

Introduction to Decision Making

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Physical therapist assistants, or PTAs, are not physical therapy technicians. The term technician suggests someone who is expert in the technical aspects of a task. Technicians read and execute orders. They are trained to be aware of contraindications and threats to safety and to act accordingly. Technicians are not called upon to make significant clinical decisions. PTAs, however, have greater responsibilities.

It is best to start this discussion by acknowledging that most of us are master decision makers. As our cognitive development proceeds, our decision-making capabilities improve. From deciding which toy to play with to what career to enter, from determining how to cross a busy street to choosing the most appropriate treatment modality, decision making is enhanced through cognitive maturation, experience, and learning. Amazingly, many of our more routine decisions appear to be made automatically, with seemingly little conscious thought or effort. In contrast, complex decisions require more deliberate thought. It is clear, however, that the process used for simple and routine decision making is no different from that used for more complex problems. This text will attempt to illuminate and operationalize decision-making processes that enhance clinical practice in physical therapy.

Let's examine how you probably made the decision to become a PTA. Someone may have advised you to consider entering the field. He or she likely made that decision by observing your behavior and personality and concluding that physical therapy was a good fit for you.

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You may have sought opportunities to observe physical therapy and PTAs in action. You may have compared your personal goals and desired lifestyle with a PTA's earning potential and other career factors to determine whether physical therapy was indeed right for you. You probably had to decide whether you possessed the appropriate science aptitude and caring attitude to succeed. Before making the final decision, you probably sketched out a plan—written or mental—as to how you could feasibly complete PTA educational requirements. After considering these and other factors, you then made the decision to become a PTA. Although you may not have engaged in this process in a steplike fashion, at some point during your career decision-making process you probably considered the factors mentioned. Your decision was based on: (1) understanding and setting goals, (2) analyzing personal needs and desires, (3) assessing limitations and strengths, (4) observing the environment, and (5) synthesizing a plan of action (**Figure 1.1**). These same factors (with some minor modifications) must be considered in clinical decision making.

In physical therapy, clinical decision making is a systematic process by which clinicians gather information, make judgments, establish

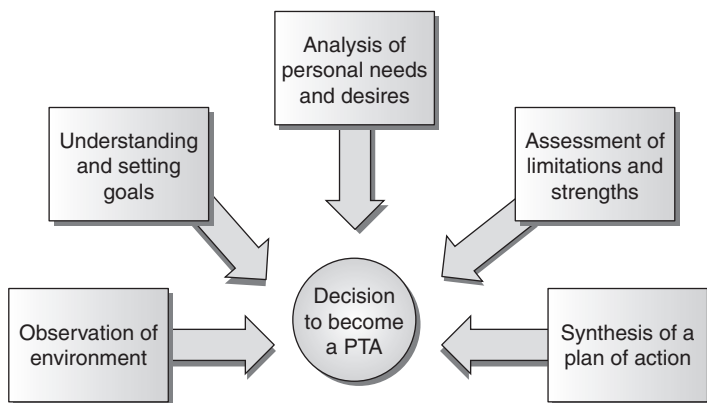


Figure 1.1 Decision-Making Factors

diagnoses, and synthesize plans of action to facilitate satisfactory progression toward established rehabilitation goals. Although they are not responsible for clinical decision making that leads to a diagnosis or the synthesis of a treatment plan, it is crucial that PTAs engage in effective clinical decision making with respect to appropriate clinical progression, assessment of intervention efficacy, and meeting patients' needs.

PTAs are often required to engage in significant clinical decision making. They must carry out treatment plans as designed by physical therapists. In carrying out those plans, PTAs must make important clinical decisions. These decisions may include the determination of the type of therapeutic exercise to administer, progression within therapeutic exercise and gait activities, selection and alteration of some physical agent parameters, and assessment-based modifications within the plan of care. When making clinical decisions, PTAs engage in a process that is dependent on their understanding of pre-established goals, attendance to the rehabilitation environment, an understanding of patient/family needs, assessment of objective measures, and the possession of sound clinical knowledge and expertise (**Figure 1.2**).

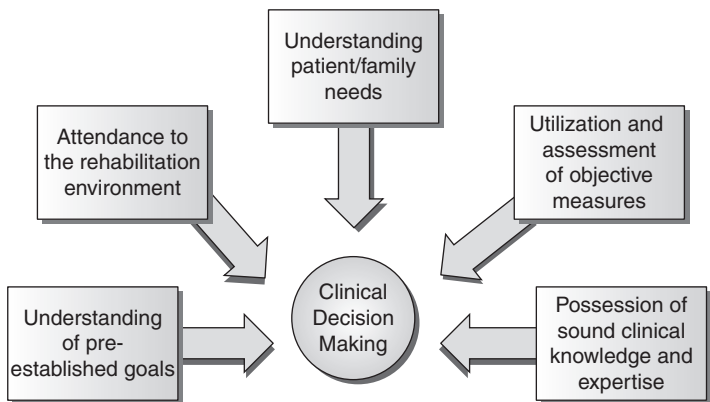


Figure 1.2 Clinical Decision-Making Factors

Understanding Pre-Established Goals

Most physical therapy evaluations include the specification of treatment goals. Depending on the complexity of the patient's conditions, these goals may be more or less expansive in scope. For instance, the patient with a moderate shoulder adhesive capsulitis may emphasize joint range of motion and muscle strength, which are fairly moderate goals. However, treatment goals for a patient in a rehabilitation center with a diagnosis of cerebrovascular accident (CVA) will be much more extensive. The goals will most likely address movement/muscle coordination, gait, activities of daily living, joint range of motion, and so on.

It is crucial that PTAs understand the significance of the established goals. It is insufficient to simply catalog goals and treat them as merely a documentation exercise. Treatment goals can significantly affect clinical decision making. They may signal the relative aggressiveness of treatment, alter treatment emphasis, and/or influence intervention selection.

Attendance to the Rehabilitation Environment

PTAs must be keenly aware of the overall rehabilitation environment when making clinical decisions. *Rehabilitation environment* refers to those external factors that impact the patient's rehabilitation. These factors include the interdisciplinary team, the rehabilitation setting, and expertise in identifying and accessing available resources.

Interdisciplinary Team

Depending on the case's complexity, the number of involved rehabilitation professionals may vary. PTAs' clinical decision making may be influenced by the types of additional rehabilitation services the patient is receiving. Physical therapy treatment must not take place in a vacuum. It is important that PTAs reach out to interdisciplinary team members and understand their rehabilitation goals and how they relate to the physical therapy goals. In in-patient rehabilitation settings, this typically takes place in formal and regular team conferences. However, it is equally important that regular interdisciplinary communication occurs in other, less formal settings.

Rehabilitation Setting

Clearly, the rehabilitation setting greatly influences the type and extent of clinical decisions PTAs may be called upon to make. Physical therapy services are provided in a wide variety of settings, including schools, specialty clinics, general private practices, acute care hospitals, nursing homes, subacute care facilities, and rehabilitation centers. In acute care settings, clinical decisions may be focused on moving patients to basic levels of function in preparation for the next level of care. In outpatient settings, clinical decisions may focus more on maximizing the patient's ability to perform activities of daily living. Regardless of the setting, PTAs are often called upon to make a vast array of clinical decisions to facilitate the accomplishment of treatment goals. Effective PTAs understand their provision of physical therapy care in the context of the rehabilitation setting and associated patient needs.

Accessing Available Resources

Clinical decision making is certainly influenced by the ability of PTAs to understand and access available clinical resources. Clinicians often become comfortable with doing things a certain way. They like to use a certain ultrasound machine. They avoid an unfamiliar electrical stimulation device. They perform therapeutic exercise in a stereotypical fashion. PTAs must ensure that their knowledge of available resources, rather than their comfort level with particular techniques and procedures, impacts clinical decision making.

PTAs must carefully survey the available clinical resources. For instance, they must know which ultrasound machines allow for frequency modifications, or which electrical stimulation units can provide interferential modes, or which exercise machines can provide variable resistance, and so on. A clear and complete knowledge of the available clinical resources surely enhances and influences the clinical decisions the clinician will make.

Understanding Patient/Family Needs

It is important for PTAs to remember that effective rehabilitation requires the concerted efforts of both the clinician and the patient. This point must be communicated to the patient in very clear terms.

Modern Western society is very focused on instant gratification. If we are sick, we want a pill to get better. If we are a few pounds overweight, we want to shed them as quickly as possible with the least amount of work. Effective physical therapy treatment counters these societal desires. The clinician and patient must work together to achieve goals. Typically, patients must invest more time in achieving the designated rehabilitation goals than their therapists. To maximize rehabilitation, they must be compliant with home exercise programs, vigilant in maintaining appropriate postures, mindful of goals made in the clinic, and dedicated to applying successes to their activities of daily living.

Therefore, PTAs should strive to understand their patients' needs. PTAs should have some knowledge of their patients' premorbid conditions, family/work responsibilities, recreational status, and so on. Knowledge of these types of factors will influence clinical decisions such as rates of progression, types of home exercise programs, and modality use.

■ Utilization and Assessment of Objective Measures

The knowledge of results certainly influences clinical decisions. How does a clinician know if treatment is effective? Pain scales, manual muscle testing, goniometry, isokinetic testing, circumferential measurement, and other assessments are crucial to efficacy assessment. PTAs use these types of assessments to attach an objective number or finding to their observations. Clearly, if a patient's initial shoulder abduction range of motion is 0 to 80 degrees and two weeks later it is 0 to 110 degrees, then there has been a measurable improvement. This change will significantly affect decision making. Such information may be used to alter how aggressive the stretching program should be, determine when to emphasize strengthening over stretching, or know when to consult with the physical therapist to alter the treatment plan.

It is easy for PTAs to fall into the habit of considering objective assessment as episodic rather than continuous occurrences. Assessment is not something that occurs only on a strict or prescribed schedule (e.g., interim and discharge summaries). Rather, assessment occurs continuously. Each treatment session should include at least some

objective assessment, because assessment results guide the next step in the rehabilitation process. PTAs must strive to make assessment an integral part of all therapeutic activities.

● **Possession of Sound Clinical Knowledge and Expertise**

Clearly, all clinical decision making is undergirded by a sound understanding of the clinical, anatomical, physiological, and physical concepts applied in physical therapy. When involved in entry-level PTA education, students must not simply rely on rote memorization of facts. Students must strive to understand the presented material. They must work hard to apply the presented information to unfamiliar situations. They must strive to appreciate that although academic content is necessarily presented in separate classes, all coursework is intertwined and interconnected. They must be ever ready to apply presented material across the curriculum. Practicing PTAs must maintain their clinical and academic skills. They must take advantage of appropriate continuing education opportunities, participate in peer learning and investigation activities, and continuously strive to maintain and update their skills.

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It is true that physical therapists synthesize treatment plans and goals. However, PTAs may have responsibility for carrying out all or part of the treatment plan. Within that responsibility resides a range of simple to complex decisions that may be made by PTAs. Such decisions can be effectively made only if the clinician indeed possesses sound clinical knowledge and expertise.

PTAs may be called upon to make a wide range of clinical decisions. The range of decisions exists on a continuum from simple to complex. Physical therapy treatment plans also exist on a continuum from more general to prescriptive. The type of plan provided may be dependent upon the type of facility, the patient's acuity, the relative level of PTA supervision, as well as clinician expertise and experience (PT/PTA). For example, let's assume a patient is referred to physical therapy following removal of a long leg cast for management of a distal femoral fracture. Following the initial evaluation, the physical therapist assigns the patient to a PTA. The physical therapy treatment plan includes *electrical stimulation to enhance quadriceps strength*. This part of the treatment plan is written in fairly general terms. Physical therapists assume that PTAs are capable of making the appropriate clinical decisions to carry out the treatment plan.

■ The Range of Clinical Decisions

Such clinical decisions include the use of high-voltage or alternating current, as well as the determination of pulse frequency, duty cycle, electrode placement, and ramp/surge parameters (**Figure 1.3**). Clearly, the treatment plan may specify these parameters. However, in the

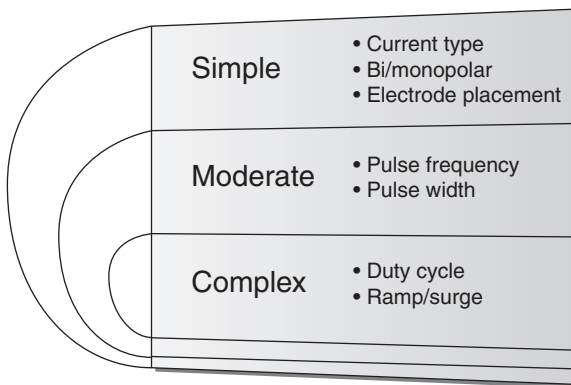


Figure 1.3 Potential Range of Clinical Decisions in Electrical Stimulation

absence of such specifications, to provide appropriate treatment PTAs must know what parameters they may alter without PT consent, when to obtain specific instructions from the physical therapist, and/or how to apply other clinical decision-making skills. The chapters in this text will examine various aspects of physical therapy treatment and identify the parameters and processes that facilitate sound PTA clinical decision making.

● **Limits on Clinical Decisions**

Just as PTAs may make a wide range of clinical decisions, they must be aware of the more prescriptive aspects of physical therapy care. Indeed, even routine physical therapy interventions may be strictly prescribed by physical therapists. More complex interventions such as iontophoresis, isokinetic strengthening, and postfracture gait training may be quite prescriptive. However, clinical decisions related to patient comfort and safety must still be made. Once strictly prescribed, PTAs must follow the treatment plan or consult the supervising physical therapist for changes to that plan.

