# Contents

*Preface*  
vii

1. Greeting the Patient  
2. The Patient Interview  
3. Otoscopic Examination  
4. Immittance Instrumentation  
5. Tympanometry  
6. Acoustic Reflex Thresholds  
7. Acoustic Reflex Decay  
8. Audiometer Instrumentation  
9. Biologic Check of Audiometer Instrumentation  
10. Obtaining a Threshold  
11. Obtaining an Unmasked Air-Conduction Audiogram  
12. Obtaining an Unmasked Bone-Conduction Audiogram  
13. Masking  
14. Speech Thresholds  
15. Word Recognition Testing  
16. Masking for Speech Audiometry  
17. The Stenger Test  
18. Tuning Fork Tests  
19. Otoacoustic Emissions  
20. Interpreting Test Results
21 Counseling the Patient 195
22 Reporting Results 201
23 Common Pitfalls in Audiologic Evaluation 205

References and Bibliography 211
Index 213
Preface

The Basic Audimetry Learning Manual, a volume in the Core Clinical Concepts in Audiology Series, is designed to provide beginning clinicians and students with experiences and instruction in the art and science of clinical audimetry techniques. Learning outcomes, review of concepts, observation exercises, guided practice, and review materials serve as catalysts for active learning of concepts and provide opportunity for utilization of fundamental audimetry methods.

The Learning Manual can be used in conjunction with a text of the instructor’s choosing, or with the books of the complementary Core Clinical Concepts in Audiology: Basic Audimetry Series to promote reflection, application, and assessment of learned information. The comprehensive content of the Learning Manual encompasses the breadth of audiologic evaluation, including history taking and patient communication, ear canal assessment, immittance, pure-tone testing, masking, speech audiometry, otoacoustic emissions, and patient counseling. Along with its family of texts in the Core Clinical Concepts in Audiology Series, the Learning Manual is designed to cultivate successful learning by students and professionals.

Each chapter of the Learning Manual consists of various components designed to guide the reader through an engaging process of active learning. The first component, Learning Outcomes, provides the reader with clear goals for knowledge and skill building and a foundation for readers to evaluate their progress toward clinical competence outcomes.

The second component, Review of Concepts, provides a concise review of the theoretical knowledge necessary for performance of clinical activities. This section provides examples that serve as a preparation for practice of the clinical skill.

The third component, Observation, challenges readers to witness the behavior of seasoned professionals in the act of clinical practice. Observation exercises may be performed by watching clinical instructors or practicing professionals in the laboratory, classroom, or clinic, utilizing the pertinent techniques with patients, students, or volunteers. The Observation component encourages students to learn by example and provides the opportunity for instructors to model exemplary clinical behavior.

The fourth component, Guided Practice, leads the reader step-by-step through exercises designed to provide first-hand experience performing clinical activities. Components of each clinical activity are segmented into manageable modules, allowing readers to experience success with the individual elements of clinical techniques and systematically guide readers toward clinical competence.

The final component, Reflection and Review, provides readers with opportunities to incorporate newfound understanding gained through Observation and Guided Practice into their theoretical and conceptual knowledge base through answering reflective and review questions. By explaining methods, describing experiences, and answering questions related to techniques, readers will demonstrate their understanding of concepts and have opportunity to assess learning in relation to expected outcomes, set forth in the Learning Outcomes section.

Chapters of the Learning Manual can be completed in a serial fashion, following the sequence of a typical audiologic evaluation. Alternatively, the order of activities can be tailored to suit a particular instructional curriculum, or as individual topics coalesce with the reader’s immediate goals. Topics addressed in each chapter are explored in-depth in the books of the associated Basic Audimetry Series of the Core Clinical Concepts in Audiology Series, and references are provided to these books to provide an integrated learning experience for readers. Readers may also find additional information from other sources as well to be used as a supplement to or in lieu of these texts.
We wish to thank all the individuals who have assisted in the process of the creation of this book. We sincerely appreciate the opportunity to create this Learning Manual as a component of the series. We appreciate the efforts of all of the individuals at Plural Publishing who have guided us through the publishing process. We also thank those users of the first edition who provided valuable feedback regarding suggested modifications for the second edition of this text.

It is our sincere hope that instructors and students will find the material in this book helpful in their quest for translating theoretical material into clinical skills.
INTRODUCTION

In this chapter, you will learn how to greet patients and set expectations for the evaluation process in a professional manner. Once you have learned the fundamentals of greeting a patient and explaining the evaluation process, you will be able to build on this knowledge to develop your own style in interacting with patients and their families.

LEARNING OUTCOMES

- Be able to greet patients appropriately.
- Be able to explain what will happen during the evaluation process.

REVIEW OF CONCEPTS

Greeting the Patient

Many factors come into play when greeting a patient for the first time. For the most part, patients will see you before they speak to you. Therefore, your physical appearance is crucial. Do you look the part of the professional in the environment? Are you suitably dressed and wearing appropriate identification to reveal your role? Overall, your appearance should set you apart as belonging in the health care environment.

Observe whether anyone is accompanying the patient. Many patients who have difficulty hearing will bring a companion to assist with communication. Ask the patient if he or she would like this person to be present with them during the examination. If the accompanying person is an interpreter, remember some important factors:

- While the interpretation is occurring, speak to the patient rather than the interpreter.
- Verify whether the interpreter will be interpreting sequentially (after you speak) or simultaneously (while you are speaking). If the interpreter will be using a sequential method, be sure to pause appropriately.
- Be certain to verify patient knowledge and understanding by asking questions that will tap her or his understanding of the information.

When greeting a patient, you may already have some information about the purpose for the visit. For instance, a receptionist may have noted a basic “complaint” or you might have documentation indicating why the patient has come to see you. During the greeting process, remember
that not only is it appropriate, but it is of utmost importance to ask, “What brings you in today?”

A critical aspect of meeting the needs of patients with hearing loss is to modify your style of interaction to facilitate optimal communication. For patients with known or suspected hearing loss, your speech should be slightly slower and slightly louder than normal and you should face the patient wherever possible. You should maintain your attention on the patient rather than on medical record-keeping or note-taking equipment. Most patients will have a limited understanding of the terminology formally used for describing anatomy of the auditory system and hearing function. It is important to modify your use of language to avoid jargon that will be confusing to the patient.

It is your responsibility to build rapport with patients so that they are comfortable with you. This will begin in the first few moments that you are with patients and will carry on throughout your relationship with them. In order to build rapport, you will need to possess and display genuine characteristics of objectivity, empathy, and respect. As a demonstration of the aforementioned characteristics, you also will need to convey a fundamental desire to listen in a sensitive manner.

Understanding the culture of patients you are greeting is critical. Patients from different cultural groups may respond to disability, eye contact, familial hierarchy, use of names and titles, and the role of different genders in society in a manner that is different from yours. You should be aware of these differences because they will set the stage for your interactions with the patient from the very beginning. When greeting patients, be sensitive to their cultural background. In general, follow these guidelines:

- Use a title such as “Mr.” or “Ms.”
- Ensure that you are talking with the correct person. Use at least two other identifiers, such as birth date and address, to confirm identity.
- Identify yourself and your purpose.
- If the patient is accompanied by another person, ask if this person should be present during the patient’s examination.

Say, for example, “Hello Ms. Smith. My name is (state your title, and first and last name). I am the audiologist who will be testing your hearing today/seeing you today. Our appointment should take about (insert number of minutes). Can I have you confirm your (address, date of birth, identification number, phone number, other identifier) for me?”

**Explaining the Evaluation**

After you have greeted the patient and confirmed her or his identity, explain the process of the evaluation. Say, for example, “First, I will be talking with you about what brings you in today. Then I will be looking in your ears, and testing your hearing. I also will be testing how well your eardrums and the bones in your middle ears are functioning. These tests will help me understand more about your hearing and any difficulties you might be having.” This brief statement gives the patient a sense of the overall structure of the appointment. Then ask, “Do you have any questions before we begin?”
OBSERVATION

1. Observe an experienced clinician greeting a patient.

2. Observe the elements that the clinician uses to build rapport.
   a. What specific behaviors does the clinician use?
   b. Does the clinician’s choice of words appear appropriate for the patient’s cognitive level, chronologic age, and hearing status?

3. If an interpreter is present, note how the clinician interacts with the patient and the interpreter.
   a. To whom does the clinician address her or his questions?

GUIDED PRACTICE

1. Prepare to greet a patient on your own. Utilize demographic and other available information to learn about the patient prior to the visit.

2. Based on the information that you have, briefly list the assumptions that you are making prior to meeting with the patient.

3. Greet the patient. Remember to speak slowly and clearly.

4. Verify the patient’s identity, and review the plan of action for the appointment with him or her.

5. Test any assumptions you have noted in item number 2.

6. Make certain that the patient is comfortable with the process and has an opportunity to ask questions.
1. Describe in detail how you would greet a patient. Include the following:
   a. Addressing the patient
   b. Confirming the patient’s identity
   c. Providing an overview of the activities of the appointment, as well as the time frame in which they will be conducted
   d. Asking the patient for any questions about the process

2. What specific behaviors might you display to earn the patient’s trust and respect?
3. Describe in detail the information you might obtain from preexisting demographic information, referral information, previous chart notes, and other patient information. How you would test any assumptions that you are making?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

4. Discuss how you would work with an interpreter during a visit. How would you verify patient understanding of the information you are sharing and discussing?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________