Assessment of Communication Disorders in Children

Resources and Protocols

FOURTH EDITION

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Preface

The fourth edition of this book, *Assessment of Communication Disorders in Children*, is a companion volume to the third edition of the *Assessment of Communication Disorders in Adults* (Hegde & Freed, 2022). Together, these two texts provide a comprehensive set of resources and protocols for assessing both children and adults with communication disorders. The two books share the same clinical philosophy: Clinicians need both scholarly information on disorders of communication and practical protocols for assessing them.

Clinicians typically find that they have to seek scholarly and background information on assessment in one source and practical assessment tools in another. Most background information on assessment techniques are to be found in more traditionally written textbooks on assessment. More practical assessment tools are typically presented in resource books. Clinicians often find this an inefficient arrangement to gain access to both scholarly background and practical procedures of assessment. Sometimes, the different sources the clinicians have to access may be somewhat inconsistent with each other, creating further problems of integration and validation. Therefore, to solve these practical and technical problems, we have designed an assessment book that includes two chapters each on the most commonly assessed communication disorders in children: one to provide the scholarly background and the other to give practical assessment protocols. Thus, in a single source, the clinicians can find both scholarly information and practical protocols to assess speech, language, fluency, voice disorders, as well as the children with complex communication needs. We also have written a single chapter on literacy skills that offers both the background information and assessment parameters and procedures, and a single chapter introducing assessment for augmentative and alternative communication (AAC) systems.

This book, similar to the companion volume, *Assessment of Communication Disorders in Adults*, 3rd Edition (Hegde & Freed, 2022), has an initial section on the *foundations of clinical assessment*. This section includes chapters on common assessment procedures and major assessment matters and issues. The first chapter gives the outline of a basic assessment procedure. The second chapter then offers all the protocols commonly used in assessing most, if not all, disorders of communication in children. This section includes additional chapters on assessment based on standardized tests, assessment of ethnoculturally diverse children, and alternative assessment procedures along with a model that integrates alternative and traditional approaches. All chapters offer extensive background information and critical review of major issues.

A unique philosophy that has guided the writing of this book is that the *alternative and traditional assessment procedures need to be integrated in assessing all children—including mainstream children*. We do not believe that traditional assessment is good for some children and alternative procedures are needed for others. Certain fundamental limitations of standardized tests do not disappear when they are administered to mainstream children. Many alternative procedures are designed to overcome the limitations of standardized tests and those limitations are evident even when the tests are administered to children included in the standardization sample (mainstream *or* culturally diverse). Most alternative procedures have additional strengths that will enhance the reliability and validity of assessment data obtained on any child, not just an ethnoculturally diverse child. Our chapter on alternative assessment procedures not only reviews extensive information on alternative procedures, but also describes a model of assessment that integrates the strengths of the traditional approach with those of the various alternative approaches.

The first chapter on each disorder, called the *resource* chapter, is a review of scholarly information on assessment, the kind typically found in traditional textbooks. The chapter gives the

research base on the normal skill development when relevant, describes the disorder and its classification, summarizes etiologic information, specifies any associated clinical conditions, and gives a descriptive overview of assessment. Each resource chapter offers critical review of issues related to assessing the particular disorder. In addition, the chapter includes a description of diagnostic criteria, differential diagnosis, and probabilistic prognostic statements. All resource chapters include a section on postassessment counseling in which the clinician gives the parents or other caregivers the assessment results and answers their questions. The most frequently asked questions and the clinician's answers are written in a dialogue format that the student and the beginning clinician can model after.

The second chapter on each disorder and on children with complex communication needs is a collection of detailed as well as *practical and precisely written protocols* to make a complete and valid assessment. The protocols go beyond the typical resources offered to speech-language pathologists. Most protocols are detailed enough to be used immediately in assessing any child with a communication disorder. All protocols may be individualized on the companion website and printed out for clinical use. In addition, the common and the standard assessment protocols given in Chapter 2 may be combined with specialized protocols given in the respective chapters on disorders of speech, language, fluency, voice, and on children with complex communication needs. Therefore, with the help of resources and protocols given in the book and the companion website, the clinician can develop child-specific and individualized assessment packages to be readily and easily used during assessment sessions.

For this fourth edition, a new section on assessing voice in transgender and gender diverse adolescents has been added to the chapter on assessment of voice (resources). In Chapter 5 on *Assessment of Speech Sound Production: Resources*, a new section has been added on criterion-referenced assessment. The title of the previous Chapter 13, *Assessment of Nonverbal and Minimally Verbal Children* has been changed to *Assessment of Children With Complex Communication Needs* to reflect the current preferred usage. The chapter's content has been suitably revised and updated. The protocols on assessing children with complex communication needs (Chapter 14) has been modified to parallel the changes in Chapter 13. We have updated assessment research and tools throughout the book. All chapters and protocols have been revised as found necessary. New research on assessment techniques and approaches has been summarized.

We would like to thank Valerie Johns for her excellent editorial support. Our thanks also go to Lori Asbury, Production Manager, Jessica Bristow, Production Assistant, and Christina Gunning, Project Editor for their fine and friendly work on the book. As always, Plural Publishing's President Angie Singh's behind-the-scene support is greatly appreciated.

Creating Child-Specific Assessment Packages With Protocols on the Companion Website

Assessment protocols are detailed forms the clinicians can use to complete specific diagnostic tasks. These protocols are time-saving devices for the clinician. The accompanying website contains all the standard protocols: the child case history form, the orofacial examination and hearing screening form, and the assessment report outline. These protocols are essential in assessing all children with any disorder of communication.

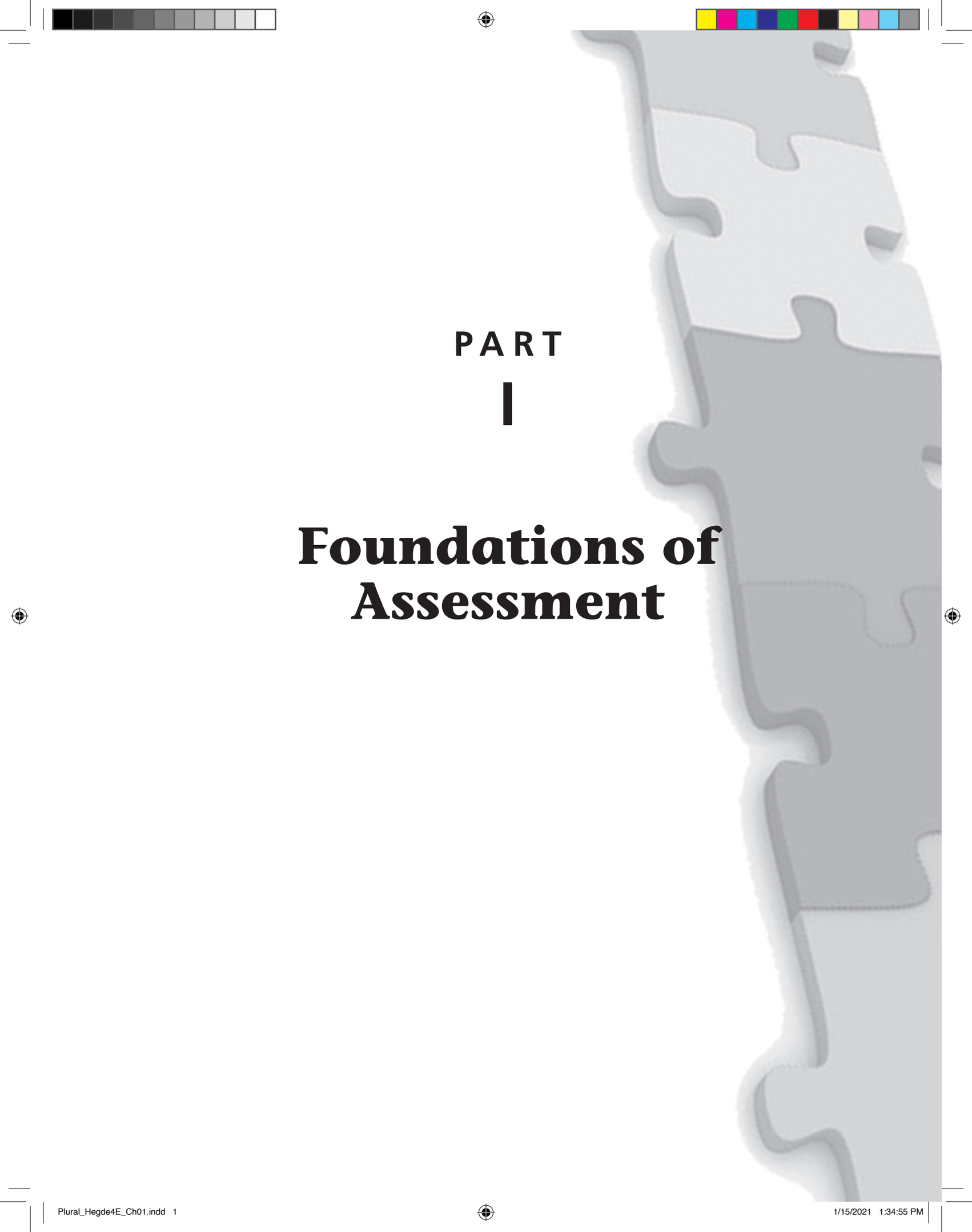
The *companion website* also contains protocols included in various *protocol chapters* in the book. These specific protocols help assess speech sound production and phonological patterns, various language skills, fluency disorders, voice disorders, and children with complex communication needs. Although the protocols are offered as detailed procedures in specific formats, we emphasize that assessment is a dynamic process. No procedure can be applied to a child without modifications. Tailoring assessment procedures to suit the individual child and the family requires both creativity and scholarship; in fact, this is one of the themes of the book. Therefore, we do not expect the clinician to photocopy the protocols from the printed book and use them during assessment. Instead, we expect the clinician to modify the protocols on the *companion website* to suit an individual child and family, print them out, and use them during assessment. Even as they use printed forms during assessment, clinicians will modify certain procedures, change the wordings of questions to be asked, and alter the manner in which information is given to the families.

Individualizing a protocol is accomplished with relative ease because the bulk of the information on the *companion website* will be relevant to most children and families. A few additions and deletions may help individualize each protocol for a specific child. The clinician also can type in the name of the school or clinic, along with all the identifying information needed (e.g., the name and address of the child and the parents, name of the clinician, the date of assessment, etc.). Therefore, the protocols can easily be converted into the clinician's stationery formats. When filled out and printed, they will be appropriate to be placed in a child's clinical folder.

In addition to an opportunity to individualize the protocols, clinicians also are offered the possibility of *putting together a comprehensive assessment package for a child* efficiently and relatively quickly. The clinician can select the protocols needed for a given child's assessment, individualize them, and print them for clinical use. This feature is especially useful when a child needs to be assessed for multiple communication disorders. For example, for a child who exhibits both a speech sound and a language disorder, the clinician may print out all the basic protocols plus the specific speech and language protocols given in Chapters 6 and 8 to create a comprehensive assessment package. Similarly, for children with a diverse ethnocultural background (African American, Asian, or Hispanic), the clinician may select the relevant speech protocols, language protocols, or both, given in Chapters 6 and 8 and attach them to all the other protocols used.

An additional advantage of the protocols is that several of them *help assess speech and language skills without the use of standardized tests* that may not be appropriate for certain children. For example, the clinician can assess speech sounds, apraxic or dysarthric speech, and the production of grammatical morphemes, basic vocabulary, conversational skills, and so forth with protocols designed in the manner of criterion-referencing without normative comparisons.

We encourage clinicians to freely individualize and use the practical and time-saving protocols to design a child-specific and comprehensive assessment package. The assessment report outline given on the *companion website* will further expedite the task of writing an assessment report.



PART

I

Foundations of Assessment

CHAPTER 1

Assessment of Communication Disorders in Children

- Assessment, Evaluation, and Diagnosis
- Written Case History
- The Initial Clinical Interview
- Hearing Screening
- Orofacial Examination
- Diadochokinetic Tasks
- Speech-Language Sample
- Standardized Assessment Instruments
- Alternative and Integrative Assessment Procedures
- Assessment of Children With Complex Communication Needs
- Assessment of Literacy Skills
- Stimulability
- Postassessment Counseling
- Assessment Report
- Chapter Summary
- Study Questions
- References

No communication disorder may be effectively treated without a thoughtful assessment. **Treatment** is a systematic effort to change an existing condition, and **assessment** is a first step to determine what needs to be changed, and if possible, why. In medicine, diagnosis of the disease precedes treatment; in communication and other behavioral disorders, efforts designed to understand the nature of the problem precedes treatment.

Treatment may not be offered unless the clinician knows what exactly to treat. On the other hand, treatment may be more effective if the cause of a disorder can be determined. Generally, causes may be better inferred or demonstrated for physical diseases than for communication disorders, especially for the commonly treated speech sound and language disorders in children. A highly correlated clinical condition such as a cleft of the palate, traumatic or congenital brain injury, autism spectrum disorder, or similar disorders may suggest causation of communication disorders but, in fact, both the clinical condition and the communication disorder are coexisting conditions. Potential causes of communication disorders, especially of those characterized as *functional*, are inferred, rather than experimentally demonstrated.

Assessment, Evaluation, and Diagnosis

Different sources define assessment, evaluation, and diagnosis in different ways, depending on their main concerns. The Individuals with Disabilities Education Act (IDEA, 2011) addresses the assessment of students in schools who may qualify for special education services. According to the IDEA, **evaluation** means the procedures used by qualified personnel, often a multidisciplinary team, to determine if a child is the one with a disability to establish initial and continuing eligibility for services (IDEA, 2011). The IDEA requires that an evaluation be comprehensive and assess all areas of suspected disability. The team should address educational and behavioral concerns for students who are not meeting the grade-level expectations (IDEA, 2011). IDEA defines **assessment** as "the ongoing procedures used by qualified personnel to identify the child's unique strengths and needs and the early intervention services appropriate to meet those needs throughout the period of the child's eligibility . . . and includes the assessment of the child . . . and the assessment of the child's family . . ." (IDEA, 2011, Part C). Therefore, an evaluation is used to determine eligibility for services, whereas assessment includes various ongoing activities and procedures designed to determine a child's strengths and needs, and for developing appropriate treatment to address those needs. Such a distinction is typically not made in clinical sciences, although speech-language pathologists (SLPs) working in public schools will adhere to the distinction.

The American Speech-Language-Hearing Association (ASHA) describes speech-language **assessment** as a complex process that requires the integration of a variety of information gathered during the evaluation (ASHA, 1994). Furthermore, ASHA's Preferred Practice Patterns for the Professions of Speech-Language Pathology (ASHA, 2004) states that a comprehensive speech-language pathology assessment should include the following:

- A case history that includes the client's education; medical status; socioeconomic, cultural, and linguistic backgrounds; and information from teachers and other related service providers.
- An interview with the client, caregivers, and family.
- A review of the client's auditory, visual, motor, and cognitive status.
- Standardized and/or nonstandardized measures of specific aspects of speech, spoken and nonspoken language, cognitive processes (e.g., attention, perception, memory, problem solving), and swallowing function, including observations and analysis of work samples. If standardized measures are selected for speech, language, cognitive processes, and/or swallowing assessment, any documented ecological validity or cultural sensitivity issues must be taken into consideration.
- The identification of potential for effective intervention and compensatory strategies.

- Follow-up services to monitor communication and swallowing status and ensure appropriate intervention and support for individuals with identified speech, language, cognitive, and/or swallowing disorders.

Historically, SLPs have more commonly used the term *diagnosis* than *assessment*. The classic books of this kind were likely to be called *diagnosis in speech-language pathology* (Darley, 1964; Darley & Spriestersbach, 1978). In medicine, **diagnosis** is to point out the cause of a set of symptoms (disease), but in speech-language pathology, diagnosis is often limited to naming a disorder and differentiating it from other (similar) disorders. In all disciplines, even if tentative and subject to later revision, diagnosis is the end result of a series of scientific and clinical activities, examinations, and data gathering through various means. In this sense, diagnosis is a part of an overall assessment (or evaluation) strategy. In this book, we define **assessment** as clinical activities that result in a clear description of the characteristics of communication disorders. Because of the difficulty in establishing the causes of communication disorders in many cases, we use the term **diagnosis** in a more restricted sense of naming the disorder (e.g., language disorder, stuttering) based on the assessment results.

Generally, the term *assessment* means *to determine the value of something*. But in clinical practice in communication disorders, assessment goes beyond a description of the parameters of a disorder. It includes a description of the strengths and needs of a client, predictive statements of prognosis for improvement with or without treatment, and recommendations for communication treatment, additional assessment, or other kinds of specialized services. The term *evaluation* is often used interchangeably; we make no distinction between *assessment* and *evaluation* in this book.

Communication disorders may be diagnosed in a different sense, too. Although it may be difficult to specify why a child has not acquired speech sounds or language behaviors, it may be possible to find out what maintains the child's current verbal repertoire. A **functional analysis** in applied behavioral science seeks to identify the maintaining causes of behavioral disorders, appropriate or inappropriate (Duker, 1999; Esch et al., 2010; Kelley et al., 2007; Lerman et al., 2005; Maul et al., 2016). This kind of functional analysis (assessment) has been demonstrated to be useful in diagnosing the maintaining or currently controlling variables of verbal behaviors of the kind specified by Skinner (1957). Furthermore, an identification of maintaining causes helps design an effective treatment procedure. Regrettably, most SLPs, being linguistically oriented by their training, have not included a functional analysis in their assessment of communication disorders. Functional behavioral assessment is addressed in Chapter 4 on alternative assessment approaches and in Chapter 7 on assessing language skills in children.

As different forms of disorders of communication have come to light through research and clinical observation, assessment also has become an increasingly complex activity. As we learn more about the behavioral, neurophysiological, genetic, and cultural aspects of communication disorders, we find ourselves expanding the parameters of assessment. In the past, communication disorders in children were viewed with relatively little concern for the cultural and social contexts of speech and language. In most cases, *linguistic deviation* from established norms was considered sufficient to diagnose a disorder of communication. Clinicians now realize that linguistic deviations cannot be evaluated in isolation and needs to be evaluated in the context of the individual child, his or her family, the culture, the language background, the educational demands and objectives, the future occupational goals, and so forth. A linguistic deviation from some accepted norm by itself is not a basis to diagnose a disorder of communication. This realization is not surprising because communication is always social and cultural; a linguistic deviation may only be a cultural difference. Therefore, more than a linguistic deviation, a concept of verbal behavior deficits may better serve the ultimate purpose of assessment: treatment planning.

Parameters of assessment of communication disorders in adults and children share common elements, but there are significant differences. Not all, but most disorders of communication in

adults are due to aging and related disease processes that affect previously mastered speech-language skills. To the contrary, most disorders in children are due to factors that tend to disrupt the speech-language learning process. Furthermore, many clinicians tend to specialize in assessing and treating communication disorders in either children or adults. Therefore, to offer comprehensive assessment information as well as a collection of practical tools, we have devoted this book to communication disorders in children. A companion volume is devoted to assessment of communication disorders in adults (Hegde & Freed, 2022).

We begin this initial chapter with an outline of assessment as a series of well-planned activities. These activities strive to be systematic and scientific, but all clinicians know that clinical experience and judgment also play their role. When science can do no more, but more still needs to be done, experience and judgment can help.

Procedurally, assessment includes attempts at understanding the child's past and the present, the current problems, and the family constellation (case history), a face-to-face interview of people concerned (often the parents or other caregivers), and various examinations done in the clinic. When all the activities, including planned clinical examinations are completed, the clinician shares the findings with the family and the child, makes recommendations, suggests a prognosis, and answers questions. We begin with what is often the first component in a communication assessment: the case history.

Written Case History

A written case history is a questionnaire that is completed by the child's caregiver, family member, or by the client if old enough. The *Common Protocol 1: Child Case History* in Chapter 2 may be used to take a detailed case history. The purpose of a case history form is to understand both the past and the present of the child by gathering information on the child, the disorder for which professional help is being requested, and the family constellation. A detailed case history may also serve as a guide for the clinical interview. A child case history form usually will include questions of various kinds, usually organized into sections whose descriptions follow.

Basic Identifying Information

This section includes the client's name, date of birth, age, address, and phone number. The parent's names, ages, address, and phone number(s) are also reported in this area. The child's physician and his or her contact information may be reported here.

Most printed forms allow the clinician to fill in the identifying information. It is important to have all the needed information because missing pieces of identifying information can be problematic for contacting the child and the family and the referral source.

Referral Source

Documentation of the referral source is important for several reasons. A child who is referred by a physician or another SLP is likely to have a medical or clinical history that may need further exploration. The type of physician referral may also provide insight into other deficits or areas of concern. For example, a referral from an otorhinolaryngologist (ENT specialist) may indicate a significant hearing history, a referral from a pediatric neurologist may suggest possible neurological problems, and a referral from a psychologist may suggest intellectual disabilities or an autism spectrum disorder.

Noting the referral source is also an important part of developing and maintaining professional relationships. If a physician or other rehabilitation professional refers a client, it is often

helpful to send a thank you letter, and once the proper release forms are obtained, it may be helpful to provide the referring professional with a brief summary of results and recommendations.

Other Specialists Who Have Seen the Child

Information on other specialists is important in determining if the child's communication difficulties might be part of other problems, such as a hearing loss, physical condition, or neurological disorder. A clinician may need to obtain background information from one or more of these sources. If the child has been seen by other SLPs, the clinician needs to follow up with them. The clinician should always obtain the caregiver's permission prior to contacting other specialists or agencies.

In addition, detailed information about previous therapy should be obtained during the interview. Details should include where and when treatment was received, the type of treatment that was provided, and the child's response to that treatment. The clinician should be aware that if there is a long list of other SLPs who have evaluated the child, one may be dealing with "searching" parents who are looking for someone to tell them what they want to hear.

Statement of the Problem

The case history form asks the parent or caregiver to describe the problem. This might help the clinician prepare for assessing a specific type of communication disorder or level of severity. The problem statement will also help the clinician determine what the caregivers' primary concerns are, and their level of knowledge regarding the child's communication problem.

The problem statement should be recorded in the caregivers' own words. During the interview, the clinician may explore the different meanings of this statement and get clarifications to derive a more technical description of the problem.

Developmental History

The case history usually includes an area for the caregiver to report the ages at which the child reached a variety of developmental milestones. This information is helpful in determining if the communicative disorder is part of a larger physical, neurological, or behavioral disability.

The clinician should note that the developmental history the caregivers report may be more or less reliable. In some cases, the information may not be available. Careful interview and the use of a prepared inventory will help obtain useful information. The clinician may complete this task with the *Common Protocol 2: Developmental Milestones From 0 to 4 Years of Age*, provided in Chapter 2.

Medical History

The case history includes an area for the caregiver to report any illnesses, accidents, or hospitalizations. The form typically lists several diseases that are of special importance to speech-language development.

During the interview, the clinician can explore the reported medical conditions further, as needed, to determine whether they are significant to the child's communication disorder or not. Although communication disorders in some children may not be associated with significant medical conditions, those in others may be, as in the case of children who have genetic syndromes or brain injury.

Family and Social Background

This area is used to collect information on the parents' educational and occupational background, the child's siblings, and the family constellation. It usually includes an area for the parent to