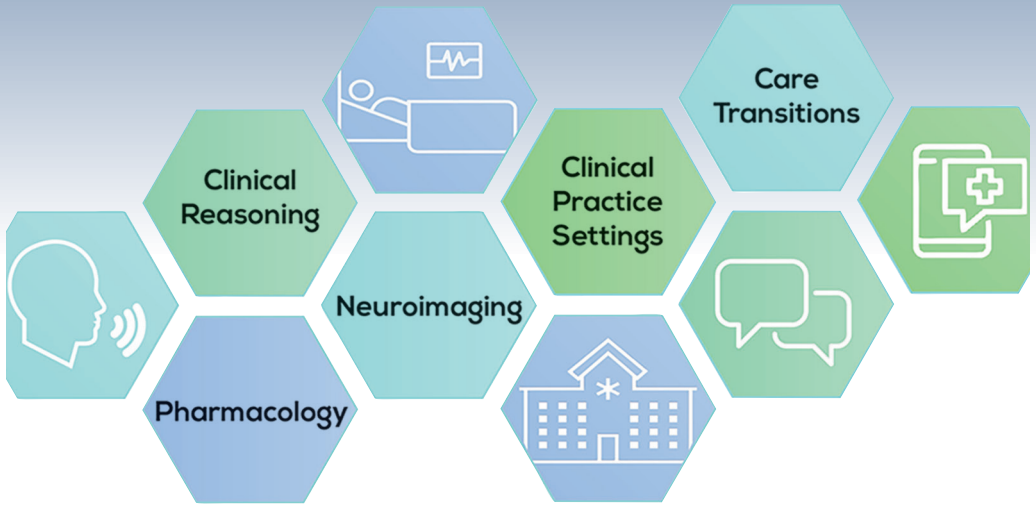
MEDICAL
Speech-Language Pathology Across the Care Continuum
An Introduction



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PREFACE

Where does one begin to learn about the nature and practice of medical speech-language pathology? Most graduate programs have specialty courses that explore the various disorders commonly seen across health settings. Students leave these courses with a deep understanding of the classifications, diagnosis, and treatment principles for dysphagia, aphasia, dementia, traumatic brain injury, voice disorders, and motor speech disorders. This core information forms the foundation for the clinician to use as they begin practice.

As a new clinician enters the medical setting, they quickly discover that patients are seen across a continuum of care that is not organized around speech-language pathology concerns. Patients exhibit characteristics of multiple disorders. Efficiency in delivering care is an immediate concern because of time demands that are ever present. Each of the settings along the continuum presents with unique priorities that shape the role and the practice characteristics of the speech-language pathologist. As part of their clinical preparation, students have typically not spent focused practicum time in all the different health settings. New medical procedures and medications, unfamiliar to the clinician, may impact communication and swallowing. Thus, the new clinician may feel unprepared, even though they are equipped with state-of-the-art speech-language pathology information and background.

Several universities are beginning to offer courses and seminars in medical speech-language pathology with a goal of preparing new clinicians to enter practice with an awareness of these issues. In talking with colleagues who teach these courses, we discovered that there was no text designed to supplement the core disorder- focused material and to integrate that within the context of medical speech-language pathology practice. That is the purpose of this text.

This book is designed to address the integration of SLP knowledge with practice setting specific issues. The settings covered include acute care settings, rehabilitation, outpatient settings, skilled nursing facilities, and home care. The application of skills, knowledge, and clinical process in each of these settings is highlighted. In addition to the setting-specific foci, we have included two chapters of a more in-depth nature. The first focuses on medications and their effect on communication and swallowing. The second is designed to enhance understanding of neuroimaging and its implications for clinical care. Both areas are critically important in health care settings yet are rarely represented in a thorough manner in graduate preparation. Finally, several cases have been developed. Students and faculty can use these cases to explore application of both clinical and setting-specific principles as a primer for practice in "the real world."

As authors and editors of this content, our hope is that the book can serve as a core text in courses in medical speech-language pathology. The book may also be useful for those speech-language pathologists transitioning from a school-based or private practice setting into health care. We welcome feedback and suggestions for future editions.

We also are happy to acknowledge those who have contributed to this work, including our own students and colleagues at Vanderbilt University and at MGH Institute of Health Professions. Additionally, special appreciation is offered to Megan Wilcox, Zachary Smith, and Rachel Pittman, all who have made significant contributions to this work.

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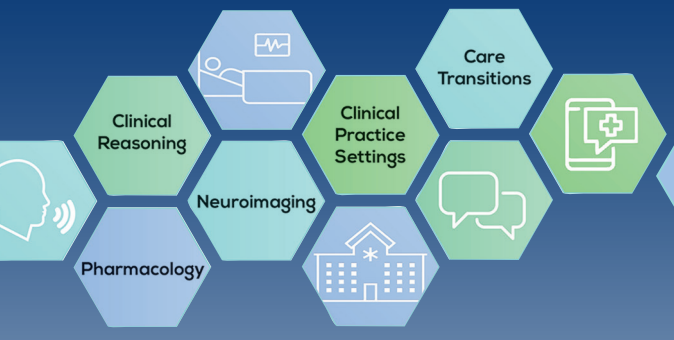

CHAPTER 1

Medical Speech-Language Pathology: Key Concepts

Alex F. Johnson

Chapter Objectives

Upon completion of this chapter, the reader will be able to:

- Introduce and familiarize the reader with the defining characteristics of medical speech-language pathology.
- Provide basic concepts about clinical reasoning in health settings.
- Familiarize the reader with the concept of the continuum of care, as the basis for reading the other chapters in the book.
- Guide the reader toward the use of additional resources to aid practice.

Getting Started

Most new clinicians find the challenge and opportunity of working in the medical setting to be a wonderful experience. The opportunity to learn and really understand the impact of communication and swallowing disorders in this setting is powerful. Similarly, discovering and appreciating the solutions that the speech-language pathologist (SLP) can add for patients with health issues is impactful. Learning to work together with other disciplines (interprofessional practice) to achieve the best possible outcomes is realized in this setting, as well.

It must also be noted that for the new SLP, the unfamiliar territory of a hospital, skilled nursing facility, or home health setting can challenge clinical reasoning in a way that is not experienced in the safety of the university clinic. This text provides an opportunity for the student or new graduate to learn about these settings and think about the skills and knowledge needed for working in these areas. It also is intended to be helpful for those experienced SLPs transitioning from other settings.

Like every profession, speech-language pathology can be practiced in several contexts. A common approach to understanding the distribution of speech-language pathology services is subdivision into health care and education settings. These two areas encompass most speech-language pathology practices. Additional settings include higher education, research, private practice, industry, and so forth. Interestingly, most of the work in these additional settings is devoted to activities related to either health- or education-focused practice. Because SLPs are generally trained to provide services in many contexts, it is safe to assume that the skills associated with health- and education-based practice can be observed in both types of settings. Consider the clinician in the hospital setting, who spends most of the time dealing with patients with swallowing disabilities and aphasia but receives a referral from a pediatric neurologist for a 6-year-old child with dyslexia and language learning difficulties. Conversely, think about the school-based SLP who spends most of her day with children with language

and reading problems but receives a new student who has swallowing and cognitive problems after a brain injury. In each case, the physical environment is different, the purpose and focus of treatment may be different, yet the client could be seen in either environment.

This text is designed to serve as a resource for emerging and established clinicians beginning practice in the medical setting, to provide information and support. Thus, the focus here is on features that can help the SLP appreciate the characteristics of the setting (context) and the critical decisions and activities associated with medical speech-language pathology across the continuum of care.

Describing Medical Speech-Language Pathology

Medical speech-language pathology can be considered from two perspectives: (a) the location where services are provided, and (b) the clinical approach to care. The first topic focuses on the various types and approaches of clinical service that occur in and across health settings. In the United States, health care is delivered in many different physical settings: acute care hospitals, rehabilitation settings, specialty hospitals, outpatient settings, and the patient's home. Some patients with chronic conditions are seen by their SLP in skilled nursing or other long-term care facilities. A broad array of specialty hospitals, community health centers, and governmental agencies also provide this type of care.

A second perspective for the discussion of medical speech-language pathology has to do with a clinical practice and decision model, or clinical reasoning. A detailed discussion of clinical reasoning is beyond the scope of this chapter. However, various aspects of clinical reasoning, especially those that are setting specific, are reflected throughout this book. Adapted from medicine, this clinical reasoning model considers the patient's history, any current or chronic health conditions or physical limitations, the setting and functional needs of the patient, any social or societal concerns, the family context, and so forth. In speech-language pathology, as in the other health professions, a cause-and-effect approach for diagnosing a communication or swallowing disorder and generating possible solutions to management of the patient's problem is the overarching concern. In a behavioral science, such

as speech-language pathology, this approach involves generating hypotheses about possible explanations for the presenting problem, and then refining tests and observations to confirm or reject these various options. At times, testing allows for observation of a direct physical cause for the problem, but in many cases in speech-language pathology, the cause must be inferred using discipline-specific knowledge. This model has been in use in speech-language pathology for decades, particularly in health-related settings (Nation & Aram, 1977; Tomblin, Morris, & Spriestersbach, 2000). Interestingly, this approach is also applied in many other speech-language pathology settings, including those in community, in schools, in private practice, and in other settings. It is important to note that many individuals with health-related (medical) communication disorders are seen in these community contexts. While their communication impairment may be related to a health condition, they may be participating in social, educational, or vocational activities in their community. The SLP in these settings needs to appreciate the health-related history and concerns of the individual client or patient or student, regardless of the setting. It is, in fact, the interaction among patient health status (causes), resultant difficulties in communication or swallowing function, available treatments, functional outcomes, and the patient's perspectives and goals that define the boundaries of medical speech-language pathology.

It also makes sense to clarify the use of the term *medical*. This term, as a descriptor for health condition–focused speech-language pathology practice, has been in use for many years. In a previous reference text, Johnson and Jacobson (2017) reviewed use of this terminology in some detail. In some cases, the use of the term *medical* can cause confusion. More precise, yet cumbersome, terminology might include condition-focused or health-related speech-language pathology services as an alternative. However, the common understanding of the term *medical* in this case is not intended to imply the practice of medicine, rather it relates to the points previously discussed: settings and an approach to problem-solving. A brief, if incomplete, introduction to some of the exemplary contributors to medical speech-language pathology may be found in Appendix 1–A, at the end of this chapter. It is important to acknowledge that there are dozens of additional contributors that could be mentioned, and the reader is invited to augment the list with those contributors who have influenced their own thinking. Review of the primary work of some of these individuals can provide an interesting glimpse into some of the historical thinking, theoretical perspectives, and clinical tools that are in common use across medical speech-language pathology contexts of practice.

Clinical Reasoning Tools for the Novice Speech-Language Pathologist

It can be helpful for new clinicians to map out the likely continuum for their specific patient. This can serve as an alert to communicate carefully and deliberately both within the current team and with the next team in the continuum. For new clinicians, being both deliberate and anticipatory regarding collaboration across the continuum, can enhance quality and efficiency of care, and can produce the best clinical outcomes for the patient. Deliberation and anticipation can be thought of as two critical clinical reasoning processes that help all clinicians, especially new ones, focus on the needs of the patient within the scope and context in which they are being seen.

Deliberate Practice

Deliberate practice involves a concentrated focus on a skill or activity or on a set of decisions. To develop expertise with a new or complex skill, one needs repeated and focused experience. Dudding et al. (2017) have written about the important role of deliberative practice in clinical teaching. Paired with expert feedback and self-evaluation (reflection), deliberate practice is an effective approach to establishing competence in new skills. Ericson (2008) described deliberate practice as a highly structured training experience that is focused on improvement of performance in a specific domain and leads to expertise. Applied to speech-language pathology, one could imagine that learning to make reliable perceptual judgments about voice or speech samples of varying types requires practice. Typically, these skills are learned through highly specific training exercises in the classroom and laboratory. Initially, learners acquire this skill by focusing on discrete elements (pitch, loudness, quality, intelligibility) separately. Eventually, clinicians improve their skills and advance to being able to reliably make these judgments with real patients in the clinical setting. However, it is important to acknowledge that each step toward integrated decision-making in the "real world" requires focused and repeated practice, sequenced over time, in increasingly challenging situations. Perceptual judgments, psychomotor abilities, diagnostic test administration and interpretation, and clinical decision-making are some of the most salient SLP skills that lend themselves to acquisition through deliberate practice. Tools that can help someone learn these skills include apps, checklists, organizers, and templates. In addition, the

importance of external feedback and mentoring cannot be underestimated. These elements, human ones, are particularly helpful in the earliest stages of learning.

Deliberate practice is not unique to speech-language pathology. Atul Gawande, a surgeon, highlights this concept in his best-selling book, *The Checklist Manifesto* (Gawande, 2010). This author effectively describes the use of simple checklists to get things right in health care. He documents improvements in surgical procedures, intensive care units, and emergency situations using this cueing mechanism. The decision to be deliberate about patient management keeps a clinician's attention on the patient and the primacy of their needs in the clinical interaction. In a busy clinical setting, the distractions of multiple demands, personal interruptions, or benign forgetfulness can allow for clinicians to omit or overlook key factors. Deliberate practice mitigates these errors.

Anticipatory Practice

Anticipatory practice focuses on the larger system of care and addresses the patient's needs as their condition or the location of care changes. Consideration of what the patient will need in the future, at the next point of care, may change steps or actions that a given clinician takes at a specific point in time. An early description of anticipatory practice was provided by Pridham et al. (1979). In this article, the authors described application of anticipatory practice on two scenarios—maternal /child health and surgical management and follow-up. Expert clinicians, from any discipline, make recommendations and provide interventions that reflect the long-term goals of any patient in the context of their capabilities and the capability of the system needed to support them. For example, a clinician may recognize that a patient has a motor speech disorder (dysarthria) and has trouble being understood by family and friends. Understanding the cause of the dysarthria (chronic versus degenerative) sheds light on the patient's immediate and future needs and likely outcomes. These observations and decisions become automatic as clinicians gain knowledge and experience. However, it is common for clinicians, early in their practice, to err because of their limited anticipatory knowledge.

In deliberate practice, one learns relevant skills and develops expertise in appropriate implementation. In anticipatory practice, one learns to project the patients' needs along the continuum of care. Figures 1–1A and 1–1B summarize these two important foci in the process of clinical reasoning.

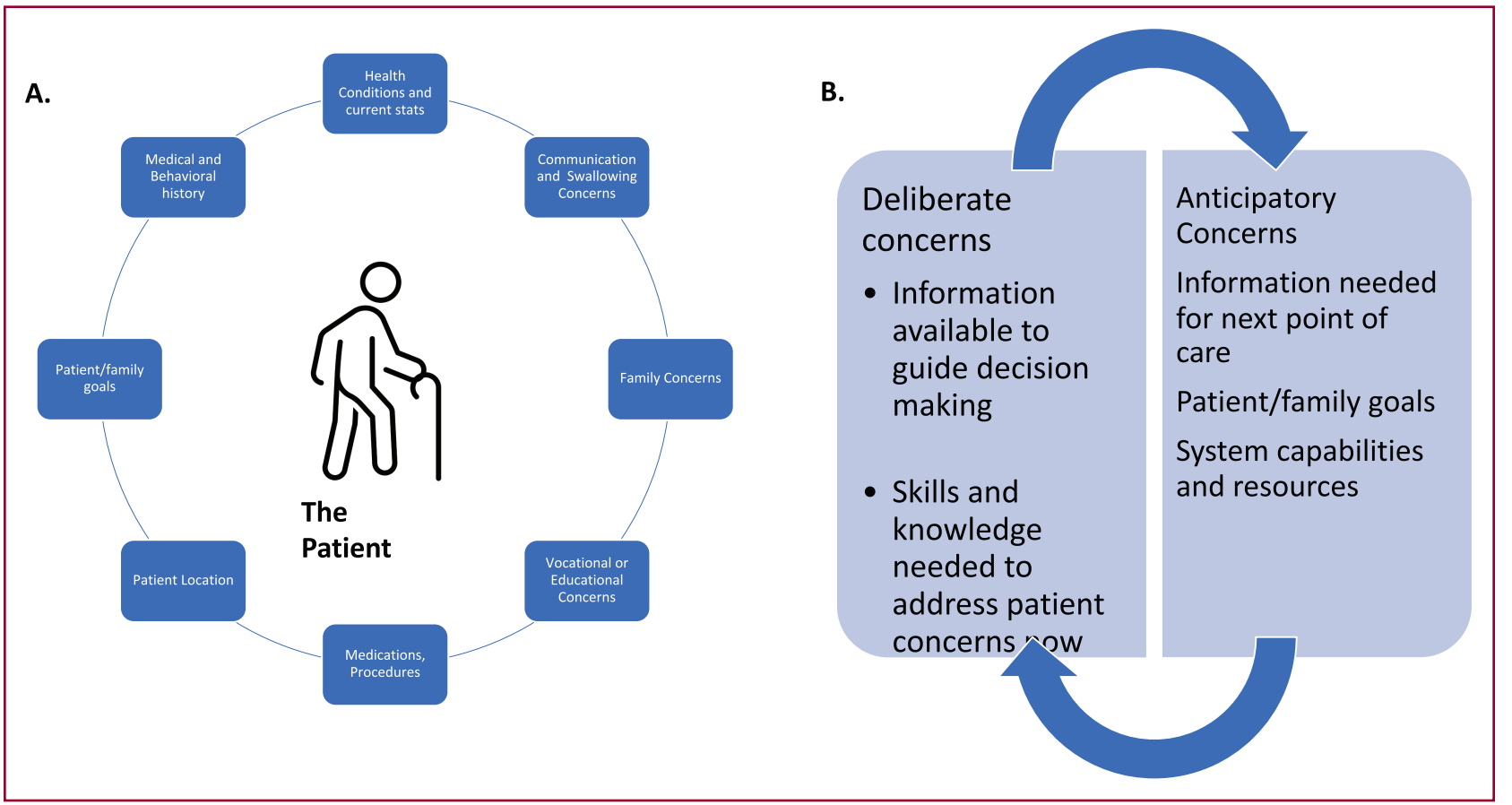

FIGURE 1–1. **A.** The patient in context. **B.** Deliberate and anticipatory practice in medical speech-language pathology.

An example might help to highlight the interaction between these two perspectives on clinical expertise development. One might consider the ways they might apply differently to a graduate student, a new clinician, or a more experienced clinician.

Case Example: Deliberate and Anticipatory Practice

The patient is a 50-year-old woman who sustained a stroke and is having trouble with comprehension and production of both written and spoken language. She is currently being seen by the SLP in an acute stroke unit in a university medical center. The SLP will want to be sure to evaluate and monitor communication skills and check motor speech and swallowing capabilities.

The deliberative practice decisions for this clinician will be as follows:

- What tools will be useful for repeatable, accurate, and precise measures of change during this acute stage of recovery?
- What information about language, speech, and swallowing will be most useful for those providing care for the patient?
- What information will be of benefit to the patient and her family?
- Are there any short-term compensatory tools that could be useful in the current (acute stroke unit) setting?
- Do I (the SLP) have the competency to gather and prioritize the information needed, to use appropriate assessment tools, to diagnose the communication disorder, and to provide appropriate recommendations, especially for the current point of care?

The anticipatory questions that the clinician might consider:

- When will this patient be discharged?
- What are the various services they will need upon discharge? Who will be providing speech-language pathology services for this patient, if needed? In what setting will speech-language pathology services be provided?
- What information or actions could help with the transition to the next point of care?
- What is the best way to transmit the important information to the next provider?