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:


Kenneth W. Norwood, Rebecca L. Slayton, COUNCIL ON CHILDREN WITH DISABILITIES, SECTION ON ORAL HEALTH. Pediatrics Mar 2013, 131 (3) 614-619; DOI: 10.1542/peds.2012-3650.


On-Line Resources

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

The May Institute

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

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Decision Making for Safer Intake and Swallowing

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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

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.

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

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, Libu, Nechtman, 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 oropharyngeal 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 (Flyman, Grossman, Tarjan, & Miller, 1987; Flyman, 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...

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 hiccuping
- 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!

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.

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)

Legend

Clinical and ethical decision-making model adapted from Jonsen, Siegler, and Winslade (1992). The figure illustrates the four components of a clinical 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 factors.
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

Oral Hygiene and Care

Within 24 hours...

- Bacteria beginning to form
- More bacteria arrive and existing bacteria multiply and form a biofilm
- 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


Safety may be increased for children and adults by...

Modified Diets are more than puree or thickened liquids

Eight Textures Most Significant in Dysphagia Diets and Treatments:

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 shear)
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)

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.
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/
References


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

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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.

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**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 interpersonal 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 professionals 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.

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.
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.
**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.**

**Program Housing**

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<tr>
<td>Audiology</td>
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<td>Speech-Language Pathology</td>
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- **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.