Chapter 1

COMMUNICATION DISORDERS IN EDUCATIONAL AND MEDICAL SETTINGS: BACKGROUND, LEGAL/ ADMINISTRATIVE ISSUES, PROFESSIONAL ROLES, AND SERVICE DELIVERY MODELS

Whether you are reading this textbook as a communication disorders major or are a student majoring in education or allied health professions (e.g., physical therapy, nursing, occupational therapy), you are starting out at the same place as many other students. You probably know little about communication sciences and disorders and are taking this course to gain an overview of the field. We cover the breadth of the profession while controlling the depth to which we go in each chapter so the information is not overwhelming. We also keep the references and technical terms to a minimum so you can focus on the big picture while still learning some detail.

BACKGROUND INFORMATION: THE COMMUNICATION DISORDERS PROFESSIONAL

Communication takes many forms, some verbal and some nonverbal. **Language** is a major part of the human communication system because it includes words and rules for organizing them. **Speech** is the process by which sound is shaped into meaningful units, such as words, whereas **audition** is the process of hearing what is said. A multitude of genetic, prenatal and perinatal (at birth) factors can interfere with a child's normal development of speech, language, and audition. Acquired damage, as from traumatic injuries and diseases, also can affect a child's or adult's ability to use speech and language or to hear it. These difficulties constitute communication disorders that can affect a person's development and/or lifestyle in a negative way.

Audiology and **speech-language pathology** are professions that play primary habilitative and rehabilitative roles for children and adults with communication disorders. In this chapter, we briefly discuss both the professions of audiology and speech-language

pathology in terms of scope of practice, educational/clinical preparation, and credentialing. Other than Chapter 10, our focus is on speech-language pathology for the remainder of the book. Throughout the rest of the text we often abbreviate speech-language pathologist as SLP to save space and avoid cumbersome writing.

WORK SETTINGS

Audiologists and speech-language pathologists often work closely in many settings with professionals such as physicians, neurologists, dentists, classroom teachers, psychologists, occupational therapists, physical therapists, nurses, and special educators. Communication disorders are among the most common impairments in medical as well as educational settings. This is one reason this text introduces communication disorders to audiologists and speech-language pathologists and to students in training for education and health professions. The more members of a rehabilitation team know about communication disorders, the greater the possibility of multidisciplinary cooperation in assessment and treatment. From the preceding list of professionals that cooperate with specialists in communication disorders, it may be obvious that speech-language pathologists and audiologists can be employed in a variety of settings. Although such settings can be broadly divided into clinical/medical and educational, we can discuss them more specifically. **Figure 1–1** illustrates that clinical/medical settings can include acute care hospitals, rehabilitation hospitals, community clinics, private practices, university clinics, and long-term care facilities. The second major category of educational settings is far simpler because it includes public school systems and private schools. This is rather deceptive because, in speech-language pathology, the majority of clinicians work in school settings.

We would like to spend a little time here briefly to characterize the clinical/medical settings. There are subtle differences among these facilities. First, **acute care hospitals** are the medical facilities that individuals with a critical need for care go to. For example, if a person experiences a stroke or heart attack, he would be taken to an acute care hospital. The length of stay at such a hospital is typically short, usually not more than a few weeks in duration. A major goal in such a hospital is to stabilize the patient and remove life-threatening conditions. At the end of that time, the patient either goes home or is transferred to a rehabilitation hospital for further treatment. Some acute care hospitals specialize in the pediatric population and are often known as children's hospitals. Some of these facilities offer both inpatient and outpatient services after a patient is discharged.

The second type of clinical/medical facility is a **rehabilitation hospital**. In a rehabilitation hospital, a patient receives medical treatment, but also a host of other therapies such as physical, occupational, speech-language, and respiratory is available. The length of stay at a rehabilitation hospital is typically less than two months. A third type of clinical/medical facility is the **community clinic**. In many urban communities, a clinic is set up by an organization (e.g., Sertoma International, Easter Seals). Such a clinic may include services such as physical therapy, occupational therapy, and speech-language therapy, but

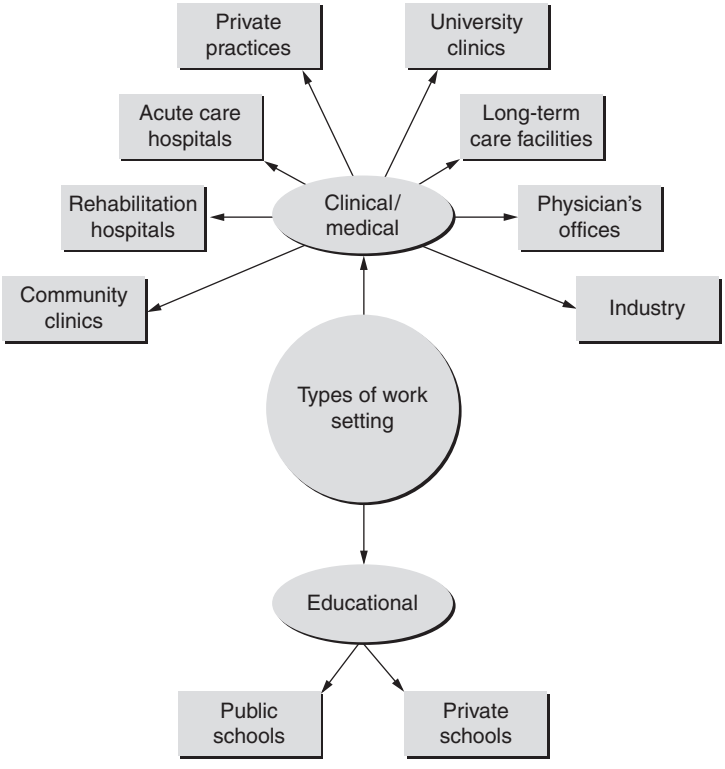

FIGURE 1–1 Types of work settings in audiology and speech-language pathology.

does not typically have an inpatient program where clients are housed residentially. Usually, the patients come for services to community clinics on an outpatient basis.

A fourth type of clinical/medical facility is called a **private practice**. This is an office set up by one or more professionals in audiology or speech pathology where outpatient services are provided. Imagine an office complex where the speech-language pathologist "hangs a shingle" and advertises services in speech and language assessment and treatment. It is like a doctor's or dentist's office that provides services. Sometimes professionals in private practice provide services to other facilities such as hospitals, day care programs, or Head Start programs. Usually, private practices comprise a limited number of professionals ranging from one to five; however, when a private practice develops to the point when it includes many specialists from different disciplines, it can turn into a community clinic.

The fifth kind of clinical/medical facility is a **university-based clinic**. If you are a major in communication disorders, you probably have one of these on your campus and it is an important part of your training program. University clinics provide clinical practicum for students in training to be audiologists and speech-language pathologists. These clinics usually see a full range of clients but do not typically have medical facilities or physicians on duty.

Thus, the patients seen in a university clinic are children and adults who seek assessment and treatment services as outpatients. Most of the services are provided by students in training under the supervision of certified professionals in communication disorders.

The sixth clinical/medical setting is the **long-term care facility**. These facilities are also known as nursing homes or assisted living centers. Patients in these facilities are residents who are typically not expected to return to independent living because of some persistent medical condition. The residents, however, still might require physical, occupational, respiratory, or speech-language treatment to increase their quality of life and allow them to be as independent as possible. The patients may also suffer from hearing impairment and require periodic reevaluation and maintenance of their hearing instruments.

The final two clinical/medical settings are usually reserved for specialists in audiology. Audiologists often are hired by physicians who specialize in otolaryngology (ear, nose, throat) because audiologic assessment and monitoring are essential to diagnosis and monitoring of treatment. It is far more common for an audiologist rather than a speech-language pathologist to be employed in a physician's office. Finally, many companies employ audiologists to monitor the hearing abilities of workers exposed to high levels of noise. The **industrial audiologist** assesses hearing acuity and prescribes hearing protection for workers as part of a program of hearing conservation.

It is clear from this discussion that audiologists and speech-language pathologists have diverse opportunities for employment in clinical/medical settings. Although educational settings may appear on the surface to be less diversified, there is more to these employment sites than meets the eye. First, educational settings vary from urban to rural. Working in a school system in a large city is quite different from being employed in a small town. One difference is in the number of colleagues available with whom to collaborate. Large city school systems may have more than a hundred speech-language pathologists to service the many schools in the urban area. Such systems have opportunities for professionals in many areas to collaborate in research, participate in continuing education, and devise innovative programs. Some school systems have taken the responsibility for serving the birth to 3 years population, and all school systems are responsible for children between the ages of 3 and 5. In rural school systems, it is possible that only one or two specialists in communication disorders are employed. Many states have school systems that are run by cities and other school systems that are run by counties. The age range of students served by the communication disorders specialists typically spans birth to age 21. Thus, it is not only children who receive services in school systems, but young adults as well. Another aspect of public school services is that the speech-language pathologist sees a full range of disorders. For example, disorders of voice, stuttering, articulation, language, and swallowing are all seen in public school settings. Furthermore, students with neurologic disorders such as cerebral palsy and head injury receive services in the public schools. In some school systems, the clinicians perform treatment and assessment in school buildings and children's homes, and they sometimes visit hospital settings to provide services under the aegis of the public schools. It is important to note that all

services in public schools are provided free of charge, which is not the case in clinical/medical settings. Thus, the school system caseload offers a diversity of disorders, ages, and environments rivaling clinical/medical settings.

According to recent surveys (American Speech-Language-Hearing Association [ASHA], 2003), approximately 56 percent of speech-language pathologists work in school settings and 35 percent are employed in healthcare facilities such as hospitals and other residential facilities. The remaining 10 percent are either in private practice or university settings. Surveys report that 54 percent of audiologists (ASHA, 2003) are employed in nonresidential healthcare settings. Another 26 percent work in hospitals, and 11 percent in school systems.

THE PROFESSIONS OF AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

Audiologists focus on problems of hearing and largely perform diagnostic, habilitative, and rehabilitative services for both children and adults. The American Speech-Language-Hearing Association (2004) provides a summary of the scope of practice in both audiology and speech-language pathology. For both professions, more specific responsibilities are delineated in general areas. In this book, we only scratch the surface. There are six general areas of practice in the field of audiology:

1. *Prevention:* Audiologists conduct hearing conservation, **screening**, and education programs in an effort to prevent hearing impairment and promote hearing wellness. **Prevention** may also involve identifying adverse acoustic environments that can contribute to hearing loss.
2. *Identification (screening):* Audiologists attempt initially to identify people with hearing loss from birth throughout the life span. They also identify those with balance disorders and tinnitus (ringing in the ears).
3. *Assessment:* Whereas screening serves initially to identify those persons with hearing impairments, assessment involves a detailed examination of the entire auditory system from the ear canal to neurologic aspects of hearing. The audiologist uses many different technologically sophisticated devices to test the various parts of the hearing mechanism. Some of these involve use of pure tones and others use speech stimuli to determine exactly the type of signals the patient can hear and those that present difficulty. The results of a thorough assessment are used to develop a comprehensive treatment plan.
4. *Rehabilitation:* Audiologists fit appropriate hearing technology devices such as assistive listening systems and hearing aids as part of a management program. They also assess persons to determine whether a cochlear implant is appropriate, and if so, they participate in fitting and optimization of its use. Audiologists provide training in aural rehabilitation/habilitation, auditory training, speech reading, and strategies for effective communication. They also provide training for people with balance difficulties.
5. *Advocacy/consultation:* The audiologist provides advocacy for the rights of groups or individuals with hearing impairments and assists in obtaining funding for technology and/or treatment. Audiologists consult with other professionals, clients, families, agencies, the

government, and industry regarding hearing, auditory impairments, and management services.

6. *Education/research/administration:* Audiologists participate in professional education programs by teaching academic and clinical skills to students in training to be professionals in communication disorders. They also conduct basic and applied research on hearing, auditory impairments, assessment, and treatment to provide efficacy data on assessment and treatment protocols.

For a general explanation of screening, assessment, and treatment of persons with hearing impairments, refer to Chapter 10. As mentioned previously, the field of audiology is quite complex, and we cover it only enough to provide you with a flavor for what these professionals do in practice. Students in communication disorders who are interested in audiology as a specialty will have several courses specific to this field in their training program.

Speech-language pathologists diagnose and treat both problems of speech and problems of language. The disorders addressed by the speech-language pathologist fall into several broad areas, which include disorders of *voice*, *language*, *fluency*, *articulation*, and *swallowing*. Within each area are many specific types of communication impairments, and we describe these in separate chapters. For now, it is enough to know the general areas to allow us to briefly outline the scope of practice in speech-language pathology. Just as in audiology, there are six general components addressed in the ASHA (2004) scope of practice document:

1. *Prevention:* Speech-language pathologists promote communication wellness by promoting healthy lifestyles. Activities such as smoking cessation and wearing head protection in sports reduce the probability of laryngeal cancer and brain injury that could cause a communication impairment. Early detection and intervention programs with infants maximize communication abilities and reduce the level of handicap for individuals with disorders.
2. *Identification (screening):* The speech-language pathologist engages in screening procedures initially to identify persons with communication disorders. Screenings are especially important in the early **identification** of children with communication impairments but are also critical in identifying adults who suffer from speech, language, or hearing problems as a result of a variety of medical and neurologic conditions.
3. *Assessment:* After a person is identified as having a communication disorder, the speech-language pathologist conducts an in-depth evaluation to determine the extent of impairment and designs a program of treatment. The assessment may involve measurements by electronic devices, communication sampling, and administration of standardized tests.
4. *Treatment:* The speech-language pathologist provides intervention for adults and children diagnosed with speech and language disorders, which include the following possible management targets: articulation, motor speech disorders, apraxia, resonance disorders, voice disorders (e.g., disorders of pitch, loudness, quality), fluency disorders (e.g., stuttering, cluttering), language disorders (including syntax, semantics, morphology, phonology, pragmatics, literacy, and prelinguistic communication), cognitive disorders (e.g., attention, memory, problem solving), and feeding/swallowing disorders. The treatment can also include methods of augmentative communication using high- or

low-technology solutions such as laptop computers with speech synthesizers or simple communication boards.

5. *Advocacy/consultation:* The speech-language pathologist advocates for persons with speech, language, and swallowing impairments by serving as a member of collaborative teams, helping to secure funding for equipment/services, and serving as a consultant with other professionals.
6. *Education/research/administration:* Speech-language pathologists design and conduct public awareness programs on normal communication, communication disorders, swallowing impairments, and prevention of disorders. They conduct in-service training for other professionals and participate in the education and training of communication disorders specialists. Administrative duties involve managing clinical and academic programs.

It is easy to see that both audiologists and speech-language pathologists have much in common in terms of work settings and scope of practice. Both professions are intimately involved in prevention, identification, assessment, treatment, counseling, advocacy, administration, and research. The difference is that audiologists are focused on hearing, balance, and tinnitus, and speech-language pathologists largely concentrate on specific disorders of speech and language.

CREDENTIALING IN AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

Becoming an audiologist or speech-language pathologist is a complex process that is largely dictated by professional associations. The **American Speech-Language-Hearing Association (ASHA)** is a major professional organization made up of speech-language pathologists and audiologists. ASHA also includes the National Student Speech-Language-Hearing Association (NSSLHA) for students majoring in communication disorders. ASHA provides guidelines for the training of these professionals, which involves both academic and clinical skills. The academic and clinical requirements for becoming a communication disorders professional are quite complicated, and we discuss the process only generally in this chapter. To read the detailed requirements, go to http://www.asha.org/certification. Academically, in terms of degree requirements, a speech-language pathologist must obtain a master's degree (Master of Science, Master of Arts, Master of Communication Disorders) with a specialty in speech-language pathology, whereas an audiologist must obtain a doctoral degree (AuD; Doctor of Audiology). The degree program must be accredited by ASHA to ensure that it meets professional requirements. During the degree programs, speech-language pathologists and audiologists are required to obtain specific academic skills (specialized coursework) and demonstrate clinical skills in supervised practicum experiences. As you might predict, audiology programs are heavily weighted toward the study of normal hearing, hearing disorders, audiometric assessment, and aural rehabilitation along with courses in balance disorders. Speech-language pathologists study the normal aspects of speech, hearing, and language followed by coursework in how those areas can be disordered, assessed, and treated. Near the end of their training program, students in audiology and speech-language pathology

must pass a national examination in their area of specialty. The student must also complete a year of working in the profession under the mentorship of a certified speech-language pathologist or audiologist. This is known as the **clinical fellowship year (CFY)**. In some audiology programs, this is included in the final year of the degree program. Speech-language pathologists typically complete their CFY during their first year of paid employment, with a certified professional agreeing to supervise them during that period. Thus, to be certified by ASHA, a student must (1) complete the required degree in the area of specialty at an accredited university program, (2) complete all academic and clinical requirements that are part of that accredited program, (3) pass a national examination in the area of specialty, and (4) complete a clinical fellowship year in the area of specialty. When all of this is completed, ASHA awards a **Certificate of Clinical Competence (CCC)** in either audiology or speech-language pathology. It should also be mentioned that the field of audiology has organizations other than ASHA that affect student training and professional development. One such group is the **American Academy of Audiology (AAA)**.

Certification is critical for speech-language pathologists and audiologists, but there is another credential typically required to practice. Each state has licensure requirements for audiologists and speech-language pathologists. In almost every state to provide clinical services, the professional must qualify for a state license. Fortunately, licensure requirements are typically identical to certification requirements, so professionals who have the CCC also qualify for a state license.

THE INFLUENCE OF PROFESSIONAL ORGANIZATIONS

As mentioned earlier, organizations such as ASHA set requirements for the training of professionals in communication disorders by accrediting university programs and prescribing academic and clinical experiences necessary to result in certification. ASHA also plays a role in establishing a code of professional ethics to which all speech-language pathologists must adhere. The code of ethics protects patients who receive services and ensures that clinicians act professionally and ethically in their practice. You can find the code of ethics at http://www.asha.org/docs/html/ET2010-00309.html. ASHA also serves a research function by publishing professional journals, offering grants for research, and holding continuing education workshops and conventions.

CASELOAD ISSUES FOR SPEECH-LANGUAGE PATHOLOGISTS IN EDUCATIONAL AND MEDICAL SETTINGS

EDUCATIONAL SETTINGS

One intent of this book is to provide classroom teachers, special education personnel, and SLPs interested in working in school settings with information on communication disorders so that they may better serve students with specific speech, language, or hearing problems. You may well wonder how many students in school settings have disorders of communication.

In the 50 states and the District of Columbia for the 2000–2001 school year, a total of 5,775,772 students (ages 6 to 21 years) received special education services (U.S. Department of Education, 2000). More than 50 percent of students being served by special educators in the public schools had learning disabilities as their primary handicap. Students whose primary impairment was speech or language accounted for 18.9 percent of the total served, and students with hearing impairments were 1.2 percent.

Clearly then, students with learning disabilities and communication disorders constitute the bulk of students with handicaps served in the schools, and other categories of disabilities (i.e., cognitive impairment, emotional disturbance, multihandicapped, orthopedically impaired, other health impaired and visually handicapped) are less prevalent. The astute reader will no doubt notice that all the incidence figures reported here are for children older than the age of 5 years. According to the law, schools must provide services for preschool children between the ages of 3 and 5 years. Many school systems have expanded this mandate to also include the birth to 3 years population. Because speech/language disorders are more prevalent in preschool-age children, this population expands the potential caseload of the school-based SLP considerably.

It is important to note that of the students who are classified as learning disabled, cognitively impaired, multihandicapped, and orthopedically impaired, a large proportion of these youngsters have an accompanying communication disorder in speech, hearing, or language. These students are classified according to their primary disability (e.g., cognitive impairment) and are not included in the 18.9 percent speech/language-impaired figure mentioned previously because this figure represents only those students whose primary classification is speech/language disorder. Thus, the SLP has a large number of cases who have speech, language, or hearing impairment as their primary disability, and also a very large population of other children whose primary classification represents another category, but who are likely to be receiving speech/language treatment as part of their special education program.

As a result of the large caseloads, the number of SLP positions in public school systems can be expected to increase nationwide. According to the U.S. Bureau of Labor Statistics, the employment rate for the profession of speech-language pathology is expected to grow significantly for the next decade. A 27 percent increase in job openings is predicted to compensate for the shortfall in available SLPs to serve ever growing caseloads of children and adults. All teachers, but especially elementary and special education personnel, can fully expect to have students with significant communication disorders in their classrooms at some time.

Results from the 2003 ASHA Omnibus Survey indicate that the average caseload size for speech-language pathologists working in schools full-time is 53, with a range from 15 cases to 110 cases. Average caseload size varies significantly by state. For example, on the ASHA Omnibus Survey of 2003, the lowest average caseload was North Dakota with 32, and the highest was Indiana with 75. As discussed later in this book, SLPs may use any of several available service delivery models. They see some students individually, others in groups; they accomplish some goals by integrating treatment into classroom activities. The 2003 ASHA Omnibus Survey indicates that speech-language pathologists have a

mean of 49 individual sessions and 83 group sessions per month. Nearly 71 percent of their caseload consists of students older than the age of 6 years, 26 percent represents 3- to 5-year-olds, and almost 3.5 percent are in the birth to 2 years age group. Additionally, a wide range of severity of communication disorders is represented in the SLP's caseload: 23 percent of students exhibit severe impairments, 51 percent moderate impairments, and 26 percent mild impairments.

Subsequent chapters describe the various prevalence figures associated with each type of communication disorder. The frequency of occurrence, say, of language impairments is vastly different from that of voice disorders. The ASHA Schools Survey (ASHA, 2006) summarizes data with regard to representation of each disorder type in the typical SLP's caseload. **Table 1–1** shows this information. The percentages exceed 100 because of cooccurring disorders. For example, a student may exhibit both a language and articulation disorder. It is easy to see from Table 1–1 that the SLP must have expertise across many disparate areas. The implication for teachers is that this diverse group of students will also be present in their classes.

TABLE 1–1 Percentage of School-Based SLPs Who Provide Regular Services to Each Disorder Group and the Average Number of Clients Representing the Category on the Caseload

Diagnostic Category	% of SLPs Who Report Regularly Providing Services	Mean Number of Clients in Category on Caseload
Aphasia	6.0	4.5
Articulation/phonology	91.8	23.9
Attention Deficit Disorder	65.4	7.5
Autism/pervasive developmental disorder	77.4	5.0
Cognitive disorder	43.6	10.6
Swallowing disorder	13.8	4.0
Fluency disorder	67.5	2.5
Hearing disorder	45.8	3.2
Learning disability	72.4	16.5
Cognitive impairment	70.9	10.8
Motor speech disorder	4.7	4.1
Augmentative communication	50.8	4.8
Reading/writing	37.7	14.0
Language impairment	61.1	17.2
Verbal apraxia	59.4	3.1
Voice disorder	33.8	1.9

Source: Adapted from ASHA, 2006.

MEDICAL SETTINGS

For speech-language pathologists working in clinical or medical settings, ASHA provides statistics that give a snapshot of the typical caseloads (ASHA, 2007b). Regarding age groups, the 2007 healthcare survey revealed that 60 percent of clients in clinical/medical settings are adults, 12 percent are school age, 13 percent are preschool age, and 16 percent are infants/toddlers. **Table 1–2** shows the breakdown by disorder for clinicians working with adult and pediatric populations in clinical/medical settings.

LEGAL AND ADMINISTRATIVE ISSUES IN EDUCATIONAL AND MEDICAL SETTINGS

EDUCATIONAL SETTINGS: PUBLIC LAWS AFFECTING STUDENTS WITH COMMUNICATION DISORDERS

We briefly discuss each of these mandates because they provide a legal basis for provision of services to students with communication disorders in school settings. An understanding of the law helps to explain many of the procedures SLPs and teachers engage in during a school year.

Individuals with Disabilities Education Act (IDEA) The Education for All Handicapped Children Act (PL 94-142) mandated in 1977 that all handicapped children between the ages of 3 and 21 years receive a free, public education that is appropriate to their needs. PL 94-142 has been amended five times over the years, and the guidelines were embodied in the **Individuals with Disabilities Education Act (IDEA)** of 1997.

TABLE 1–2 Percentage of Healthcare-Based SLP Regular Services to Each Disorder Group on the Caseload

Diagnostic Category	% Adult Areas of Intervention	% Child Areas of Intervention
Accent modification	1	—
Aphasia	17	—
Cognitive-communication	21	14
Motor speech	8	—
Swallowing/feeding	46	17
Voice/resonance	5	3
Articulation/phonology	—	24
Fluency	—	3
Language	—	35
Other	2	1

Source: Adapted from ASHA, 2007b.

Needless to say, disorders of communication can adversely affect educational achievement. Therefore, students with speech, language, or hearing disorders are covered under IDEA and are entitled to free and appropriate individualized services. All children with handicaps and their parents are guaranteed, under this law, **due process** with regard to identification, evaluation, and placement. This includes the identification, evaluation, and placement for disorders of communication as well as other handicapping conditions. These procedures are performed by a team of school professionals in cooperation with the student's parents. Although IDEA is a federal law, individual states are allowed latitude in developing rules and regulations to comply with it. Educational procedures, therefore, vary from state to state. Although this law has far-reaching consequences for the delivery of school services, we mention here only some of the key points of the law that affect the work of the speech-language pathologist.

The National Dissemination Center for Children and Youth with Disabilities (NICHCY) has a great Web site that includes a detailed training package on the law (http://www.nichcy.org). Part of the law specifies that a team of educational personnel and the parents must develop an **Individualized Education Program (IEP)**. In the case of a student with a communication disorder, the speech-language pathologist is a member of the team. The team also includes the parents, teachers, and, when appropriate, the student. The 1997 IDEA emphasizes that the regular classroom teacher participates in the IEP process. Although IEP forms differ among school districts, certain information must be contained in each. **Table 1–3** lists the IEP components adapted from the National Dissemination Center for Children and Youth with Disabilities.

TABLE 1–3 Components of the Individualized Education Plan

1. A statement of the present level of performance
2. A statement of annual goals
3. Short-term instructional objectives
4. Specific special education and related services to be provided
5. Extent of participation in the regular educational program
6. Projected date for initiation of services
7. Anticipated duration of services
8. Appropriate criteria to determine if objectives are achieved
9. Evaluation procedures to determine if objectives are achieved
10. Schedules for review
11. Assessment information
12. Placement justification statement
13. Some statement of how special education services are tied in to the regular education program

After being developed, the IEP is signed by the team members and is reviewed and typically updated annually. In 2004, the IDEA was reauthorized as the Individuals with Disabilities Education Improvement Act (PL 108-446). The most recent IDEA is piloting multiyear IEPs that include goals for three years and must be reviewed annually and at transition points. Of course, IEPs can be reviewed and revised more often at the request of a parent or teacher.

IDEA also stipulates that the student with a disability be provided educational services in the **least restrictive environment**. This means the student should be educated to the maximum extent possible in the regular class with normal peers, if the classroom has the least barriers to successful learning. A comprehensive evaluation must be conducted, and an IEP must be developed prior to the initiation of appropriate services.

PL 99-457 One of the first amendments to the Education for All Handicapped Act was **PL 99-457**. This served to broaden and strengthen the mandate for providing services to preschool children between the ages of 3 and 5 years.

This is an exciting and challenging aspect of the public school SLP's job for several reasons. First, considering the population of preschool children with disabilities as a whole, the vast majority have a communication delay even if their primary handicap is a hearing impairment, cognitive deficit, motor problem, or the like. Second, school systems do not have a captive audience in terms of identifying these children; they are not attending the public schools. Thus, locating, identifying, and screening preschool children with communication disorders necessarily entails much community and agency interaction. The school SLP can be a member of an early intervention team from the school system that is responsible for working with parents, day care centers, pediatricians, health departments, private practices, and other children's services. Through cooperative community efforts, preschool children with communication delay can be identified. IEPs for these children may reflect several agencies' roles and responsibilities in the provision of services. Service delivery for this population: (1) could be home-based, day-care-based, center-based, or a combination of these; (2) vary in intensity; and (3) may require more coordination with agencies and parents.

Infants and toddlers (ages birth to 3 years) must be screened and evaluated utilizing parents or caregivers. The early intervention team then must develop an **Individualized Family Service Plan (IFSP)** for the children who qualify. This is similar to the IEP developed for older children but, as stated in its title, the focus is on the child's family. The plan must be reviewed and revised as needed (at least every six months). The law encourages parent training, which obviously is necessary in the total treatment of these young children. Consequently, teachers and speech-language pathologists become more involved in the development and supervision of innovative parent training programs.

Section 504 of the Rehabilitation Act of 1973 Because public schools receive federal financial assistance, they are prohibited from denying a person with a disability the opportunity to participate or benefit from programs or services or otherwise limiting a qualified person with a disability in the enjoyment of any right, privilege, or advantage. Under **Section 504**, a person with a disability is defined as someone with a physical or mental impairment that substantially limits one or more major life activities. Some students who do not meet the categorical criteria for special education services under IDEA are entitled to reasonable accommodations under Section 504. For example, students who are identified as having Attention Deficit Disorder (ADD) or Attention Deficit-Hyperactivity Disorder (AD-HD) qualify for services under Section 504 and should have a "504 Plan" that delineates any accommodations the student needs.

The Americans with Disabilities Act The **Americans with Disabilities Act (ADA)** was enacted July 26, 1990, and applies to public entities. This includes any state or local government and any of its departments, agencies, or other instrumentalities; thus, it applies to public schools. Specifically, all programs, services, and activities of schools are covered (i.e., field trips, parent meetings, standardized exams, lab classes). Participation in programs, services, and activities may not be denied simply because a person has a disability.

Communication has a special role in implementation of the ADA. Schools must ensure that communications with students who have hearing, vision, or speech impairments are as effective as for other students, and when necessary auxiliary aids must be provided. Auxiliary aids include services or devices such as qualified interpreters, assistive listening devices, telecaptioning, telecommunication devices (TDDs), videotext, taped textbooks, Braille materials, and large-print materials.

Are you still with us? We are aware that a discussion of laws and regulations is not the most entertaining fare for beginning students. It is important, however, that you know that the school-based SLP must operate under a fairly rigid set of guidelines set forth at the federal, state, and local levels. Performance of the job is not arbitrary, and many things the SLP does during the school year are prescribed by law.

CLINICAL/MEDICAL SETTINGS

Fortunately, there are not quite as many legal issues to cover for SLPs who work in clinical/medical settings. Some federal guidelines apply to hospitals and clinics just like they do to the public school system. For example, when dealing with infants and toddlers, SLPs in the clinical/medical setting also develop Individualized Family Service Plans (IFSPs) for use with the pediatric population. When dealing with adults, laws such as the Americans with Disabilities Act (ADA) also apply. Hospitals and clinics must show some degree of transparency in their procedures and paperwork and protect the confidentiality of patients. For example, in 1996, the Health Information Portability and Accountability Act (**HIPAA**) was passed as Public Law 104-191. This act establishes measures ensuring

security and privacy of healthcare information that is maintained by both public and private healthcare providers. Confidentiality in school settings is just as critical as in medical environments. The Family Educational Rights and Privacy Act of 1974 (FERPA) is the law governing the confidentiality of information in school settings.

In clinical/medical settings, one administrative level of bureaucracy that is not present in school systems is the requirements of insurance companies and other third-party payers. SLPs working in medical settings must deal with the requirements of Medicare, Medicaid, and insurance companies. These third-party payers have very strict guidelines on what types of conditions they will pay for and how long treatment can continue to be subsidized. Thus, the SLP in a clinical/medical setting must be careful to document assessment and treatment activities very specifically so that reimbursement is possible.

Another aspect unique to medical settings is the pivotal role of the physician in ordering evaluations and treatment procedures for a given patient. This is clearly different from practice in educational settings in which parents and professionals determine eligibility for and the direction of services. However, it is important to note that doctors may be part of the educational team and in some cases must be included on such panels.

Medical settings also must operate under the guidelines of national and state organizations that accredit hospitals and other clinical facilities. All of these different levels of federal, state, and local control serve to dictate much of what the SLP in a clinical/medical setting must do on a daily basis.

THE ROLE OF THE SPEECH-LANGUAGE PATHOLOGIST IN THE SCHOOL SYSTEM

Public school SLPs hold unique and interesting positions within the school system hierarchy. Superintendents are responsible to the school board and, in turn, may have a number of assistant superintendents, depending on the size of the system. The special education director is responsible to the upper level of superintendents and oversees the provision of special education services in the entire school system. Under the special education coordinator in large school systems that employ 10 or more SLPs, usually one SLP is designated as the speech pathology coordinator and is responsible for managing speech pathology staff and services throughout the school system. In smaller systems, a senior SLP may be designated for leadership purposes, but usually all of the SLPs report directly to the special education coordinator, who then is responsible for the speech pathology program as well as other special education services. The SLP often works with more than one building principal because many SLPs serve multiple schools. In addition to daily interactions with teachers, SLPs frequently work with support personnel (psychologists, social workers, nurses, physical or occupational therapists, and so forth) and agency/community professionals.

The actual work settings and job responsibilities of speech-language pathologists within the school system can vary greatly. The following three vignettes illustrate this broad range.

VIGNETTE 1–1

Mr. James works at Glen High School and Marymont Junior High. His caseload consists of 8 students with hearing impairment who are working on curriculum language and social interaction skills; 6 students who stutter, ranging in severity from mild to severe; 14 students with specific learning disabilities (SLDs) who attend a communication skills class; 10 students who are in the program for the mentally handicapped and are working on functional communication skills necessary for vocational placement; and 2 students who are working for improved voice quality (one has nodules and the other is hypernasal).

VIGNETTE 1–2

Mrs. Sarnoff is an SLP for the Piedmont School District. She serves an elementary school in the mornings and a middle school in the afternoons. This allows her to see the severe cases every day. At the elementary school, she works in the early childhood class and the multihandicapped class using a collaborative consultation approach with the teachers. She integrates classroom curriculum content into all of the therapy sessions. This means that she must be in touch with the teachers, know what is being taught, and know which subject areas and skills are most in need of support. Ten of Mrs. Sarnoff's cases are preschoolers who come into the schools for speech and language services. She works closely with the parents, training them to facilitate their child's communication skills. Several of the children in the multihandicapped class use augmentative communication devices. Mrs. Sarnoff evaluated the children and was instrumental in obtaining the appropriate device for each child. Mrs. Sarnoff has had advanced training in this area and serves as a consultant to the region regarding augmentative communication.

VIGNETTE 1–3

The East Regional Early Intervention Team consists of a physical therapist, social worker, early childhood special educator, and speech-language pathologist. Katherine Smith, the SLP, works with the team in the infant and toddler program. The infants are brought to the Hope Center where the team works on the carpet with the parents by evaluating, demonstrating, and coaching to increase responsiveness of parent and infant. Infant referrals come from parents, neonatal high-risk nurseries, pediatricians, and agencies. Often, a member of the team is asked to come to the hospital neonatal intensive care unit to meet parents and begin a supportive relationship. Ms. Smith finds this to be an interesting aspect of her job. She also has organized a parent support group and attends these meetings as a facilitator. Ms. Smith works in the toddler class where an early childhood special educator works with the 2- and 3-year-olds on a daily basis. Ms. Smith

has specific goals for each child and reviews these frequently with the teacher. They work together integrating communication and curriculum goals. All of the infants and toddlers have an Individualized Family Service Plan (IFSP) developed by the team and the parents after an assessment of family and child strengths and needs. Ms. Smith is also a member of the transition team that facilitates the movement of parents and children from one program to another (e.g., from infant to toddler program, from toddler to preschool program, from preschool to school-age services). She maintains records on all of the children and attends weekly early intervention team meetings, which often include persons from other agencies who are serving the parents and child (e.g., health department, children's services, human resources). If the parents of an infant with developmental delay cannot come to the Hope Center, or a toddler cannot be transported, Ms. Smith or another team member makes regular home intervention visits.

As you can see, there is great diversity within the public school setting; this is one of the exciting aspects of the profession of speech-language pathology. Yet all three SLPs share some common responsibilities. First, SLPs must manage each individual case from the initial screening or referral to a final determination that a maximum level of progress has been attained. Second, SLPs must manage their caseload as a whole by summarizing individual case data for compliance, planning, and reporting purposes. These summarized data, by school and total caseload, are given to the special education director who is responsible for program management. All SLPs are thus involved in three levels of management (individual student, caseload, and program levels) regardless of the size of their school system. Some of the specific responsibilities involved in planning, directing, and providing services to students with communication disorders are discussed next.

Case Finding Case finding, most commonly called **child find**, refers to the preliminary identification of students with potential communication disorders. Case finding usually involves two procedures: screenings and/or referrals. Screenings are quick assessments of a student's communicative abilities; if a problem is suspected, a second screening may be scheduled or plans for a diagnostic assessment may be set into place. Some cases are identified by a referral from another professional. Sometimes parents refer their own children for screening. In most states, an active effort has been made to provide materials (e.g., flyers, posters) for the public that outline normal development in critical areas (e.g., language, social, self-help, hearing, cognitive) and symptoms that might indicate the need for a screening by a professional.

Procedures for locating preschoolers with potential communication disorders vary from "preschool roundups" in small towns to media blitzes in larger metropolitan areas. Mass screenings in the schools take an inordinate amount of time and really are not cost effective. It is much more prudent to put time and effort into quality teacher in-services, screenings upon teacher request throughout the year, and effective communication with teachers (good rapport, working relationships, and the like). In addition, the laws require

that there be no lapse in services. Thus, speech and language services for children who are already identified must be initiated the first week of the school year, making mass screenings more difficult to conduct.

Referral is a widely used method of case finding. Anyone who has the student's welfare in mind and suspects a problem can make a referral. This includes parents, family doctor, school nurse, school counselor, principal, the individual student, and, of course, the teachers. The procedures and opportunities for requesting a screening or making a referral should be presented to teachers, parents, and other professionals periodically. The success of a referral system is dependent on the ability of teachers to identify potential disorders of communication. There is evidence that even without training, many communication problems can be effectively identified by teachers. On the other hand, teachers may not as readily be able to identify some disorders such as voice problems and subtle language problems (Sommers & Hatten, 1985).

Evaluation The process of initial **evaluation** involves formal and informal testing of the student who has failed the screening or has been referred. Results of the assessment process usually yield a diagnosis (e.g., language disorder, fluency disorder, categorizing a student as performing within normal limits). If the student is diagnosed with a communication disorder, the evaluation includes an estimate of severity.

According to IDEA, each student with disabilities must receive a comprehensive multidisciplinary evaluation to determine whether the child is eligible for special education. Eligibility must be determined prior to placement in a special education program, and written parental permission is required for this testing. The speech-language pathologist must comply with the law and be sure that test instruments are valid, are not racially or culturally discriminatory, and are administered in the student's native language. Tests can be standardized (norm referenced, criterion referenced), nonstandardized (e.g., language sample), or, most appropriately, a combination of both.

The SLP may conduct the evaluation over several days and may focus on the suspected area of deficit in detail. The SLP should do a global communication assessment as well, including articulation skills, language competencies, and the normalcy of fluency, voice, and hearing. The SLP should also examine the speech mechanism to look at anatomic structure and function. Case history information from the parents, educational and behavioral observations from the teacher, and classroom observation of the student can be important. Additional information (such as level of cognitive functioning), obtained from school personnel, may be helpful in interpreting the assessment data.

It should be pointed out that assessment is ongoing. Once a student is found to be eligible and is subsequently placed in a treatment program, the speech-language pathologist and the classroom teachers must constantly monitor progress. These periodic reevaluations let the SLP know the success or failure of therapeutic techniques and the need to change or modify the program. The need for dismissal from services also is determined by this ongoing evaluation process.

Participation in Meetings for Case Staffing and Eligibility Determination The purpose of the initial evaluation is to obtain information regarding a student's communication skills that can be presented to the eligibility committee that will determine whether placement is appropriate in a speech, language, and/or hearing program in the school. After the testing, the SLP must be prepared to describe to the eligibility committee how a student's communication disorder interferes with educational performance and the student's ability to profit from classroom instruction. You may hear many tales of students who clearly have difficulties in school or with communication, whose parents are convinced that their child has a problem, and sometimes even the professionals who do the evaluation suspect an impairment, yet the child does not qualify for special education services. How can such a thing occur? One reason is that each school system operates under federal, state, and local guidelines. Eligibility determination ultimately is accomplished by combining these three levels of administrative regulations. It is not unusual for a child to qualify for services in one state, only to be ineligible when the family moves to another state. If a student is diagnosed with a particular problem, it is unfortunate if he or she cannot receive appropriate services just because of administrative regulations. Yet it happens often enough for parents to have formed support groups and for the legal profession to offer consultative services for parents who feel that the school system has not provided appropriate services to their children. Sometimes we just do not spend enough time and effort in evaluation of students. Ehren states:

> Eligibility often shapes caseloads in ways that seem inconsistent with the state of the art. In lieu of making a diagnosis, we ascertain whether the student meets eligibility criteria.
>
> Evaluation, then, becomes an eligibility determination process, rather than a process to describe a student's communication status. . . . First we need to make a diagnosis, next, recommend the need for service; then, discuss eligibility. Diagnosis should drive eligibility; eligibility should not dictate the diagnosis. Eligibility criteria should be viewed as the last hoop to jump through in identifying a student. (Ehren, 1993, p. 20)

Participation in staffing and placement decisions regarding the student is another responsibility of the speech-language pathologist. As a member of the placement team, the SLP reviews the data on individual students and participates in the development of the Individualized Educational Program (IEP) or Individualized Family Service Plan (IFSP) for each student. Parents must give written permission for placement prior to the initiation of services.

Delivery of Treatment Although called by different names—therapy, intervention, remediation, habilitation/rehabilitation services—*treatment* refers to the actual delivery of services. **Treatment** may be **direct**, when the speech-language pathologist works directly with the student, or **indirect**, when the speech-language pathologist works with others

(such as the classroom teacher or parent) to develop, improve, or maintain communication abilities of the student.

Subsequent chapters of this book discuss the treatment principles for each of the disorders of communication SLPs frequently encounter in schools. In essence, however, treatment involves the instructional activities for the improvement of the communication deficit. The SLP must be accountable and able to show that the program of treatment is progress-directed by maintaining accurate student data. In some school systems, the SLP may be fortunate enough to have the assistance of paraprofessionals. **Paraprofessionals**, also known as communication aides, speech-language pathology assistants, or support personnel, can carry out some of the more routine treatment procedures established by the SLP. These aides are, however, limited by their educational qualifications and school system guidelines as to how much assistance they can render.

It is always the hope of the SLP that teachers support the speech-language treatment programs of their students. Teachers should participate whenever possible by working closely with the SLP (such as through sharing curricular topics, monitoring the use of techniques, assisting in carryover, and supporting in numerous other ways that are discussed throughout this book). Ideally, the classroom should be a real-life situation where the student can practice newly learned communication behaviors and strategies.

SERVICE DELIVERY MODELS

Whenever a child in a public school or clinical/medical setting receives treatment for a communication disorder it is almost always a team effort. A general guideline is that the more severe the case, the more team members will be involved. For example, a child who has cerebral palsy and a hearing impairment may require many different types of services from a broad range of professions (audiology, physical therapy, occupational therapy, SLP, classroom teacher, social worker, etc.). On the other hand, a child with a learning disability may be seen by the learning disability (LD) teacher, regular classroom teacher, and the SLP. Finally, a child whose only problem is misarticulation of the /s/ sound may be seen by only the SLP and classroom teacher. Teams can operate in a variety of ways in both educational and clinical/medical settings, and several common models are discussed here.

MULTIDISCIPLINARY, INTERDISCIPLINARY, AND TRANSDISCIPLINARY TEAM MODELS

Indirect as well as direct approaches to providing services typically involve parents, teachers, and other professionals acting as a team that participates in assessing, treating, and evaluating a treatment program. You can view the three models of team approaches on a continuum with **multidisciplinary** on one end, **transdisciplinary** on the other end, and **interdisciplinary** in the center (**Figure 1–2**). On the multidisciplinary end of the continuum, there tends to be less cooperation among team members in terms of planning and implementation of a remedial program. There is also less communication among team

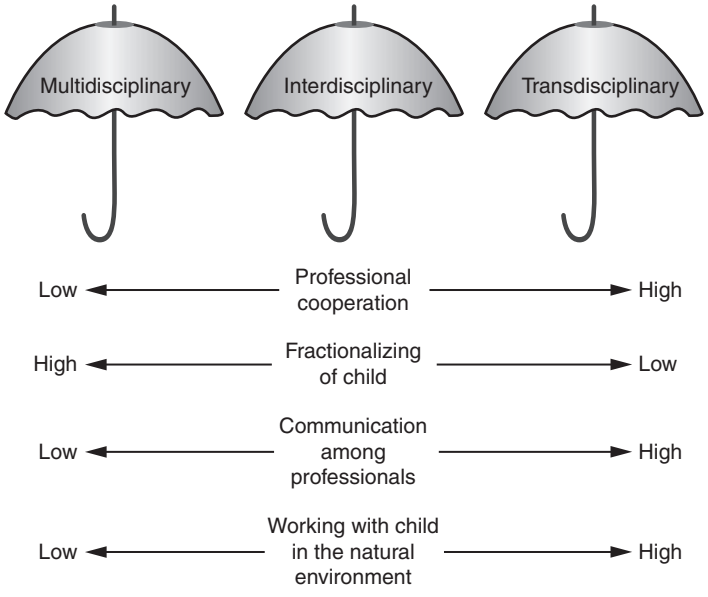

FIGURE 1–2 Models of team approaches.

members on this end of the continuum and more "fractionalizing" of the child, meaning the child is taken out of class for speech, then for work on a learning problem, then for counseling about academic adjustment, and so forth. As you approach the transdisciplinary end of the continuum, more group cooperation in planning and implementation and much greater communication exist. The team has incorporated many goals into the child's daily classroom routine, and perhaps team members have worked with the classroom teacher regarding how to use specific strategies in the child's daily activities. This accomplishes the educational objectives without constantly removing the child from the classroom.

One theme common to all three approaches is that they each use a variety of professionals. For instance, a regular classroom teacher, audiologist, SLP, psychometrist, and special educator may be involved with a case in all three approaches. In clinical/medical settings, even more professionals are involved. A second similarity is that all three approaches deal with both assessment and treatment of the child's problem. The differences among the approaches, however, are the focus of the present section. Initially, we discuss the multidisciplinary and interdisciplinary models.

The multi- and interdisciplinary approaches maintain the independence of each discipline in terms of doing separate evaluations and holding separate treatment sessions with the child. For planning purposes, both multi- and interdisciplinary approaches involve each professional making separate sets of annual goals and short-term objectives, although they comprise one Individualized Educational Program. When implementing the IEP, the multi- and interdisciplinary approaches either carry out the goals independently, or in the

latter approach, incorporate some goals of other team members when possible. This tends to fractionalize the child and the program of treatment. It has often been said that it takes more than a staple punched through a pile of separate reports to make an integrated program. Yet, this is what often happens in a multidisciplinary approach. Even though the IEP may contain goals in many areas, often team members focus only on the goals that apply to their own disciplines. It is not uncommon for one professional to be unaware of the specific goals that another team member has targeted at a given point in time or of the child's progress in that area. Another criticism of these models is that it may not be clear exactly which member of the team is accountable for certain goals and evaluating programs.

In the transdisciplinary model, the professionals and family together develop the assessment and treatment options. It is important to remember, however, that regardless of the assessment/treatment model, the IEP must be developed jointly by professionals and family members. The transdisciplinary model merely emphasizes such interactions more than others. There is much consultation and discussion during the assessment period; team members may observe the child in a variety of settings in addition to collecting individual test data. The guiding philosophy is that team members are committed to working together *across discipline boundaries* to make the intervention effective. A prominent concern in transdisciplinary models is the notion of a primary service provider. In most cases, one professional sees the child more often than do other professionals. The classroom teacher, for instance, has many more opportunities to interact with a particular child and observe behavior than does the SLP. As such, the teacher and classroom environment have much to offer in terms of evaluation information for the SLP. Who knows more than the child's teacher about her typical communication skills, problem-solving strategies, consistency of language errors, intelligibility, fluency, and social skills?

The classroom environment and teacher are also primary considerations in the treatment of speech and language problems because the child uses communication skills in the classroom throughout the day. In most cases, the SLP sees children with communication disorders for individual sessions. This is especially true in the beginning phases of treatment. When the child leaves the classroom to go to speech therapy, the SLP must *contrive* activities that resemble real communication, especially in the later stages of treatment. It is difficult to justify spending time creating a natural environment for therapy when one already exists in the classroom. Often, children can effectively learn to use correct sentence structure, speech sounds, fluent speech, and good vocal habits in the confines of the speech room. However, as soon as the child returns to the classroom environment, he often forgets these skills. An enduring complaint of SLPs is that it is relatively easy to *establish* a new communication skill, but it is most difficult to *generalize* these skills to the child's natural environment. The classroom teacher, as a team member, can be of crucial assistance here.

If close communication between the SLP and the teacher occurs, the teacher can assist in facilitating generalization of newly established behaviors. For example, a child with a

language problem who omits "is" from sentences such as "he is my friend" can easily be trained by the SLP to remember the "is" in therapy sessions. Yet, the child goes back to the classroom and continues to say sentences without including "is." If the teacher reminds the child to include "is" in classroom conversation, the child can rapidly learn that this piece of language is important and finally generalize it into daily communication. Cooperation of team members is not a one-way street. For example, imagine that a particular child scores low on vocabulary tests administered by the SLP, and the child should have some vocabulary enrichment. The SLP could consult with the classroom teacher and begin to train vocabulary words that are related to the child's academic work. For example, an SLP that we know was working with a student on building vocabulary and production of a correct /s/ sound. The SLP asked the teacher which areas of the child's academic performance were weak, and the teacher indicated that the boy was particularly struggling to understand how city government works. The SLP borrowed a textbook from the teacher and centered part of her therapy sessions around the topic of government, introducing related new vocabulary words and monitoring the child's /s/ sound during discussions they had about how the city was run.

This example underscores the symbiotic relationship between professionals. One final note about cooperation among professionals is necessary. Historically, professionals of various types have felt that certain training was their exclusive province. This type of "turfism" tends to be counterproductive. The most important goal is that the child develops skills, eradicates maladaptive behaviors, and learns specific information and strategies for problem solving. It makes no difference whatsoever if a child's grammar is corrected by the SLP, a teacher, or a parent. The critical point is that the problem is remediated. If a child learns certain concepts about classroom work from the SLP, she is further ahead, and the teacher should not feel that his or her territory has been encroached upon.

TYPES OF SERVICE DELIVERY OFFERED BY THE SPEECH-LANGUAGE PATHOLOGIST

The SLP working in the school environment can offer a continuum of services to help students with communication disorders. A number of terms are commonly used to refer to different types of services.

Direct/Indirect Services When the SLP works with children individually or in small groups, it is called direct service. These direct services can be done in the classroom, or they can be provided in a treatment room located elsewhere in the school building. When the SLP works with the student outside the classroom, either individually or in a group, this is sometimes called a pull-out model of service delivery. Most SLPs have offices/treatment rooms in which they can work with an individual child or small group for several treatment sessions per week. If the children are grouped, they are often chosen because they are all working on the same types of problems (e.g., groups of children with stuttering problems or language disorders). Whereas some SLPs are assigned exclusively to a single

school building, others are itinerant and travel among several schools, providing services to each. Whether SLPs are itinerant or not, they must maintain close communication with all teachers regarding the students they see in treatment.

Direct services in which the SLP removes the students from the classroom environment have advantages and disadvantages. One positive aspect is that the SLP can work with the student in an environment free from distractions, and this is helpful in **establishment** of many communication behaviors (e.g., teaching a new speech sound to the child). Another advantage is that certain therapy approaches involving drillwork or specialized equipment can be more easily implemented outside of the classroom. On the other hand, if students are removed from the classroom several times a week, they can miss valuable academic lessons while in speech-language treatment sessions. Direct services provided in the classroom can be of help to both the student and the teacher. The SLP can help the teacher by assisting with classroom activities, giving them a communication slant that is beneficial to all members of the class. Direct services provided in the classroom assist in generalization of goals trained in a therapy room into the natural environment.

In most school systems, SLPs provide a mixture of direct and indirect services. They see some children exclusively with direct services, whereas others receive a combination of direct and indirect, and still others receive all of their treatment in the indirect mode. The configuration of services received depends on the caseload, teacher cooperation, the particular philosophy of the SLP, and guidelines set by the school system and state department of education.

Interestingly, the ASHA Schools Surveys conducted in 1995 and 2000 indicates the following:

> Except for the birth to 2 years age group, the most frequently used service delivery model was the traditional pull-out, followed by the classroom based model. For the birth to 2 years age group, the most used model was the collaborative consultation model.

Although it is true that many states currently emphasize use of indirect and collaborative models of service delivery, the ASHA data suggest that the majority of public school speech-language pathologists surveyed indicate that direct services are still prevalent.

Indirect Services: A Consultative/Collaborative Approach Speech-language pathologists use a variety of assessment/treatment models to deal with both children and adults who have communication disorders (Frassinelli, Superior, & Meyers, 1983; Fujiki & Brinton, 1984; Marvin, 1987; Damico, 1987). As mentioned previously, in the traditional direct service model, the SLP removes the child from the classroom and sees him or her individually or in a group. Parents, teachers, and administrators have become so accustomed to this direct service model that they may find it unusual to deal with other modes of treatment, such as a consultative/collaborative mode. Basically, collaboration is a three-person (or more) chain of service. For instance, the consultant (SLP) provides professional service

to the child indirectly through the teacher. Collaboration as a practice is not new. Speech-language pathologists have made suggestions to teachers and parents for decades regarding how they can assist in treatment progress. SLPs have now begun to realize that different children may require different levels of direct or indirect involvement with the SLP and that there is a continuum of services that SLPs can offer. Consultation models have been shown to be effective and workable in school systems and are especially important in **generalization** of communication skills to the natural environment of the classroom (Ferguson, 1991; Moore-Brown, 1991; Magnotta, 1991; Montgomery, 1992).

A teacher might ask, "For what kind of case would I be the primary interventionist?" One example might involve a child who is nonverbal in a preschool class. A primary goal for this child is to increase communication attempts through pointing and physically regulating the teacher (e.g., putting the teacher's hand on a toy to wind it up) in natural daily activities. This would be a difficult goal for the SLP to work on outside of the classroom. Yet, the teacher would not have to do anything extra for the child in terms of preparation beyond simply attending to the child's pointing during certain activities and allowing the child to physically regulate him or her to make needs known. The SLP then would evaluate the occurrence of communication attempts at different points in therapy and prescribe changes in teacher–child interaction.

In another example, the consultant (SLP) might do an in-service presentation on a topic in dialectal variation, such as the occurrence of African American English features in the language of minority children. A teacher attends the in-service and later has a student who indicates that he or she wants to learn to write some short stories in a Standard English form and eliminate elements of African American English from the story. The child also indicates a desire to learn to style shift, to speak Standard English on certain occasions and then shift back to African American English when desired. The teacher might agree to monitor the writing and speaking in certain situations and let the student know when dialectal features occur. In this case, the teacher really does all the assessment, intervention, and evaluation of the program with only some advice and information from the SLP consultant. Because this student is a dialect speaker, he or she does not have a clinically significant communication disorder, so no IEP is necessary in this case.

This collaborative model highlights enhanced communication and problem solving among professionals, and the plan for assessment and intervention actually springs from these discussions. It is probably a basic fact that people tend to participate more fully in an intervention program if they have had some role in determining its course. A teacher who has a good suggestion about how to approach a problem of a communication-disordered child in the context of the classroom will be more likely to carry out the plan than if he or she is asked to do a particular task by the SLP. When this child is served exclusively by the classroom teacher and the SLP acts as a consultant, the IEP must reflect the provision of indirect services only.

You can see that the continuum of services that the SLP could offer varies considerably in terms of teacher and SLP involvement. Almost any variation on the preceding

models is possible and the particular configuration of treatment responsibilities for a particular child depends on some of the following variables:

1. Types of goals for a particular case and the child's point in the therapy program (whether the child is just beginning treatment or nearing dismissal)
2. Willingness of the SLP to be flexible in service provision
3. Willingness of the teacher to consider alternative models of service
4. Time available for consultation meetings for both parties

Although most children can benefit from direct service by the SLP, in many instances the SLP can best deal with cases by working collaboratively with the teacher or parents. Some other specific examples of cases that might be treated effectively with collaboration are illustrated next.

CASE 1–1

One common example of a case suited to collaborative models is a child who habitually abuses his vocal cords by frequently yelling, screaming, and using the voice improperly. It is difficult to see how the SLP could monitor this behavior if the SLP sees the child only individually in an isolated therapy room. The teacher sees the child more than the SLP does and can monitor instances of vocal abuse and discourage them. The major input of the SLP would be to introduce to the child proper vocal hygiene practices, inform the teacher and parents of those practices, and monitor changes in the child's vocal quality over time.

CASE 1–2

Any child who speaks in utterances less than three to four words in length is a natural candidate for indirect or collaborative treatment. These children require continuous stimulation of certain language forms and need to be reinforced naturally for use of correct language in real communicative situations (e.g., give the child objects she asks for; look at things she labels). The SLP could isolate this child and contrive activities similar to those already occurring in the classroom; however, this appears to be nothing more than reinventing the wheel. The teacher is with the child during her daily activities and can not only model appropriate language, but also reinforce the use of utterance types as suggested by the SLP. A very powerful technique known as *recasting* involves restating a child's incorrect utterance in a correct manner. For instance, if a child says, "Him my friend," a teacher or parent could say, "Yes, he is your friend." Many research projects have demonstrated that recasting can effectively promote the use of correct language forms in children with language disorders (Paul, 2007). This is a technique that does not take much extra time and that can be naturally incorporated into any interaction with a child.

CASE 1–3

A final example of appropriate use of indirect or collaborative therapy involves a child with any type of communication disorder who is in the generalization portion of speech/language therapy. The SLP can train the child's speech and language behavior only to a certain level, and then it is time for the child to use these new skills in natural situations. Some children can produce impeccable /s/ sounds in conversation with the SLP in the therapy room, only to misarticulate in the classroom or at home. Similarly, children who stutter are frequently fluent with the SLP but fail to use their fluency-enhancing techniques in real situations.

You might get the impression that collaboration is less complicated and takes less time than does providing direct services. Usually, this could not be farther from the truth. In fact, collaboration, when well done, can actually take more time than direct services do. Collaboration is not something that teachers and SLPs should dabble with. The process involves thoroughly assessing the child, establishing goals, determining who will be responsible for different aspects of the treatment program, and evaluating the effectiveness of the program (Frassinelli et al., 1983; Fujiki & Brinton, 1984; Marvin, 1987; Damico, 1987; Ferguson, 1991; Moore-Brown, 1991; Magnotta, 1991; Montgomery, 1992).

THE ROLE OF THE CLASSROOM TEACHER IN IDENTIFICATION, ASSESSMENT, AND TREATMENT

Consider the following vignettes of three teachers.

VIGNETTE 1–4

Mrs. Thomas has taught kindergarten for 12 years. She has been concerned for some time about little Rachel, who appears to have a great deal of difficulty following directions. Mrs. Thomas gave carefully sequenced instructions for making a pinwheel out of a stick, construction paper, and a metal pin. Rachel ended up with a "ball" of construction paper that was poised on the end of the stick like a perverted magic wand. Mrs. Thomas requested from the speech-language pathologist a hearing test for Rachel, and it was found that Rachel had a significant hearing loss caused by recurring ear infections. When she received an evaluation by an audiologist and wore her new hearing aid, she had little trouble with comprehending instructions.

VIGNETTE 1–5

Mrs. Carson had dealt with Reginald for two years—once the first time through third grade, and again when he had to repeat that grade. She had put in literally hundreds of hours observing whom he liked and who liked him. She knew to whom he talked and the topics of conversation. She not only knew what he learned, but *how* he learned, what motivated him, what he could do, what he could not do, what made him cry, and who his favorite baseball player was. For instance, she knew that Reggie had difficulty in meeting a strange adult for the first time and that whenever he was asked to perform a task, it was always wise to present the instructions twice. After obtaining permission to evaluate, the new SLP asked if she could take Reggie for an hour to do some tests of his language ability. Unfortunately, she never asked Mrs. Carson any questions before removing Reggie for his tests. When the SLP brought Reggie back, she announced that he had failed all of the language tests and did not talk to her when she tried to obtain a conversational sample. Mrs. Carson was not surprised. Her input about how to deal with Reggie would have made the evaluation much more effective.

VIGNETTE 1–6

Bob Brooks was a teacher who became uncomfortable whenever he thought of watching and listening to Emilio Chavez. Emilio had a severe stuttering problem and produced long, torturous blocks accompanied by facial grimaces and inspiratory gasps. Bob had discussed this with the SLP and knew it was not a good policy to avoid calling on a child who had a stuttering problem. So, now it was time to ask Emilio a question and see the look of a trapped animal quickly eclipse the child's face. Bob knew that Emilio was in speech therapy and the technique he was supposed to use was a slowed-down, stretched type of speech that prolonged vowel sounds to increase his fluency. As Emilio began to answer, he pressed his lips tightly together, and his head began to jerk in a series of rapid arrhythmic movements that lasted almost half a minute. Mr. Brooks finally said, "Remember to start out slowly and prolong the vowels like you do in speech class." Emilio stopped, tried to relax, and was able to answer the question appropriately with much less abnormality in his speech as he slowly glided from one vowel to the next.

These three vignettes illustrate the participation of teachers in three important aspects of dealing with communication disorders: identification of cases, evaluation of children's communication skills, and treatment of communication problems. In the examples involving case detection and treatment, the teacher succeeded in helping the communication-disordered child. In the case involving evaluation, the SLP failed to profit from the expertise of the teacher before evaluating a child. If she had only asked the teacher some questions, the evaluation would have been more efficient and would have provided more information. It is, of course, up to the individual classroom teacher, the school administration, and the

SLP to determine specific roles and duties in the real world. If teachers could incorporate even some of the information included in the present text into their daily interactions with children and SLPs, they could see gains in several areas. First, the children with communication disorders would be detected, evaluated, and treated more quickly and effectively. Second, SLPs would be able to perform their jobs more efficiently and be able to focus maximum effort on the cases that require the most attention. Third, teachers would be able to have an even greater impact on their students. Finally, as a member of the educational team, teachers would develop strong professional relationships with other disciplines.

Children in the public school system who are enrolled in special education comprise a highly heterogeneous group. These children represent almost every exceptionality, and public school professionals are expected to be able to diagnose and treat these problems and prescribe appropriate educational programs. In addition to representing a disparate variety of handicapping conditions, these children also manifest a full range in severity of their disorders. No single professional can hope to have expertise in assessment and remediation for every kind of physical, cognitive, language, speech, emotional, or educational problem. It is because of this diverse population and the monumental literature available about each type of disorder that public school professionals generally incorporate a team approach when dealing with special education cases. In subsequent chapters, we outline many specific ways that teachers and SLPs can cooperate in helping students with communication disorders.

THE ROLE OF THE SPEECH-LANGUAGE PATHOLOGIST IN MEDICAL SETTINGS

There is a general similarity in the functions of the SLP between clinical/medical and educational settings. As we stated earlier, the roles of case finding (screening), evaluation, treatment, and participation in staffing of cases define much of what a public school speech-language pathologist does during the course of a workday. SLPs working in clinical/medical settings perform similar functions. For example, a new patient admitted to an acute care hospital after suffering a stroke will probably be screened by the SLP for speech, language, and swallowing disorders. If difficulties in any of these areas are detected, a more thorough evaluation will be conducted and treatment will be recommended if indicated. One big difference in clinical/medical settings as compared to schools, however, is that the patient's physician must order evaluation and treatment before these can be conducted.

SLPs in clinical/medical settings perform screenings, evaluations, and treatment in much the same way as their counterparts in the school system do. Evaluations comprise standardized tests, nonstandardized tasks, and use of facility-specific checklists. Treatment in clinical/medical settings may differ based on the type of facility, but considering the clinical/medical settings as a whole, many types of therapy can be found. For instance, some facilities offer group therapy for language disorders in adults who suffer from brain injury, stroke, or dementia. SLPs also provide direct one-on-one therapy in most clinical/medical settings. All three of the treatment models discussed earlier are used in clinical/medical settings. Collaborative consultation may be used in clinical/medical settings, but instead

of involving teachers in the treatment, physical therapists, occupational therapists, nurses, and family members contribute to speech and language goals.

THE ROLE OF HEALTHCARE PROFESSIONALS IN IDENTIFICATION, ASSESSMENT, AND TREATMENT

Depending on the type of clinical/medical facility, there is almost always an opportunity for healthcare professionals to play a role in speech, language, or swallowing assessment and treatment. First of all, healthcare professionals should always be thinking of speech, hearing, language, and swallowing when they see a patient so that they can share any concerns with others on the medical staff. If a nurse is having trouble communicating with a new patient, the nurse can request a screening. Thus, the first person to encounter a patient with a communication disorder is often a healthcare professional other than the SLP.

The thorough assessment of a patient requires input from a variety of sources. The speech-language pathologist is interested in discussing the patient's communication with other healthcare professionals involved in the case. If the physical therapist (PT) has evaluated the patient prior to the SLP, the SLP can talk with the PT to see how the patient interacted. Which words did the patient use? Did the patient form sentences? Did the sentences make sense? Was the speech slurred? Healthcare professionals can answer many questions and provide valuable information to the SLP. If a swallowing evaluation is scheduled, the SLP may want to talk with the nursing staff about the patient's ability to eat or drink certain foods and beverages. These are only a few examples of how the healthcare staff can provide important information to the SLP and contribute to the evaluation of a patient's communication.

Depending on the type of clinical/medical facility, the patient's length of stay, and whether the patient is an inpatient or outpatient, healthcare professionals also can play an important role in the treatment process. If a patient is in a rehabilitation hospital for a reasonable length of time, the professionals at the facility have the opportunity to work as a team on treatment goals. In most facilities, patients are "staffed" in a meeting of all relevant professionals who discuss their goals and progress that has occurred. These staffings occur frequently and on a regular basis. Think of how valuable it can be to hear the PT, occupational therapist (OT), respiratory therapist, nurse, and speech-language pathologist discuss what levels of competence the patient has reached and what others can do to facilitate progress. During such a meeting, the SLP might tell the others which types of cues are the most efficient to help the patient retrieve vocabulary during interactions. The OT might communicate to other professionals which activities of daily living (e.g., eating, drinking, dressing) the patient should be expected to perform on his own and how to help if he has difficulty. All professionals who interact with the patient can play a role, no matter how small, in achieving each other's goals for that patient.

This chapter provides an overview of several topics. First, we introduced the professions of speech-language pathology and audiology. We discussed work settings, caseload

issues, credentialing, and professional organizations. Next, we dealt generally with legal and administrative issues that dictate the day-to-day operations of speech-language pathology and audiology programs. Finally, we discussed the role of the SLP in educational and clinical/medical settings and tried to provide an overview of how teachers and healthcare professionals could contribute to identification, assessment, and treatment of communication disorders. The rest of this text focuses on specific kinds of communication disorders and how they are identified, assessed, and treated in educational and clinical/medical settings.

Terms to Know

Communication
Language
Speech
Audition
Audiology
Speech-language pathology
Acute care hospitals
Rehabilitation hospital
Community clinic
Private practice
University-based clinic
Long-term care facility
Industrial audiologist
Screening
Prevention
Identification
American Speech-Language-Hearing Association (ASHA)
Clinical fellowship year (CFY)
Certificate of Clinical Competence (CCC)
American Academy of Audiology (AAA)
Individuals with Disabilities Education Act (IDEA)
Due process
Individualized Education Program (IEP)
Least restrictive environment
PL 99-457
Individualized Family Service Plan (IFSP)
Section 504 of the Rehabilitation Act
Americans with Disabilities Act (ADA)
HIPAA
Child find
Referral
Evaluation
Treatment
Direct treatment
Indirect treatment
Paraprofessionals
Multidisciplinary
Transdisciplinary
Interdisciplinary
Establishment
Generalization

Study Questions

1. Discuss the importance of federal special education laws from PL 94-142 to IDEA 2004. What are some of the main points of each public law?
2. What is an Individualized Education Program? What are some of its component parts? How is the IEP developed?

3. Why is it important that teachers make referrals to speech-language pathologists? What are the requisite skills needed to be able to make these referrals?
4. Differentiate between direct and indirect treatment services.

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