

A Pediatric Case Example: Application of the *Guide to Physical Therapist Practice*

Section on Pediatrics FACT SHEET



SECTION ON

PEDIATRICS

AMERICAN PHYSICAL THERAPY ASSOCIATION

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This case example is written from the point of view of a school-based physical therapist providing therapy services under IDEA Part B. It is assumed that services are delivered using a team model or approach. This is a description of the clinical decisions physical therapists consider following the patient/client management outlined in the *Guide to Physical Therapist Practice* (American Physical Therapy Association; 2001).

As described in the *Guide to Physical Therapist Practice*, there are five elements of care used to define patient/client management within physical therapist practice. These are:

1. **Examination:** A process of obtaining a history, performing relevant systems review, and selecting and administering specific tests and measures.
2. **Evaluation:** A dynamic process in which the physical therapist makes clinical judgments based on data gathered during the examination.
3. **Diagnosis:** A label encompassing a cluster of signs related to impairments of the four systems of the body (musculoskeletal, neuromuscular, cardiopulmonary, and integumentary).
4. **Prognosis:** The predicted optimal level of functional improvement, recommendation for amount of service, and establishment of a plan of care.
5. **Intervention:** Purposeful and skilled interaction with the patient/client, including coordination, communication, documentation, patient/client-related instruction, and procedural interventions.

The example that follows does not reflect all the specific and complete details related to your examination results and intervention. A focus on the goal of improved mobility in the school environment is used to highlight the clinical decision making process. Each element of patient/client management presented would in actuality encompass all the goals that are to be focused on to address the child's needs.

Case Description

Kay is a 4-year-old child with a diagnosis of cerebral palsy–spastic quadriplegia. She attends a neighborhood preschool program. It is the beginning of another school year, and you are the new physical therapist assigned to provide services to Kay. Her previous Individualized Education Program (IEP) included goals for participation during opening circle, use of a computer for preliteracy activities, use of a voice output assistive technology device, and walking with her walker within the preschool class.

Kay received physical, occupational, and speech therapy, as well as instructional services. She is expected to attend a general education kindergarten classroom next fall. You are evaluating Kay because you are new and are preparing for her next IEP meeting in 2 months. Your evaluation and recommendations to the IEP team should focus on preparation for kindergarten. The team has agreed that Kay will need some way to get around in her kindergarten classroom and other educational environments in the elementary school building.

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1. Examination

The Guide outlines the three components of the Examination process (History, Systems' Screen, and Tests and Measures) but it does not stipulate the format of the examination.

In the preschool setting, the examination may be performed collectively with the entire team present or components of the examination may be performed individually by team members and discussed collectively at a team meeting. The IEP team decides that Kay's performance in communication, problem solving, and self-help (including feeding) will be addressed by other team members. As the physical therapist on the team, you will be responsible for examining and evaluating Kay's mobility in the school environment.

A. What needs to be included in the history?

As a new team member you decide that you need to gather information about her medical and educational history. You plan to gather information from the family, teacher, and transportation aide to ensure that you provide family-centered care and collaborate with the team.

- **Medical history**

You might begin with a review of the records present at the preschool. Since this is Kay's second year at preschool, all releases of information have already been obtained. You expect the records to include past physical therapy evaluations, a health history, vision and hearing screenings, and a complete Individualized Family Service Plan (IFSP), which would also give you family priorities and background information.

You note the following pertinent medical history that will affect your systems' screen. Kay has a history of respiratory problems. She has no difficulty with feeding but has problems with speech (breathiness) and with respiratory patterns (lacks full inspiration and expiration). Kay has had Botox injections to her gastroc-soleus muscle complex.

- **Previous intervention experiences**

Kay was enrolled in an early intervention program at 4 months of age. She has been receiving physical, occupational, and speech therapy each on a weekly basis through the IFSP, initially at home and then services through an IEP when she turned 3.

- **Family expectations and desired outcomes**

You decide to call the family and set up a convenient time and place to meet with them. This might be at preschool, their home, or simply by phone. You and the family decide to meet at their home so that you can better understand the environment and activities Kay and her family enjoy. The family is able to answer your questions, get to know you, and begin to build trust in you, a new person. Kay is able to show you her bedroom and where she likes to play.

Consistent with what you read on the current IEP, Kay and her family want her to be a part of her neighborhood and attend the same school with her older sister. But, they are unsure about how she will get around in the larger building and about other assistance she might need. The family tells you that they have an upcoming visit to Shriners' Hospital for orthopedic and neuromuscular follow-up. Kay has bilateral ankle-foot orthoses (AFOs), a posterior control walker and pediWrap knee splints she wears at night. Her parents mention that an evaluation for an Intrathecal Baclofen (ITB) Pump is being considered. At home Kay either belly crawls on the floor or someone carries her from room to room. She can use her walker in the house but the rooms are crowded and it often gets in the way.

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- **Information about the family and Kay's typical routines and activities**

Kay lives at home with her mother, father, and typically developing 8-year-old sister. The family lives in a ranch-style, three-bedroom home with an enclosed yard, cement driveway, and cement sidewalks. They have a ramp into the front door. Kay is able to get to all locations in the house and to use her walker in the backyard. She cannot walk very far from her house on the sidewalk before getting tired. Walking is too slow for family walks or trips to the park. They have a minivan and Kay rides in a car seat behind the front passenger seat of the car.

- **Educational history**

You find a time that the preschool teacher is available and discuss what she feels Kay needs now and what preparation will take place this year for kindergarten. The teacher tells you about Kay's academic, social, and behavioral history. You plan to meet with or call the occupational therapist and speech therapist for their impressions. You review the current IEP with the teacher, especially the goal that identifies physical therapy as a resource. You confirm that Kay's IEP lists physical therapy once a week for 60 minutes. Last year's goal was to use her walker to move within the preschool setting, including the small playground behind the classroom. The teacher indicates that Kay has difficulty with selective attention and expresses a concern related to safety during walking. You also meet with the bus driver and aide on the bus and note that Kay is carried on and off the bus.

B. What should be considered during the Systems' Review?

From your record review and meetings with the family, teacher, occupational therapist, and school nurse, you decide that the priority systems for examination are neuromuscular, musculoskeletal, and cardiopulmonary. A screen of the integumentary system reveals no skin irritations from the orthotics.

C. What tests and measures are appropriate to administer?

Although the Guide lists all the possible tests and measures that might be included in an examination, you need to determine which ones are appropriate for Kay's needs and the goal related to moving around her new elementary school. This may include tests for developmental domains, mobility, gait analysis, and muscle performance.

- **Observations in the classroom and recess**

You decide that the best way to gather information about what Kay can do in her role as a student in the preschool (participation level), is to observe and talk with her. Kay tells you about her favorite activities; she likes books, flowers, and playing on the swings. You observe Kay when she arrives in the morning, during circle time, and playing outside. You note that Kay has the most challenges when outside and that she cannot participate with her peers on the playground equipment or during games such as tag.

Using the mobility section of the Pediatric Evaluation of Disability Inventory, (PEDI) you document her ability to move within the classroom and between the rooms of her school with her walker with difficulty. You collect data on Kay's performance on her IEP mobility goal and compare it to what she was doing last spring. She has demonstrated progress in the distance she can ambulate with her walker. You identify any concerns that you want to further evaluate through additional direct testing at the body function and structure level.

From your observations you decide that you need to check all joints for range and flexibility. You check leg and arm lengths for discrepancies and her trunk for any signs of scoliosis. You want to generally test her strength to see if it matches what you estimated after observing her.

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In addition, you believe that it is important to determine her resting heart rate (HR) as well as her HR after walking a long distance. You decide to time how long it takes Kay to get from the outside door to her classroom using the walker and compare that to some timing measures you take of other preschoolers. Having observed Kay in a variety of environments, you feel that your ecological assessment has provided you with enough information to make judgments about her motor-planning skills.

2. Evaluation

What is my clinical judgment regarding Kay's status?

You decide that Kay's past goal was appropriate and that she has made good progress. You believe that her impairments in her cardiorespiratory status, range of motion, muscle strength, and attention may all be contributing to her functional mobility limitations. Her orthopedic and neuromuscular concerns are being managed well, and you agree that an evaluation for ITB is appropriate. Her AFOs fit appropriately. She assumes a variety of positions throughout her day at preschool. Use of a stroller is not appropriate for her age, and you suggest a wagon for field trips.

You would like to discuss the need for more standing and weight-bearing throughout Kay's day. You think that she can gain a little more function with her walker but that she will not be able to keep up with her peers in kindergarten without some other type of mobility assistance. In addition, you would like to consider some age-appropriate recreational aerobic activity to promote fitness.

3. Diagnosis

You identify that Kay's physical therapy diagnosis is Practice Pattern 5C (Impaired motor function and sensory integrity associated with non progressive disorders of the CNS - Congenital origin or acquired in infancy or childhood) (*Guide to Physical Therapist Practice*, 2001). Kay's primary dysfunction is her limited independent mobility.

4. Prognosis (including the Plan of Care)

What are the expected goals and outcomes?

Although your evaluation has led you to certain conclusions about Kay's impairments, activity limitations, and participation restrictions, you need to meet with the team to set priorities for this school year. At the IEP meeting, Kay's goals for this school year include expanded mobility at preschool and in the community in preparation for kindergarten. Her goal is to be independent with assistive devices in next year's elementary school hallways at a speed equal to her peers (including ramps and turns and between objects).

The team and the family decide to begin the process of obtaining powered mobility for Kay. She will continue to use her walker at school for longer distances, especially on field trips in the community. Her parents will create opportunities to walk at the mall, and to the grocery store, park, and library on weekends. You will plan with the school district to have special transportation with a wheelchair lift next school year.

What is the appropriate method of service delivery, including frequency, duration, and location?

You will continue to see Kay 240 minutes a month with time blocked into segments to provide integrated therapy during her school activities, including field trips, consultation with the teacher on mobility and equipment needs, and possible IBT trial.

What are the criteria for discharge from this episode of care?

This episode of care will correspond with her IEP for the next year. The ultimate discharge criteria will relate to meeting her goal of independent mobility at school.

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5. Intervention

What is appropriate coordination, communication, and documentation?

You identify this area as a priority. You will be coordinating her school program with her teacher and classroom associate. You will need to identify any modification or accommodations needed during Kay's daily schedule. In addition, the teacher will need to share her educational strategies related to Kay's attention limitations with you. Her mobility skills will overlap with occupational therapy services, especially for her toileting needs and function in the lunchroom.

Communication with her family will need to occur on a regular basis with increased times during decisions about powered mobility and intrathecal baclofen therapy (IBT) trials. You will need to carefully document her performance to justify the need for powered mobility. This will involve communication and coordination with a durable medical equipment provider as well. You will need concise data for Kay's physicians who will be making orthopedic and rehabilitation decisions. Based on input from the family, you will also discuss Kay's strengths and needs with the local YMCA swim program that Kay and her family will be joining.

What patient-related instruction should be provided?

You will teach and supervise the implementation of Kay's school mobility and positioning program to be sure her changing needs are met and to make changes if there is not progress on her IEP goal as anticipated. You will work jointly with her family on her medical needs and mobility in the community.

You will review the program with the family and be sure they know what the "red-flag" issues are that require follow up. In addition, as part of a team focus, you will promote self-determination for Kay by discussing issues of self-awareness and the importance of wellness.

What procedural interventions should be suggested?

Procedural interventions will depend on Kay's progress but will include a focus on functional training, therapeutic exercise, and use of adaptive equipment that is being integrated into her daily activities.

You anticipate the need for direct skill training and will update your written classroom recommendations appropriately. You will need direct contact during field trips to problem solve concerns that were not anticipated and to identify appropriate modification and accommodation in the future. You will need to provide direct training in an elementary school setting to verify the skills Kay needs to learn this year and identify architectural changes needed for next year. You will expand Kay's skills in solving mobility problems as they occur and will improve her judgment in new situations.

Outcomes

Minimize functional limitations

When Kay begins ITB use, you would want to see sitting and standing skills maintained and endurance improved.

Optimize health status

You will want Kay to know the warning signs related to skin problems, and when to alert an adult that assistance is needed. You want to coordinate and collaborate so that the health care plan is up-to-date and feasible at school.

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Prevent disability

You want to be sure that the school staff know how to eliminate physical barriers to Kay's mobility independence, to anticipate attitudinal barriers created by other adults, and help the other preschoolers understand when it is appropriate to assist her.

Optimize patient/client satisfaction

You want Kay to be an active participant, in collaboration with her family, in decisions regarding her day-to-day choices, including activity centers, playground equipment, peer activities. Your "clients" include the entire team: the family, other school personnel, and other related service personnel.

Re-examination

How is the need for continued service determined?

Performance on the IEP goal should be measured frequently (multiple times during the month) with changes as needed. If she is not meeting her goal, the IEP team needs to decide if physical therapy is the appropriate service, if the goal is correct, or if other goals are a higher priority. At a minimum, the need for continued services should be reviewed annually at the IEP meeting.

How Can I Order a Copy of the Guide?

To order the *Guide to Physical Therapist Practice*, contact the Service Center at the American Physical Therapy Association at 800/999-2782, ext 3395, or visit APTA's Web site at www.apta.org.

For More Information

If you have additional questions, would like to order additional copies of this fact sheet, or would like to join the Section on Pediatrics, please contact the Executive Office of the Section on Pediatrics of the American Physical Therapy Association at:

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