ENTERING MEDICAL SPEECH-LANGUAGE PATHOLOGY:

What the Novice Clinician Needs to Know

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DISCLOSURES

- Financial: employed by Michigan Medicine as a Speech-Language Pathologist
- Nonfinancial: N/A

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LEARNING OBJECTIVES

1. Participants will learn basic medical etiologies, procedures, and terminology frequently required for chart reviews and basic practices in acute care.
2. Participants will utilize outside available resources (i.e. online trainings and modules) to further their education.
3. Participants will learn how to apply for a medical speech-language pathology fellowship program or acute care position, including the process of seeking such programs and preparing for interviews.

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WHY THE GAP?

1. Training **in** graduate school
   - Programs in MI don't offer medical specialties or tracks
     - Standard dysphagia or neuroanatomy courses
   - Tuition costs of out-of-state/private universities
     - Trach/vent, pediatric feeding, HNC
   - Limited clinical opportunities

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WHY THE GAP?

2. Training **after** graduate school
   - Positions in IPR/SNF more abundant for new grads
   - Experience requirements
   - Limited specialized fellowship programs
     - Regional
     - Competitive

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SPEECH PATHOLOGY IN ACUTE CARE

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CASELOAD

Intensive Care Units – Medical, Neuro, Cardio/Cardiothoracic, Surgical, Trauma/Burn

General Practice Units – Neuro/respiratory stepdown, Internal Medicine, Infectious Disease, Telemetry, Nephrology, Oncology, Pulmonology, Surgical, Surgical Specialty

Etiologies – brain mass, stroke, encephalopathy/dementia, sepsis, liver failure, cardiorespiratory failure, lung transplant, cervical spine fusions, HNC

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CASELOAD

- Clinical swallowing evaluation (CSE)
- Speech/language, cognitive evaluation
- Videofluoroscopic Swallowing Study (VFSS)
- Fiberoptic Endoscopic Evaluation of Swallowing (FEES)
- Passy-Muir Speaking Valve evaluation (PMV)
- Therapy*

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TYPICAL DAY

1. Order triaging
2. Caseload and chart reviews
3. Direct patient care
   a) CSE – prioritize based on NPO, need for imaging
   b) VFSS scheduling
   c) FEES, PMV
4. Documentation

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CHART REVIEWS

- Key things to look for:
  - Order
  - Diet/NPO
  - Date of admission
  - General history
  - LDAs
  - Previously seen
    - SLP? Neuro? ENT?
  - Imaging
    - CXR, CT Head/Neck, MRI Brain
  - Oxygen requirements
    - HFNC, BIPAP/CPAP, trach mask
  - Mentation
  - Scheduled procedures

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CASE EXAMPLE 1 (Neuro)

- 59 y/o female
- Progressive R SNHL, vertigo and falls
- MRI: R cerebellopontine angle (CPA) mass concerning for vestibular schwannoma
- EVD, SOC, CN VII palsy
- ETT: total 2 days
- CXR: clear
- CTH: evolving post-op changes, including hypoattenuation of the pons
- NGT

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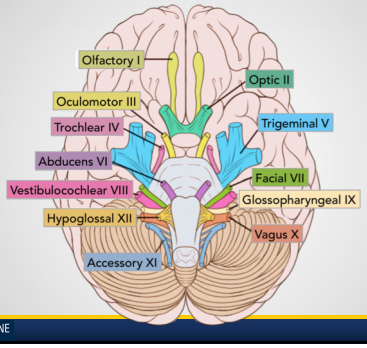

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CASE EXAMPLE 2 (PMV)

- 34 y/o male
- PMH: EtOH abuse, prior IVDU, chronic hep C
- Hospital course: sepsis, renal failure, encephalopathy, infectious tracheobronchitis
- ETT: 17 days
- Trach: Shiley 6-0 FEN, cuffed
- Oxygen: trach mask, 10 L/min @ 40% FiO2
- CXR: clear
- PEG

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CASE EXAMPLE 3 (GPU)

- 75 y/o female
- PMH: spinal surgery, sacral pressure ulcer, NPH, chronic foley
- AMS 2 mo, acute decline, tachycardic, tachypneic, sepsis + UTI
- CXR: clear
- CTH: prominence of lateral and third ventricles
- Lethargic
- Mechanical soft diet + TL

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CLINICAL SWALLOWING EVALUATIONS

1. Speak with RN/NA for patient's functional status
2. Alertness and orientation
   - Informally assessing communication, speech-language, voice
3. Oral mechanism examination
4. Bolus trials
   - Medical appropriateness & clinical presentation
5. Update RN, team

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VFSS

- SLP + GI Radiologist + rad techs + RN/transport
- GI Radiology suite
- *Procedures may vary based on hospital policy*
  1. Transfer pt into fluoroscopy chair
  2. Check frame positioning
  3. Provide bolus trials
  4. Compensatory strategies if needed
  5. Consider AP view – *nectar thick liquid*
  6. Review exam with Radiologist

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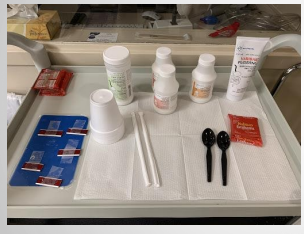
VFSS



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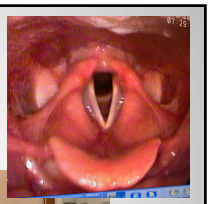
FEES

1. Evaluate each naris, consider open path/inferior turbinate
2. Evaluate anatomy/physiology, secretions
3. Provide boluses
   a) Oral containment
   b) Penetration/aspiration
   c) Residue
4. Compensatory strategies possible



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PASSY-MUIR SPEAKING VALVES

1. Case history:
   - WHY
   - Type/size of trach
   - Cuff status
   - Oxygen delivery
   - Contraindications
2. Evaluation:
   - Trach care, suctioning
   - Digital occlusion
   - PMV placement
   - Education

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SPEECH-LANGUAGE EVALUATIONS

- Intended for functional communication
- Differential dx of aphasia and motor speech disorders
- Consist of informal tasks: yes/no, repetition, naming, speech sample, commands
- WAB-Bedside or MOCA
- Standardized assessments for evaluations prior to intraoperative language mapping
  - BDAE, CLQT

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WHAT I WISH I KNEW…

1. Common medical etiologies and procedures
   - Neuro: ACA/MCA/PCA – anatomy, MER, SOC, LP, angiogram, EVD, ICH, SDH, GCS, NIHSS
   - GI: SBO, ileus, GIB, EGD, esophagram, hemoptysis, esophagectomy, TE fistula, CP bar, GERD, emesis, web
   - Cardiac/Pulmonary: CHF, CAD, NICM, AAA, SOB, PTX, NSTEMI, PEA arrest, PE, ECMO, fibrosis, angina
   - ENT/Oncology: DLB, RLN, XRT, LPR, PVFM, epistaxis, CIS, PNI, SCC
   - Other: s/p, c/b, d/t, c/f, OSH, LDA, TPN, POD, ETT

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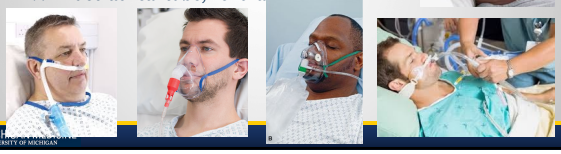
WHAT I WISH I KNEW…

2. Respiratory devices and oxygen delivery
   I. Nasal cannula, Salter, HHFNC
   II. Venti-mask, non-rebreather
   III. CPAP/BIPAP
   IV. Endotracheal tube, ventilators



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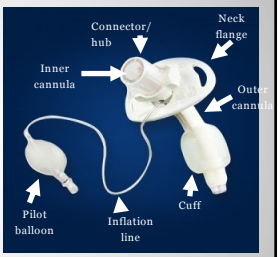
WHAT I WISH I KNEW…

3. Tracheostomies
   I. Types and features
      - Inner/outer cannulas
      - Cuff
      - Fenestrated
      - Color meanings
   II. Sizing
      - Most common = 8 or 6
      - Pediatric = ≤4



https://www.vitalitymedical.com/pdf/shiley-quick-ref-guide.pdf

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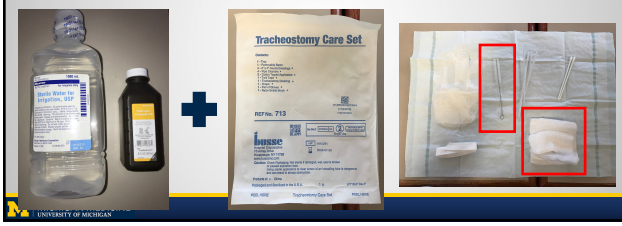
WHAT I WISH I KNEW…

3. Tracheostomies
   III. Trach care



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WHAT I WISH I KNEW…

3. Tracheostomies
   IV. Suctioning



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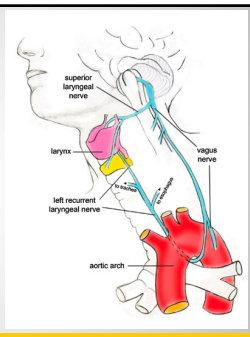
WHAT I WISH I KNEW…

4. Cranial nerves
   - V, VII, IX, X, XII
   - Recurrent laryngeal nerve (RLN)
     - Cardiothoracic sx
       - ➢ Esophagectomy
       - ➢ Mediastinal mass resection
       - ➢ Heart/lung transplant
     - Compression
       - ➢ Neck mass
       - ➢ Enlarged LNs, lymphoma
     - ❑ Reason for consult:
       - ✓ "Hoarse voice"
       - ✓ "Coughing with water"



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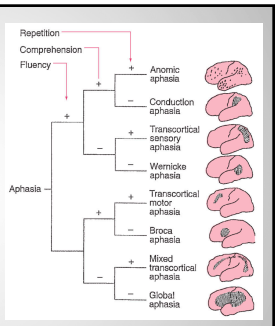
WHAT I WISH I KNEW…

5. Differential diagnosis*
   - Aphasia
     - ✓ Lesion location – correlate with imaging
   - Motor speech disorders
     - ✓ 3-4 main characteristics
     - ✓ Neurologic etiology
       - ➢ Lesion location can be helpful if stroke
     - ✓ Physical features



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RECOMMENDED RESOURCES

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MBSImP

- https://www.northernspeech.com/mbsimp/
- Standardized protocol to score 17 components of swallowing on VFSS
- Oral = 6, pharyngeal = 10, esophageal = 1
- $600, 2.1 ASHA CEUs
- Reduced costs for graduate students, group rates; email mbsimp@northernspeech.com
- Powerpoint available for facility funding

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PASSY-MUIR MODULES

- https://www.passy-muir.com/education
- Clinicians > Free courses > *scroll down*
- Aerodigestive and Respiratory Changes Post Tracheostomy: A Comprehensive Review
- Tracheostomy: Procedures, Timing, and Tubes
- Ventilator Basics for the Non-Respiratory Therapist
- Application of Passy Muir Swallowing and Speaking Valves
- Swallow Function: Passy Muir Valve Use for Evaluation and Rehabilitation

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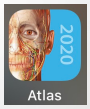
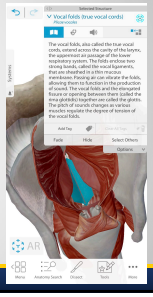
HUMAN ANATOMY ATLAS 2020

- https://www.visiblebody.com/anatomy-and-physiology-apps/human-anatomy-atlas
- App, $24.99
- Region and system views, including:
  - Pharynx and larynx, expression and mastication, laryngeal muscles





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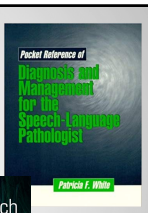
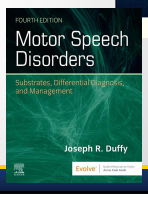
LITERATURE

- Pocket Reference of Diagnosis and Management for the Speech-Language Pathologist
  - Patricia F. White
- Motor Speech Disorders: Substrates, Differential Diagnosis, and Management
  - Joseph R. Duffy





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LITERATURE

- Coyle, J. L. (2014). Dysphagia following prolonged endotracheal intubation: Is there a rule of thumb? *Perspectives on Swallowing and Swallowing Disorders (Dysphagia), 23*(2), 80-86.
- **Langmore, S. E., Terpenning, M. S., Schork, A., Chen, Y., Murray, J. T., Lopatin, D., & Loesche, W. J. (1998). Predictors of aspiration pneumonia: How important is dysphagia? *Dysphagia, 13*(2), 69-81.**
- Langmore, S. E. (2017). History of fiberoptic endoscopic evaluation of swallowing for evaluation and management of pharyngeal dysphagia: Changes over the years. *Dysphagia, 32*(1), 27-38.
- Pearson Jr., W. G., Griffeth, J. V., & Ennish, A. M. (2019). Functional anatomy underlying pharyngeal swallowing mechanics and swallowing performance goals. *Perspectives on Swallowing and Swallowing Disorders (Dysphagia), 4*(4), 1-8.

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APPLICATION FOR FELLOWSHIPS AND TRANSITION INTO ACUTE CARE

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1. PLANNING

- Shadowing/observation
- Attend conferences/seminars re: acute care topics
- Completion of certifications (i.e. MBSImP, BLS)
- Consider geographic location
  - Large acute-care hospitals typically urban
- Consider current financial, career, and personal positions
- Not an overnight process

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2. SEARCH

- Google search for fellowships
  - Johns Hopkins, Henry Ford, Cleveland Clinic
  - Voice, HNC
- Direct websites for health systems
- Indeed, Glassdoor
  - Consider PRN, look at requirements in listing
- Word of mouth, social media

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3. APPLICATION

- Resume – 1 page
  - Internships/positions: hospital, SNF, IPR, inpatient/outpatient, homecare, TBI/cog
  - Research, presentations
- Cover letter
  - Brief: previous experiences
  - Focus on: goals, specifics of facility, skills that match values
- Letters of reference
  - Individuals who can attest to *clinical skills*

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4. INTERVIEW

- Standard topics:
  - Interest in field
  - Challenging patient/professional experience
  - Goals, weaknesses
- Knowledge & skills:
  - Differential diagnosis – aphasia, MSDs
  - Cranial nerves, anatomy – OME
  - PMV procedures/contraindications
- Tailor responses to position if able
- If unsure, state how you would receive training

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REVIEW

1. Speech Pathology in Acute Care
2. Recommended Resources
3. Application for Fellowships and Transition into Acute Care

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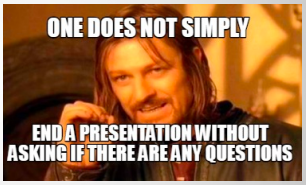
QUESTIONS

- Email:
  jonkelly@med.umich.edu



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