

2020 HEARING AID DISPENSER WRITTEN EXAMINATION OUTLINE

1. Equipment / Pre-visit (4%) - This content area assesses the candidate's knowledge of preparing testing equipment and environment to obtain valid and reliable test results.

<i>Task</i>		<i>Associated Knowledge Statements</i>	
T1	Verify function and calibration of test equipment.	K1	Knowledge of calibration requirements for audiometric equipment.
		K2	Knowledge of methods to perform a listening check of audiometric equipment.
		K3	Knowledge of function and procedures to operate audiometric equipment.
T2	Sanitize equipment (e.g., examination and audiometric equipment) before contact with client.	K5	Knowledge of methods to sanitize equipment that will be used on client.
T3	Maintain an environment that is conducive to audiometric assessment.	K6	Knowledge of physical, medical, and environmental conditions that affect audiometric assessment procedures.

2. Case History (8%) - This content area assesses the candidate's knowledge of pertinent client information to gather prior to assessment and the management of protected information.

<i>Tasks</i>		<i>Associated Knowledge Statements</i>	
T4	Obtain client report of symptoms.	K7	Knowledge of techniques to gather and assess client symptoms.
T5	Obtain pertinent client health and family health history.	K8	Knowledge of health, genetic, and medical conditions that may contribute to hearing loss.
		K9	Knowledge of the effect of hearing aid use history on assessment and treatment.
		K10	Knowledge of the effect of ear surgery history on assessment and treatment.
		K11	Knowledge of types of illnesses, medical treatments, and medications that may affect hearing.
		K12	Knowledge of health history questions to assess for conditions that may contribute to hearing loss.
		K13	Knowledge of effects of ear pathologies on hearing loss.
T6	Obtain pertinent client social and environmental history.	K14	Knowledge of the effect of exposure to physical or acoustic trauma on hearing loss and treatment.
		K15	Knowledge of lifestyle activities that could impact hearing loss and treatment.
T7	Document and maintain protected client hearing and health information.	K16	Knowledge of HIPAA laws and regulations.

3. Assessment (24%) - This content area assesses the candidate's knowledge of audiometric assessment techniques that determine degree, type, and configuration of hearing loss, and need for medical referral.

<i>Subarea</i>		<i>Tasks</i>		<i>Associated Knowledge Statements</i>
3.1 Pre-Assessment (2%)	T9	Determine need for referral to a physician by assessing client symptoms, objective signs, and medical history.	K24	Knowledge of objective signs and subjective symptoms that require a medical referral.
			K25	Knowledge of laws and regulations pertaining to signs and symptoms that require a medical referral.
3.2 Assessment (16%)	T10	Develop audiometric assessment plan to accommodate client needs.	K26	Knowledge of health, genetic, and medical conditions that may impact audiometric assessment.
			K28	Knowledge of logical order of assessment procedures.
			K29	Knowledge of issues that would require a modification to assessment procedures.
			K30	Knowledge of methods to perform sound field testing.
			K31	Knowledge of anatomical features that require a change in testing methodology.
			K32	Knowledge of methods and procedures to test clients with abnormal anatomy.
3.2 Assessment (16%)	T11	Explain procedures to client before and during audiometric assessment.	K33	Knowledge of methods to inform clients about audiometric assessment procedures.
			K35	Knowledge of techniques to describe audiometric assessment procedures to clients.
3.2 Assessment (16%)	T12	Perform pure tone air and bone conduction assessments.	K36	Knowledge of purposes and procedures of performing pure tone air conduction assessment.
			K37	Knowledge of purposes and procedures to perform pure tone bone conduction assessment.
			K40	Knowledge of methods to monitor and assess client subjective response to auditory stimuli.

3. Assessment, continued (24%) - This content area assesses the candidate's knowledge of audiometric assessment techniques that determine degree, type, and configuration of hearing loss, and need for medical referral.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
3.2 Assessment, continued (16%)	T13 Perform masking during hearing assessment.	K41 Knowledge of purpose of performing masking. K42 Knowledge of concept and implications of under and overmasking. K43 Knowledge of procedures of masking during pure tone air conduction testing. K44 Knowledge of procedures of masking during pure tone bone conduction testing. K45 Knowledge of procedures of masking during speech testing.
	T14 Measure client threshold of discomfort (i.e., TD, UCL, LDL), to determine loudness tolerance.	K47 Knowledge of purposes of measuring threshold of discomfort. K48 Knowledge of procedures to determine dynamic range of hearing. K49 Knowledge of principles and procedures to establish client threshold of discomfort for pure tones and speech discrimination.
	T15 Perform most comfortable level assessment (MCL).	K51 Knowledge of purposes, principles, and procedures of establishing client most comfortable level (MCL) for speech.
	T16 Perform speech reception threshold assessment.	K52 Knowledge of principles and procedures of establishing speech reception threshold. K53 Knowledge of procedures to perform speech reception threshold testing.
	T17 Perform speech WRS/SD (word recognition score / speech discrimination) assessment.	K54 Knowledge of principles and procedures to perform speech discrimination / word recognition assessment.
	T18 Chart and document results of audiometric assessment.	K56 Knowledge of methods to chart and document assessment results.

3. Assessment, continued (24%) - This content area assesses the candidate's knowledge of audiometric assessment techniques that determine degree, type, and configuration of hearing loss, and need for medical referral.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
3.3 Evaluation and Interpretation of Results (6%)	T19 Evaluate client audiometric assessment results to determine if retesting is necessary.	K57 Knowledge of reliable assessment results based on client audiometric and behavioral indications.
		K58 Knowledge of relationship between audiometric results and speech assessment results.
		K59 Knowledge of conditions, error, or reliability issues that indicate retesting is necessary.
	T20 Evaluate client audiometric assessment results to determine degree, type, and configuration of hearing loss.	K61 Knowledge of principles and criteria for determining significant air-bone gap.
		K62 Knowledge of criteria to identify asymmetrical hearing loss.
		K63 Knowledge of how to interpret audiometric assessment results.
		K65 Knowledge of audiometric test results that require medical referral.
		K66 Knowledge of type, degree, and configuration of hearing loss indicated by audiometric assessment results.
	T21 Explain and discuss client audiometric assessment results and evaluation of hearing loss with implications for communication.	K67 Knowledge of criteria to compare client audiometric test results with subjective symptoms.
		K68 Knowledge of criteria to identify changes in hearing.
K69 Knowledge of symptoms associated with specific audiometric assessment results.		
K70 Knowledge of counseling techniques to help explain audiometric assessment results to clients.		
K71 Knowledge of methods to counsel clients and explain implications of hearing loss.		
K72 Knowledge of hearing difficulties related to the degree, type, and configuration of hearing loss.		
K73 Knowledge of consequences of untreated hearing loss.		

4. Selection and Sales (13%) - This content area assesses the candidate's knowledge of patient candidacy and selection of hearing aids.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
4.1 Hearing Aid Candidacy, Recommendation, and Selection (10%)	T22 Determine client candidacy for hearing aids.	K74 Knowledge of how to use assessment results to determine amplification recommendations.
		K75 Knowledge of anatomical variations that affect client candidacy for amplification.
		K76 Knowledge of hearing amplification requirements for different hearing losses.
		K77 Knowledge of indications for monaural, binaural, or CROS systems, and implantable devices.
		K78 Knowledge of the advantages of different styles of hearing aids.
		K79 Knowledge of audiometric assessment results that affect earmold/dome selection.
		K80 Knowledge of physical considerations that affect manipulation of hearing aids.
		K81 Knowledge of client needs that affect hearing aid selection and fitting.
	T23 Apply client historical information to hearing aid selection and settings.	K82 Knowledge of previous hearing aid use and how that impacts new hearing aid fitting.
		K83 Knowledge of effects of previous hearing aid use on client motivation for hearing assistance.
		K84 Knowledge of hearing aid features.
	T24 Determine client lifestyle compatibility with hearing aid features.	K85 Knowledge of criteria for selecting hearing aid parameters based on client needs.
		K86 Knowledge of benefits of hearing aid amplification for various lifestyles.
	T25 Determine hearing aid options and accessories to recommend to clients.	K87 Knowledge of types of hearing aid options and accessories (e.g., Bluetooth, remote controls, TV, telecoil, and FM).
		K88 Knowledge of types of hearing aid controls.
K89 Knowledge of methods to explain hearing aid options to clients.		
K90 Knowledge of dynamic range considerations for hearing aid selection.		
K92 Knowledge of advantages of different styles of hearing aids.		

4. Selection and Sales, continued (13%) - This content area assesses the candidate's knowledge of patient candidacy and selection of hearing aids.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
4.1 Hearing Aid Candidacy, Recommendation, and Selection, continued (10%)	T38 Select user-controlled options of hearing aid.	K122 Knowledge of purposes and procedures to select user-controlled options of hearing aids. K123 Knowledge of purposes and procedures of adjusting acoustic characteristics of hearing aids.
	T37 Select physical characteristics of earmold or domes to fit client needs.	K121 Knowledge of purposes and procedures of selecting options and styles of earmolds or domes.
4.2 Sale (3%)	T39 Obtain signed medical clearance or medical waiver from client before selling hearing aids.	K124 Knowledge of requirement to obtain medical clearance or waiver for clients.
	T40 Dispense hearing aid to client by adhering to state and federal guidelines and regulations.	K125 Knowledge of dispenser legal obligation to client to adjust, replace, and refund hearing aids.
		K126 Knowledge of laws and regulations regarding the sale and fitting of hearing aids.
		K127 Knowledge of FDA regulations regarding the sale of hearing aids.
	K128 Knowledge of requirements of documenting hearing aid sales.	

5. Ear Impression (8%) - This content area assesses the candidate's knowledge of how to take and evaluate an ear impression.

<i>Tasks</i>		<i>Associated Knowledge Statements</i>	
T26	Evaluate client ear canal to determine whether an ear impression can safely be performed.	K93	Knowledge of purpose and procedures to take an ear impression.
		K94	Knowledge of purpose and procedures of evaluating client ear canal before an ear impression.
T27	Inform client about ear impression procedures to make client aware of sensations.	K95	Knowledge of expectations and sensations experienced during impression procedures.
T28	Select type and size of blocking material (e.g., cotton dam) to use during ear impression process.	K97	Knowledge of procedures to take ear impressions on clients with abnormal anatomy (e.g., mastoid cavities).
		K98	Knowledge of methods to determine size and type of blocking material needed during an ear impression.
		K99	Knowledge of how to determine placement of blocking material.
		K100	Knowledge of purposes of using blocking material during an ear impression.

6. Pre-Fitting (5%) - This content area assesses the candidate's knowledge of procedures to establish hearing aid settings and physical characteristics before fitting.

<i>Tasks</i>		<i>Associated Knowledge Statements</i>	
T41	Check hearing aids to verify functionality and consistency with order before fitting.	K129	Knowledge of the American National Standards Institute (ANSI) standards for hearing aid performance.
		K130	Knowledge of purposes and methods of evaluating physical characteristics of hearing aids.
		K131	Knowledge of methods to verify function of hearing aids.
		K132	Knowledge of manufacturer specifications (included features and settings) for hearing aids.
T42	Evaluate physical characteristics of custom products and earmolds before fitting (e.g., shell, canal, consistency with order, defects).	K133	Knowledge of methods used to verify earmold received from manufacturer.
		K134	Knowledge of purposes and methods of evaluating physical characteristics of earmolds.
T44	Pre-program or adjust hearing aid settings for client.	K136	Knowledge of procedures of setting levels of maximum output for hearing aids.
		K137	Knowledge of how to program and adjust hearing aids.
		K138	Knowledge of methods to configure and verify program settings of hearing aids.
		K139	Knowledge of audiometric test results that affect selection of acoustic properties of hearing aids.

7. Fitting (17%) - This content area assesses the candidate's knowledge of how to fit a hearing aid and associated accessories and apps.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
7.1 First Fit (8%)	T45 Insert hearing aid into client ear to assess fit.	K140 Knowledge of how to insert and remove different style hearing aids. K141 Knowledge of methods to determine whether hearing aid is a good fit for client.
	T46 Modify hearing aid or earmold to fit client.	K143 Knowledge of hearing aid physical characteristics that need adjustment or to be remade. K144 Knowledge of modifications for custom products and earmolds. K145 Knowledge of common complaints and their indications for physical hearing aid fit. K146 Knowledge of physical characteristics that can be modified on earmolds to improve fit or address client complaints. K147 Knowledge of methods and tools to modify physical characteristics of hearing aids and earmolds. K148 Knowledge of questions to ask clients regarding hearing aid fit. K149 Knowledge of physical characteristics that can be modified on hearing aids to improve fit or address client complaints.
T47	Adjust hearing aid electroacoustic characteristics (e.g., gain, frequency response, maximum power output) to meet client fitting needs.	K150 Knowledge of purpose and methods to set and adjust electroacoustic characteristics of hearing aids. K151 Knowledge of procedures to assess electroacoustic characteristics and performance of hearing aid. K152 Knowledge of common client complaints associated with electroacoustic characteristics of hearing aids. K153 Knowledge of procedures to help client adapt to sensory stimuli with hearing aid use. K154 Knowledge of relationship between adjustable acoustic characteristics of hearing aid and client perceptions of sound quality. K155 Knowledge of adjustments to reduce feedback. K156 Knowledge of adjustments that need to be made to hearing aid programming, including telecoil.

7. Fitting, continued (17%) - This content area assesses the candidate's knowledge of how to fit a hearing aid and associated accessories and apps.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
	T52 Evaluate outcome of hearing aid fitting with verification measures (i.e., sound field testing, real ear).	K170 Knowledge of purposes and procedures of performing unaided and aided sound field testing. K171 Knowledge of purpose and procedures to perform real ear/probe measurement. K172 Knowledge of necessary adjustments to hearing aids based on performance. K173 Knowledge of methods to validate client hearing aid benefit.
7.2 Delivery (9%)	T48 Demonstrate and explain techniques to insert, remove, and manipulate hearing aids.	K157 Knowledge of common issues associated with insertion and removal of hearing aids. K159 Knowledge of procedures to insert and remove client hearing aids.
	T49 Teach client to use hearing aid and assistive listening device controls.	K160 Knowledge of information to provide client regarding use of hearing aids (e.g., controls, features). K162 Knowledge of information to provide to client regarding phone and app use with hearing aid. K163 Knowledge of questions to ask clients regarding hearing aid fit.
	T50 Instruct client how to use, maintain, and dispose of hearing aid batteries.	K164 Knowledge of procedures to care for and dispose of hearing aid batteries. K165 Knowledge of procedures to use and maintain rechargeable hearing aids.
	T51 Instruct client on hearing aid care and maintenance to optimize hearing aid function.	K167 Knowledge of purposes, procedures, and information regarding care and maintenance of hearing aids. K168 Knowledge of methods to reinforce proper hearing aid use. K169 Knowledge of methods to reinforce proper hearing aid care.
	T53 Instruct client on how to use hearing aid options, features, and accessories.	K175 Knowledge of techniques to assess client proficiency in using hearing aid options, features, and accessories. K176 Knowledge of use of hearing aid options, features, and accessories. K178 Knowledge of purposes and methods of evaluating client use of telecoil.

8. Follow-Up Care (11%) - This content area assesses the candidate's knowledge of procedures to resolve client issues including physical fit and acoustic targets.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
8.1 Postfitting Care (8%)	T54 Provide client with follow-up care.	K179 Knowledge of techniques to conduct ongoing client counseling on hearing aid use. K180 Knowledge of methods to maintain hearing health. K181 Knowledge of methods to compare previous and new audiometric test results.
	T55 Gradually adjust programming of hearing aid in follow-up visits to help client become accustomed to target settings.	K182 Knowledge of necessary adjustments based on client experience or adaptation level. K183 Knowledge of necessary adjustments required to achieve real ear measure target.
	T56 Modify physical characteristics of custom products and earmolds to fit client and troubleshoot client complaints.	K184 Knowledge of procedures used to modify earmolds for physical fit and acoustic performance. K185 Knowledge of methods to select domes to modify acoustic performance. K186 Knowledge of methods to use buffers and grinders. K187 Knowledge of ear anatomy that affects hearing aid fitting.
	T57 Identify electroacoustic adjustments to be performed on hearing aid based on client complaints.	K188 Knowledge of techniques to identify and eliminate acoustic feedback. K189 Knowledge of purposes and methods of identifying circuit noise of hearing aids. K190 Knowledge of procedures to identify causes of feedback in hearing aids. K191 Knowledge of purposes and methods of evaluating frequency response of hearing aid. K192 Knowledge of purposes and methods of evaluating gain of hearing aids.

8. Follow-Up Care, Continued (11%) - This content area assesses the candidate's knowledge of procedures to resolve client issues including physical fit and acoustic targets.

<i>Subarea</i>	<i>Tasks</i>	<i>Associated Knowledge Statements</i>
8.2 Repairs (3%)	T58 Assess performance of hearing aids and client complaints to determine whether repairs need to be made.	K193 Knowledge of techniques to differentiate between external and internal feedback.
		K194 Knowledge of procedures to run an electroacoustic analysis on a hearing aid to determine if it is performing to manufacturer specifications.
		K195 Knowledge of evaluation techniques to determine whether to repair hearing aids or send to the manufacturer for repair.
		K196 Knowledge of purposes and methods of evaluating volume control of hearing aids.
		K197 Knowledge of techniques to differentiate changes in client hearing from malfunction of hearing aid.
		K198 Knowledge of client complaints that indicate hearing aid malfunction.
	T59 Perform hearing aid maintenance and repair.	K199 Knowledge of procedures to assess causes of hearing aid malfunction.
		K200 Knowledge of types of repairs for hearing aids.
		K201 Knowledge of how to service or repair hearing aids.
		K202 Knowledge of equipment and tools used to repair hearing aids.

9. Counseling (10%) - This content area assesses the candidate's knowledge of methods to establish realistic expectations and educate the client on optimizing communication while using hearing aids and accessories.

<i>Tasks</i>	<i>Associated Knowledge Statements</i>
T60 Determine when hearing aid is no longer adequate for client needs.	K204 Knowledge of indicators that a different hearing aid would be more effective to meet client needs.
	K205 Knowledge of how hearing may change over time.
T62 Establish realistic expectations about potential experiences while wearing hearing aids.	K207 Knowledge of realistic expectations regarding hearing amplification.
	K208 Knowledge of factors that affect successful hearing aid fitting.
	K209 Knowledge of adaptation process and implications for new hearing aid users.
	K210 Knowledge of purposes and methods of evaluating client expectations about amplification.
T63 Educate client on practices to optimize communication while using hearing aids and accessories in different circumstances.	K211 Knowledge of cognitive and physical factors that influence successful hearing aid use.
	K212 Knowledge of strategies for maximizing communication in different listening environments.

