Tuesday, 3:00 – 4:30, C6

Decision Making for Safer Intake and Swallowing

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Objective:

Identify effective methods for the practical application of concepts related to improving the delivery of services for persons with developmental disabilities at the level of the state.

Identify the phases of swallowing

Develop strategies to promote safer intake before modifying diet level

Consider implementing interprofessional teamwork to promote safer swallowing

Notes:

Decision Making for Safer Feeding and Swallowing
Cekola and Rigley-Rowell
April 18, 2017
33rd Annual Developmental Disabilities Conference

Additional References and Resources

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Wolf L, Glass R, et al. (1992). *Feeding and swallowing disorders in infancy: assessment and management:* (Austin, TX): Pro-Ed, Inc.

On-Line Resources

http://iddsi.org/
International Dysphagia Diet Standardization Initiative

The May Institute
https://www.mayinstitute.org/pdfs/developmental_disabilities_fact_sheet.pdf

ASHA's Technical Report on the Role of the SLP in Feeding & Swallowing Disorders - if you click on the hyperlink for DD it has a fabulous description of the unique and complex components that we often see in the DD population that affect feeding/swallowing:
http://www.asha.org/policy/tr2001-00150.htm#sec1.2.3

An article that highlights the biobehavioral nature of the complex cases.
http://journals.lww.com/jpgn/Fulltext/1998/08000/Classifying_Complex_Pediatric_Feeding_Disorders.3.aspx

Images were borrowed from Google Images

Decision Making for Safer Intake and Swallowing

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Department of Speech, Language and Hearing Sciences
Western Michigan University

Neither speaker has any financial relationships or conflicts of interest to disclose.

Objectives

1. Identify effective methods for the practical application of concepts related to improving the delivery of services for persons with developmental disabilities
2. Identify the phases of normal feeding and swallowing
3. Develop strategies to promote safer intake before modifying diet level
4. Consider ways to implement or improve interprofessional teamwork to promote QOL, health, and improved intake

Definition

From CDC:
Developmental disabilities are a group of conditions due to an impairment in physical, learning, language, or behavior areas.

About 1/6 children in the U.S. have one or more developmental disabilities or other developmental delays.

Developmental disabilities are a diverse group of severe chronic conditions that are due to mental and/or physical impairments.

People with developmental disabilities have problems with major life activities such as language, mobility, learning, self-help, and independent living.

ADHD	**autism spectrum disorder**	**cerebral palsy**
hearing loss	**intellectual disability**	**learning disability**
vision impairment	**other developmental delays**	

Prevalence

Three most common developmental disabilities in the USA:

- Intellectual disability
- Cerebral Palsy
- Autism Spectrum Disorders

(https://www.mayinstitute.org/pdfs/developmental_disabilities_fact_sheet.pdf)

Please allow us to paint with broad strokes today.

Rationale

The prevalence of dysphagia and feeding disorders is **higher in developmental disability than in the normal population** and varies widely by etiology, by the severity and multiplicity of involvements and by the age of the population (Rogers et al., 1994; Sheppard, Liou, Hochman, Laroia, & Langlois, 1988).

The dysphagia and feeding disorders that are seen in adults with developmental disability include poorly developed and absent feeding and oral preparation skills and competencies, physiological and anatomical impairments that degrade oral-pharyngeal and esophageal bolus motility, and disruptive or maladaptive mealtime behaviors.

Significant interactions have been noted between **disordered feeding skills and survival** in children and adults with severe DD (Eyman, Grossman, Tarjan, & Miller, 1987; Eyman, Grossman, Chaney & Call, 1990).

All references can be found in the Roles of Speech-Language Pathologists in Swallowing and Feeding Disorders: Technical Report

The SLP Scope

PCP for:

- Speech
- Language
- Voice
- Cognitive-Communication
- ***Feeding/Swallowing***

Service Delivery Domains

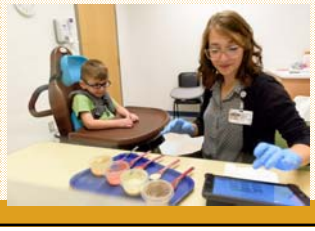
- Collaboration
- Counseling
- Prevention and Wellness
- Screening
- Assessment
- Treatment
- Modalities
- Technology
- Instrumentation

Who's in the Huddle?

- MSW
- RN
- RT
- PT
- OT
- Dietitian
- Nutritionist
- CNA
- Pulmonologist
- Pediatrician
- PCP/MD/DO
- Neurologist
- Case Mgr.
- Teacher(s)
- Neuropsychologist
- LPN
- Client and Family

What are We Talking About?

- Feeding Disorder
  - avoidant, restrictive, ineffective, inefficient intake, reduced appetite
- Dysphagia
  - Difficulty swallowing food/liquid



Facts on Feeding

- 25% of neurotypical children experience feeding disorders
- 80% of children identified with special needs experience feeding disorders

(Manikam, 2000)

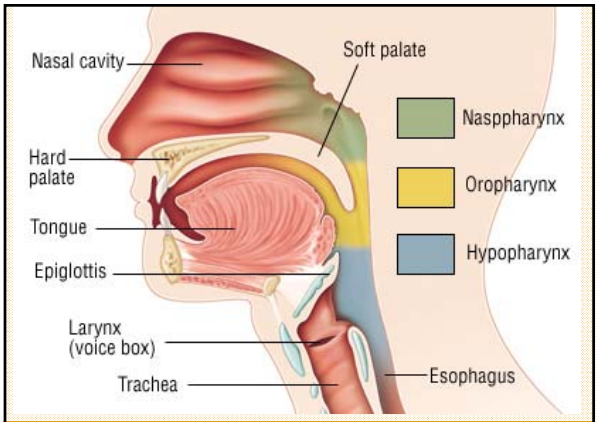
Factors Related to Feeding and Swallowing Disorders

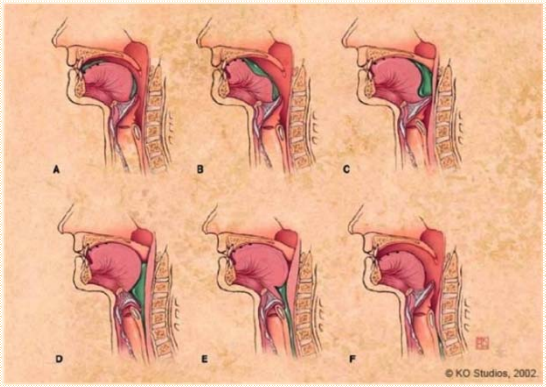
- Strength
- Coordination
- Cognition
- Breathing
- Fatigue
- Appetite
- Sensation
- Structural Defects
- Surgical Changes
- GI Disorders
- Fear/Anxiety
- Medications

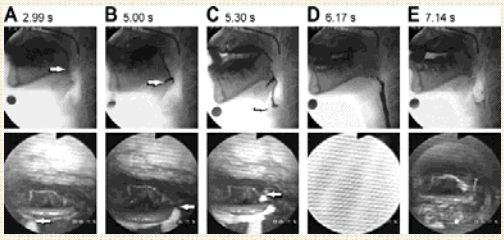
It's Complicated…

50+ pairs of muscles and…

CN V – Trigeminal
CN VII – Facial
CN IX – Glossopharyngeal
CN X – Vagus
CN XI – Spinal Accessory
CN XII - Hypoglossal







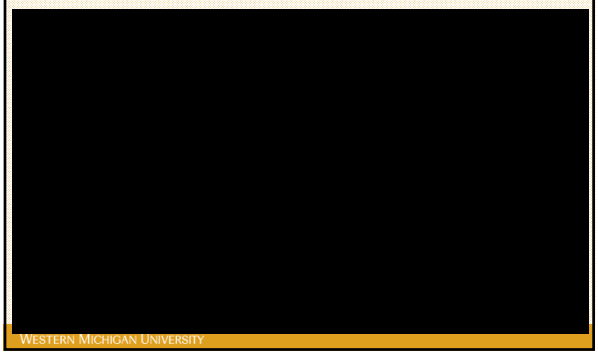
Facts on Swallowing

Videofluoroscopy:

- 39-56% demonstrated feeding and/or swallowing difficulties
- 26% aspirated
  - 94% ***silent*** aspiration

(Migliore, et al, 1999)

Let's Take a Look...



Overt Signs/Symptoms

- Arching of back
- Stiffening
- Reduced alertness
- Excessive feeding times
- Coughing/gagging
- Refusal/avoidance
- Difficulty breastfeeding
- Difficulty chewing
- Wet vocal quality
- Frequent throat clear
- Frequent spitting up or vomiting
- Difficulty coordinating breathing and swallowing
- Inadequate weight gain or growth
- Holding or pocketing of food
- Color changes
- Nasal reflux
- Drooling

Silence is not golden... Let's take a look

Subtle Signs/Symptoms

- Sleepiness and/or poor sleeping
- Falls asleep before a full feeding
- Frequent nipple changes or particular about certain nipple
- Draws knees to chest with crying
- Sweating
- Frequent colds/nasal congestion/URIs
- Difficult transitions between foods
- Temperature spike after meals
- Changes in sucking or feeding mid meal/feeding
- Coughing or gagging after meal
- Delayed throat clearing after meal

Subtle Signs/Symptoms

- Grazing
- Frequent hiccoughing
- Not hungry/ poor appetite
- Delayed swallow response
- Multiple swallows per bite/bolus
- Irritable after feeding
- Avoidance of all foods in specific group or texture
- Eats less than 20 foods and drops/does not add in new foods
- Unexplained weight loss/lack of growth
- Inconsistent tolerance of feedings/meals
- Increasing parent/family stress around mealtime

Consequences

- Dehydration
- Slowed growth
- Failure to Thrive
- Aspiration
- Pulmonary disease
- Hospitalization
- Rehospitalization
- Isolation
- Costly
- Pain

Decisions, Decisions…

- Short-Term vs Long-Term
- Benefits vs. Risks
- Patient/Family Preference- they are a vital part of team
- Implementation Factors

Decision Making for Safer Intake

- Health Status
- Age
- Self-Feeding
- Mobility/Motor Control
- Alertness – Timing
- Posture – Safety/ Comfort/Efficiency
- Interest – Motivation/Med
- Pace – Freq./Rate
- *Diet modification- last resort!

Decision Making Maps and Practice Portal

AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

"Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values."

(Sackett D. et al., 2000)

www.asha.org/practice-portal/

Ethical Decisions

What do we do when patients "refuse" dysphagia recommendations?

Is your team making decisions differently than you would by yourself?

"Ideally, the speech-language pathologist, patient, family, and medical team will continue to work together to facilitate the safest possible oral feeding program.

The speech-language pathologist may provide ongoing treatment services, diet modifications, and other recommendations.

At a minimum, the speech-language pathologist should monitor the patient with the medical team."

ASHAWIRE

From: **Ethical Decision-Making in Dysphagia Management**

Am J Speech Lang Pathol. 1996;5(1):15-22. doi:10.1044/1058-0360.0501.15

Medical Indications	Patient Preferences
medical history	personal history
accurate diagnosis	religious & personal values
accurate prognosis	expressed preferences
treatment options	advance directives
	self assessment of quality of life
	ability to make & communicate decisions
Quality of Life	**Contextual Features**
external assessment of benefits and burdens	economic—insurance, availability, cost
subjective judgment	family preferences
who should decide when the patient cannot?	legal issues
	burdens on caregivers

Legend:

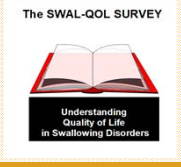
Clinical and ethical decision-making model adapted from Jonsen, Siegler, and Winslade (1992). The figure illustrates the four components of their decision-making model. Most clinical and ethical decisions can be made by balancing the medical indications with the preferences of the patient. These two features have the most weight in ethical decision-making and thus are depicted above external assessments of quality of life and other contextual features.

Quality of Life (QOL)

Given individuals with DD, QOL assessment and monitoring is *crucial* for "effective" outcomes and should be addressed early and throughout life.

Two measurement tools currently identified as "validated"

- The Swallowing Questionnaire Quality of Life Questionnaire (SWAL-QOL and SWAL-CARE)



Time to call "us"!

- Refer to Primary Doctor
- Ask to observe lunch at school
- Talk to a Nurse
  - Ask for consultation
  - Talk to the teacher
- Well child visits

Safety may be increased for children and adults by…

Oral Hygiene and Care

Within 24 hours….

Bacteria beginning to form.

More bacteria arrive and existing bacteria multiply, and form a microcolony

Bacteria begin spreading, growing multiple layers, and form a macrocolony

Colonies link and spread, and form a biofilm.

- One cubic millimeter of dental plaque contains about 100 million bacteria
- Oral bacterial load increases during intubation
- Higher dental plaque scores predict risk of pneumonia

(Munro CL, Grap MJ, Elswick RK Jr (2006). Oral health status and development of ventilator associated pneumonia: a descriptive study. 453 - 460.)

Photos courtesy of Center for Medical Biofilm Research, University of Southern California, description courtesy of www.sageproducts.com

Modified Diets are more than puree or thickened liquids

Eight Textures Most Significant in Dysphagia Diets and Treatments : (Leonard, Kendall, 1997)

1. **Adhesiveness- (amount of work needed to remove peanut butter from palate)**
2. **Cohesiveness- (change in cracker when pressed between tongue and palate)**
3. **Firmness- (compressing pudding between tongue and palate)**
4. **Fracturability -("biteability"- force needed to cause a solid food to break)**
5. **Hardness- (force needed to achieve deformation in a hot dog before it shears)**
6. **Springiness- (how a marshmallow returns to original shape after compression)**
7. **Viscosity- (rate of flow of milkshake or nectar when drawn through a straw)**
8. **Yield stress- (force required to get salad dressing to flow from bottle)**

The Complete IDDSI Framework and Detailed Definitions- Published March 4, 2017

- Clear examples of each level
- Physiological rationales for each level
- Ways to measure each level, along with pictures

(c) The International Dysphagia Diet Standardisation Initiative 2016 @http://iddsi.org/resources/framework/.

Interprofessional Education & Practice

Values and Ethics: works with others to maintain a climate of mutual respect and shared values

Roles/Responsibilities: use knowledge of one's own role and those of others to appropriate assess and address health care needs of patients and promote and advance health of populations

Interprofessional Communication: communicate with others in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and disease prevention

Teams & Teamwork: Apply relationship-building values and principles of team dynamics to perform effectively in different roles to plan, deliver, evaluate patient/population care/programs/policies that are safe, timely, efficient, and equitable.

IPEC Interprofessional Education Collaborative
Connecting health professions for better care

https://ipecollaborative.org/About_IPEC.html

IPP Team Examples

Nutrition at Risk (NAR)

SNF- variety of residents/care plans
RN
RD
SLP
MD

IPP Team Examples

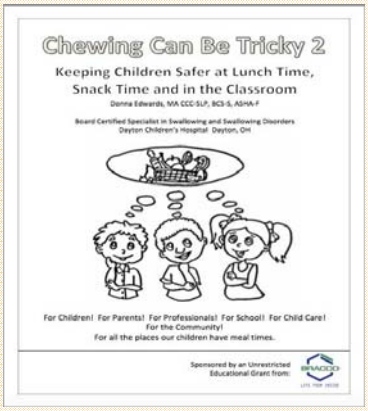
WMed Pediatric Multidisability Clinic

RN	PT	Pharmacy
RD	OT	Ortho/MD
SLP/AuD.	Pharmacy	Orthotist
Ped MD	MSW	Students

ASHA Case Rubric for School

Hannah is a 5-year-old girl who received a diagnosis of autism spectrum disorder (ASD) at 4 years old. At that time, her nonverbal cognitive abilities were consistent with a mild intellectual disorder. Birth and medical history are unremarkable. According to mom, Hannah has a large vocabulary and speaks in short sentences but does not communicate or play with others. Mom reported that Hannah does not make eye contact, bangs her head on the floor when upset, and resists physical contact such as hugs. Mom also noted that Hannah is a "picky" eater and eats only a few different types of foods. According to mom, the doctor at their community health center noted that Hannah "is way too thin" and needs a more balanced diet. Hannah's current placement in kindergarten is of concern to Hannah's mother and family due to her lack of progress and some "peculiar" behaviors.

Learn more
http://www.asha.org/Practice/Interprofessional-Education-Practice/



Resources

Video of Swallow Mechanism:
https://www.youtube.com/watch?v=QvNA53Ky2qQ

"Chewing Can Be Tricky" Dysphagia Coloring Book (free):
http://swallowingdisorderfoundation.com/wp-content/uploads/2015/09/Chewing-Can-Be-Tricky-2.pdf

Pediatric Feeding News
http://pediatricfeedingnews.com/

American Speech Language and Hearing Association:
www.asha.org

National Institute on Deafness and Other Communication Disorders:
https://www.nidcd.nih.gov/health/dysphagia

American Board of Swallowing and Swallowing Disorders:
http://www.swallowingdisorders.org/

Resources

National Foundation of Swallowing Disorders:
http://swallowingdisorderfoundation.com/

Swal QOL:
https://lmholtanslp.files.wordpress.com/2013/02/quality-of-life-in-swallowing-disorders-swal-qol.pdf

Feeding Tube Awareness Foundation:
http://www.feedingtubeawareness.org/

American Cleft Palate Association
http://www.acpa-cpf.org

American Association on Intellectual and Developmental Disabilities (AAIDD)
http://aaidd.org/

Upcoming Continuing Education:

Pediatric Feeding Assessments and Interventions ASHA- Webinar May 12, 2017
https://www.asha.org/eWeb/OLSDynamicPage.aspx?Webcode=olsresults&cat=CEU%20Courses&tpc=sd

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Additional references will be provided in a handout at the conference.

Contact Information

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IPEC CORE COMPETENCIES

for Interprofessional Collaborative Practice: 2016 Update

Values/Ethics

Work with individuals of other professions to maintain a climate of mutual respect and shared values.

Sub-competencies

VE1. Place interests of patients and populations at center of interprofessional health care delivery and population health programs and policies, with the goal of promoting health and health equity across the life span.

VE2. Respect the dignity and privacy of patients while maintaining confidentiality in the delivery of team-based care.

VE3. Embrace the cultural diversity and individual differences that characterize patients, populations, and the health team.

VE4. Respect the unique cultures, values, roles/responsibilities, and expertise of other health professions and the impact these factors can have on health outcomes.

VE5. Work in cooperation with those who receive care, those who provide care, and others who contribute to or support the delivery of prevention and health services and programs.

VE6. Develop a trusting relationship with patients, families, and other team members (CIHC, 2010).

VE7. Demonstrate high standards of ethical conduct and quality of care in contributions to team-based care.

VE8. Manage ethical dilemmas specific to interprofessional patient/population centered care situations.

VE9. Act with honesty and integrity in relationships with patients, families, communities, and other team members.

VE10. Maintain competence in one's own profession appropriate to scope of practice.

Roles/Responsibilities

Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations.

Sub-competencies

RR1. Communicate one's roles and responsibilities clearly to patients, families, community members, and other professionals.

RR2. Recognize one's limitations in skills, knowledge, and abilities.

RR3. Engage diverse professionals who complement one's own professional expertise, as well as associated resources, to develop strategies to meet specific health and healthcare needs of patients and populations.

RR4. Explain the roles and responsibilities of other providers and how the team works together to provide care, promote health, and prevent disease.

RR5. Use the full scope of knowledge, skills, and abilities of professionals from health and other fields to provide care that is safe, timely, efficient, effective, and equitable.

RR6. Communicate with team members to clarify each member's responsibility in executing components of a treatment plan or public health intervention.

RR7. Forge interdependent relationships with other professions within and outside of the health system to improve care and advance learning.

RR8. Engage in continuous professional and interprofessional development to enhance team performance and collaboration.

RR9. Use unique and complementary abilities of all members of the team to optimize health and patient care.

RR10. Describe how professionals in health and other fields can collaborate and integrate clinical care and public health interventions to optimize population health.

Interprofessional Communication

Communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease.

Sub-competencies

CC1. Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function.

CC2. Communicate information with patients, families, community members, and health team members in a form that is understandable, avoiding discipline-specific terminology when possible.

CC3. Express one's knowledge and opinions to team members involved in patient care and population health improvement with confidence, clarity, and respect, working to ensure common understanding of information, treatment, care decisions, and population health programs and policies.

CC4. Listen actively, and encourage ideas and opinions of other team members.

CC5. Give timely, sensitive, instructive feedback to others about their performance on the team, responding respectfully as a team member to feedback from others.

CC6. Use respectful language appropriate for a given difficult situation, crucial conversation, or conflict.

CC7. Recognize how one's own uniqueness (experience level, expertise, culture, power, and hierarchy within the health team) contributes to effective communication, conflict resolution, and positive interprofessional working relationships (University of Toronto, 2008).

CC8. Communicate the importance of teamwork in patient-centered care and population health programs and policies.

Teams & Teamwork

Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable.

Sub-competencies

TT1. Describe the process of team development and the roles and practices of effective teams.

TT2. Develop consensus on the ethical principles to guide all aspects of team work.

TT3. Engage health and other professionals in shared patient-centered and population-focused problem-solving.

TT4. Integrate the knowledge and experience of health and other professions to inform health and care decisions, while respecting patient and community values and priorities/preferences for care.

TT5. Apply leadership practices that support collaborative practice and team effectiveness.

TT6. Engage self and others to constructively manage disagreements about values, roles, goals, and actions that arise among health and other professionals and with patients, families, and community members.

TT7. Share accountability with other professions, patients, and communities for outcomes relevant to prevention and health care.

TT8. Reflect on individual and team performance for individual, as well as team, performance improvement.

TT9. Use process improvement to increase effectiveness of interprofessional teamwork and team-based services, programs, and policies.

TT10. Use available evidence to inform effective teamwork and team-based practices.

TT11. Perform effectively on teams and in different team roles in a variety of settings.

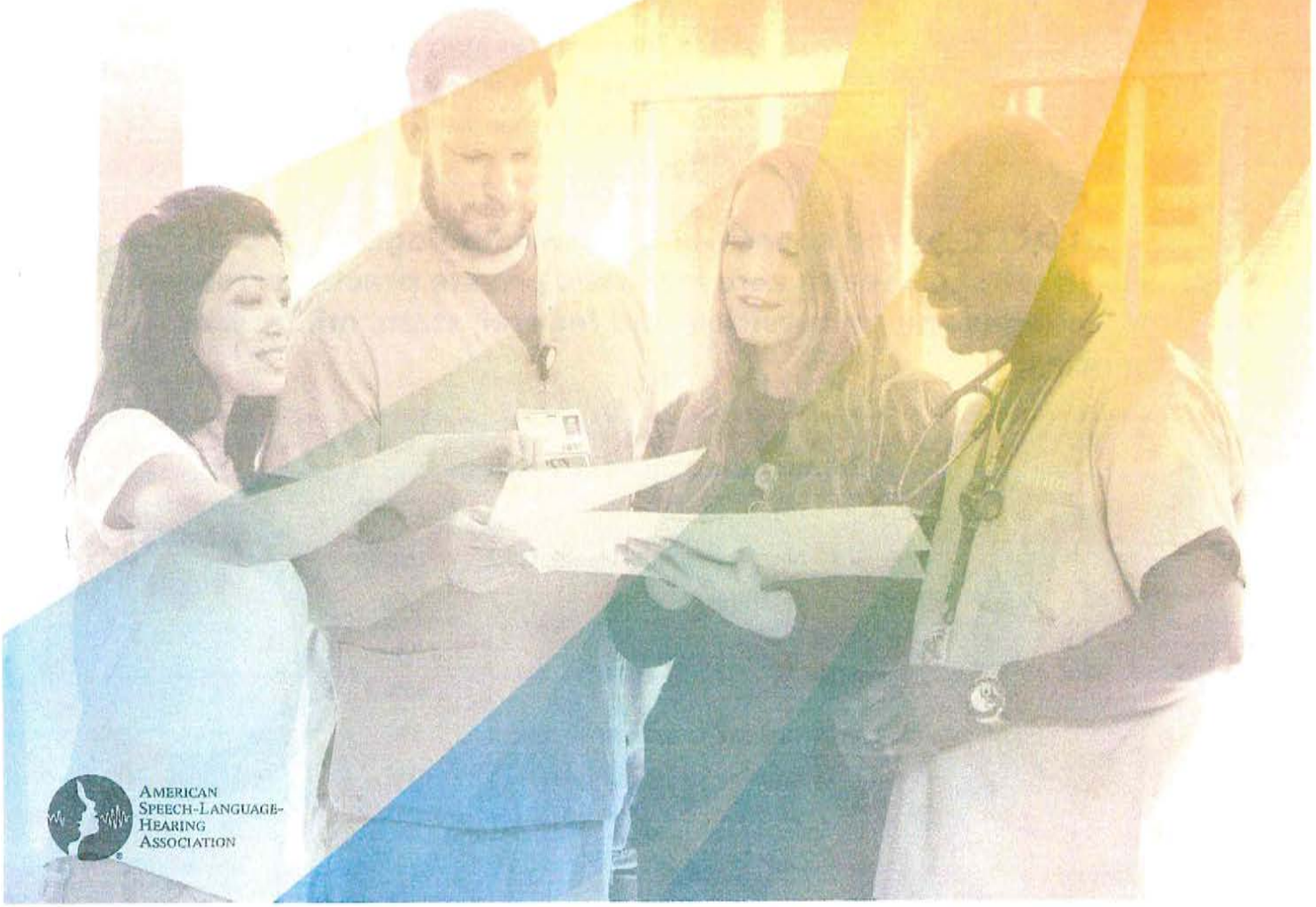
Interprofessional Education Collaborative (2016). Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel. Washington, DC. Retrieved from: https://ipecollaborative.org/uploads/IPEC-Core-Competencies.pdf

THE VALUE OF COLLABORATING WITH **AUDIOLOGISTS** AND **SPEECH-LANGUAGE PATHOLOGISTS**

WHAT WE DO

Audiologists specialize in preventing and assessing hearing and balance disorders as well as providing audiologic treatment, including hearing aids.

Speech-language pathologists identify, assess, and treat speech, language, and swallowing disorders.



AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

HOW WE ADD VALUE

Audiologists and speech-language pathologists are uniquely qualified as communication specialists. Their service on interprofessional teams contributes to policy making, patient safety, and overall improved health and educational outcomes.

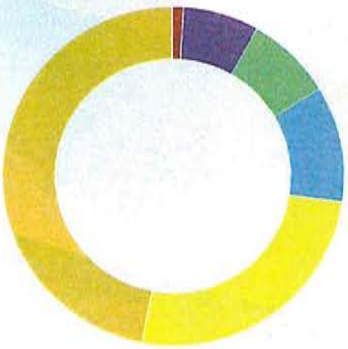
As members of a health care or educational team **audiologists** identify unrecognized hearing loss, contribute to differential diagnosis, and provide guidance on prevention and preservation of hearing and balance.
Speech-language pathologists identify speech, language, and swallowing disorders; contribute to differential diagnosis; and provide guidance on prevention and preservation of functional communication and swallowing.

Audiologists and speech-language pathologists have a history addressing a variety of communication, swallowing, and balance disorders through successful coordination with teams focusing on:

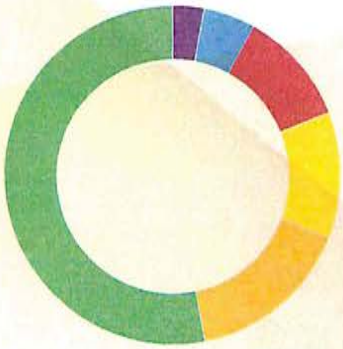
- Augmentative and alternative communication (AAC)
- Cleft palate
- Cochlear implant
- Cognitive communication
- Craniofacial
- Early hearing detection and intervention (EHDI)
- Individual Education Program (IEP)
- Intraoperative Monitoring (IOM)
- Language and Literacy
- Ototoxic effects
- Response to Intervention (RTI)
- Stroke rehabilitation
- Swallowing and nutrition
- Traumatic brain injury rehabilitation
- Tinnitus management
- Vestibular rehabilitation

Audiologists (CCC-A) and speech-language pathologists (CCC-SLP) are employed in schools, health care facilities, private practices, research facilities, colleges and universities, and federal, state, military, or local agencies.

Primary Employment Settings



CCC-A		CCC-SLP
47%	Non-Residential Health Care	16%
26%	Hospital	12%
11%	Other	5%
8%	School	53%
7%	College/University	3%
1%	Residential Health Care	11%



HOW WE LEARN TOGETHER

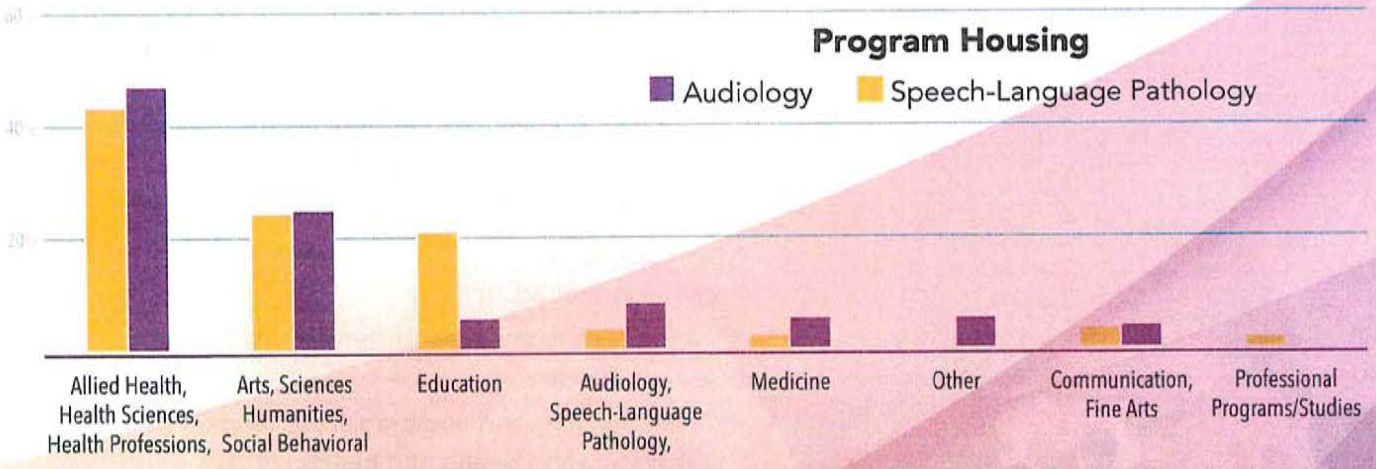
Interprofessional education—learning about, from and with each other

As interprofessional education expands, academic programs and practice settings are adopting models that prepare future clinicians for patient-centered collaborative practice, such as:

- Case-based simulations
- Case presentations
- Clinical practice
- Course work
- Evidence-based practice
- Grand rounds
- Interdisciplinary seminars
- Journal groups
- Leadership training—Leadership Education in Neurodevelopmental and Related Disabilities (LEND)
- Learning communities
- Problem-based learning
- Professional issues colloquia
- Research projects
- Service learning

Academic programs in audiology and speech-language pathology are represented in over 300 U.S. colleges and universities offering undergraduate through PhD education.

More than 40% of all audiology and speech-language pathology degree programs are housed in colleges of allied health.



Total Enrollment

- 38,261 undergraduate students
- 19,259 graduate students
  - 2,573 Audiology (entry-level clinical doctorate)
  - 6,686 SLP (entry-level master's)

HOW ASHA HELPS

ASHA promotes successful interprofessional practice and interprofessional education.

The American Speech-Language-Hearing Association (ASHA) represents more than 182,000 members and affiliates who are audiologists, speech-language pathologists, speech, language, and hearing scientists, audiology and speech-language pathology support personnel, and students.

ASHA affiliates with the following organizations that promote interprofessional practice (IPP) and interprofessional education (IPE):

- National Academy of Medicine (NAM) Global Forum on Innovation in Health Professional Education (November 2012–present)
- Interprofessional Collaborative (IPC; 2006–present)
- World Health Organization (WHO)

The evolution of health care reform is creating a different landscape. As part of this evolution, ASHA

- Established a 10-year (2015–2025) strategic objective to advance interprofessional education and collaborative practice (IPE/IPP);
- sponsored a Health Care Landscape Summit,
- collaborates among health professions within the framework of IPE/IPP,
- supports outcomes measurement to advance service delivery,
- promotes SLPs and audiologists as leaders in communication health and health literacy.

Visit **www.asha.org** or contact **academicaffairs@asha.org** for more information.

American Speech-Language-Hearing Association