maddie. "I want to help others, and I want to learn sign language—maybe be a teacher when I grow up."

Not every student is a success story like Maddie. Not every student will benefit from a fully inclusive educational program. Yet all students will benefit from the teamwork of responsible administrators, educators, and therapists who use one another's expertise to create opportunities for students to achieve a true sense of belonging and ultimately live full, productive lives.

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