CHAPTER 2

The Physical Therapist Assistant as a Member of the Health Care Team

OBJECTIVES

After studying this chapter, the reader will be able to:

1. Discuss the supervisory role of the physical therapist on the health care team.
2. Describe the differences in role, function, and supervisory relationships of the physical therapist, physical therapist assistant, and other health care personnel.
3. List the events taking place in the collaborative path between physical therapist and physical therapist assistant.
4. Compare and contrast the types of health care teams.
5. Identify the members of the rehabilitation team and their responsibilities.

KEY TERMS

direct personal supervision
general supervision
interdisciplinary team
intradisciplinary team
multidisciplinary team
physical therapist assistant (PTA)
plan of care (POC)

Direction and Supervision of the Physical Therapist Assistant

The American Physical Therapy Association (APTA) defines a **physical therapist assistant (PTA)** as "a technically educated health care provider who assists the PT in the provision of physical therapy."[33] The Association considers a PTA to be the only individual who assists the PT in the delivery of selected physical therapy interventions. A PTA is also a graduate of a PTA education program accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

LEVELS OF SUPERVISION

Per the APTA, a PTA delivering selected physical therapy interventions must be under a level of supervision called **general supervision**. This means the PT is not required to be physically present on-site for direction and supervision of the PTA, but must be available by telecommunications at all times. Some states, however, require that

the PTA deliver selected physical therapy interventions only under the **direct personal supervision** of the PT. Direct personal supervision means the PT must be physically present and immediately available on-site at all times to direct and supervise tasks related to patient and client management. The direction and supervision is continuous throughout the time these tasks are performed.

In all physical therapy practice settings, the PTA's performance must be safe and legal. His or her performance also depends on many variables, including the type of clinical practice, the environmental surroundings of the practice, the type of communication between the PT and the PTA, the experience of the PTA, the patient/client's needs, the type of PTA supervision offered in emergency events, the PT's expectations for the patient/client, the necessary modification(s) to the **plan of care (POC)**, and the accessibility of the PT.

THE ROLE OF THE PTA IN A CLINICAL SETTING

The practice of physical therapy is conducted by the PT. The PT remains the only individual responsible for the physical therapy services when the PTA is involved with provision of selected interventions (treatments). The PT must provide direction and supervision of PTAs and other personnel for the provision of quality physical therapy services. Many considerations are involved to assure quality in physical therapy clinical settings. These considerations can have direct consequences in clinical practice, and may include the PT and PTA's education, experience, and responsibilities, along with the organizational structure in which the physical therapy services are provided. The PT is directly responsible for the actions of the PTA regarding patient/client management.[33]

APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL[38]

This document was developed by a committee to develop a list of required skills for a new graduate PTA. This list includes skills considered essential for any PTA graduate include musculoskeletal, neurological, cardiovascular pulmonary, and integumentary systems. The terms used in this list are based on the *Guide to Physical Therapist Practice* and an asterisk (*) denotes a skill identified on the PTA (NPTE) Test Content Outline.

PTA Skill Category	Description of Minimum Skills for PTA
Plan of Care Review • **Review of physical therapy documents** • **Review of medical record** • **Identification of pertinent information** • **Identification of indications, contraindications, precautions, safety considerations, and expected outcomes** • **Access to related literature** • **Match patient goals to selected interventions** • **Identification of role in patient care** • **Identification of items to be communicated to the physical therapist**	1. Read all physical therapy documentation, including initial examination and plan of care. A. Note indications, contraindications, precautions and safety considerations for the patient. B. Note goals and expected outcomes. C. Seek clarification from physical therapist, as needed. 2. Review information in the medical record at each visit, including: A. Monitor medical record for changes in medical status and/or medical procedures. B. Collect data on patient's current condition, compare results to previously collected data and safety parameters established by the physical therapist, and determine if the safety parameters have been met. C. Seek clarification from appropriate health professions' staff for unfamiliar or ambiguous information. 3. Identify when the directed interventions are either beyond the scope of work or personal scope of work of the PTA. 4. Communicate to the physical therapist when there are significant changes in the patient's medical status, physician referral, or when the criticality and complexity of the patient is beyond the knowledge, skills, and abilities of the PTA. 5. Explain the rationale for selected interventions to achieve patient goals as identified in the plan of care.

APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA

Provision of Procedural Interventions
• **Compliance with policies, procedures, ethical standards, etc.**
• **Risk management strategies**
• **Protection of patient privacy, rights, and dignity**
• **Competent provision of interventions, including:**
  • **Therapeutic exercise**
  • **Functional training**
  • **Manual therapy techniques**
  • **Application and adjustment of devices and equipment***
  • **Airway clearance techniques**
  • **Integumentary repair and protection techniques**
  • **Electrotherapeutic modalities***
  • **Physical agents and mechanical modalities***
• **Assessment of patient response**
• **Clinical problem solving**
• **Ability to modify techniques**
	1. Provide interventions compliant with federal and state licensing requirements, APTA standards documents (e.g. *Guide for Conduct for the PTA, Code of Ethics*), and facility policies and procedures.
	2. Assure safety of patient and self throughout patient care.
	  A. Identify the need for and take action when safety of patient or self may be at risk or has been compromised.
	  B. Utilize risk management strategies (e.g. universal precautions, body mechanics).
	3. Assure patient privacy, rights, and dignity.
	  A. Follow HIPAA requirements and observe Patient Bill of Rights.
	  B. Position/drape to protect patient modesty.
	4. Provide competent provision of physical therapy interventions, including:
	  <u>Therapeutic exercise</u>
	  A. Aerobic Capacity/Endurance Conditioning or Reconditioning
	  1. Increase workload over time
	  2. Movement efficiency and energy conservation training
	  3. Walking/wheelchair propulsion programs
	  B. Balance, coordination, and agility training
	  1. Developmental activities training
	  2. Neuromuscular education or reeducation
	  3. Postural awareness training
	  4. Standardized, programmatic, complementary exercise approaches (protocols)
	  5. Task-Specific Performance Training (e.g. transfer training, mobility exercises, functional reaching)
	  C. Body mechanics and postural stabilization
	  1. Body mechanics training
	  2. Postural stabilization activities
	  3. Postural awareness training
	  D. Flexibility exercises
	  1. Range of motion
	  2. Stretching (e.g. passive, active, mechanical)
	  E. Gait and locomotion training
	  1. Developmental activities training
	  2. Gait training (with and without devices)
	  3. Standardized, programmatic, complementary exercise approaches
	  4. Wheelchair propulsion and safety
	  F. Neuromotor development training
	  1. Developmental activities training
	  2. Movement pattern training
	  3. Neuromuscular education or reeducation
	  G. Relaxation
	  1. Breathing strategies (with respect to delivery of an intervention)
	  2. Relaxation techniques (with respect to delivery of an intervention)

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APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
	H. Strength, power, and endurance training for head, neck, limb, trunk, and ventilatory muscles 1. Active assistive, active, and resistive exercises, including concentric, dynamic/isotonic, eccentric, isometric, diaphragmatic breathing, and low-level plyometrics (e.g. kicking a ball, throwing a ball) <u>Functional training in self-care and home management</u> A. Activities of daily living (ADL) training 1. Bed mobility and transfer training 2. Activity-specific performance training B. Device and equipment use and training 1. Assistive and adaptive device or equipment training during ADL C. Injury prevention or reduction 1. Injury prevention education during self-care and home management 2. Injury prevention or reduction with use of devices and equipment 3. Safety awareness training during self-care and home management <u>Manual therapy techniques</u> A. Therapeutic massage B. Soft tissue mobilization C. Passive range of motion <u>Application and adjustment of devices and equipment</u> A. Adaptive devices 1. Hospital beds 2. Raised toilet seats B. Assistive devices 1. Canes 2. Crutches 3. Long-handled reachers 4. Walkers 5. Wheelchairs C. Orthotic and prosthetic devices 1. Braces D. Protective devices 1. Braces E. Supportive devices, such as: 1. Compression garments 2. Elastic wraps 3. Soft neck collars 4. Slings 5. Supplemental oxygen <u>Breathing strategies/oxygenation</u> 1. Identify patient in respiratory distress 2. Reposition patient to improve respiratory function

APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
	3. Instruct patient in a variety of breathing techniques (pursed lip breathing, paced breathing, etc.) 4. Administration of prescribed oxygen during interventions Integumentary protection 1. Recognize interruptions in integumentary integrity 2. Repositioning 3. Patient education 4. Edema management Electrotherapeutic modalities, such as: 1. Electrotherapeutic delivery of medications 2. Electrical muscle stimulation 3. Electrical stimulation for tissue repair 4. Functional electrical stimulation 5. High-voltage pulsed current 6. Neuromuscular electrical stimulation 7. Transcutaneous electrical nerve stimulation Physical agents 1. Cryotherapy (e.g. cold pack, ice massage, vapocoolant spray, hydrotherapy) 2. Ultrasound 3. Thermotherapy (e.g. dry heat, hot packs, paraffin baths, hydrotherapy) Mechanical modalities 1. Compression therapies 2. Mechanical motion devices 3. Traction devices 5. Determine patient's response to the intervention: A. Interview patient and accurately interpret verbal and nonverbal responses. B. Identify secondary effects or complications caused by the intervention. C. Determine outcome of intervention (positive or negative), including data collection and functional measures. 6. Use clinical problem-solving skills in patient care. A. Determine if patient is safe and comfortable with the intervention, and, if not, determine appropriate modifications. B. Compare results of intervention to previously collected data and determine if there is progress toward the expectations established by the PT or if the expectations have been met. C. Determine if modifications to the interventions are needed to improve patient response. 7. Modify interventions to improve patient response. A. Determine modifications that can be made to the intervention within the plan of care. B. Communicate with physical therapist when modifications are outside scope of work or personal scope of work of PTA. C. Select and implement modification. D. Determine patient outcomes from the modification.

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APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
Patient Instruction • **Application of principles of learning** • **Use of variety of teaching strategies** • **Methods to enhance compliance** • **Clarity in instructions** • **Assessment of patient response**	1. Apply principles of learning using a variety of teaching strategies during patient instruction. 2. Provide clear instructions (e.g. verbal, visual). 3. Apply methods to enhance compliance (e.g. handouts, reporting forms). 4. Determine patient response/understanding of instruction.
Patient Progression • **Competent patient progression** • **Communication of pertinent information** • **Relationship of psychosocial factors to progress** • **Clinical problem solving**	1. Implement competent patient progression. A. Identify the need to progress via data collection. B. Determine what progression can be made within the plan of care. C. Identify possible progressions that will continue to advance patient response. D. Select and implement the progression of the intervention. E. Determine outcomes of the intervention. 2. Communicate pertinent information. A. Identify changes in patient response due to intervention. B. Describe adjustments to intervention within plan of care. C. Describe response to change in intervention. 3. Recognize when other variables (psychological, social, cultural, etc.) appear to be affecting the patient's progression with the intervention. 4. Determine if patient is progressing toward goals in plan of care. If no, determine if modifications made to the intervention are required to improve patient response.
Data Collection • **Competent data collection** • **Interview skills** • **Accurate and timely** • **Clinical problem solving** • **Ability to modify techniques** • **Documentation and communication**	1. Provide accurate, reproducible, safe, valid, and timely collection and documentation of data to measure the patient's medical status and/or progress within the intervention as indicated in the following categories: <u>Anthropometric characteristics</u> 1. Measure body dimensions (e.g. height, weight, girth, limb length). <u>Arousal, attention, and cognition</u> 1. Determine level of orientation to situation, time, place, and person. 2. Determine patient's ability to process commands. 3. Determine level of arousal (lethargic, alert, agitated). 4. Test patient's recall ability (e.g. short-term and long-term memory). <u>Assistive and adaptive devices</u> 1. Measure for assistive or adaptive devices and equipment. 2. Determine components, alignments and fit of device and equipment. 3. Determine patient's safety while using the device. 4. Monitor patient's response to the use of the device. 5. Check patient or caregiver's ability to care for device and equipment (maintenance, adjustment, cleaning). <u>Body mechanics</u> 1. Determine patient's ability to use proper body mechanics during functional activity. <u>Environmental barriers, self-care, and home management</u> 1. Identify potential safety barriers. 2. Identify potential environmental barriers.

APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
	3. Identify potential physical barriers. 4. Determine ability to perform bed mobility and transfers safely in the context of self-care home management. <u>Gait, locomotion, and balance</u> 1. Determine patient's safety while engaged in gait, locomotion, balance, and mobility. 2. Measure patient's progress with gait, locomotion, balance, and mobility, including use of standard tests. 3. Describe gait deviations and their effect on gait and locomotion. <u>Integumentary integrity</u> 1. Identify activities, positioning, and postures that may produce or relieve trauma to the skin. 2. Identify devices and equipment that may produce or relieve trauma to the skin. 3. Observe and describe skin characteristics (e.g. blistering, continuity of skin color, dermatitis, hair growth, mobility, nail growth, sensation, temperature, texture, and turgor). 4. Observe and describe changes in skin integrity, such as presence of wound, blister, incision, hematoma, etc. 5. Test for skin sensation and describe absent or altered sensation. <u>Muscle function</u> 1. Perform manual muscle testing. 2. Observe the presence or absence of muscle mass. 3. Describe changes in muscle tone. <u>Neuromotor function</u> 1. Identify the presence or absence of developmental reflexes, associated reactions, or abnormal tone. 2. Identify performance of gross and fine motor skills. <u>Orthotic and prosthetic devices and equipment</u> 1. Check components, ensure alignment and fit of orthotic devices, braces, and/or splints. 2. Determine effectiveness of components (Is it working or not?), alignment, and fit of orthotic devices, braces, and splints during functional activities. 3. Determine patient/caregiver's ability to don/doff orthotic, device, brace, and/or splint. 4. Determine patient/caregiver's ability to care for orthotic device, brace, and/or splint (e.g. maintenance, adjustments, and cleaning). <u>Pain</u> 1. Define location and intensity of pain. <u>Posture</u> 1. Determine postural alignment and position (static and dynamic, symmetry, deviation from midline). <u>Range of motion</u> 1. Perform tests of joint active and passive movement, muscle length, soft tissue extensibility, tone and flexibility (goniometry, tape measure). 2. Describe functional range of motion.

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APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
	Sensory response 1. Perform tests of superficial sensation (coarse touch, light touch, cold, heat, pain, pressure, and/or vibration). 2. Check peripheral nerve integrity (sensation, strength). Vital signs 1. Monitor and determine cardiovascular function (e.g. peripheral pulses, blood pressure, heart rate). 2. Monitor and determine physiological responses to position change (e.g. orthostatic hypotension, skin color, blood pressure, and heart rate). 3. Monitor and determine respiratory status (e.g. pulse oximetry, rate, and rhythm, pattern). 2. Provide timely communication to the physical therapist regarding findings of data collection techniques. 3. Recognize when intervention should not be provided or should be modified due to change in patient status.
Documentation • **Select relevant information** • **Accuracy** • **Ability to adapt**	1. Document in writing/electronically patient care using language that is accurate, complete, legible, timely, and consistent with institutional, legal, and billing requirements. 2. Use appropriate grammar, syntax, and punctuation in communication. 3. Use appropriate terminology and institutionally approved abbreviations. 4. Use an organized and logical framework to document care. 5. Identify and communicate with the physical therapist when further documentation is required.
Safety, CPR, and Emergency Procedures • **Safety** • **Initiate emergency response system** • **CPR**	1. Ensure safety of self and others in the provision of care in all situations. 2. Initiate and/or participate in emergency life support procedures (simulated or actual). 3. Initiate and/or participate in emergency response system (simulated or actual). 4. Maintain competency in CPR. 5. Prepare and maintain a safe working environment for performing interventions (e.g., clear walkways, equipment checks, etc.).
Health Care Literature	1. Reads and understands the health care literature.
Education • **Colleagues** • **Aides, volunteers, peers, coworkers** • **Students** • **Community**	1. Instruct other members of the health care team, using established techniques, programs, and instructional materials, commensurate with the learning characteristics of the audience. 2. Educate colleagues and other health care professionals about the role, responsibilities, and academic preparation and scope of work of the PTA.
Resource Management • **Human** • **Fiscal** • **Systems**	1. Follow legal and ethical requirements for direction and supervision of other support personnel. 2. Select appropriate nonpatient care activities to be directed to support personnel. 3. Identify and eliminate obstacles to completing patient related duties. 4. Demonstrate efficient time management. 5. Provide accurate and timely information for billing and reimbursement purposes. 6. Adhere to legal/ethical requirements, including billing. 7. Maintain and use physical therapy equipment effectively.

APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
Behavioral Expectations • **Accountability** • **Altruism** • **Compassion and caring** • **Cultural competence** • **Duty** • **Integrity** • **Social responsibility**	Accountability 1. Adhere to federal and state legal practice standards and institutional regulations related to patient care and fiscal management. 2. Act in a manner consistent with the *Standards of Ethical Conduct for the Physical Therapist Assistant* and *Guide for Conduct of the Physical Therapist Assistant.* 3. Change behavior in response to understanding the consequences (positive and negative) of the physical therapist assistant's actions. Altruism 1. Place the patient/client's needs above the physical therapist assistant's self-interests. Compassion and caring 1. Exhibit compassion, caring, and empathy in providing services to patients; promote active involvement of the patient in his or her care. Cultural competence 1. Identify, respect, and act with consideration for the patient's differences, values, preferences, and expressed needs in all physical therapy activities. Duty 1. Describe and respect the physical therapists' and other team members' expertise, background, knowledge, and values. 2. Demonstrate reliability in meeting normal job responsibilities (e.g. attendance, punctuality, following direction). 3. Preserve the safety, security, privacy, and confidentiality of individuals. 4. Recognize and report when signs of abuse/neglect are present. 5. Actively promote physical therapy. Integrity 1. Demonstrate integrity in all interactions. 2. Maintain professional relationships with all persons. Social responsibility 1. Analyze work performance and behaviors and seek assistance for improvement as needed.
Communication	Interpersonal communication 1. Develop rapport with patients/clients and others to promote confidence. 2. Actively listen and display sensitivity to the needs of others. 3. Ask questions in a manner that elicits needed responses. 4. Modify communication to meet the needs of the audience, demonstrating respect for the knowledge and experience of others. 5. Demonstrate congruence between verbal and nonverbal messages. 6. Recognize when communication with the physical therapist is indicated. 7. Initiate and complete verbal and written communication with the physical therapist in a timely manner. 8. Ensure ongoing communication with the physical therapist for optimal patient care. 9. Recognize role and participate appropriately in communicating patient status and progress within the health care team.

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APTA MINIMUM REQUIRED SKILLS OF PTA GRADUATES AT ENTRY LEVEL

PTA Skill Category	Description of Minimum Skills for PTA
	Conflict management/negotiation 1. Recognize potential for conflict. 2. Implement strategies to prevent and/or resolve conflict. 3. Seek resources to resolve conflict when necessary.
Promotion of Health, Wellness, and Prevention	1. Demonstrate health-promoting behaviors. 2. Recognize opportunities to educate the public or patients about issues of health, wellness, and prevention (e.g. benefits of exercise, prevention of falls, etc.) and communicate opportunity to the physical therapist. 3. Educate the public or patients about issues of health, wellness, and prevention (e.g. benefits of exercise, prevention of falls, etc.). 4. Recognize patient indicators of willingness to change health behaviors and communicate to the physical therapist.
Career Development	1. Engage in self-assessment. 2. Identify individual learning needs to enhance role in the profession. 3. Identify and obtain resources to increase knowledge and skill. 4. Engage in learning activities (e.g. clinical experience, mentoring, skill development). 5. Incorporate new knowledge and skill into clinical performance.

The PTA cannot evaluate, develop, or change the POC or the treatment plan, and cannot write a discharge plan or a summary.[39] Furthermore, the APTA has a position that the PTA cannot perform joint mobilization techniques and sharp debridement wound therapy because it requires evaluative skills during the application of the intervention. Some PTs choose to allow PTAs who have the appropriate knowledge and skills to perform these interventions. And while it is not mandated as a minimum skill of PTA graduates, many PTA programs teach the basics of joint mobilization with the understanding that some clinical practice sites expect PTAs to perform these interventions. States' physical therapy practice acts differ in regard to the PTA's responsibilities and may prohibit or allow different skills, including joint mobilization.

THE PHYSICAL THERAPIST'S RESPONSIBILITIES IN THE CLINICAL SETTING

The PT integrates the five elements of patient/client management to optimize patient/client outcome(s). These five elements are examination, evaluation, diagnosis, prognosis, and intervention. The PT's POC may involve having the PTA assist with selected interventions. The PT is responsible for directing and supervising the PTA consistent with the APTA's House of Delegates positions (Direction and Supervision of the Physical Therapist Assistant[39]). All selected interventions are directed and supervised by the PT. Also, there should be ongoing communication regarding the patient/client's care between the PT and the PTA.

Regardless of the setting in which the services are provided, while supervising the PTA, the APTA has established that the PT has the following responsibilities:[39]

- Referral interpretation
- Initial examination, evaluation, diagnosis, and prognosis
- Development or modification of a POC based on the initial examination and reexamination; the POC includes the physical therapy goals and outcomes.
- Determination of when the expertise and decision-making capability of the PT requires the PT to personally administer physical therapy interventions and when it may be appropriate to utilize the PTA. A PT must determine the most appropriate use of the PTA in order to provide safe, effective, and efficient physical therapy services.
- Reexamination of the patient/client considering the patient/client's goals and revision of the POC

- Establishment of the discharge plan and documentation of discharge summary/status
- Oversight of all documentation for physical therapy services rendered to each patient/client

Ultimately, the PT remains responsible for the physical therapy services provided when the PT's POC involves the PTA assisting with selected interventions. When determining the appropriate extent of assistance from the PTA, the PT must consider the following:[39]

- The PTA's education, training, experience, and skill level
- Patient/client stability, criticality, acuity, and complexity
- The predictability of the consequences
- The type of setting in which physical therapy services are provided
- Liability and risk management concerns
- Federal and state statutes
- The mission of physical therapy services for that specific clinical setting
- The needed frequency of reexamination

The APTA's recommendations for ongoing communication between the supervising PT and the PTA in off-site settings may include the following actions:[39]

- The supervising PT must be accessible by telecommunications to the PTA at all times while the PTA is treating patients/clients. This requirement is dependent on the jurisdiction of the clinical site. Some jurisdictions require general supervision whereas others require direct, on-site supervision.
- There must be regularly scheduled and documented conferences between the supervising PT and the PTA regarding patients/clients. The frequency of these conferences must be determined by the needs of the patient/client and the needs of the PTA. In those situations in which a PTA is involved in the care of a patient/client, a supervisory visit by the PT will be made for the following reasons:
  - Upon the PTA's request for a patient's reexamination
  - When a change in the POC is needed
  - Prior to any planned discharge
  - In response to a change in the patient/client's medical status
  - At least once a month, or at a higher frequency when established by the supervising PT, in accordance with the needs of the patient/client

A supervisory visit should include the following: an on-site reexamination of the patient/client, an on-site review of the POC with appropriate revision or termination, and an evaluation of need and recommendation for use of outside resources.

THE COLLABORATION PATH BETWEEN THE PHYSICAL THERAPIST AND THE PHYSICAL THERAPIST ASSISTANT

There is a collaborative path between the PT and the PTA that allows appropriate communication and patient care. This collaborative path includes the following steps:

1. The PT performs the initial examination of the patient/client. During the examination, the PTA helps the PT by gathering specific data that the PT requested. The PTA accepts the delegated tasks within the limits of his or her capabilities and also considering legal, jurisdictional, and ethical circumstances and principles. Although the PTA cannot perform the initial examination and evaluation, he or she may take notes and help gather some data as requested by the PT. Taking notes should not compromise the decision-making process of the PT, the integrity of the evaluation, or the establishment of the POC.
2. The PT performs the initial evaluation of the patient/client by comprehensively assessing all the results of the initial examination. The PT assesses the examination data to make a judgment about the data value. This is called evaluating. The PTA is not involved in this process. The PTA does not interpret the results of the initial examination.
3. The PT establishes a diagnosis by organizing the examination data into defined clusters, syndromes, or categories to be able to determine the prognosis, including the POC. The PTA is not involved in this process.
4. The PT determines the patient/client's prognosis (level of optimal improvement) that may be obtained

through specific interventions; the PT also decides the necessary amount of time, frequency, and types of interventions required to reach the patient/client's optimal level. The PTA is not involved in this process.

5. The PT establishes the goals/outcomes to be accomplished by the POC and the plan for interventions. The PT creates a POC to use various physical therapy procedures and techniques to produce changes in the patient/client's condition.
6. The PT performs the patient/client's interventions, delegating selected patient/client interventions to the PTA.
7. The PTA performs the selected patient/client interventions as directed by the PT. There is established, ongoing communication between the PT and the PTA.
8. The PTA may perform data collection during the course of the patient/client's interventions to record patient/client's progress or lack of progress since the initial examination and evaluation. The PTA may ask the PT for a reexamination. The PTA's utilization and understanding of problem solving is an integral part of patient care. The APTA has developed a Decision Making Algorithm that can assist the PTA in developing this skill. The Algorithm can be located in Appendix E.
9. The PT performs the reexamination and establishes new patient/client outcomes and POC.
10. The PT performs patient/client's new interventions. The PT delegates to the PTA selected new patient/client interventions.
11. The PTA performs new patient/client interventions as directed by the PT. There is again established, ongoing communication between the PT and the PTA.
12. The PT performs the discharge examination and evaluation of the patient/client when the outcomes are met. Just as with the initial examination, the PTA can gather examination data that can be utilized by the PT in the discharge evaluation.

The preferred collaborative relationship between the PT and the PTA is characterized by trust, mutual respect, and value and appreciation for individual and cultural differences. In this relationship, the PTA's role is to offer suggestions, provide feedback, carry out agreed-upon delegated activities, and freely express concerns to the PT about clinical issues or other difficulties. The PT and the PTA modify communication to effectively treat patients, collaborate as team members, ensure a continuum of care in all settings, and educate patients, families, caregivers, other health care providers, and payers. The mechanisms for effective communication and feedback between the PT and the PTA relating to patient/client care include:

- Discussion of the goals and expectations for the patient
- Frequent and open communication
- Information on response to patient care
- Recommendations for discharge planning
- Discussion of modifications of a POC established by the PT
- Recommendations from other disciplines
- Considerations of precautions, contraindications, or other special problems included in the interventions

The PT is the administrator and supervisor of the clinical services and the PTA can assist with delegated clinical services or administrative tasks.

DIFFERENCES IN SUPERVISION REQUIREMENTS FOR PHYSICAL THERAPIST ASSISTANTS

PTs are licensed providers in all states and PTAs are licensed providers in the majority of states. In regard to supervision, the PTs and PTAs are governed by their state's specific physical therapy practice act. Some states have more stringent standards of supervision than other states. In all situations, the PTs and PTAs must comply with their state practice act. The state-specific practice act dictates the number of assistive personnel (including PTAs) that the PT can supervise. For example, in Arizona one PT can supervise three PTAs, whereas in Kansas he or she can supervise four and in Iowa only two. The majority of states limit the number of personnel a PT can supervise.

In addition, there are supervision requirements for PTAs that relate to the type of insurance that reimburses physical therapy services, such as Medicare, and the types of setting, such as outpatient or inpatient departments, home health agencies, private facilities, and others. For example, in certain settings (reimbursed by Medicare) such as home health agencies (HHA), physical therapy services can be performed safely and effectively under the "general" supervision of a PT. This type of supervision means the PT need not always be present on the premises when the PTA is delivering physical therapy services. However, this Medicare rule for HHAs may be superseded by a specific state physical therapy practice act.

Another example of Medicare supervision for PTAs is the "direct" form of supervision, which takes place in the office of a PT in private practice (PTPP). This means that the supervising PT (who owns his or her physical therapy practice) must always be physically present in the office suite at the time physical therapy services are provided by PTAs (and other PTs). For more information, PTAs must consult the Medicare supervision requirements (at www.apta.org) and their state practice act.

The Health Care Team and the Rehabilitation Team

As health care professionals and providers, PTs and PTAs always work together with other professionals and providers. Typically, this collaborative effort between disciplines involves the health care team and the rehabilitation team.

HEALTH CARE TEAM

The health care team is a group of equally important individuals with a common interest: collaborating to develop common goals and building trusting relationships to achieve these goals. Members of the health care team are the patient/client, family member(s), caregiver(s), various health care professionals involved in the patient/client's care, and insurance companies. The patient/client, the patient/client's family, and the caregiver(s) are extremely important in the team. To work effectively as a team, the members of the health care team must be committed to the goals of the team and of the patient. They must address all the patient's medical needs. Team members must communicate effectively with each other, sharing a common language of care, respect, dedication, and teamwork. All members must also show leadership skills to be able to effectively work together and help the patient/client placed in their care.

There are three types of health care teams: intradisciplinary, multidisciplinary, and interdisciplinary. **Intradisciplinary team** members work together within the same discipline. Other disciplines are not involved. An example of such a team is the PT and the PTA working in a home health care physical therapy practice when other services are not necessary. Although the members collaborate effectively, this team is not the most efficient type because only one discipline is involved. This means the patient/client has only one type of care.

In a **multidisciplinary team**, members work separately and independently in their different disciplines. They do not meet or try to collaborate with each other. The members' allegiance is mostly geared toward their particular discipline. Sometimes, competition between members may develop. An example of such a team may be different medical specialties trying to evaluate a patient for a specific pathology having very little communication with each other. The lack of communication and cooperation between the members of the multidisciplinary team may cause problems for the patient/client. For example, the patient/client's final diagnosis may be controversial because some members of the team have a competitive approach and limited consultation. This is not the most effective team approach; however, its success depends on the members of the team.

Contrary to the first two teams, the **interdisciplinary team** members work together within all disciplines to set goals relevant to a patient/client's individual case. All the members collaborate in decision making; however, the evaluations and interventions are done independently. An example of such an interdisciplinary team would be health care members working together in a skilled nursing facility (SNF). In such a facility, members from different disciplines meet, exchange information, and try to understand each other's discipline in order to help the patients. The outcomes and the goals are team-directed, and not bound to a specific discipline. This team is the most efficient and most successful in regard to a patient's outcomes.

REHABILITATION TEAM

The rehabilitation team may include the PT, the PTA, the occupational therapist, the certified occupational therapist

assistant, the SLP, the certified orthotist and prosthetist, the kinesiologist, the primary care physician (a medical doctor such as a physiatrist and/or a doctor of osteopathy or other specialty/physician who is concurrently treating the patient), the physician assistant, the registered nurse, the social worker, and the certified athletic trainer. It may also include the physical therapy aide, the physical therapy volunteer, the PT or the PTA student, and the home health aide.

Physical Therapy Director

The rehabilitation team also includes the physical therapy director (who may also be called the physical therapy manager or physical therapy supervisor). The physical therapy director may be an experienced PT or PTA (with knowledge and experience beyond entry level) who manages and supervises a physical therapy department. He or she is in charge of the functions of the department, the responsibilities of all members of the department, and the relationships of all personnel in the department.

The physical therapy director has to make sure that the department's policies and procedures are applied efficiently and that goals and strategic planning are set for the department. The director also has clinical knowledge and skills plus abilities in administration, education, leadership, and other areas. He or she has the responsibility to:

- Motivate subordinates
- Communicate effectively with supervisors
- Impartially evaluate staff and give feedback
- Educate all employees
- Interview new personnel and help their development of skills
- Delegate tasks to appropriate staff

Physical Therapist

As a member of the rehabilitation team, the PT clinician is a skilled health care professional with a postbaccalaureate degree (doctorate—Doctor in Physical Therapy). The APTA considers attainment of a postbaccalaureate as the minimum professional education qualification for PTs who graduated from a CAPTE-accredited program after 2003.

As of 2014, almost all PT postbaccalaureate degrees were from Doctor of Physical Therapy (DPT) programs.[37] As per the APTA, the DPT is a postbaccalaureate degree conferred upon successful completion of a doctoral-level professional (entry-level) or postprofessional education program. The transition to the regulatory designation of "DPT" was adopted by the 2014 House of Delegates. This transition will require changes in the practice acts of all states by the year 2025.[32] After graduation, and following successful performance on the National Physical Therapy Examination, every PT is licensed (or registered) by each state or jurisdiction where he or she practices. As a member of the rehabilitation team, the PT is responsible for the patient/client's:

- Screening
- Evaluation
- Diagnosis
- Prognosis
- Intervention
- Education
- Prevention of injury and disease
- Coordination of care
- Referral to other providers

The PT also must prevent or decrease the patient/client's impairments, functional limitations, and disabilities and achieve cost-effective clinical outcomes.

The responsibilities of PTs are various and complex. They provide services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease. They restore, maintain, and promote overall fitness and health. During their daily practice, PTs examine patients' medical histories and then test and measure the patients' strength, range of motion, balance and coordination, posture, muscle performance, respiration, and motor function. They also determine patients' abilities to be independent and reintegrate into the community or workplace after injury or illness. Furthermore, PTs develop treatment plans describing a treatment strategy, its purpose, and its anticipated outcome. For example, in regard to treatments, PTs encourage patients to use their own muscles to increase their flexibility and range of motion before finally advancing to other exercises that improve strength, balance, coordination, and endurance.

The PT's treatment goal is to improve the individual's functions at work and at home. During interventions, PTs also may use electrical stimulation, hot packs or cold compresses, and ultrasound to relieve pain and reduce swelling. They may use traction or deep-tissue massage or other myofascial release (as a form of manual therapy) to alleviate soreness and tenderness of the muscles.

PTs also educate patients, clients, families of patients/clients, and caregivers on how to:

- Use assistive and adaptive devices, such as crutches, prostheses, and wheelchairs
- Perform home exercise programs
- Help facilitate patient independence at home, work, and/or play
- Prevent disease, and promote wellness and healthy behaviors

As treatment continues, PTs document the patient's progress, conduct periodic examinations, and modify treatments as necessary. PTs are also teachers in colleges and universities and perform research contributing to evidence-based physical therapy practice.

According to the U.S. Department of Labor, Bureau of Statistics, "employment of physical therapists is expected to grow by 36 percent from 2012 to 2022, much faster than the average for all occupations."[39] Over the long run, the demand for PTs should continue to rise as the increase in the number of individuals with disabilities or limited function spurs demand for therapy services. The growing elderly population is particularly vulnerable to chronic and debilitating conditions that require therapeutic services. Also, the baby boomer generation is entering the prime age for heart attacks and strokes, increasing the demand for cardiac and physical rehabilitation. Young people will need physical therapy as technological advances save the lives of a larger proportion of newborns with severe birth defects. Future medical developments also should permit a higher percentage of trauma victims to survive, creating additional demand for rehabilitative care. Employment growth in the physical therapy field may also result from advances in medical technology that would permit the treatment of more disabling conditions. In addition, widespread interest in health promotion should increase demand for physical therapy services. A growing number of employers are using PTs to evaluate worksites, develop exercise programs, and teach safe work habits to employees in the hope of reducing injuries.

Physical Therapist Assistant

The PTA is a technically educated health care provider who assists the PT in the provision of physical therapy. The PTA is a graduate of a PTA educational program accredited by CAPTE earning an associate degree from a technical or community college, college, or university. Following successful

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performance on the National Physical Therapy Examination (NPTE), administered by the Federation of State Boards of Physical Therapy (FSBPT), every PTA is licensed by each state or jurisdiction where he or she practices.

The PTA is an important member of the rehabilitation team. As discussed earlier, the PT is directly responsible for the actions of the PTA related to patient/client management. The PTA may perform selected physical therapy interventions under the direction and at least general supervision of the PT. The PT can determine the most appropriate use of the PTA to provide delivery of services in a safe, effective, and efficient manner.

PTAs perform a variety of tasks. These treatment procedures, performed under the direction and supervision of PTs, include the following:

- Therapeutic exercises
- Therapeutic massages
- Therapeutic modalities such as electrical stimulation, paraffin baths, hot and cold packs, traction, and ultrasound
- Patient/caregiver/family education

PTAs also record the patient's responses to treatment, and report the outcome of each treatment to the PT.

In addition to clinical practice, PTAs may work in PTA educational programs. They act as program directors, instructors and clinical instructors. They provide students with an appropriate role model of the PT–PTA relationship.

According to the U.S. Department of Labor, Bureau of Statistics, employment of PTAs is expected to grow "by 41 percent from 2012 to 2022, much faster than the average for all occupations."[40] The reasons for growth are similar to those for PTs: the increase in the number of individuals with disabilities or limited function, the growing elderly population vulnerable to chronic and debilitating conditions that require therapeutic services, and the large baby boomer generation in need of rehabilitation. In addition, future medical developments would also create demand for physical therapy services.

Occupational Therapist

The licensed (or registered) **occupational therapist** (OTR/L) is a skilled health care professional having a doctorate or master's degree. All states, Puerto Rico, and the District of Columbia regulate the practice of occupational therapy; however, specific eligibility requirements for licensure vary by state. To obtain a license, applicants must graduate from an accredited educational program and pass a national certification examination. The occupational therapists who pass the exam are awarded the title occupational therapist registered (OTR) or occupational therapist licensed (OTL).

Occupational therapists (OTs) help people improve their ability to perform tasks in their daily living and working environments. They work with individuals who have conditions that are mentally, physically, developmentally, or emotionally disabling. They also help these individuals to develop, recover, or maintain daily living and work skills. OTs help patients and clients not only to improve their basic motor functions and reasoning abilities, but also to compensate for permanent loss of function. OTs' areas of expertise include the following:

- Patient education and training in activities of daily living (ADLs)
- Development and fabrication of orthoses (splints)
- Training, recommendation, and selection of adaptive equipment (such as a long-arm shoehorn)
- Therapeutic activities for a patient/client's functional, cognitive, or perceptual abilities
- Consultation in adaptation of the environment for a physically challenged patient/client

OTs also use computer programs to help patients/clients improve decision-making, abstract-reasoning, problem-solving, and perceptual skills, as well as memory, sequencing, and coordination. All of these skills are important for independent living. OTs instruct those with permanent disabilities, such as spinal cord injuries, cerebral palsy, or muscular dystrophy, in the use of adaptive equipment, including wheelchairs, splints, and aids for eating and dressing. They also design or make special equipment needed at home or at work. Some OTs treat individuals whose ability to function in a work environment has been impaired. These practitioners arrange employment, evaluate the work environment, plan work activities, and assess the client's progress. OTs also may collaborate with the client and the employer to modify the work environment so that the client's work can be successfully completed.

OTs may work exclusively with individuals in a particular age group or with particular disabilities. In schools, for example, they evaluate children's abilities, recommend and provide therapy, modify classroom equipment, and help children participate as fully as possible in school programs and activities. OTs in mental health settings treat individuals who are mentally ill, mentally retarded, or emotionally disturbed. OTs also may work with individuals who are dealing with alcoholism, drug abuse, depression, eating disorders, or stress-related disorders. Assessing and recording a client's activities and progress is an important part of an OT's job. Accurate records are essential for evaluating patients and clients, for billing, and for reporting to physicians and other health care providers. In addition, OTs are specializing in new practices such as driver rehabilitation and fall-prevention training for the elderly.

According to the U.S. Department of Labor, Bureau of Statistics, the largest number of OTs' jobs have been in acute hospitals, rehabilitation centers, and orthopedic settings.[40] Other major employers are offices of other health practitioners (which include offices of OTs), public and private educational services, and nursing care facilities. Some OTs are employed by home health care services, outpatient care centers, offices of physicians, individual and family services, community care facilities for the elderly, and government agencies. A small number of OTs are self-employed in private practice.

Similar to physical therapy, "employment of occupational therapists is expected to increase by 29 percent between 2012 and 2022, much faster than the average for all occupations."[40] The baby boomer generation's movement into middle age and the growth in the population

75 years or older will increase the demand for occupational therapy services. Hospitals will continue to employ a large number of OTs to provide therapy services to acutely ill inpatients. Hospitals also will need OTs to staff their outpatient rehabilitation programs. Employment growth in schools will result from the expansion of the school-age population and extended services for disabled students. OTs will be needed to help children with disabilities prepare to enter special education programs.

Occupational Therapy Assistant

Occupational therapy assistants generally must complete an associate degree or a certificate program from an accredited community college or technical school. Occupational therapy assistants are regulated in most states and must pass a national certification examination after they graduate. Those who pass the test are awarded the title of certified occupational therapy assistant (COTA). The COTA's duties do not include patient evaluation and establishment or revision of a POC. The COTA's areas of practice are in a patient/client's functional deficits of dressing, grooming, personal hygiene, and housekeeping.

The supervisory relationship of the OTR/L and the COTA follow similar guidelines to the supervisory relationship between the PT and the PTA. Occupational therapy assistants work under the direction of occupational therapists to provide rehabilitative services to persons with mental, physical, emotional, or developmental impairments. The ultimate goal is to improve patients/clients' quality of life and ability to perform daily activities. For example, occupational therapy assistants help injured workers reenter the labor force by teaching them how to compensate for lost motor skills; COTAs also help individuals with learning disabilities increase their independence. Occupational therapy assistants help patients/clients with rehabilitative activities and exercises outlined in a treatment plan developed in collaboration with an occupational therapist. Activities range from teaching the proper method of moving from a bed into a wheelchair to the best way to stretch and limber the muscles of the hand. Occupational therapy assistants monitor an individual's activities to make sure they are performed correctly and to provide encouragement. They also record their patient/client's progress for the occupational therapist. In addition, occupational therapy assistants document the billing of the client's health insurance provider.

According to the U.S. Department of Labor, Bureau of Statistics, occupational therapy assistants work in hospitals, offices of other health practitioners (which includes offices of occupational therapists), and nursing care facilities.[40] Some occupational therapy assistants work in community care facilities for the elderly, home health care services, individual and family services, and state government agencies. As per the U.S. Department of Labor, "from 2012 to 2022, employment of occupational therapist assistants is expected to grow by 41 percent, much faster than the average for all occupations."[40] The demand for occupational therapy assistants will continue to rise, due to growth in the number of individuals with disabilities or limited function. Job growth will result from an aging population, which will need more occupational therapy services. Third-party payers, concerned with rising health care costs, are expected to encourage occupational therapists to delegate more hands-on therapy work to occupational therapy assistants.

Speech-Language Pathologist

The speech-language pathologist (SLP) or speech therapist is a skilled health care professional who has a master's degree in speech pathology (including 9 months to 1 year of clinical experience). The SLP needs to pass a national examination to obtain the certification of clinical competence to practice speech and language pathology. The national examination on speech-language pathology is offered through the Praxis Series of the Educational Testing Service (ETS).

Medicaid, Medicare, and private health insurers generally require a SLP practitioner to be licensed to qualify for reimbursement. All states regulate SLPs through licensure or registration. SLPs can also acquire the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP) offered by the American Speech-Language-Hearing Association. To earn a CCC, a person must have a graduate degree and 375 hours of supervised clinical experience, complete a 36-week postgraduate clinical fellowship, and pass the Praxis Series examination in speech-language pathology administered by the ETS.

SLPs assess, diagnose, treat, and help to prevent speech, language, cognitive, communication, voice, swallowing, fluency, and other related disorders. The SLP's general area of practice is to restore or improve communication of patients with language and speech impairments. In the rehabilitation team, the SLP works closely with the

PT, PTA, OTR/L, and COTA to correct a patient's swallowing and cognitive deficits. SLPs work with people who cannot make speech sounds, or cannot make them clearly; those with speech rhythm and fluency problems, such as stuttering; people with voice quality problems, such as inappropriate pitch or harsh voice; those with problems understanding and producing language; those who wish to improve their communication skills by modifying an accent; those with cognitive communication impairments, such as attention, memory, and problem-solving disorders; and those with hearing loss who use hearing aids or cochlear implants in order to develop auditory skills and improve communication. SLPs use written and oral tests, as well as special instruments, to diagnose the nature and extent of impairment and to record and analyze speech, language, and swallowing irregularities.

SLPs develop an individualized POC tailored to each patient's needs. For individuals with little or no speech capability, SLPs may select augmentative or alternative communication methods, including automated devices and sign language, and teach their use. They teach these individuals how to make sounds, improve their voices, or increase their language skills to communicate more effectively. SLPs help patients develop, or recover, reliable communication skills so patients can fulfill their educational, vocational, and social roles.

Most SLPs provide direct clinical services to individuals with communication or swallowing disorders. In speech and language clinics, they may independently develop and carry out treatment programs. SLPs in schools develop individual or group programs, counsel parents, and may assist teachers with classroom activities. SLPs keep records on the initial evaluation, progress, and discharge of clients. This helps pinpoint problems, tracks client progress, and justifies the cost of treatment when applying for reimbursement. They counsel individuals and their families concerning communication disorders and how to cope with the stress and misunderstanding that often accompany them. They also work with family members to recognize and change behavior patterns that impede communication and treatment and show them communication-enhancing techniques to use at home. Some SLPs conduct research on how people communicate. Others design and develop equipment or techniques for diagnosing and treating speech problems.

According to the U.S. Department of Labor, Bureau of Statistics, SLPs work in educational services, including preschools, elementary and secondary schools, and colleges and universities.[40] Others work in hospitals; the offices of other health practitioners, including SLPs; nursing care facilities; home health care services; individual and family services; outpatient care centers; child day care services; or other facilities. A few SLPs are self-employed in private practice. They contract to provide services in schools, offices of physicians, hospitals, or nursing care facilities, or work as consultants to industry. As per the U.S. Department of Labor office, "the employment of speech-language pathologists is expected to grow by 19 percent from 2012 to 2022, faster than the average for all occupations."[40] The reasons for this growth may be the members of the baby boomer generation having problems associated with speech, language, swallowing, and hearing impairments, and the high survival rate of premature infants and trauma and stroke victims, whose speech or language may need assessment and possible treatment. Many states now require that all newborns be screened for hearing loss and receive appropriate early intervention services. Employment of SLPs in educational services will increase along with growth in elementary and secondary school enrollments, including enrollment of special education students.

Orthotist and Prosthetist

Both orthotists and prosthetists are important members of the rehabilitation team. They work closely with orthopedic surgeons, physicians from many disciplines, and physical and occupational therapy practitioners. As per the U.S. Department of Labor, "orthotists and prosthetists can fit and prepare orthopedic braces and prosthetic devices for patients/clients who have disabilities of limbs or spine" (including partial or total absence of the limb).[40] In regard to educational requirements, orthotists and prosthetists must complete an accredited bachelor degree program and 1 year of residency in prosthetics and orthotics. Certification as orthotists or prosthetists is available through the American Board for Certification in Orthotics and Prosthetics. The certified orthotist designs, fabricates, and fits patients with orthoses prescribed by the physician. The orthoses can be braces, splints, cervical collars, and corsets. The certified prosthetist designs, fabricates, and fits prostheses for patients with partial or total loss of limb(s). Both prosthetists and orthotists are responsible for making any modifications and alignments of the prosthetic limbs and orthotic braces, evaluating the patients' progress, keeping accurate records on each patient, and teaching

the patients how to care for their prosthetic or orthotic devices. Prosthetists and orthotists work in private practice laboratories, hospitals, or government agencies.

Kinesiologist

Kinesiologists are individuals who complete a bachelor or master degree in the study of human movement who try to improve the efficiency and performance of the human body in sports, at work, and during ADLs. Kinesiologists work closely with PTs and PTAs to help patients/clients in specific areas of exercise, biomechanics, psychomotor skills, and the workplace environment. In regard to exercise kinesiology, the kinesiologist will work with the PT to assess and monitor a patient/client's response to exercises. Based on data analysis (from an assessment such as the patient/client's ambulation on a treadmill in cardiac rehabilitation), the PT may ask the kinesiologist to create an exercise program individually designed for the patient. Biomechanics kinesiologists can also collaborate with PTs and prosthetists to improve and maximize prosthetic devices during patient/client ambulation (walking) with a prosthetic limb. A psychomotor kinesiologist will cooperate with physical therapy in the area of neurological impairments that cause motor learning impairments to patients/clients. A kinesiologist in the workplace environment performs workplace and ergonomic analysis together with physical therapy for enhancement of patients/clients' body mechanics and positioning. Some kinesiologists may also coach or train amateur/professional athletes. Others with doctoral degrees (PhD) may teach or be involved in research activities at different universities.

Primary Care Physician

The primary care physician (PCP) is a medical doctor (MD) or an osteopathic doctor (DO). The PCP provides primary care services and manages routine health care needs. Although both MDs and DOs may use all accepted methods of treatment, including drugs and surgery, DOs place special emphasis on the body's musculoskeletal system, preventive medicine, and holistic patient care. DOs are more likely than MDs to be primary care specialists, although they can be found in all specialties. About half of DOs practice general or family medicine, general internal medicine, or general pediatrics. The PCP acts as the "gatekeeper" for patients covered under managed health care systems (such as an HMO), authorizing referrals to other specialties or services including physical therapy.

In general, physicians diagnose illnesses and prescribe and administer treatment for people suffering from injury or disease. They examine patients, obtain medical histories, and order, perform, and interpret diagnostic tests. They counsel patients on diet, hygiene, and preventive health care.

It takes many years of education and training to become an MD: 4 years of undergraduate school, 4 years of medical school, and between a range of 3 to 8 years of internship and residency, depending on the specialty selected. A few medical schools offer combined undergraduate and medical school programs that last 6 years rather than the customary 8 years. The minimum educational requirement for entry into a medical school is 3 years of college; most applicants, however, have at least a bachelor degree, and many have advanced degrees. Acceptance to medical school is highly competitive. Applicants must submit transcripts, scores from the Medical College Admission Test, and letters of recommendation. Schools also consider applicants' character, personality, leadership qualities, and participation in extracurricular activities. Most schools require an interview with members of the admissions committee. Following medical school, almost all MDs enter a residency. Residency is a graduate medical education in a specialty that takes the form of paid on-the-job training, usually in a hospital. Most DOs serve a 12-month rotating internship after graduation and before entering a residency, which may last 2 to 6 years, being also dependent on the selected specialization.

All states, the District of Columbia, and U.S. territories license physicians. To be licensed, physicians must graduate from an accredited medical school, pass a licensing examination, and complete 1 to 7 years of graduate medical education. Although physicians licensed in one state usually can get a license to practice in another without further examination, some states limit reciprocity. Graduates of foreign medical schools generally can qualify for licensure after passing an examination and completing a U.S. residency. MDs and DOs seeking board certification in a specialty may spend up to 7 years in residency training, depending on the specialty. A final examination immediately after residency or after 1 or 2 years of practice also is necessary for certification by the American Board of Medical Specialists or the American Osteopathic Association. There are 24 specialty boards, ranging from allergy and immunology to urology.

In the rehabilitation team, there are five distinct physicians' specialties that PTs and PTAs may interact with the most: family and general practitioners, physiatrists, orthopedic surgeons, neurologists, and pediatricians. Family and general practitioners are often the first point of contact for people seeking health care, acting as the traditional family doctor. They assess and treat a wide range of conditions, ailments, and injuries, from sinus and respiratory infections to broken bones and scrapes. Family and general practitioners typically have a patient base of regular, long-term visitors. Patients with more serious conditions are referred to specialists or other health care facilities for more intensive care.

The physiatrist is a physician specializing in physical medicine and rehabilitation. Physiatrists treat a wide range of problems from sore shoulders to spinal cord injuries. They see patients in all age groups and treat problems that touch upon all the major systems in the body. These specialists focus on restoring function to people. They care for patients with acute and chronic pain and musculoskeletal problems such as back and neck pain, tendonitis, pinched nerves, and fibromyalgia. They also treat people who have experienced catastrophic events resulting in paraplegia, quadriplegia, or traumatic brain injury, and individuals who have had strokes, orthopedic injuries, or neurologic disorders such as multiple sclerosis, polio, or amyotrophic lateral sclerosis (ALS). Physiatrists practice in rehabilitation centers, hospitals, and private offices. They often have broad practices, but some concentrate on one area such as pediatrics, sports medicine, geriatric medicine, brain injury, or many other special interests.

Orthopedic surgeons are highly trained physicians who diagnose, treat, give medical advice, and perform surgery on people with bone and joint disorders including nerve impingement conditions of the spine and hip and knee injuries. They not only have a wide expertise in treating back and neck injuries, but also are often called upon to perform spinal surgeries, such as the removal of a disk. Orthopedic surgeons have one of the longest training periods of all doctors.

Neurologists are physicians skilled in the diagnosis and treatment of diseases of the nervous system including the brain. These doctors do not perform surgery; however, neurologists often help determine whether a patient is a surgical candidate. They are known to employ a wide variety of diagnostic tests such as nerve conduction studies, and are often called upon to make cognitive assessments and offer medical advice.

Providing care from birth to early adulthood, pediatricians are concerned with the health of infants, children, and teenagers. They specialize in the diagnosis and treatment of a variety of ailments specific to young people and track their patients' growth to adulthood. Most of the work of pediatricians involves treating day-to-day illnesses that are common to children such as minor injuries, infectious diseases, and immunizations. Some pediatricians specialize in serious medical conditions and pediatric surgery, treating autoimmune disorders or serious chronic ailments.

Physician Assistant

The physician assistant (PA) is a skilled health care professional with a baccalaureate degree or a postbaccalaureate degree from an accredited program. Most applicants to PA schools already have a baccalaureate degree. The PA is required to have 1 year of direct patient contact and to pass a national certification examination. All states and the District of Columbia have legislation governing the qualifications or practice of PAs. All jurisdictions require PAs to pass the Physician Assistants National Certifying Examination, administered by the National Commission on Certification of Physician Assistants (NCCPA) and is open to graduates of accredited PA education programs. Only those successfully completing the examination may use the credential "Physician Assistant—Certified."

The PA's responsibilities include therapeutic, preventive, and health maintenance services in settings where physicians practice. The PA works under the supervision and direction of a physician; however, PAs may be the principal care providers in rural or inner city clinics where a physician may be present for only one or two days per week. In such instances, the PA must discuss each patient's case with the supervising physician and other medical professionals as necessary. Similar to physicians, PAs may also evaluate and treat patients in hospitals and nursing homes. Nevertheless, they always must report back to and confer with the physician.

In most states, the PA is allowed to prescribe medications and to refer patients to medical and rehabilitation services including physical therapy. PAs are formally trained to provide diagnostic, therapeutic, and preventive health care services, as delegated by a physician. Working as members of the health care team, they take medical

histories, examine and treat patients, order and interpret laboratory tests and x-rays, make diagnoses, and prescribe medications. They also treat minor injuries by suturing, splinting, and casting. PAs record progress notes, instruct and counsel patients, and order or carry out therapy.

PAs also may have managerial duties. Some order medical and laboratory supplies and equipment and may supervise technicians and assistants. The duties of PAs are determined by the supervising physician and by state law. Many PAs work in primary care specialties, such as general internal medicine, pediatrics, and family medicine. Other specialty areas include general and thoracic surgery, emergency medicine, orthopedics, and geriatrics. PAs specializing in surgery provide preoperative and postoperative care and may work as first or second assistants during major surgery. In regard to opportunities for work, it is projected that "employment of PAs will grow by 38 percent from 2012 to 2022."[40]

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Registered Nurse

The registered nurse (RN) is a skilled health care professional who has graduated from an accredited program and is licensed by a state board after successful completion of a licensure examination. In all states and the District of Columbia, nursing students must graduate from an approved nursing program and pass a national licensing examination in order to obtain a nursing license. Nurses may be licensed in more than one state, either by examination, by the endorsement of a license issued by another state, or through a multistate licensing agreement. All states require periodic renewal of licenses, which may involve continuing education.

There are three major educational paths to registered nursing: a bachelor of science degree in nursing (BSN), an associate degree in nursing (ADN), and a diploma program. Most of the nursing educational programs offer degrees at the bachelor level that take about 4 years to complete. ADN programs, offered by community and junior colleges, take about 2 to 3 years to complete. Diploma programs, administered in hospitals, last about 3 years. Only a small and declining number of programs offer diplomas. Generally, licensed nursing graduates of any of the three types of educational programs qualify for entry-level positions as staff nurses. Registered nurses work to promote health, prevent disease, and help patients cope with illness. They are also advocates and health educators for patients, families, and communities. When providing direct patient care, they observe, assess, and record symptoms, reactions, and progress in patients; assist physicians during surgeries, treatments, and examinations; administer medications; and assist in convalescence and rehabilitation. RNs also develop and manage nursing care plans, instruct patients and their families in proper care, and help individuals and groups take steps to improve or maintain their health.

Although state laws govern the tasks that RNs may perform, it is usually the work setting that determines their daily job duties. There are several types of nurses: hospital nurses, office nurses, nursing care facility nurses, home health nurses, public health nurses, occupational health nurses (also called industrial nurses), head nurses (or nurse supervisors), nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse-midwives. Hospital nurses form the largest group of nurses. Most are staff nurses, who provide bedside nursing care and carry out medical regimens. Office nurses care for outpatients in physicians' offices, clinics, ambulatory surgical centers, and emergency medical centers. They prepare patients for, and assist with, examinations; administer injections and medications; dress wounds and incisions; assist with minor surgery; and maintain records. Some also perform routine laboratory and office work.

Nursing care facility nurses manage care for residents with conditions ranging from a fracture to Alzheimer's disease. Although they often spend much of their time on administrative and supervisory tasks, nursing care facility nurses also assess residents' health, develop treatment plans, supervise licensed practical nurses and nursing aides, and perform invasive procedures, such as starting intravenous fluids. They also work in specialty-care

departments, such as long-term rehabilitation units for patients with strokes and head injuries.

Home health nurses provide nursing services to patients at home. Home health nurses assess patients' home environments and instruct patients and their families in various areas of health related to their condition. Home health nurses care for a broad range of patients, such as those recovering from illnesses and accidents, cancer, and childbirth. They must be able to work independently and may supervise home health aides.

Public health nurses work in government and private agencies, including clinics, schools, retirement communities, and other community settings. They focus on populations, working with individuals, groups, and families to improve the overall health of communities. They also work with communities to help plan and implement programs.

Occupational health nurses, also called industrial nurses, provide nursing care at worksites to employees, customers, and others with injuries and illnesses. They give emergency care, prepare accident reports, and arrange for further care if necessary. They also offer health counseling, conduct health examinations and inoculations, and assess work environments to identify potential or actual health problems.

Head nurses or nurse supervisors direct nursing activities, primarily in hospitals. They plan work schedules and assign duties to nurses and aides, provide or arrange for training, and visit patients to observe nurses and to ensure that the patients receive proper care. They also may ensure that records are maintained and equipment and supplies are ordered.

At the advanced level, nurse practitioners provide basic, primary health care. They diagnose and treat common acute illnesses and injuries. Nurse practitioners also can prescribe medications. However, certification and licensing requirements vary by state. Other advanced practice nurses include clinical nurse specialists, certified registered nurse anesthetists, and certified nurse-midwives. Advanced practice nurses must meet educational and clinical practice requirements beyond the basic nursing education and licensing required of all RNs.

In the rehabilitation team, the RN is the primary liaison between the patient and the physician. The RN communicates to the physician changes in the patient's social and medical status, makes patient referrals (under the physician's direction) to other services, educates the patient and patient's family, and performs functional training such as ambulation or transfers with patients (after instruction from the PT or PTA). The RN also supervises other levels of nursing care such as the licensed practical nurses (LPNs), certified nursing assistants (CNAs), and home health aides.

It is projected that in general, between 2012 and 2022, the occupation of registered nurse is expected to offer over half a million jobs.[40] More new jobs are expected to be created for RNs than for any other occupation in the health care field. Thousands of job openings will result from the need to replace experienced nurses who leave the occupation, especially as the median age of the registered nurse population continues to rise. Faster-than-average growth will be driven by technological advances in patient care, which permit a greater number of medical problems to be treated, and an increasing emphasis on preventive care.[40] In addition, the number of older people, who are much more likely than younger people to need nursing care, is projected to grow rapidly. Employers in many parts of the country are reporting difficulty in attracting and retaining an adequate number of RNs, due primarily to an aging RN workforce and insufficient nursing school enrollments. Imbalances between the supply of and demand for qualified workers should spur efforts to attract and retain qualified RNs.

According to the U.S. Department of Labor, Bureau of Statistics, job opportunities for RNs are expected to be very good.[40] The U.S. Department of Labor indicates that "employment of registered nurses is expected to grow by 19 percent from 2012 to 2022."[40]

Social Worker

In general, a social worker needs a bachelor degree in social work (BSW) to qualify for a job. Although a bachelor degree is sufficient for entry into the field, a master's degree in social work (MSW) or a related field has become the standard for many positions. An MSW is typically required for positions in health care settings and for clinical work. Some social work jobs in public and private agencies also may require an advanced degree, such as a master's degree in social services policy or administration.

All states and the District of Columbia have licensing, certification, or registration requirements regarding social work practice and the use of professional titles. Although standards for licensing vary by state, a growing number of states are placing greater emphasis on communications

skills, professional ethics, and sensitivity to cultural diversity issues. Additionally, the National Association of Social Workers (NASW) offers voluntary credentials. Social workers with an MSW may be eligible for the Academy of Certified Social Workers (ACSW), the Qualified Clinical Social Worker (QCSW) credential, or the Diplomat in Clinical Social Work (DCSW) based on their professional experience. Credentials are particularly important for social workers in private practice. Some health insurance providers require social workers to have credentials in order to be reimbursed for services.

Social workers help people function optimally in their environment, deal with their relationships, and solve personal and family problems. Social workers often see clients who face a life-threatening disease or a social problem, such as inadequate housing, unemployment, serious illness, disability, or substance abuse. Social workers also assist families that have serious domestic conflicts, including those involving child or spousal abuse. Social workers often provide social services in health-related settings that are governed by managed care organizations. To contain costs, these organizations are emphasizing short-term intervention, ambulatory and community-based care, and greater decentralization of services.

Most social workers specialize. Although some conduct research or are involved in planning or policy development, most social workers prefer an area of practice in which they interact with clients. There are three classifications of social workers: child, family, and school social workers; medical and public social workers; and mental health and substance abuse social workers.

Child, family, and school social workers provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and academic functioning of children. They also advise teachers on how to cope with problem students. Some child, family, and school social workers may specialize in services for senior citizens. Child, family, and school social workers typically work in individual and family services agencies, schools, or state or local governments.

Medical and public health social workers provide persons, families, or vulnerable populations with the psychosocial support needed to cope with chronic, acute, or terminal illnesses, such as Alzheimer's disease, cancer, or AIDS. They also advise family caregivers, counsel patients, and help plan for patients' needs after discharge by arranging for at-home services ranging from Meals on Wheels to oxygen equipment. Medical and public health social workers may work for hospitals, nursing, and personal care facilities, individual and family services agencies, or local governments.

Mental health and substance abuse social workers assess and treat individuals with mental illness or substance abuse problems, including abuse of alcohol, tobacco, or other drugs. Such services include individual and group therapy, outreach, crisis intervention, social rehabilitation, and training in skills of everyday living. Mental health and substance abuse social workers are likely to work in hospitals, substance abuse treatment centers, individual and family services agencies, or local governments. These social workers may be known as clinical social workers.

According to the U.S. Department of Labor, Bureau of Statistics, social workers usually spend most of their time in an office or residential facility, but also may travel locally to visit clients, meet with service providers, or attend meetings.[40] To tend to patient care or client needs, many hospitals and long-term care facilities are employing social workers on teams with a broad mix of occupations, including clinical specialists, registered nurses, physical/occupational therapists, PTAs, COTAs, and health aides. Competition for social worker jobs is stronger in cities, where demand for services often is highest and training programs for social workers are prevalent. However, opportunities should be good in rural areas, which often find it difficult to attract and retain qualified staff. Job prospects may be best for those social workers with a background in gerontology and substance abuse treatment.

As per the U.S. Department of Labor, "employment of social workers is expected to increase by 19 percent during the 2012 to 2022 decade, which is faster than the average for all occupations."[40] The growth of social worker jobs will be in home health care services, nursing homes, long-term care facilities, hospices, assisted living communities, and senior communities. This projection is based on the expanding elderly population. Also, the employment of substance abuse social workers will grow rapidly over the 2012 to 2022 projection period. Substance abusers are increasingly being placed into treatment programs instead of being sentenced to prison. As this trend grows, demand will increase for treatment programs and social workers to assist abusers on the road to recovery.

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Certified Athletic Trainer

The certified athletic trainer (ATC) is a health care professional with a minimum of a baccalaureate degree who works mainly with sports injuries. Athletic trainers can become certified by the National Athletic Trainers' Association Board of Certification (NATABOC). The certification examination administered by NATABOC consists of a written portion with multiple choice questions, an oral/practical section that evaluates the skill components of the domains within athletic training, and a written simulation test, consisting of athletic training–related situations designed to approximate real-life decision making. When the athletic trainers pass the certification exam, they can use the designation Certified Athletic Trainer (ATC). Usually, the ATC works under the supervision of a physician, providing injury prevention, and treatment and rehabilitation to a patient after an injury. The ATC also can work in colleges and universities, secondary schools, private or hospital-based rehabilitation clinics, and professional athletic associations. As per the U.S. Department of Labor, "between 2012 and 2022, the job growth for athletic trainers will be at a rate of 19 percent."[40]

Physical Therapy Aide

The physical therapy aide is a nonlicensed worker specifically trained under the direction of a PT, or when allowable by law, under a PTA. The aide can function only if he or she is supervised directly (on-site) and continuously by the PT, or when permissible by law by the PTA. Direct personal supervision requires that the PT, or where allowable by law, the PTA, be physically present and immediately available to direct and supervise tasks that are related to patient/client management. The direction and supervision is continuous throughout the time these tasks are performed. The physical therapy aide can perform routine designated tasks related to the operation of physical therapy services such as patient transportation, equipment cleaning and maintenance, secretarial duties, or housekeeping duties. A physical therapy aide cannot perform tasks that require the clinical decision making of the PT or the clinical problem solving of the PTA. The APTA opposes certification or credentialing of physical therapy aides and does not endorse or recognize certification programs for physical therapy aides.

Physical Therapy Volunteer

The physical therapy volunteer is a member of the community interested in assisting physical therapy personnel with departmental activities. He or she may take telephone calls and messages, transport patients from their rooms to the rehabilitation department in acute care hospital settings, and file patients' charts. The volunteer cannot provide direct patient care.

Physical Therapist Student and Physical Therapist Assistant Student

PT and PTA students perform duties commensurate with their level of education. The PT or PTA clinical instructor (CI) is responsible for all actions and duties of the PT or PTA student in the clinical settings. The CI is a PT or PTA at the clinical site who directly instructs and supervises students during their clinical learning experiences. The CIs are responsible for facilitating clinical learning experiences and assessing students' entry-level performances. All students' documentation must be co-signed by the CI. The PTA cannot be a CI for a PT student, but can be a CI for a PTA student. Patients must be informed that they will be treated by a student and have the right to refuse treatment.

Home Health Aide

The home health aide (HHA) is a nonlicensed worker who provides personal care and home management services. Some HHAs are certified in their jurisdictions. The HHA assists the patient in his or her home setting with bathing, grooming, light housework, shopping, and cooking. After receiving instruction and supervision from the PT or the PTA, the HHA may provide supervision or assistance to a patient performing a home exercise program (HEP).

Discussion Questions

1. While working in a skilled nursing facility, the PTA has been asked to attend a care team meeting for a resident. Who will be attending the meeting and what role do they play on the team?
2. Utilizing Appendix E, review the Problem Solving Algorithm Utilized by PTAs in Patient/Client Intervention document. Discuss the role of the PT and PTA in clinical care.

Learning Opportunities

1. Utilizing the APTA webpage (www.apta.org), review the *Value-Based Behaviors for the Physical Therapist Assistant*. Locate the section PT/PTA Collaboration and create strategies to promote the PT/PTA relationship.
2. Interview a health care professional, such as a PT, OT, SLP, or SW. Create a class presentation about the function, role, and interactions of this health care professional.
3. Create a class presentation about who PTAs are and what they do.