

INFORMATION TO PREPARE  
for the  
**NATIONAL COMPETENCY EXAM**

# Study Guide

for the  
Board Certification  
In Hearing Instrument Sciences  
**EXAMINATION**



*Prepared by*  
*National Board for Certification in Hearing Instrument Sciences*  
***National Board for***

***Certification in Hearing  
Instrument Sciences***

## **Acknowledgements**

The National Board for Certification in Hearing Instrument Sciences (NBC-HIS) Executive Council wishes to thank the following committees and companies who contributed to the development of this guide.

- NBC-HIS Examination Committee and the Item Writers Committee for development of the questions and responses
- Assessment Learning Systems for their initial work in developing the Role Delineation Study and Competency Models
- Kryterion for their assistance in moving into computer-based testing and ongoing psychometric assistance
- Lastly, we acknowledge you, the reader, for taking the initiative to demonstrate your experience and professionalism by becoming Board Certified

Without these cooperative efforts, this Study Guide would not have become a reality.

## **Purpose of this Study Guide**

The purpose of this guide is to familiarize you with the different item formats and competency areas that will be tested. The items are representative of the style and content of the items used on the current National Competency Examination (NCE), and are based on the most recent Competency Model and the 2012 NBC-HIS Role Delineation Study.

Use this guide as a tool to help you succeed with the NCE. Be sure to read ALL instructions carefully before you read the sample items. When you complete the items, stop and check your responses. The purpose of this exercise is to introduce you to the format of the NCE.

*Please note: Use of this guide does not imply you will receive a passing score on the NCE. The design and purpose of the NCE is to test your skill as a hearing healthcare professional. The accomplishment of the designation rests upon your successful completion of the NCE.*

## **NBC-HIS STUDY GUIDE**

### **Table of Contents**

Table of Contents.....	4
Introduction.....	6
Role of the Hearing Healthcare Professional.....	7
Professional Practice Profile for Hearing Health Professionals.....	7
Professional Practice Profile.....	12

### **Section I**

Administrative Policies.....	23
Eligibility Requirements.....	23
Eligibility Appeals Process.....	24
Application Process.....	24
Exam Site Registration.....	25
Non-Discrimination Policy.....	25
Exam Fee Refunds.....	26
Exam Date/Site Changes.....	27
National Competency Exam Schedule.....	27
National Competency Exam Rules.....	27
Exam Composition and Scoring.....	27



Passing the Exam.....	29
Failing the Exam.....	29
Exam Score Review and Appeal.....	30
Responsibilities of Board Certification.....	30
NBC-HIS Code of Ethics.....	32
Tips for Exam.....	38

## Section II

Study Guide Exam.....	40
Competency Model for Hearing Health Professionals.....	40
Sample Board Certification Exam.....	42
Answer Key.....	47
Recommended Reading List.....	49

## Introduction

The unique preparation a hearing healthcare professional receives makes it difficult to judge the needed skills and expertise with standard assessments used in classroom study. Individuals who dispense hearing aids learn a multitude of needed skills through supervised “hands-on” training with individuals with hearing loss. This “hands-on” experience, above and beyond the minimum requirements for licensure, is necessary for successful completion of the NCE.

In the late 1970’s, concerns were expressed within the industry regarding the lack of a standardized method for measuring the skills of the experienced hearing healthcare professional. Because of those concerns and subsequent discussions, a certifying body known as “The National Board for Certification in Hearing Instrument Sciences” (NBC-HIS) was formed under the umbrella of the organization presently known as the International Hearing Society. In 1999 NBC-HIS separated from IHS and became an independent credentialing entity.

The purpose of NBC-HIS is to develop an unbiased exam to measure the skills of hearing healthcare professionals and provide certification to candidates who pass the examination.

Research involved in the development of the exam includes a series of Role Delineation Studies to determine the current skills needed to be a successful hearing healthcare professional. From this study of dispensing practice, skills are grouped into specific competency areas, thus creating the Competency Model upon which the NCE is based.

“Board Certified in Hearing Instrument Sciences” (BC-HIS), accredits the skills and competency achieved by a hearing healthcare professional. By earning the BC-HIS designation you have demonstrated your competency to the public and hearing healthcare professionals.

The NBC-HIS National Competency Exam (NCE) is the only Board Certification examination for hearing healthcare professionals approved by the National Commission for Certifying Agencies (NCCA), a nationally

recognized organization that reviews and accredits international competency testing for certifying organizations.

## **Role of the Hearing Healthcare Professional**

The hearing aid specialist plays a vital role within the community of hearing healthcare professionals. Their professional interactions with those with hearing loss, provides a direct link to that person's enhanced quality of life.

The expertise needed to be successful in this profession is not derived solely from textbooks or classroom study. The successful hearing healthcare professional also relies upon skills that have been developed through years of actual "hands-on" experience. The training and commitment needed to successfully develop these skills has gained the hearing healthcare professional one of the highest consumer satisfaction ratings within the health care industry. (MarketTrak VIII: Twenty-five year trends in the Hearing Health Market)

## **A Professional Practice Profile for Hearing Health Professionals**

Hearing aid dispensing includes several professions that overlap. There are traditional hearing aid dispensers, board certified hearing healthcare professionals, hearing aid practitioners, hearing instrument specialists, audioprosthologists, audiologists, doctors of audiology, otolaryngologists, and other doctors of medicine. This Professional Practice Profile does not replace or supersede current state/provincial or federal regulations governing the practice of hearing aid dispensing, but is specific to the training and day-to-day activities of those professionals licensed in hearing aid dispensing.

A role delineation study, also known as a job task analysis or practice analysis, is based on a national survey of the critical tasks and responsibilities performed by hearing healthcare professionals. The NBC-HIS Role Delineation Studies have provided the Competency Model used as

the blueprint in the development of the NBC-HIS Board Certification Examination in the Hearing Instrument Sciences (National Competency Exam or NCE). A Job Task Analysis (JTA) and Role Delineation Study are performed every five years so that the Competency Model used in the development of the NCE is consistent with current best practices.

Hearing healthcare professionals serve patients of all ages appropriate to their training and scope of licensed practice, regardless of their ethnicity, racial, religious, cultural, linguistic or socioeconomic status. They also recognize and respect the scope of practice and services provided by other professionals within the medical, clinical, rehabilitative and related hearing healthcare professions. Furthermore, they work cooperatively with these professionals in the best interests of the consumer they serve.

**The following guiding principles and assumptions were used in the development of this Professional Practice Profile for Hearing Health Professionals:**

- Only those professionals who hold professional licenses which allow hearing aid dispensing, and who have appropriate training and experience may provide specific procedures.
- Safety and health of the patient are the most important considerations in all practice decisions and actions.
- All dispensing procedures are performed in a manner as to prevent bodily injury and infection.
- Hearing aids may be only part of the solution for improved communication; therefore, it is important to recognize and to encourage the use of other assistive listening devices for patients.
- Hearing health care requires a team effort. Dispensers must work with other professionals, as needed, to maximize patient care and inter-professional collaboration.
- Hearing Healthcare Professionals form a partnership with each of their patients to help achieve total communication with their own world, thus enabling their development and participation in all aspects of their life.
- All equipment must be maintained according to the manufacturer's specifications and recommendations. Equipment must be properly calibrated and necessary records maintained.

- Decontamination, cleaning and disinfection of multiple-use equipment must be carried out according to facility-specific infection-control policies and manufacturer’s guidelines.
- Ambient noise levels in the test environment must be appropriate to the practice setting.
- Documentation must be maintained in accordance with local regulations, and in keeping with good professional practice.

The NBC-HIS 2012 Role Delineation Study analyzed the responses of survey participants to 100 tasks in terms of the “frequency” with which each task was performed, and in terms of the “level of supervision” occurring with each task performance. Sixteen broad procedures were identified using statistical clustering of the tasks and are listed below.

- **Elicit patient/client case histories**, including medical, otological, pharmacological, previous amplification history, and patient attitudes and expectations.
- **Administer otoscopy** for identifying possible otological conditions, including, but not limited to, the FDA red flag conditions that may indicate the need for medical referral, or which may have a bearing on needed rehabilitative measures, outcomes, and/or recommendations.
- **Administer cerumen management** in the course of examining ears, taking ear impressions and/or fitting of hearing instruments.
- **Administer and interpret tests of human hearing**, including appropriate objective and subjective methodology and measures.
- **Determine candidacy for hearing instruments**, assistive devices, or for referral for cochlear implant evaluation or other clinical/rehabilitative/medical intervention.
- **Prescribe, select, and fit appropriate hearing instruments and assistive devices**, including appropriate technology, electroacoustic targets, programming parameters, and special applications as indicated.
- **Assess hearing instrument efficacy** utilizing appropriate fitting verification methodology, including all available fitting validation methods.

- **Take and prepare ear impressions for prosthetic adaptation** of hearing instruments, assistive devices, telecommunications applications, ear protection, and other related applications.
- **Design and modify earmolds and auditory equipment** requisite to meet individual patient needs.
- **Provide rehabilitative advice and counseling** in the use and care of hearing instruments, assistive devices, and in effectively utilizing communication coping strategies and other approaches to foster optimal patient rehabilitation. (See appendix for list of resources)
- **Counsel family member and other interested parties relative to psychosocial and rehabilitative considerations** for optimal patient outcomes.
- **Provide long-term patient care**, including periodic audiometric updates and recommendations for modifying rehabilitation programs to help meet patients' changing needs over time.
- **Refer and cooperate with other allied professionals** in meeting the needs of the individuals with a hearing loss.
- **Provide supervision and in-service training** of those entering the dispensing profession.
- **Maintain and update knowledge and skills in current and future diagnostic and technological advancements** within the hearing industry.
- **Consult with industry in the development of products and services** relating to aiding hearing loss.

The sixteen procedures listed above were then grouped into 5 major areas as follows:

- **1. Assess patient presenting problem and needs**
- **2. Test and analyze patient hearing**
- **3. Prescribe and analyze hearing instruments**
- **4. Fit, adjust, program, and service hearing instruments and equipment**
- **5. Counseling, Rehabilitation and Professional Practice**

This Professional Practice Profile details expected outcomes, indications for procedures, and the procedures for each of the five areas outlined above. The Profile represents currently accepted practices in dispensing hearing instruments for hearing health professionals. As technology and education advance over time, new methods, skills, and services will be added.

### **1. Expected Outcomes**

- Although results vary from person to person and the outcome cannot be guaranteed, a reasonable statement of prognosis may be made to the patient, the family, and other professionals.
- While patient satisfaction is the ultimate determining factor in a successful fitting, measurement and monitoring of results should be done to ensure and/or improve the quality of service.
- Regularly scheduled follow-up services should be provided to assess the need for other services and to monitor the effectiveness of the fitting and/or the level of hearing.

### **2. Indications for Procedures**

- Hearing screening may be used to identify individuals who may need further hearing evaluation and/or hearing rehabilitation.
- Services are provided when there is a reasonable prognosis of benefit to the patient.

### **3. Procedures**

- All procedures are done in accordance with standard levels of practice.
- Counseling of the patient and family/caregiver is critical to the understanding of the nature of the communication problem and to the setting of reasonable expectations from services.
- When indicated by results of procedures, referrals are made to the appropriate medical and/or other professional.

- The lifestyle, preferences, special needs, and economic priorities of the patient are critical components of the products recommended by the dispenser.

## **PROFESSIONAL PRACTICE PROFILE**

### **1. ASSESS PATIENT PRESENTING PROBLEM AND NEEDS**

#### **Expected Outcomes**

- Identification of factors in the patient's background that may put him at risk for hearing problems
- Identification of FDA red flags that would require a referral for medical evaluation
- Identification of other medical problems that may have an impact on the methods used for procedures and/or expected outcomes of hearing aid fitting.
- Identification of family members' concerns regarding patient's hearing difficulties
- Exploration of patient attitudes and expectations of amplification
- Identification of problems with hearing and understanding
- Identification of daily activities and impact of hearing loss on lifestyle
- Identify impact of hearing loss on family, friends, and in the workplace

#### **Indication for Procedure**

- Individuals being seen for either hearing screening or hearing evaluation

#### **Procedure Methods for Case History**

- Typically consists of a combination of written answers to a series of questions, elaboration of those answers by oral questioning, and behavioral observation.
- Areas covered include but are not limited to: family history of hearing loss, incidence and duration of childhood hearing-related illnesses,



information regarding dizziness, loss of balance, or tinnitus, current medication/drug history, history of noise exposure and acoustic trauma. In addition, it is critical to elicit family members concerns about patient's hearing difficulties, the patient's attitudes and expectations regarding amplification, and the patient's own assessment of their hearing difficulties.

- Additional areas that must be covered include, but are not limited to, questions regarding history of ear surgeries, diseases and treatments, information regarding past experiences with amplification, questions and observation regarding ear deformity, pain, sudden hearing loss, ear infection, disease, drainage or blockage requiring medical referral.
- Otoscopy will be performed prior to moving forward with testing to determine if there are any contraindications to testing.

## **2. TEST AND ANALYZE HEARING**

### **Expected Outcomes**

- Basic hearing evaluation is conducted to quantify and qualify hearing loss on the basis of perceptual responses to acoustic stimuli and to describe any associated communication disorders.
- Results of the evaluation may result in recommendations for more advanced testing, medical referral, amplification consultation, assistive listening device consultation, or follow-up recommendations.
- Speech discrimination tests are performed for additional information about a hearing loss.
- Evaluation may result in recommendation for a medical referral, amplification, aural rehabilitation, and/or counseling.
- Determine need for medical referral based on audiometric air-bone gap results.
- Determine degree, type, and configuration of hearing loss from test results.
- Hearing instrument efficacy will be determined by pre-post audiometric measures.

## **Indications for Procedures**

- Hearing evaluation may be done when a hearing screening is failed.
- Hearing evaluation is generally prompted by self-referral, family referral, failure of an occupational hearing test, or referral from other professionals.

## **Procedure Methods**

- Hearing evaluation is preceded by eliciting the hearing history and assessing the hearing problem. This is followed by examination of the external ear canal and cerumen management, if necessary.
- The standard audiometric tests consist of pure-tone air and bone conduction testing with appropriate masking using the TDH-39 standard. While the standard equipment now is EAR-3 or equivalent insert earphones the TDH-39 masking standards are commonly used and thus properly calibrated TDH-39 headphones may still be used. Some professionals also choose to do loudness growth testing at this time.
- Speech testing includes speech awareness and/or speech reception threshold tests, speech discrimination tests, and establishing MCL and UCL thresholds (appropriate masking used as required). In addition, further information can be gained by doing unaided and aided sound-field discrimination tests, by performing speech in noise testing and by testing binaurally as well as monaurally.
- Special audiometric tests, such as otoacoustics emissions, may be performed for additional information about a hearing loss.
- Evaluation may result in recommendation for a medical referral, amplification, aural rehabilitation, and/or counseling.
- Procedures such as immittance audiometry (tympanometry and acoustic reflexes) are quite common.
- Procedures to assess cochlear versus retrocochlear (i.e., eighth cranial nerve, brainstem, or cortical) auditory disorders include:
  - - Acoustic reflex threshold

- - Tone decay testing
- - PiPb rollover testing
- Special procedures for testing infants and children as appropriate to licensure or evaluating tinnitus are also sometimes called for.
- Evaluate the reliability and validity of the test results.
- Evaluate test results to determine the presence of collapsed ear canals if using TDH-39 headphones.
- Evaluate aided sound field measures and/or real-ear aided performance measures or Live Speech Mapping.

### **3. PRESCRIBE AND ANALYZE HEARING AIDS**

#### **Expected Outcomes**

- In consultation with the patient and family, taking into account their lifestyle, special needs, hearing aid style, level of technology, and price category preferences, selecting the hearing aids that will best fit their needs.
- Provide measurable results of improved hearing thresholds and ease of communication.
- The appropriate specifications for the hearing aids will be selected.

#### **Indications for Procedure**

- Individuals identified with hearing loss who have reached a level of acceptance regarding their loss that they are ready to seek help from amplification.

#### **Procedure Methods**

- Determine hearing aids needed for severity, type, and configuration of hearing loss, keeping in mind the patient's history, lifestyle, and audiogram.
- Discuss with patient the various levels of technology and their different price categories to aid in determination of hearing aid prescription.

- Identify physical limitations affecting hearing aid selection.
- Prior to dispensing the hearing aids, verification of hearing aid performance is conducted via a listening check to rule out excessive circuit noise, intermittency, and/or poor sound quality.
- Perform electroacoustic analysis to determine if hearing aids are performing according to manufacturer's specifications.
- Confirm telecoil function.
- Digital hearing aids should be programmed prior to patient's arrival to ensure integrity of programming system and hearing aids.

#### **4. FIT, ADJUST, AND SERVICE HEARING AIDS**

##### **Expected Outcomes**

- Appropriate earmold/hearing aid shell configuration and material will be selected for maximum comfort and hearing aid performance.
- When it is appropriate, the proper size and type of dome will be selected for RIC, RITE type hearing aids.
- Alleviation of a problem with physical or acoustic comfort (i.e., occlusion, loudness, discomfort)
- Restore the aid to manufacturer's specifications.

##### **Indications for Procedure**

- Patient is being fitted for new amplification.
- Patient or family report a problem with the function, comfort, or benefit being received from the hearing aid.

##### **Procedure Methods**

- Assess ear canal for ear impression vis-à-vis size, length, and direction.
- Perform proper ear impression procedures, e.g. otoblock placement.
- Determine earmold/hearing aid shell configuration and material.

- Examine surface of earmold and instrument for damage and sharp edges.
- Perform physical fitting of coupler and instrument.
- Appropriateness of physical fit should be assessed through ease of insertion and removal, cosmetic appeal, comfort, absence of feedback, placement of microphone port/ports and ease of volume control use when present.
- Program selected hearing aids to patient's baseline audiometric data.
- Adjust/modify hearing aid electronics based on patient feedback.
- Validation of fitting should be done either with sound field testing using frequency specific thresholds and/or aided speech discrimination and speech reception thresholds or with real ear aided measurements or with Live Speech Mapping.
- Make venting modifications as needed for reduction of occlusion effect and or to control feedback. Modify shell or ear mold for improved, more comfortable fit.
- In the event the patient returns with a malfunctioning hearing aid, conduct in-office internal inspection of ear mold and instrument and take appropriate corrective action (suctioning wax and debris from receiver and microphone ports, cleaning corrosion from battery contacts, replace earmold tubing, etc.). Conduct electric current drain measurement of hearing aid. If in-office repair is not possible return aid to manufacturer for repair and offer the patient a loaner hearing aid to use while his is being repaired.
- If the hearing aid needs to go to the factory for repair, and it is out of warranty, inform the patient of the charges and repair warranty.
- Reprogram hearing aids based on patient feedback.

## **5. COUNSELING AND AURAL REHABILITATION**

### **Expected Outcomes**

- Dispensers assist patients in coming to grips with the reality of their hearing loss and in the process of accepting amplification or other assistive listening devices.
- Dispensers educate the family and the patient in the ramifications of a hearing loss and what is a reasonable expectation for improved communication with amplification.
- To facilitate listening in various acoustic environments.
- To provide alerting systems.
- To augment the benefits of the hearing aids.
- To establish procedures for follow-up.
- To provide information to allied health-care professionals.

### **Indications for Procedure**

- Individuals who have had their hearing evaluated.
- Individuals who are being fitted with amplification.
- Individuals who need more help than their hearing aids can provide in various situations.

### **Procedure Methods**

- Explain otoscopic examination and audiometric assessment to patient.
- Discuss patient's reactions to hearing aids.
- Discuss with patient various treatment options e.g., different levels of technology, different styles of hearing aids.
- Provide patient with hearing rehabilitation exercises (several of the manufacturers have good programs for this as well as programs found in the literature).
- Explain hearing aid use in different listening environments.

- Instruct patient on proper instrument insertion and removal techniques.
- Counsel patient on cerumen management.
- Counsel patient regarding care and use of hearing aids.
- Counsel patient on battery life and insertion/removal techniques.
- Counsel patient on telephone usage with hearing instruments, and assistive listening device coupling as necessary.
- A hearing aid usage schedule is determined.
- Counsel patient on amplification expectations and limitations.
- Discussion of appropriate expectations for amplification include: improved communication, freedom from unwanted feedback, minimization of the occlusion effect, and more auditory benefit in quiet than in noise.
- Patient is advised of their legal rights for hearing aid adjustment, replacement and return.
- Self-assessment tools that measure degree of hearing handicap, and/or pre- and post-fitting satisfaction are an appropriate tool for measuring patient satisfaction.
- Instruct patient/family in effective listening techniques with hearing aids.
- Counsel family members about patient's adjustment and use of hearing aids.
- Provide patient with information concerning environmental modifications that can ease communication.
- May provide patient with information on speechreading or other aural rehabilitation classes.
- May also include demonstration and information on devices to enhance:
  - - telephone usage

- - listening to television
- - listening in church
- - listening in restaurants and other difficult listening environments
- - listening in the classroom or auditoriums
- - telephone, doorbell, smoke alarm alerting systems
- Formulate long-term treatment program
- Establish methods for recording care from treatment to rehabilitation.
- Counsel patient on importance of follow-up visits.
- Provide physician, with patient's permission according to HIPAA standards, your audiometric evaluation and recommendations. Communicate with other allied-health professionals as appropriate. The HIPAA standard is a US standard, professionals from other countries would follow the standards set forth by their governments.

## **6. OFFICE AND PRACTICE MANAGEMENT**

### **Expected Outcomes**

- Equipment will be maintained according to sanitary guidelines and manufacturer's specifications.
- Records will be maintained in an organized and efficient manner.
- Clinical/ professional knowledge and skills will be current.

### **Indications for Procedure**

- To standardize professional standards and practices.

### **Procedure Methods**

- Maintain equipment to standards of sanitation and cleanliness.
- Supervise sanitization and cleanliness of office.



- Maintain equipment according to manufacturer's specifications.
- Conduct biologic check of audiometric equipment.
- Perform cerumen management procedures using standard techniques/equipment.
- Recruit, train and develop professional and administrative staff.
- Establish supervisory procedures to ensure quality care.
- Develop marketing and advertising plans.
- Identify sources of patient referrals.
- Establish and maintain quality assurance procedures.
- Adopt and follow the professional code of ethics.
- Maintain adequate professional liability protection.
- Design, implement, and monitor hearing care/conservation programs.
- Know governmental laws and guidelines affecting the dispensing profession.
- Update clinical/professional knowledge and skills.
- Attend professional seminars, conferences, and association conventions.
- Maintain patient records in accordance with governmental regulations including HIPAA privacy standards. The HIPAA standard is a US standard, professionals from other countries would follow the standards set forth by their governments.
- Develop and maintain effective patient/business information systems.
- When billing electronically we must maintain and adhere to all HIPAA standards.
- Formulate short and long range business plans.
- Upgrade office computer systems (hardware and software).

Great strides have been made in raising the standard of care that hearing health professionals give their patients. It is vitally important to bring more professionals into this field as our population ages. It is hoped that the detailed “road map” provided in the Professional Practice Profile can help us provide a more professional and uniform level of service to our patients.

# **SECTION 1**

## **Administrative Policies**

### **Eligibility Requirements**

Exam candidates must have a current State/Provincial Dispensing License or Certificate of Registration (where applicable), and meet a minimum of two (2) years of full-time dispensing experience within the last five (5) years, or a diploma from an approved two-year post-secondary educational program (*see below for complete listing of approved programs*) to be eligible to take the National Competency Exam (NCE). Eligibility is obtained by submitting:

- A current State/Provincial dispensing license OR Certificate of Registration (where applicable)

AND:

- A letter on company letterhead from a current employer or the person that supervised your training attesting to your two years of full-time dispensing experience; OR a diploma in Hearing Instrument Sciences from:

#### **In Canada:**

*MacEwan University Hearing Aid Practitioner Program*

*Conestoga College*

*George Brown College*

#### **In the United States:**

*Bates Technical College*

*Rowan College at Burlington County College*

*Ozarks Technical Community College*

*Spokane Falls Community College*

Note: If you are self-employed or a business owner, please call the NBC-HIS office for options to provide proof of the two-year dispensing requirement. They can be reached at 734-522-2900.

Hearing Instrument Specialists who have completed fifteen (15) or more months of the two-year dispensing requirement are eligible to sit for the exam. However, upon successfully passing the exam, they will remain “Board Eligible” until such time that the two-year requirement is fulfilled and appropriate fees are paid.

If a candidate lives in a state or province that requires them to pass the NCE to receive their license, the license requirement is not applicable.

### **Eligibility Appeal Process**

If a candidate has been denied the opportunity to take the NCE and they feel they have met the requirements, they may appeal to the National Board for Certification in Hearing Instrument Sciences (NBC-HIS), Executive Director, by writing a letter indicating the reason(s) they should not be denied. In the event a candidate is not satisfied with the decision of the Executive Director, they may appeal, in writing, to the Executive Council for further consideration. The appeal must be submitted to NBC-HIS within thirty (30) days of denial.

### **Application Process**

If you have met the eligibility requirements outlined in this guide, you are qualified to take the exam. An application can be downloaded from the NBC-HIS website [www.nbc-his.com](http://www.nbc-his.com). Complete and return the application with a copy of the following items:

- Your state/provincial license or certificate of registration
- A recent photograph (head shot only)
- A letter from the individual or company that supervised your training OR a diploma from one of the approved two-year post-secondary educational programs

- The applicable application and exam fees, which are indicated on the exam application

Your submitted application and documentation are reviewed for eligibility. Once you are determined to be an Examination Candidate, your application will remain valid and on file for a period of two (2) years.

## **Exam Site Registration**

Exam site information is available on the NBC-HIS website. When your application has been approved, the staff at the NBC-HIS office will contact you to schedule your exam. You will receive an email confirmation with the scheduled date, time and location. This confirmation will also have a launch code (computer-based exams ONLY), that will be required to access your exam. It is highly recommended that you **print this email confirmation notice** and take it with you to the exam site. The-examination fee must be paid each time you sit for the exam.

## **Non-Discrimination Policy**

No applicant shall be denied eligibility to the NCE because of age, sex, marital status, national origin, sexual preference, religious preference, race, or physical disability. (Except when a physical disability affects the level of professional service that must be provided to the patients). Any individual who wishes to question any of the eligibility requirements of the National Board for Certification in Hearing Instrument Sciences shall submit these concerns in writing to the NBC-HIS office.

## Exam Fee Refunds

If you are unable to take the NBC-HIS Exam on your scheduled date or at the scheduled location, you are entitled to a refund of your exam fee if your request is received and acknowledged by NBC-HIS staff at least four (4) business days prior to the scheduled exam date.

An exam date may be rescheduled for another date and/or time if necessary. An additional exam fee will be assessed for any schedule changes made less than four (4) business days prior to the exam date.

### **DAYS FROM SCHEDULED EXAM----- EXAM REFUND\***

Four business days prior to exam.....	100 percent
Less than four business days.....	0 percent
No Show on exam day.....	0 percent

NBC-HIS recognizes that emergencies do occur which prohibit taking the scheduled exam. In these instances, the paid exam fee will be applied to a future exam. The transfer will only occur under the following circumstances:

- Death of an immediate family member.
- Sudden illness (you must submit a letter from your doctor).
- Extreme emergency over which you have no control.

You must submit, in writing, a statement detailing the circumstances which prohibited you from taking the scheduled exam.

The NBC-HIS Executive Council or Executive Director shall exercise reasonable judgment to determine whether the circumstances warranted failure to appear for the scheduled exam. Decisions rendered by the Executive Council or Executive Director are final.

## **Exam Date/Site Changes**

Exam Candidates may transfer an exam reservation to another scheduled exam date or location by contacting the NBC-HIS office at least 5 days prior to the originally scheduled exam date. Please note, once an exam reservation is transferred to another date or location, the exam fee is no longer refundable.

## **National Competency Exam Schedule**

The National Competency Exam is conducted at computer test centers and via paper and pencil at previously scheduled events in the US and Canada. Check the website [www.NBC-HIS.com](http://www.NBC-HIS.com) to find the location(s) or event nearest you.

## **National Competency Exam Rules**

On the day of your scheduled exam, please allow yourself ample time to locate the examination room and check in at least 20 minutes before your scheduled time. When you check in, present your exam Confirmation Notice. Plan to be at the exam site for three (3) hours. A maximum of two (2) hours is provided for completion of the NCE which begins at the conclusion of registration and instructions. **Late arrival may result in cancellation of your scheduled exam time and forfeiture of your exam fees.**

You may not carry any papers, briefcases, calculators or other personal belongings to the exam site. This restriction also includes cell phone calculators. Blank paper and a pencil/pen will be provided by the exam administrator to use for any required calculations.

## **Exam Composition and Scoring**

The NBC-HIS Exam and Item Writers' Committees are composed of experienced and currently practicing Board Certified hearing healthcare professionals. These individuals volunteer their time to research and draft items for the National Competency Exam based upon the NBC-HIS Role

Delineation Study results and performance objectives required to be considered a competent hearing healthcare professional.

During the developmental stages of this examination in 1981, 1991, 1999, 2006 and 2012 a Role Delineation Survey was distributed within the hearing healthcare profession. From these studies a Competency Model was developed. Each competency area is weighted based on its importance to the overall performance of the hearing healthcare provider's day-to-day activities. The percentage of importance determines the approximate number of questions in each area used in the National Competency Exam (NCE).

The NCE consists of 100 scored multiple choice items. At times, additional un-scored items may be added for BETA testing purposes. When BETA items are on an exam additional time is allotted to complete the exam. Items from each competency area are randomly distributed though the exam. A successful Exam Candidate should be familiar with the following areas of competency.

### Competency Areas

- |    |   |     |
|----|---|-----|
| 1. | Assess patient presenting problem and needs                 | 19% |
| 2. | Test and analyze patient hearing                            | 28% |
| 3. | Prescribe and analyze hearing aids                          | 13% |
| 4. | Fit, adjust, program and service hearing aids and equipment | 25% |
| 5. | Counseling, rehabilitation and professional practice        | 15% |

Each item is scored as either correct or incorrect, there is no partial credit given for any items. Items on the exam may have multiple selections required (more than one of the listed answers) to receive credit for the item. Even though the NCE has five competency areas, it is scored as a single exam. The percentage associated with each competency areas reflects the approximate number of items pertaining to that area that will be on the exam.



Computer-based exam results will be reported to you when your exam is submitted and will list either a pass or fail for the entire exam. Paper/pencil exam scores will be provided to the candidates by an NBC-HIS staff member at a later date. The actual number of correct answers or percentages will be disclosed only if you fail. Additional instructions based on pass or fail results will be provided as necessary.

## **Passing the Exam**

A passing score for the entire exam is required to become Board Certified in Hearing Instrument Sciences (BC-HIS). Scores for each area of competency are not provided.

You will receive a passing score report in the mail with a press release for local media, and the Criteria Sheet explaining proper usage of the BC-HIS designation.

You will also receive a wall certificate, and be able to request NBC-HIS logos for your letterhead, business cards, websites and other advertisements.

## **Failing the Exam**

To successfully complete the National Competency Exam, candidates must receive an overall passing score. When a failing score is achieved, you will be notified of your score for each of the competency areas tested.

Upon receiving a fail report, the exam candidate may retake the NCE after a 30-day waiting period. You must submit the examination fee. An application fee is **not** required at this time. After submitting your exam fee, contact the NBC-HIS office to schedule the exam. If the exam is failed a second time, you must wait six (6) months before retaking the exam.

If the exam candidate does not pass the National Competency Exam within two years from the initial exam date, they must file a new application for approval and at this time candidates will be required to pay both an application fee and examination fee. The new application must be accompanied with the appropriate fees and documentation. This

requirement will depend on the laws and regulations currently in effect by the applicant's state or province.

## **Exam Score Review and Appeal**

An exam appeal will only be considered if there was an issue at the exam site that resulted in a problem taking the exam. **Requests for exam appeals** must be submitted in writing by registered mail within **sixty days** of the **exam date**, and must be accompanied by a payment of **\$75.00**. A candidate may appeal an exam score for the following reasons:

- Excessive noise or confusion during the examination which inhibited concentration
- Exam room conditions (lighting, temperature, etc.)
- Faulty computer operation

If the review is found in your favor, you will be issued a refund of the appeal fee.

## **Responsibilities of Board Certification**

As an individual who is Board Certified in Hearing Instrument Sciences (BC-HIS), you will be expected to deal with your patients and peers in a professional manner as required by the NBC-HIS Code of Ethics.

All certificates issued by the National Board for Certification in Hearing Instrument Sciences remain the property of NBC-HIS.

Those Board Certified in Hearing Instrument Sciences must register their certificate each year by payment of an annual revalidation/recertification fee.

Certified individuals must recertify their credentials at the completion of each third-year by:

- Submitting proof of current licensure status

- Submitting proof of having obtained a minimum of twenty-four (24) hours of continuing education credits\* during the defined three (3) year period **OR** retaking and passing the National Competency Exam (including payment of appropriate fees)
- Sign and date statement in the area indicated on your statement before returning it to the NBC-HIS office

\*If your annual statement indicates you have obtained less than the 24 required continuing education units, and you have obtained credits that are not indicated on your statement, submit a copy of any certificates you have received from the sponsor(s) to the NBC-HIS office and those credits will be confirmed with IHS for accuracy.

**Failure to comply with the revalidation/recertification requirements outlined above, will result in a revocation of your Board Certified credentials.**



## **Code of Ethics of the National Board for Certification in Hearing Instrument Sciences**

REVISED MAY 2013

### **PREAMBLE**

The Code of Ethics of the National Board for Certification in Hearing Instrument Sciences ("Code of Ethics") delineates the ethical obligations of all hearing health professionals that have achieved Board Certification by the National Board for Certification in Hearing Instrument Sciences ("NBC-HIS"), as well as of the candidates for Board Certification ("Certificant").

This Code of Ethics, adopted by NBC-HIS, is binding upon all Certificants. Strict adherence to this Code of Ethics is required to maintain Board Certification. Further, this Code of Ethics promotes honorable conduct that assures public confidence in the integrity of Board Certified hearing health professionals' services.

### **RESPONSIBILITIES TO THE PATIENT/CLIENT**

The Certificant, as a practitioner in the hearing health care profession, shall hold paramount the welfare of the patient/client. The Certificant shall respect the inherent dignity and rights of all individuals.

The Certificant shall adhere to the core values of the profession and shall act in the best interest of the patient/client over the interest of the Certificant. The Certificant shall not engage in conflicts of interest that interfere with professional judgment.

The Certificant shall utilize all resources available, including referral to other professionals, as needed, to provide the best possible service to the patient/client.

### **SERVICES RENDERED**

The Certificant shall fully inform the patient/client of the nature and possible results of the services rendered.

The Certificant shall not guarantee results from the use of any hearing instrument(s), product(s), service, or counseling. A reasonable statement of prognosis may be in order, but caution must be exercised in order to assure the patient/ client is not led to expect results that cannot be accurately predicted.

### **CONFIDENTIALITY**

All information relating to the condition of the patient/client, regardless of the source, is and shall always remain confidential.

The Certificant shall protect confidential patient/client information and may only disclose confidential information to appropriate authorities when allowed or as required by law.

### **DISCUSSION OF THE PATIENT/CLIENT**

The fundamental obligation of the hearing health professional is to advance the welfare of the patient/client. This obligation requires deliberate care in the manner that the hearing health professional discusses findings and recommendations with the patient/client.

The Certificant shall never make any statement to persons, members of persons' family, or any other individual that would cast doubt as to the credibility of other professionals rendering professional services to patients/clients.

In the event the Certificant has questions and/or reservations about the recommendations of other professionals, he/she shall communicate the concerns to the professional involved.

### **MAINTENANCE OF RECORDS**

A fundamental factor in the delivery of professional services is the continuing knowledge of the patient's/client's condition. Such knowledge can effectively exist only if the Certificant initiates, secures and maintains as their property, records to specifically include the professional services he/she provides to the patient/client.

### **FEES FOR PRODUCTS AND SERVICES RENDERED**

The Certificant shall provide full disclosure of the ultimate cost of the hearing instrument(s), product(s) and/or service(s) rendered, at the earliest time possible.

### **DELAY IN PROVIDING SERVICE**

The Certificant shall not unreasonably delay or allow for the unreasonable delay of hearing health services.

### **DISCONTINUANCE OF SERVICE**

The Certificant shall only discontinue service to the patient/client after providing reasonable notice and after all contractual agreements between the parties have been met.

### **RESPONSIBILITIES TO COLLEAGUES AND THE PROFESSION**

At all times, the Certificant's conduct shall be in a manner that will enhance the status of the hearing health profession. The Certificant shall be supportive of individuals and organizations with whom they are associated for their mutual benefit.

The Certificant shall not criticize—by action or inference—to the patient, the character, qualifications, services, fees, or products of another hearing health professional.

The Certificant shall not offer for sale any Class I medical device (hearing aid) when a direct face-to-face contact has not been established (i.e. sale by internet or mail order).

The Certificant shall inform NBC-HIS of violations of this Code of Ethics.

## **STANDARDS AND COMPLIANCE WITH LAWS AND REGULATIONS**

The Certificant shall comply with applicable federal, state, and local laws and regulations.

The Certificant shall provide truthful, accurate, and relevant information, and shall not make misleading representations.

The Certificant shall not exploit persons, including but not limited to patients/clients, employees, or interns, over whom they have supervisory, evaluative, or other authority.

The Certificant shall not harass anyone verbally, physically, emotionally, or sexually.

The Certificant shall promote organizational behaviors and business practices that benefit patients/clients, as well as society as a whole.

## **DISCRIMINATION**

The Certificant shall not discriminate in the delivery of professional services on the basis of sex, marital status, age, religious preference, nationality, sexual orientation, or race.

## **ADVERTISING AND PUBLIC COMMUNICATION**

The Certificant shall not engage in any representation which is false, misleading, deceptive, or unfair. The Certificant shall not participate in false advertising. The Certificant's communications/advertisements shall not:

- Contain a false, fraudulent, misleading, deceptive, unfair, or sensational statement or claim;

- Be misleading due to the omission of necessary material information;  
or
- Otherwise operate to deceive.

The Certificant shall only use the NBC-HIS Board Certification in the manner designated by NBC-HIS.

## **REPORTING**

The Certificant must maintain and promote ethical practice by reporting illegal or unethical acts to the relevant authorities. The Certificant shall promptly, fully, and accurately report to NBC-HIS any departure from this Code of Ethics or failure to conform to applicable federal, state, or local laws and regulations.

The Certificant shall report to NBC-HIS any conduct about which the Certificant is aware and that reasonably appears to violate this Code of Ethics. This reporting requirement includes, but is not limited to, self-reporting and reporting about other Certificants. The Certificant is required to promptly, fully, and accurately report the potential violation(s) to NBC-HIS.

Prompt reporting requires the Certificant to report the potential violation(s) no later than 30 days from the date of the Certificant's receipt of knowledge.

Each Certificant must fully cooperate with NBC-HIS throughout its investigations of potential Code of Ethics violations.

## **VIOLATION**

Violation of any provision of this Code of Ethics may result in sanction(s) up to and including revocation of Board Certification. Examples of a violation of this Code of Ethics include, but are not limited to:

- Conviction of a Felony;
- Conviction of a misdemeanor related, directly or indirectly, to the testing, fitting, and/or sale of a hearing instrument;



- Disciplinary action by a State Regulatory authority resulting in a Certificant's hearing aid dispensing privileges being placed on probation, suspended, or revoked;
- Engaging in false, misleading, deceptive or unfair advertising;
- Improper use of the NBC- HIS Board Certification credential or trademark;
- Revocation of State Licensure;
- Failure to properly maintain confidential patient information;
- Statement(s) to persons, members of persons' family, or any other individual which would cast doubt as to the credibility of other professionals rendering professional services to patients/clients;
- Offering for sale any class I medical device (hearing aid) when a direct face-to-face contact has not been established, i.e. sale by internet or mail order.

Those holding Board Certification awarded by NBC-HIS pledge themselves to observe and support the NBC-His Code of Ethics. As stated above, by violating any part of this Code of Ethics, Board Certification may be revoked. This Code of Ethics is interpreted and enforced by the NBC-HIS Executive Council.

## ***Tips for Taking the NBC-HIS Examination***

The NCE is based upon what you do every day in your practice of fitting and dispensing hearing aids. Nonetheless, there is no substitute for knowing the subject matter. Some candidates may have trouble even on questions assessing their greatest competency. This occurs when a person becomes nervous or angry and upset about the exam.

**Format** - Become familiar with the format of questions on the exam. You will find examples of different types of questions in the following pages.

**Arrive Early** – Most exam candidates will be able to take the exam at a location near them. However, if you must travel to an exam site, it is advisable to travel the day before and opt to stay at a nearby hotel. It could be one of the best investments you ever made! You should arrive at the test site at least 20 minutes prior to your scheduled start time to allow sufficient time for check-in.

**Get a Good Night's Sleep** – Go into the Exam well rested. You will be able to concentrate better.

**Be Sure You Understand the Instructions** -- Instructions will be provided at the start of the exam. If you have any questions, ask the administrator or proctor at the exam site.

**Develop a Timetable** - You will have two (2) hours to complete the scored 100 items. Always answer the **easier** questions first. Never spend too much time on any one question. You may go back to questions that you skip.

**Draw a Blank – DON'T PANIC!** – If you “freeze” on a question, don’t hit the panic button! This happens to all of us in an exam. Merely go to the next question and come back to it later. There are times when another question will “trigger” the answer to that difficult question. As a rule, when you panic you diminish your ability to think clearly.

**Changing Your Answers** – As a rule it is not advisable to change an answer. However, if you misread or misinterpreted a question originally or remember some information not previously considered, or another question jogs your memory, then you may improve your score by changing your answer.

**Be Practical** – No one ever made a perfect score on a standardized certification exam. Everyone will miss some questions. The certifying exam can only sample the many subjects and procedures addressed in the fitting and dispensing of hearing aids. Don’t get upset. Remember, a calm positive attitude will permit you to continue without apprehension or interference with questions that follow.

**In Summary** - There is no substitute for knowing what the exam entails and a good understanding of the process involved in taking an exam. Your ability to take the NCE successfully is greatly improved if you will study the materials provided to you or recommended in this study guide.

# **SECTION II**

## **STUDY GUIDE EXAM**

### **Revised Competency Model for Hearing Healthcare Professional NBC-HIS 2015**

- 1. ASSESS PATIENT PRESENTING PROBLEM AND NEEDS (19%)**
  - 1.1 Explore childhood hearing history and related otological problems
  - 1.2 Elicit current health history (medications, illness, and handicaps)
  - 1.3 Investigate hearing loss impact on family, work and social life
  - 1.4 Explore family history of hearing loss
  - 1.5 Explore patient/family amplification concerns and expectations
  - 1.6 Evaluate medical condition and need for referral
  - 1.7 Evaluate patient's experience with amplification
  
- 2. TEST AND ANALYZE PATIENT HEARING (28%)**
  - 2.1 Perform standard audiometric tests
  - 2.2 Understand special audiometric tests
  - 2.3 Conduct sound field tests
  - 2.4 Interpret hearing/audiometric data

3. **PRESCRIBE AND ANALYZE HEARING AIDS** (13%)
- 3.1 Specify hearing correction needed, or medical referral
  - 3.2 Select specifications to order appropriate hearing instrument
  - 3.3 Conduct hearing instrument analysis
  - 3.4 Analyze instrument/battery performance, including real-ear tests
  - 3.5 Maintain knowledge of technical advances in hearing sciences

4. **FIT, ADJUST, PROGRAM AND SERVICE HEARING AIDS AND EQUIPMENT** (25%)
- 4.1 Select and fit type/style of earmold, coupler and instrument
  - 4.2 Conduct otoscopic assessment, otoblock placement and impression techniques
  - 4.3 Program and adjust hearing instrument to patient's needs
  - 4.4 Identify physical fit problems and modify instrument
  - 4.5 Troubleshoot, inspect and repair hearing aids
  - 4.6 Upgrade, maintain and monitor equipment

5. **COUNSELING, REHABILITATION AND PROFESSIONAL PRACTICE** (15%)
- 5.1 Explain test results to patient
  - 5.2 Explain amplification expectations, options and limitations to patient
  - 5.3 Explain hearing instrument use, care and follow-up program
  - 5.4 Counsel family on patients use and adjustment to hearing aids
  - 5.5 Monitor patient satisfaction and usage of hearing instrument

- 5.6 Inter-professional relations and promotion or hearing healthcare
- 5.7 Office management and patient records
- 5.8 Maintain professional ethics, NBC-HIS Code of Ethics, government rules and continuing education

### **SAMPLE BOARD CERTIFICATION EXAM**

These questions are indicative of the type of questions you will find on the NCE. While some questions may have only one correct answer, some questions may have multiple options that must be chosen to answer the question correctly. If more than one option must be chosen, it will be pointed out in the question. If more than one option is asked for, you must answer with all the correct options to get credit for the question (no partial credit is given). Be sure to read the question carefully and pay special attention to words like: **NOT, FALSE, TRUE, SELECT ALL, MOST** and **LEAST**.

This sample contains items from each of the competency areas.

1. The **MOST** common cause of sudden loss of hearing at 4000Hz is:
  - A. Presbycusis
  - B. Noise induced
  - C. Acoustic trauma
  - D. Acoustic neuroma
  
2. During the course of taking a case history, which of the following information is **LEAST** important?

- A. Any unilateral tinnitus experienced
  - B. Any vertigo symptoms
  - C. Concussion in the previous six months
  - D. Sudden hearing Loss
3. A younger mother comes in concerned that her hearing has gone down. In taking her history, it's found that her mother also developed a hearing loss after the birth of her first child. What would be the **MOST** probable etiology of this problem?
- A. Cholesteatoma
  - B. Otitis media
  - C. Meniere's disease
  - D. Otosclerosis
4. Which of the following conditions would **NOT** be a concern in establishing a pure tone air conduction threshold?
- A. Collapsed external auditory meatus
  - B. Congenital atresia
  - C. Otosclerosis
  - D. Impacted cerumen
5. Which of the following statements is **FALSE** when talking about audiometric testing?
- A. Headphones and insert earphones should produce comparable results
  - B. Bone conductor placement can affect the test results
  - C. Insert earphones can give more accurate results when testing a collapsed ear canal

- D. Ambient noise is more of a problem with insert earphones
6. A large dip at 6000 Hz in one ear only, with a positive tone decay, is indicative of:
- A. Acute otitis media
  - B. Industrial deafness
  - C. A possible retrocochlear tumor
  - D. Acoustic trauma
7. A patient who has worn hearing aids for a long time reports to your office saying that his ears are “stopped up.” He recently had a cold.
- Which of the following will give the **MOST** information about this patient’s complaint?
- A. Real ear measurement
  - B. Impedance audiometry
  - C. Pure tone air conduction audiometry
  - D. Pure tone bone conduction audiometry
8. When troubleshooting a hearing instrument, the battery current drain was measured.
- A reading of 0.00 MA would **MOST** likely indicate which of the following?
- A. Bad microphone
  - B. Bad receiver
  - C. Plugged acoustic filter
  - D. Dead instrument



9. Which programmable adjustment would **BEST** help control loud sharp sounds?
- A. Adjust the knee point higher
  - B. Reduce low frequencies
  - C. Increase the compression ratio
  - D. Reduce gain
10. During otoscopic inspection, which **ONE** of the following is **NOT** a consideration for earmold selection?
- A. Volume of acoustic cavity
  - B. Texture of auricle
  - C. Compliance of the tympanum
  - D. Depth of concha
11. A problem that may be caused by shrinking earmold tubing is:
- A. Harmonic distortion
  - B. Changing response of the instrument
  - C. Increasing gain
  - D. Soreness at top of pinna
12. A hearing aid patient comes in complaining that his ITC aids were working fine until he had them cleaned. Now they are weak and feeding back and he is told the aids will have to be sent in for an out-of-warranty repair, or purchase new aids. What is the **MOST** likely cause of the problem?
- A. Debris in microphone
  - B. Microphone pushed in
  - C. Receiver tubing pushed in

D. Wax on receiver

13. A patient who has had a radical mastoidectomy has been referred by a physician for a new ear mold. The physician is urging caution due to a short auditory meatus.

Which of the following statements is **TRUE** for this patient?

Choose **ALL** that apply.

- A. A long canal is preferable
- B. Multiple otoblocks may be needed
- C. Careful placement of otoblock is needed
- D. Hand packing technique while taking impression is preferable

14. A patient comes to the office after losing all hearing in the left ear over a period of about six weeks. The hearing in the right ear is within normal limits. The patient has been to an ENT doctor and has been given medical clearance to seek amplification.

The only viable option is a CROS fitting. The patient is reluctant to comply. Which of the following option(s) should be included in counseling the patient?

Choose **ALL** that apply.

- A May help the patient feel more balanced
- B. A hearing aid will not help the left ear
- C. Will enable the patient to hear from the left side
- D. Will restore the hearing in left ear to near normal

15. A realtor with a bilateral ski slope loss comes into the office complaining of hearing difficulties at meetings, in the car, from room to room, and in crowds. He states that he does not want to wear a hearing instrument.

Which of the following is the **MOST** important factor in fitting this man successfully?

- A. Selection of proper hearing instrument
- B. Encouraging him to use two aids
- C. His ability to accept the hearing loss and his need for help
- D. Possible financial ramifications of impairment

### **Answer Key**

- 1. C. Acoustic trauma
- 2. C. Concussion in the previous six months
- 3. D. Otosclerosis
- 4. C. Otosclerosis
- 5. D. Ambient noise is more of a problem with insert earphones
- 6. C. A possible retro cochlear tumor
- 7. B. Impedance audiometry
- 8. D. Dead instrument
- 9. C. Increase the compression ratio
- 10. C. Compliance of the tympanum
- 11. D. Soreness at top of pinna
- 12. C. Receiver tubing pushed in
- 13. B. Multiple otoblocks may be needed  
C. Careful placement of otoblock is needed
- 14. A. May help the patient feel more balanced  
B. A hearing aid will not help the left ear  
C. Will enable the patient to hear from the left sides
- 15. C. His ability to accept the hearing loss and his need for help

## End of Study Guide Exam

Thank you for participating in the NBC-HIS ***Study Guide Exam***. Exam items contained herein are intended for informational purposes only as a guide to candidates, and do not appear in the actual ***National Competency Exam***.



## **RECOMMENDED READING LIST FOR NBC-HIS NATIONAL COMPETENCY EXAM**

- Audiology: Science to Practice (2<sup>nd</sup> Ed., 2013) Kramer, Steven with James Jerger & H. Gustav Mueller
- Introduction to Audiology (12<sup>th</sup> Ed., 2014) Martin, Frederick & John Clark
- Strategies for Selecting and Verifying Hearing Aid Fittings (2<sup>nd</sup> Ed. 2002) Valente, Michael
- Audiology: Diagnosis (2<sup>nd</sup> Ed., 2007) Roeser, Ross; Michael Valente, Holly Hosford-Dunn
- Audiology: Treatment (2<sup>nd</sup> Ed., 2007) Valente, Michael; Holly Hosford-Dunn, Ross Roeser
- Audiology: Practice Management (2<sup>nd</sup> Ed., 2007) Hosford-Dunn, Holly; Ross Roeser, Michael Valente
- Handbook of (Central) Auditory Processing Disorders, Vol. II (2<sup>nd</sup> Ed., 2013) Chermak, Gail; Frank Musiek
- Handbook of (Central) Auditory Processing Disorders, Vol. I (2<sup>nd</sup> Ed., 2013) Musiek, Frank; Gail Chermak
- Digital Hearing Aids (2008), Schaub, Arthur.
- Sandlin's Textbook of Hearing Aid Amplification: Technical and Clinical Considerations (3<sup>rd</sup> Ed., 2014) Metz, Michael J.
- Consultative Selling Skills for Audiologists (2011) Taylor, AuD., Brian.
- Geriatric Audiology (2<sup>nd</sup>, 2010) Weinstein, Barbara.