Communication Disorders in Educational and Medical Settings

An Introduction for Speech-Language Pathologists, Educators, and Health Professionals

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CONCEPTS UNDERLYING THE PRESENT TEXT AND TARGET AUDIENCES

The discipline of communication disorders involves the two professions of audiology and speech-language pathology. Audiologists are involved in the assessment and rehabilitation of people who have hearing loss. Speech-language pathologists (SLPs) focus on the assessment and treatment of disorders affecting speech, language, voice, and swallowing. Both audiologists and SLPs serve as primary interventionists for communication disorders that affect children, adolescents, and adults.

Most introductory texts on communication disorders place heavy emphasis on speech-language pathology and devote only a single chapter to audiology. One reason for this is because training programs typically require students to take another course titled “Introduction to Audiology” in which hearing is the sole topic of consideration. This text is designed to be an introductory text for communication disorders as well as a text that could be used in the training of educational and health professionals. It is designed in the traditional way, with a single chapter on hearing disorders that provides treatment implications for speech-language pathologists, educators, and health professionals. Students interested in audiology as a potential career can find a general introduction in the present text that can then be elaborated in additional coursework on hearing disorders.

The two most common environments in which audiologists and SLPs provide services are educational settings (school systems) and medical settings (hospitals, rehabilitation centers, long-term care facilities, medical clinics). Educational professionals (classroom teachers, special educators, school psychologists, teaching assistants) in the school setting and health professionals (physicians, nurses, occupational therapists, physical therapists, nurses’ aides) in the medical/clinical environment frequently encounter communication disorders. As speech-language pathologists perform assessment and treatment activities...
Preface

in educational and medical settings, they typically make an effort to collaborate with setting-specific professionals in providing services. These relationships are depicted in Figure 1. For example, classroom teachers and special educators can play a vital role in providing assessment information to the SLP and can also become involved in the treatment program to promote generalization of communication skills to the natural environment. Similarly, in medical settings, health professionals are in a position to provide critical

![Communication Disorders Common to Medical and Educational Settings]

Voice, Fluency, Articulation, Resonance, Child Language, Adult Language, Swallowing, and Motor Speech Disorder

- Occupational Therapist
- Physical Therapist
- Physician
- Nurses

Health professionals in medical settings who routinely deal with clients having communication disorders and can work collaboratively with the speech-language pathologist.

Speech-Language Pathologist

The speech-language pathologist is the primary service provider for communication disorders but routinely collaborates with other setting-specific professionals on strategies to improve assessment, treatment, and generalization.

- Classroom Teacher
- Special Educator
- School Psychologist
- Teacher’s Aides

Educational professionals in school settings who routinely deal with clients having communication disorders and can work collaboratively with the speech-language pathologist.

The speech-language pathologist conducts assessment and treatment activities in ways that are unique to medical and educational settings. This text will differentiate the similarities and differences in clinical work as seen in medical and educational settings to provide examples for SLP students who are likely to do clinical practicum in both arenas and ultimately take jobs in one or the other.

How This Text Addresses the Above Model

The text will provide a basic understanding of normal and disordered communication and a rudimentary knowledge of what the SLP does in a medical setting to work with clients who have communication disorders. Tips will be provided on how to deal with a person who has difficulty communicating. Specific suggestions will be made on how health professionals can aid in the assessment and treatment of communication disorders.

The text will provide a basic understanding of normal and disordered communication and a rudimentary knowledge of what the SLP does in a school setting to work with clients who have communication disorders. Tips will be provided on how to deal with a person who has difficulty communicating. Specific suggestions will be made on how educational professionals can aid in the assessment and treatment of communication disorders.

Figure 1  Relationships among health professionals, speech-language pathologists, and educators in medical and educational settings.
help in generalizing communication goals while the patient is receiving nursing care, physical therapy, or occupational therapy.

To collaborate in treatment or assessment activities, health and educational professionals must have a basic knowledge of the nature of various communication disorders and awareness of how they might play a role in the treatment process. Likewise, students in training to become speech-language pathologists must gain an appreciation of how their role is similar and different as they move from educational to medical settings and how to work with educational and health professionals. Thus, there are several important uses of this text:

1. The primary use of the book is as an introductory text in communication disorders that illustrates not only normal and disordered communication in children and adults but also how professionals deal with these disorders in school and medical settings.
2. Educators and health professionals can also use the text in training or in coursework on various disorders encountered in school and medical settings. Communication disorders are among the most frequently encountered problems in both school and medical environments. The text provides an introduction to normal and disordered communication in medical and educational settings. We make specific suggestions for health and educational professionals in terms of how to deal with clients with communication disorders and how to collaborate with the SLP in assessment and treatment.
3. The book is useful as a guide for the SLP in working with other professionals in school and medical environments because it includes practical suggestions for involvement of other professionals in the assessment and remediation processes.

Table 1 shows an example of how the disorders of communication are both similar and different across medical/clinical and educational settings. The various chapters covering communication disorders are listed in the left column and the work settings and client populations are included in the next two columns. Chapters 1, 2, 3, and 7 address normal aspects of the field and the communication processes that are applicable to medical/clinical and educational work settings.

**OUR APPROACH TO PEDAGOGY**

The field of communication disorders, similar to many other disciplines, has undergone an information explosion in the past 25 years. Both the fields of speech-language pathology and audiology have experienced quantum leaps in technology and empirical research since the turn of the new century. These fields have embraced evidence-based practice that combines use of relevant research with clinical skills and the unique needs of patients. Now, more than ever before, training programs are straining to provide adequate coverage of all dimensions of communication sciences and disorders. Master's programs in speech-language pathology have been lengthened, and now a clinical doctorate is the required credential in the field of audiology. Students often report that it is a struggle to process all of the classroom information and learn the diverse clinical skills necessary for certification as a professional.
TABLE 1  An Example of How the Various Disorders of Communication Are Seen in Educational and Medical Settings

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Educational Setting</th>
<th>Medical/Clinical Setting</th>
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<tbody>
<tr>
<td><strong>Voice disorders</strong></td>
<td>Disorders of vocal fold mass and approximation, intensity, quality, pitch, and so forth in children and adolescents.</td>
<td>Disorders of vocal fold mass and approximation, intensity, quality, pitch, and so forth in adults.</td>
</tr>
<tr>
<td>Chapter 9</td>
<td></td>
<td>Adult disorders such as laryngectomy, vocal cord paralysis, spasmodic dysphonia, and hysterical aphonia are often seen in medical settings.</td>
</tr>
<tr>
<td><strong>Articulation disorders</strong></td>
<td>Developmental phonology disorders, articulation disorders.</td>
<td>Glossectomy, jaw and oral cancer.</td>
</tr>
<tr>
<td>Chapter 4</td>
<td></td>
<td>Dyssarthis and apraxia seen in postcerebrovascular accident (CVA) patients and in some degenerative diseases.</td>
</tr>
<tr>
<td><strong>Motor speech disorders</strong></td>
<td>Dysarthrias in children with cerebral palsy and other conditions, developmental apraxia, apraxia of speech in brain-injured adolescents.</td>
<td></td>
</tr>
<tr>
<td>Chapter 13</td>
<td></td>
<td>Adults with aphasia, dementia, TBI, and degenerative neurologic conditions, and so forth.</td>
</tr>
<tr>
<td><strong>Early child language disorders</strong></td>
<td>Disorders of syntax, semantics, morphology in preschool children.  Autism and cognitive limitations in young children.</td>
<td>Working with neonatal ICU and families of high-risk children during the infant/toddler period.</td>
</tr>
<tr>
<td>Chapter 5</td>
<td></td>
<td>Adults with resonance disorders secondary to brain injury, surgery, or degenerative conditions.</td>
</tr>
<tr>
<td><strong>School-age, adolescent, and adult language disorders</strong></td>
<td>Disorders of syntax, semantics, morphology, and pragmatics in older children/adolescents; literacy-based problems in school settings. Adolescents with traumatic brain injury and other brain injury exhibit problems with word retrieval, memory, executive function, and other difficulties seen in adults with brain injury.</td>
<td>Adults with hearing impairment.</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Stuttering, cluttering seen in children and adolescents.</td>
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<td>Chapter 12</td>
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<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
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<tr>
<td>Chapter 13</td>
<td>Children/adolescents with dysphagia as a product of neurologic conditions.</td>
<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
</tr>
<tr>
<td>Chapter 14</td>
<td></td>
<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
</tr>
<tr>
<td><strong>Fluency disorders</strong></td>
<td>Stuttering, cluttering seen in children and adolescents.</td>
<td>Fluency problems in adults associated with motor speech disorders, word finding difficulties, and language processing load. Adult stuttering.</td>
</tr>
<tr>
<td>Chapter 8</td>
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<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
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<tr>
<td><strong>Swallowing disorders</strong></td>
<td>Children/adolescents with swallowing disorders as a product of neurologic conditions.</td>
<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
</tr>
<tr>
<td>Chapter 13</td>
<td></td>
<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
</tr>
<tr>
<td><strong>Hearing impairments</strong></td>
<td>Children/adolescents with hearing impairment that is either congenital or acquired.</td>
<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
</tr>
<tr>
<td>Chapter 10</td>
<td></td>
<td>Adults with dysphagia as a result of neurologic insult are seen in acute care and rehabilitation medical settings.</td>
</tr>
<tr>
<td><strong>Resonance disorders</strong></td>
<td>Children with clefts and other velopharyngeal problems.</td>
<td>Children with clefts and other velopharyngeal problems.</td>
</tr>
<tr>
<td>Chapters 9 and 11</td>
<td></td>
<td>Children with clefts and other velopharyngeal problems.</td>
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In most training programs, students are initially exposed to the field of communication disorders in an introductory course. The goal of such a course is to provide an overview of basic processes of speech, hearing, and language and discuss common disorders that professionals deal with in communication disorders. After or concurrently with the introductory course, students take courses in the normal processes of speech, hearing, and language such as phonetics, speech and hearing science, anatomy and physiology, and introduction to audiology. The next step is completion of courses focusing on disorders of speech, hearing, and language that discuss in considerable detail the nature of each type of impairment and assessment and treatment approaches used in remediation. Then, on the graduate level, students also take even more advanced courses in all of the communication disorders and participate in extensive clinical practicum experiences.

As veteran instructors who have many years of experience introducing students to the field of communication disorders, we have observed several recurring issues:

- When students begin taking more focused courses in the field, we have found that they most often do not remember the specific terms they “learned” in the introductory course, mainly because concepts were introduced too quickly and superficially to facilitate recall. Our task in these later courses, then, becomes reintroducing the specifics of each disorder in earnest.
- We have noticed that colleagues teaching the introductory courses and using a very complex text often have to omit certain information to cover all relevant areas in a given semester. Thus, some students have the experience of being required to “know” certain information from the text for test purposes and are not responsible for other facts in preparation for an examination.
- The average semester has only about 40 class days of approximately one hour in which to cover material. If an instructor administers four 1-hour examinations during a semester, that reduces the number of teaching days to 36. Especially in introductory courses, instructors tend to show DVD presentations of the various disorders, and many of these videos are not specifically designed to be compatible with the introductory textbook. Thus, when you remove teaching time lost as a result of video presentations, there are precious few hours left to cover normal aspects of speech, hearing, and language plus all of the disorder areas. It is not unusual for instructors to have only two or three days to address a particular area of interest such as fluency disorders, articulation, anatomy, language disorders, or vocal disorders. The bottom line is that teaching opportunities are limited and the broad base of an introductory overview course makes it important that instructors cover material at a consistent depth that allows for understanding but that does not overload the student.

As a result of the preceding points, we saw the need to create an introductory textbook that covers all relevant areas, but that does so in a way so as not to overwhelm students. It is axiomatic that an introductory text should cover the breadth of a discipline to give students a sampling of its relevant components and a flavor for the duties of professional
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practitioners. In a field as vast as communication disorders, it is a challenge to do justice even to the breadth of the field. And the real challenge concerns the depth at which each area is considered. Our solution is to attempt to control the depth in each section by limiting inclusion of more technical information that will be covered in later courses. We also make a conscious effort to minimize the use of references to the research literature that students will study in more specific coursework. We use references to support major points in the text without overwhelming students with a large bibliography.

This, of course, is a judgment call on the part of the present authors, but our goal is to have each chapter be similar in depth, creating an evenness of content throughout the book. Instructors can always add information if they deem it important for introductory students. This, in many ways, is more workable than telling students to ignore sections of a text that have provided too much depth for beginning students. We carefully considered the selection of information that is critical to an overview of the profession with the goals of keeping the text readable and not overwhelming students and instructors. Even this approach results in ample detail in all the areas of normal processes and disorders; students will find learning the material challenging but doable. Students can use the general foundation they develop in their introductory courses to build more in-depth knowledge in later courses in the training program.

No matter what a student’s major or a reader’s profession, he or she is still in the position of learning about communication sciences and disorders for the first time. We intend this text primarily for speech-language pathologists in training, and we also make the information accessible to professionals in education and allied health and anyone unfamiliar with this field. Whether you are an educator, health professional, or speech-language pathologist in training, we are certain that you will find this introduction to the field of communication disorders exciting, interesting, and relevant to your future work.