

## **GRADUATE CURRICULUM ON VOICE AND VOICE DISORDERS** **ASHA Special Interest Division 3, Voice and Voice Disorders**

In 2003, a joint statement by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) and the Council for Clinical Certification in Audiology and Speech-Language Pathology (CFCC) outlined requirements for graduate programs and clinical certification applicants in the disciplines of audiology and speech-language pathology (ASHA, 2003). The new Standards for the Certificate of Clinical Competence make particular reference to the Knowledge and Skills Acquisition (KASA) form that was developed by the CFCC to assist students and graduate programs in documenting the completion of the certification standards. To help students meet the certification standards, graduate programs are expected to (a) provide a curriculum that addresses knowledge and skills in each certification standard, (b) identify appropriate student learning outcomes, (c) develop appropriate assessment methods for each learning outcome, (d) appropriately document the acquisition of knowledge and skills, and (e) assess learning objectives based upon multiple sources of information (ASHA, 2003). Demonstration of knowledge and skills acquisition is a requirement for clinical certification in audiology and in speech-language pathology.

The certification standards represented in the KASA account for a breadth and depth of knowledge and skills in communication disorders and other subject areas that support clinical competence. This comprehensive teaching initiative is intended to produce clinicians with entry-level competence in all areas of audiology or speech-language pathology. The challenge for graduate programs is to ensure that all students have the opportunity to meet the certification standards.

To assist graduate programs in meeting the certification standards related to voice, a subcommittee of Special Interest Division 3, Voice and Voice Disorders developed this model graduate curriculum to use as a guide. It is presented in syllabus format and provides suggestions for course content that would meet the knowledge requirements of the Standards for the Certificate of Clinical Competence as well as ideas for labs and assignments to meet the skills requirements. Because

it may be difficult for all students to acquire clinical practicum hours in voice, some of the labs and assignments provide opportunities for skills demonstration in the classroom. This syllabus is not intended to infringe upon the academic freedom granted to academic faculty. It is designed to be a suggested outline of basic course content and skills that would satisfy certification standards. The specific standard addressed is indicated parenthetically after each competency.

## **SPECIAL INTEREST DIVISION 3 MODEL SYLLABUS: VOICE**

### **Competencies**

Upon completion of the course, the student will be able to:

1. Describe anatomy and physiology of the vocal mechanism. (III-B)
2. Describe respiration, phonation, resonance and articulation as related to modulation of voice.  
(III-B)
3. Describe neurophysiology of respiration, phonation, and resonance. (III-B)
4. Identify measurable variables as related to modulation of voice (e.g., acoustic, aerodynamic, perceptual). (III-B)
5. Describe life span changes including pediatric development of the vocal mechanism and aging influences on respiration, phonation, resonance, and articulation. (III-BC)
6. Articulate theories and processes of respiration, phonation, and resonance. (III-B)
7. Identify etiologies and describe characteristics of vocal pathologies (e.g., benign, malignant, and neuropathologic) including incidence and prevalence. (III-C)
8. Identify structural, neuropathologic, functional/behavioral, and idiopathic laryngeal pathologies. (III-CD)
  - a. Identify the mechanical, acoustic, and aerodynamic effects of each. (III-CD)
9. Identify high-risk populations (e.g., those in specific occupations such as teachers, singers, actors, lawyers, persons with hearing loss) and their specialized evaluation and treatment needs.  
(III-CD)
10. Recognize the needs of specific and culturally diverse populations (e.g., transgender, transsexual, mutational falsetto). (III-CD)
  - a. Consider the specific needs of non-English speakers.

11. Outline a complete evaluation protocol and identify clinically appropriate assessment tools. Include history, acoustic and aerodynamic measures, perceptual ratings, imaging, and electroglottography. (III-D)
  - a. Interpret subjective and objective voice production data using current literature. (III-D; IV-1, e)
12. Identify techniques for assessing the psychosocial impact of voice disorders across the life span (e.g., validated questionnaires). (III-D)
13. Identify techniques for prevention of voice disorders and promotion of vocal wellness (e.g., vocal hygiene, avoiding phonotrauma) in varied clinical, educational, and corporate settings. (III-D)
14. Identify evidence-based treatment approaches and outcomes to voice disorders: behavioral, medical (including pharmacological), surgical, and combination strategies. (III-D)
15. Describe appropriate management procedures including recommendations and referrals. (III-D; IV 2-g)
16. Outline the anatomical and physiological changes in patients with tracheostomies. Identify procedures for assessing communication needs and speaking valve selection. (III-D)
17. Outline a clinically appropriate alaryngeal voice assessment protocol, including stimulability, insufflation testing, prosthesis fitting, and modality selection. (III-D)
18. Describe evidence-based treatment approaches and supportive outcomes to alaryngeal speech production: behavioral, medical (including pharmacological), surgical, and combination strategies. (III-D)

## **Suggested Graduate Curriculum in Voice Disorders**

### General Scientific Principles

- Anatomy and Physiology of Respiration, Phonation, and Resonance
- Neuroanatomy
- Histology
- Biomechanics
- Theories of Voice Production

### Assessment and Diagnosis

#### History

- Past Medical
- Current Medical History (e.g., medications, hearing status, reflux)
- Psychosocial
- Developmental and Genetic Aspects
- Voice Use History

#### Auditory Perceptual Evaluation

- Speech Breathing
- Voice Quality
- Resonance
- Vocal and Other Related Behaviors
- Perceptual Assessment and Screening Tools

#### Visual Perceptual Evaluation

- Stroboscopy
- Endoscopy
- High Speed Imaging
- Videokymography

#### Instrumental Evaluation

- Acoustics
- Aerodynamics
- Glottography
- Nasometry
- Electromyography

### Laryngeal Pathologies and Disorders

- Structural
- Neuropathologic
- Idiopathic
- Functional/Behavioral

### Specific Populations

- Alaryngeal Voice (see ASHA, 2004a)
- Aging Voice
- Pediatric Voice
- Professional Voice

Paradoxical Vocal Fold Motion/Vocal Cord Dysfunction (PVFM/VCD)  
Transgender and Transsexual Voice

Management of Voice Disorders

Evidence-Based Practice  
Outcomes Measures  
Behavioral  
Medical  
Surgical  
Education and Counseling  
Collaborative Input

Professional Issues

Licensure  
Scope of Practice  
Endoscopy Training (see ASHA, 2004b, 2004c)  
Reimbursement and Coding  
Documentation  
HIPAA Compliance  
Telehealth

**ASSIGNMENT IDEAS**

Download information on reflux prevention, vocal hygiene, and medication side effects. Create and present patient education materials. Include considerations for specific populations (e.g., those in specific occupations such as teachers, singers, and actors, as well as transgender and transsexual individuals and non-English speakers). (IV-G 1a; IV-G 2c)

Complete an Internet search for resources on voice disorders. (IV-G 2c)

- a. Search resources on specific vocal pathologies (e.g., benign and malignant vocal fold lesions, vocal fold paralysis and paresis, PVFM/VCD).
- b. Identify resources that would be most appropriate for specific populations (e.g., teachers, singers, actors, transgender and transsexual individuals, and non-English speakers).
- c. Review the ASHA Web site for technical reports, position statements, guidelines, and knowledge and skills documents relevant to voice. These can be found under the heading “Selected Desk Reference Documents” on the ASHA Web site.

Create a case history form. Use it on one person. (IV-G 1b)

Create comparison assessment protocols for hypothetical patients when provided with a case history (e.g., child vs. adult). (IV-G 1b, c, d)

Write a diagnostic report for a hypothetical patient. Include appropriate recommendations for intervention and appropriate referrals. (IV-G 1e, f, g; IV-G 2g)

Watch video of tracheoesophageal prosthesis insertion and describe procedural steps for fitting. (IV-G 1c, d, e; IV-G 2c)

Create a table of the available tracheotomy tubes speaking valves. Include selection criteria. (IV-G 1c, d, e)

Create a table of the available alaryngeal communication devices (electrolarynges, prostheses, hands-free valves). Include selection criteria. (IV-G 1c, d, e)

Select outcome assessment tools to monitor treatment progress. (IV-G 2c, e)

Complete a therapy note, therapy progress report, Medicare assessment form, or individualized education program (IEP) for a hypothetical patient. (IV-G 2f)

Write out patient instructions for therapy techniques, explanations of problems, and progress in lay terminology. (IV-G 1f; IV-G 2a, b, f, g)

Create comparison treatment protocol for hypothetical patients when provided with a case history (e.g., child vs. adult). Include behavioral objectives. (IV-G 2a, c, f)

Develop a research question on a topic of interest. Include a problem statement, background, question(s) to be answered, methods, and proposed analysis.

Write a reaction paper to the ASHA policy documents on voice and voice disorders (available from [www.asha.org/policy](http://www.asha.org/policy)).

Critique a clinical practice guideline using the Appraisal of Guidelines Research and Evaluation (available from [www.agreecollaboration.org](http://www.agreecollaboration.org)). A list of clinical practice guidelines related to

speech-language pathology or audiology can be found in the NCEP section of the ASHA Web site ([www.asha.org](http://www.asha.org)).

## **LAB IDEAS**

Perform acoustic and aerodynamic analysis from sample files. (IV-G 1c, e)

Perform perceptual ratings of stroboscopic videos. (IV-G 1c, e)

Provided with pulmonary function testing from a referral source (pulmonologist), summarize findings as they relate to speech breathing and phonation and propose a management strategy.

Perform perceptual analysis (e.g., voice quality, observation of breathing, speaking technique) from video samples that provide patient interview, conversation and reading samples, and performance tasks. (IV-G 1b, c, e)

Demonstrate technical knowledge of communication devices (e.g., electrolarynges, tracheotomy tubes, speaking valves). (IV-G 1c, e)

Demonstrate diagnostic interviewing skills in role-play. (IV-G 1-b, e)

a. Demonstrate ability to adapt interview questions to responses.

Demonstrate therapeutic evidence-based practice techniques in role-play with appropriate materials. (IV-G 2b, c, d).

a. Demonstrate ability to branch techniques with failures. (IV-G 2c, d, e)

Discuss clinical cases and their ethical considerations in a grand rounds format. (IV-G 3a, b, d)

## **REFERENCES**

- American Speech-Language-Hearing Association. (2003). *Expectations for graduate programs and certification applicants*. Available from [www.asha.org/about/credentialing/accreditation/CAA-CFCC\\_req.htm](http://www.asha.org/about/credentialing/accreditation/CAA-CFCC_req.htm).
- American Speech-Language-Hearing Association. (2004a). *Roles and responsibilities of speech-language pathologists with respect to evaluation and treatment for tracheoesophageal puncture and prosthesis* [Position statement]. Available from [www.asha.org/policy](http://www.asha.org/policy).



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American Speech-Language-Hearing Association. (2004c). *Vocal tract visualization and imaging: Technical report*. Available from [www.asha.org/policy](http://www.asha.org/policy).