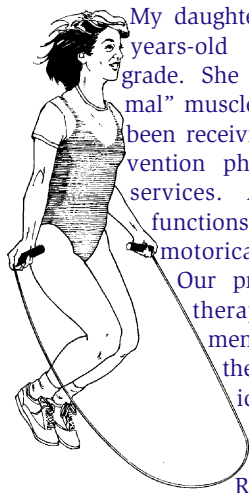


Who Does What on the Interdisciplinary Team Regarding Physical Education for Students With Disabilities?

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My daughter Rachel is 7-years-old and in first grade. She has “low-normal” muscle tone and has been receiving early intervention physical therapy services. Although she functions well, she is motorically delayed. Our private physical therapist recommended asking for the adapted physical education teacher to work with Rachel. When I made the request, the school physical therapist asked me why I wanted an adapted physical education teacher, stating that a physical therapist can do whatever the adapted physical education teacher does. She saw no reason to have the adapted physical education teacher see Rachel, and I had no answer to give her. When I bring this issue up at our next individualized education program (IEP) meeting, what can I say differently? What does the adapted physical education teacher do that is different from what the physical therapist does?

This parent is asking all the right questions in seeking the best education

for Rachel. This article can help by providing essential information about the roles of physical therapists and other professionals working with students with disabilities.

Physical therapists, occupational therapists, therapeutic recreation specialists, and adapted physical education teachers often work as members of an interdisciplinary IEP team regarding the educational needs of students with disabilities, especially children with physical disabilities. As members of a team, these professionals bring to the group varied and specialized training to coordinate the team’s activities and provide quality educational and rehabilitation services to students with disabilities (Smith, Perry, Neumayer, Potter, & Smeal, 1992). One of the prime requirements for effective interdisciplinary interaction is that all members of the IEP team, including parents, special education teachers, and general education teachers, have an understanding and appreciation of the contributions from each of the disciplines.

The school-based roles and responsibilities of physical therapists, occupational therapists, therapeutic recreation specialists, and adapted physical education teachers are defined by regulations, guidelines, and philosophies gathered from Federal and state laws, state guidelines, professional standards, and

school district policies. Despite these guidelines, a fundamental barrier to effective interdisciplinary collaboration is confusion and misunderstanding of the roles of these four professionals.

Roles and Responsibilities

To make the most use of services provided by physical therapists, occupational therapists, therapeutic recreation specialists, and adapted physical education teachers, we must become familiar with the knowledge bases and areas of expertise of each professional. Table 1 provides examples of how the general physical education teacher can employ the competencies of each professional when developing IEP objectives for students. Figures 1 and 2 show examples of professional collaboration in the cases of two students.

The following role descriptions are not intended to provide a defense for anyone’s professional “turf,” but to articulate similarities and dif-

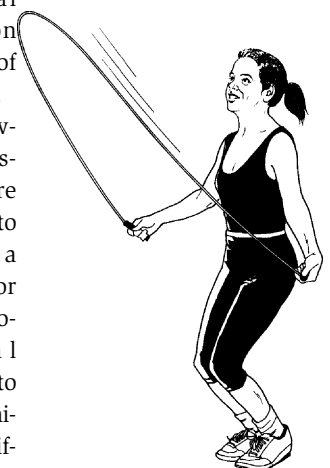


Table 1. Sample Physical Education Program Goals Based on Reports from Members of the IEP Team

| Professional Area of Expertise | Component | Content Areas | General Physical Education Program Goals <i>The student will be able to</i> |
|-----------------------------------|---|---|--|
| Physical Therapy | Motor Control | Inefficient movement patterns | Select movement patterns most efficient for performing the respective skill |
| | Posture/Balance | Poor balance control | Shift weight and use rotational patterns when throwing, and hitting a ball |
| Occupational Therapy | Fine Motor | Prehension/grip | Manipulate a variety of age appropriate materials, tools, and toys |
| | | Daily living skills | Manage daily self-care activities such as dressing prior to and after physical education class |
| Therapeutic Recreation Specialist | Interpersonal and/or social skills training | Difficulty engaging in cooperative relationships | Demonstrate ability to share equipment, take turns, and wait in line |
| | | Difficulty accepting winning and losing | Demonstrate appropriate sportsmanship when playing games |
| Adapted Physical Educator | Fundamental motor skills | Delayed gross motor skills | Demonstrate developmentally appropriate locomotor and object control/manipulative skills |
| | Physical fitness | Below norms on physical fitness measures for age, gender, and/or disability | Improve physical fitness including cardiovascular endurance, strength, and flexibility |

Note. This information was adapted from *Guidelines for occupational and physical therapy in California public schools* (1996). California Department of Education, Sacramento, CA.

ferences in the training, knowledge base, and skills physical therapists, occupational therapists, therapeutic recreation specialists, and adapted physical education teachers bring to the IEP team. In this way, schools and districts can effectively integrate the traditional functions of each professional, allowing each member, including the special education teacher, to assist other professionals in carrying out their responsibilities.

Physical Therapist

Physical therapists are health professionals with specific training in the remediation of a disability, dysfunction, or pain. Physical therapists may do the following:

- Restore and preserve range of motion.
- Evaluate muscle length and perform stretching exercises.
- Perform muscle strength evaluation.

Schools and districts can effectively integrate the traditional functions of each professional, allowing each member, including the special education teacher, to assist other professionals in carrying out their responsibilities.

- Offer exercises to increase strength, endurance, and coordination for specific muscle groups or the entire body.
- Evaluate muscle tone.
- Evaluate and train sitting and standing balance, transfers, and mobility, including wheelchair use for ambulation.

- Evaluate and train users of lower extremity orthosis and prostheses.
- Assess skin integrity and sensation.
- Offer various physical therapy modalities (e.g., heat, ultrasound, massage) to relieve pain, prevent deformity, develop or improve muscle strength or motor skills, and maintain maximal functional capabilities (DeLisa, Currie, & Martin, 1998; Shearer, Burnham, Wall, & Turnbull, 1995; Sherrill, 1998).

Physical therapy services in the schools are provided following a physician's prescription. School services tend to focus on techniques that correct, facilitate, or adapt the student's functional performance in motor development (e.g., a student's gross motor skills and related locomotor activities), motor control and coordination, posture and balance, functional mobility (e.g., transfer skills from a desk to a walker, from a

Figure 1. Combining Expertise in a Sample IEP Motor Skills Goal

| Student Background |
|---|
| <p><i>Name:</i> Rachel <i>Age:</i> 7 <i>Present Level of Performance:</i> Walks independently, low cardiovascular endurance, low muscular strength, emerging manipulative/object control skills when distance is shortened <i>Annual Goal:</i> To improve object control skills to the extent that she can successfully participate in the first-grade general physical education program with few or no modifications</p> |
| Role of the Physical Therapist (PT) |
| <p>The PT will work with Rachel to improve her overall muscle strength. The PT will use assistive devices that are designed to teach skills, that address postural control, and that may compensate for a lack of strength.</p> |
| Role of the Occupational Therapist (OT) |
| <p>The OT will work with Rachel to improve her ability to reach, grasp, and release objects of different sizes, textures, shapes, and weights. The OT will use modifications in positioning and in the environment that are age appropriate to enhance Rachel's endurance, strength, and object control skills.</p> |
| Role of the Therapeutic Recreation Specialist (TR) |
| <p>The TR will work with Rachel and her family to identify and provide recreation and leisure activities and hobbies of interest to Rachel in which she can work to improve endurance, strength, and object control skills. The TR specialist also will help Rachel and her family access community recreation programs and develop program plans specifically suited to Rachel's needs.</p> |
| Role of the Adapted Physical Educator (APE) |
| <p>The APE teacher will use a developmental task analysis approach to teach Rachel fundamental object control skills through modifications to instruction, tasks, equipment, and environmental constraints.</p> |
| Role of the General Physical Educator (PE)/Special Education Teacher |
| <p>The general physical educator and/or special education teacher, after training from PTs can use assistive devices in the classroom and remind Rachel of correct posture. OTs can provide training in positioning such that general PE/special education teachers can put Rachel into positions in which she can reach and grasp objects independently. After being provided with a task analysis for manipulative/object control skills, the general PE and special education teachers can help facilitate APE goals by encouraging/fostering movement opportunities during recess time and other motor opportunities throughout the school day.</p> |

wheelchair to a bench, gait training, use of walkers, wheelchairs, crutches, prosthetics and/or braces (Auxter, Pyfer, & Huettig, 1997; California Department of Education, 1996; Sherrill, 1998).

Physical therapists consider the skills a student needs to navigate throughout the school building, as well as skills the student will need after the school years to successfully transition into the community. Though physical therapists tra-

ditionally took the child out of the classroom and provided therapeutic intervention in a specially designed room, under the Individuals with Disabilities Education Act (IDEA, 1997; Public Law 105-17), physical therapists spend time in the classroom/gymnasium, during the child's regularly scheduled class, where they work to enhance the child's level of functioning while performing the skills taught by the physical educa-

Physical therapists offer exercises to increase strength, endurance, and coordination for specific muscle groups or the entire body.

tor or those outlined in the student's IEP (see Figures 1 and 2; Blumenkopf, Levangie, & Nelson, 1985).

As an interdisciplinary team member a physical therapist can contribute information regarding contraindicated activities or positions, positioning and limb use to maximize performance, and modifications to equipment and the environment (Block, 2000). For example, when working on the skill of throwing with a student with spastic cerebral palsy, the physical therapist would explain that because of the presence of the asymmetric tonic neck reflex (an involuntary movement elicited when the head is turned to one side or the other, resulting in extension of the limbs on the face side and flexion of the limbs on the opposite side) to help a right-handed student grasp and release/throw a ball, the student should look to the left side when grasping the ball with the right hand then turn their head to the right side to throw/release the ball. Similarly, the physical therapist can teach the special education and general physical education teachers the body mechanics for lifting a student from their wheelchair to the floor, chair, gym mat, or scooter board, principles of performing a safe transfer, and different types of transfers including the one-person lift, and two-person transfers.

Occupational Therapist

Occupational therapists also are health professionals who focus on practical activities and provide services to people with specific performance difficulties in self-care, work, and play activities that limit their ability to deal with tasks of everyday living. Their goal is to assist people to increase independent function, enhance development, and prevent disability in work and/or leisure activities, as well as to assist people in coping with developmental or psychological

Figure 2. Combining Expertise in a Sample IEP Transition Goal

Student Background

Name: George

Age: 14

Present Level of Performance: Walks independently with a slight scissor gait; able to perform reach, grasp, and release skills when accommodations are made for slight upper extremity hypertonicity; eye-hand coordination skills are good but George requires extra time to complete eye-hand coordination tasks; balance is generally good and protective extension is used when balance is challenged

Annual Goal: Transition to community bowling alley

Role of the Physical Therapist (PT)

The PT will work with George to develop body mechanics of balance and posture needed to transfer weight while walking down the lane from the ball carriage to the foul line and maintaining balance during ball release and follow through. To accomplish these goals, the PT also will work with George on strength and stability as well as joint mobility.

Role of the Occupational Therapist (OT)

The OT will work with George to develop arm and wrist strength to support the weight of a 9lb bowling ball as he engages in the pendulum swing action. The OT will also assist George with developing the fine motor skills he needs to release the ball during return arm swing as well as reflex integration.

Role of the Therapeutic Recreation Specialist (TR)

The TR will help George learn about bowling equipment and selection, relevant interpersonal and social skills as it relates to bowling, self-initiated independent behavior in bowling, and appropriate bowling etiquette.

Role of the Adapted Physical Educator (APE)

The adapted physical educator will provide instruction in the technique of bowling, including arm action, four-step approach, and ball release and follow-through. Skills will be taught in the gymnasium and will be taught in a whole-part-whole method.

Role of the General Physical Educator (PE)/Special Education Teacher

The general physical educator and/or special education teacher can facilitate the TR specialist's goals by providing opportunities for students to study and research the sport of bowling and practice appropriate interpersonal skills with classmates. Physical therapy goals can be addressed in the classroom by encouraging George to walk throughout the school and outside in the playground as much as possible giving him opportunities to improve posture and balance. With training the general PE/special education teacher can look for the interaction of reflexes to facilitate and reduce its impact on George's fine motor skills.

- Evaluation and training in use of assistive technology systems (DeLisa et al., 1998).

Through a physician's prescription, occupational therapists typically focus on activities to improve student performance in postural stability, sensory processing, organization and integration, motor planning and coordination, fine-motor abilities (e.g., arm and hand), self-help abilities (e.g., eating and dressing), environmental adaptations, use of assistive devices, and social and play abilities (Block, 2000; California Department of Education, 1996; Sherrill, 1998).

In the school setting, occupational therapists are likely to consider the role of the hand by facilitating or teaching a student to use his or her hand to improve handwriting skills and other hand-manipulation skills related to areas of the curriculum, such as art, music and band, and transfer skills. Occupational therapists also may contribute to a child's independence in school by helping a student who uses a wheelchair learn to carry a lunch tray on his or her lap, manage a ramp to and from the playground, and move through the halls (Auxter et al., 1997).

Some occupational therapists may have additional professional expertise in the area of sensory integration with which to provide sensorimotor training to students with disabilities, including those with learning disabilities, autism, and Down syndrome, for example, to ready them to receive instruction or to help develop fundamental play skills and behaviors (e.g., eye contact, listening skills, initiation and sustaining communication with others, and identification of personal interests; Auxter et al., 1997; California Department of Education, 1996). Occupational therapists also provide intervention related to

Occupational therapists offer evaluation and training in self-care activities, such as dressing, eating, bathing, and personal hygiene.

disabilities (Sherrill, 1998; Shearer et al., 1995). Services provided by occupational therapists include the following:

- Evaluation and training in self-care activities, such as dressing, eating, bathing, and personal hygiene.
- Training in home management skills.
- Exploration of vocational skills and interests.
- Maintaining and improving joint range of motion, muscle strength, endurance, coordination, and dexterity in upper extremities.
- Evaluation and training for compensation for sensory, perceptual, and cognitive deficits.
- Training in use of upper extremity prostheses.

the school setting and transition into the community (see Figures 1 and 2).

As an interdisciplinary team member, occupational therapists can provide insights regarding self-help skills needed in the locker room, fine motor skills, skills related to sensory integration, tactile awareness, and proprioception. For example, when working with children with developmental coordination disorder who may have problems with motor planning, occupational therapists can provide ideas for special education and general physical education teachers to help students integrate both sides of their body when performing a movement and or link different parts of a skill to perform a fluid movement. Similarly for children who have difficulty with balance (e.g., students with cerebral palsy, Down syndrome, and developmental coordination disorder), occupational therapists can provide assistance in the physical education class by helping children develop increased awareness of their body movements and positions.

Therapeutic Recreation Specialist

Therapeutic recreation specialists have a broad specialization in the area of recreation and leisure activities, including art, aquatics, music, dance, drama, horticulture, and outdoor recreation. Therapeutic recreation specialists facilitate the development, maintenance, and expression of an appropriate leisure lifestyle for people with disabilities. Their duties may include the following:

- Assessment of the interests, resources, level of participation, social capability, and physical limitations of a person with a disability.
- Education for leisure activities.
- Assistance for the individual and his or her family in adjusting to a disability.
- Increasing the independence of a person with a disability.
- Providing community integration.
- Providing recreation activities that are nonstructured and more suited to the wants and needs of the person with a disability.
- Interpersonal and social skills training (Block, 2000; DeLisa et al., 1998).

To accomplish these goals, therapeutic recreation specialists may work in one or

Therapeutic recreation specialists provide assessment of the interests, resources, level of participation, social capability, and physical limitations of a person with a disability.

more of three areas of services: therapy, leisure education and leisure counseling, and recreation participation (Sherrill, 1998). A physician's prescription is not required for the provision of services by therapeutic recreation specialists.

As an interdisciplinary team member, therapeutic recreation specialists can provide suggestions for adaptations for recreation programs, information regarding leisure assessment, and insights into available recreation/leisure programs in the community (Block, 2000). In this capacity, therapeutic recreation specialists can assist students in making the transition from school to community recreation by providing community reintegration training (see Figure 2) and can be of great help to the physical educator with physical activity and recreation transition services (Block).

Adapted Physical Educator

The adapted physical educator has the foundation of professional training in physical education, with further specialized knowledge of children with disabilities. Adapted physical education teachers focus on the student's fundamental locomotor and manipulative/object control skills related to physical activity, motivation, management of behavior, and acquisition of skills that lead to a healthy, physically active lifestyle. Adapted physical education teachers teach or provide students with appropriate adaptations or modifications needed for successful participation in dance; aquatics; and individual, dual, and team sports.

Adapted physical education teachers help the IEP team by assessing physical education related problems, writing goals, planning programs, implement-

ing programs, and consulting with general physical education professionals and parents (Block, 2000). The adapted physical education teacher can help the general physical educator in including students with disabilities by doing the following:

- Taking information provided by the IEP team regarding the child's physical and motor skills and presenting it to the general physical education teacher and the special education teacher.
- Providing specific information to the general physical educator regarding ways to modify activities to ensure safe and successful participation by the child with a disability (Block, 2000).

Responsibilities Under the Law

The primary professional distinctions between the *allied health professionals* (physical therapy and occupational therapy), *leisure professionals* (therapeutic recreation specialists), and *educators* (adapted physical education teachers) are the types of services they provide. IDEA outlined the role of physical therapists, occupational therapists, and therapeutic recreation specialists as related services intended to augment the direct services of the educational programs designed for the student with a disability. As related services, physical therapy, occupational therapy, and therapeutic recreation are provided so that a student who qualifies for special education services can benefit from his or her educational program, including physical education. The goals, objectives, and interventions that physical therapists, occupational therapists, and therapeutic recreation specialists recommend to the IEP team must relate to a student's

Adapted physical education teachers provide students with appropriate adaptations or modifications needed for successful participation in dance; aquatics; and individual, dual, and team sports.

attainment of his or her physical education or motor IEP goals and objectives. Thus, the goals, objectives, and interventions and the location for service delivery (e.g., classroom, cafeteria, playground, community) will vary from student to student and school to school.

In IDEA, physical education was considered so important that it is the only curricular area specifically mentioned in the definition of special education. The law defines physical education as a direct service that should be part of the child's educational program (Block, 2000). As such, adapted physical education teachers are not required to obtain a physician's prescription before they provide services. Students must receive either physical education or adapted physical education at least as often as students without disabilities receive physical education. Schools provide adapted physical education when the student needs additional or modified learning opportunities to be successful in physical education or when the student needs a different physical education curriculum.

As a direct service, adapted physical education follows the existing school, county, or state curriculum for adapted physical education or general physical education. Adapted physical education goals and objectives, therefore, should coincide with what is being taught in the general physical education class. Likewise, adapted physical education lessons should prepare the student for inclusion in the general physical education program and should occur within the general physical education program, to the extent that inclusion is individually appropriate for each student.

Coming Together in the Public School Setting

Several job responsibilities are common to these professions. First, all four professionals serve basically the same population, provide services in the same environments, and use their respective specialized training and interventions to help students with a disability acquire maximum benefit from their educational program (Blumenkopf et al., 1985; Smith et al., 1992). Consequently, the professionals may identify a common IEP goal or objective for a student.

For example, physical therapists address components of gross motor skills, movement patterns, and posture/balance control that also are of concern to the adapted physical education teacher. Occupational therapists share some components of visual perception and integration with the adapted physical education teacher, such as movement and position in space, directionality, integrating both sides of the body, and sequencing movements. Therapeutic recreation specialists and adapted physical education teachers share concerns regarding appropriate social play behaviors, and the development of peer relationships (see Table 1).

Shared areas of expertise do not constitute a duplication of service or provide a rationale for substitution of services, but rather provide additional data and important intervention strategies for the development and implementation of the student's IEP goals, in accordance with the students' needs (California Department of Education, 1996).

Examples of Collaborative Teaming

Assuming from the opening scenario that Rachel meets the qualification criteria for adapted physical education, her IEP team will discuss adapted physical education goals and objectives and document them. Given Rachel's delays in cardiovascular endurance and muscular strength and the emergence of Rachel's object-control skills, Figure 1 outlines ways in which IEP team members can work together to improve her performance. This example focuses on goals that relate to adapted physical education. Physical therapists, occupational therapists, and therapeutic recreation specialists may address other goals that are not incorporated into adapted physical education.

As in the case study of George provided in Figure 2, as students get older, opportunities for participation in physical activities expand beyond the school setting (Krueger, DiRocco, & Felix, 2000). Consequently, all members of the IEP team need to focus on transitioning students with disabilities into community activities. Although the adapted physical education teacher will focus on George's

A student with a disability needs a collaborative approach to meet their motor development IEP goals and objectives.

motor skills related to opportunities for skill development in bowling, for example, physical therapists, occupational therapists, and therapeutic recreation specialists also may focus on George's motor skills related to the various community bowling centers in which George may participate to reach his transition goals. Although this example focuses on goals that relate to adapted physical education, physical therapists, occupational therapists, and therapeutic recreation specialists, again, may address additional goals not incorporated into adapted physical education.

Final Thoughts

A student with a disability needs a collaborative approach to meet their motor development IEP goals and objectives. As the cases of Rachel and George illustrate, a range of professionals—as part of an interdisciplinary team—may provide services outlined in IDEA. Physical therapists, occupational therapists, therapeutic recreation specialists, and adapted physical education teachers can help address the overall educational plan for the student (California Department of Education, 1996).

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