

ADVOCACY

**What a swallowologist needs:
Educating physicians, nurses, and
other medical professionals**

Funding from ASHFoundation

Clinical Research Grant Recipients

These \$50,000–\$75,000 grants support scientists with a research doctorate within the discipline of communication sciences and disorders to support investigations that will advance knowledge of the efficacy of treatment and assessment practices. Project funding is available for mentored treatment research, independent treatment research, or collaborative treatment research as specified in grant guidelines.

2014

Awarded \$75,000 each



Soo-Eun Chang

Assistant Professor
University of Michigan

"Enhancing Speech Motor Function in Stuttering Speakers with Neuromodulation: A tDCS Study"



Ianessa A. Humbert

Assistant Professor
Johns Hopkins University

"Creating Swallowing Physiologists by Applying Physiology to Clinical Decision-Making"



Linda D. Vallino

Head, Craniofacial Outcomes Research Laboratory
Nemours/Alfred I. DuPont Hospital for Children

"Automating Speech Intelligibility Assessment in Children with Cleft Palate"

Recipients

[Research Grants Recipients](#)

[Scholarships](#)

[Clinical Achievement Award Recipients](#)

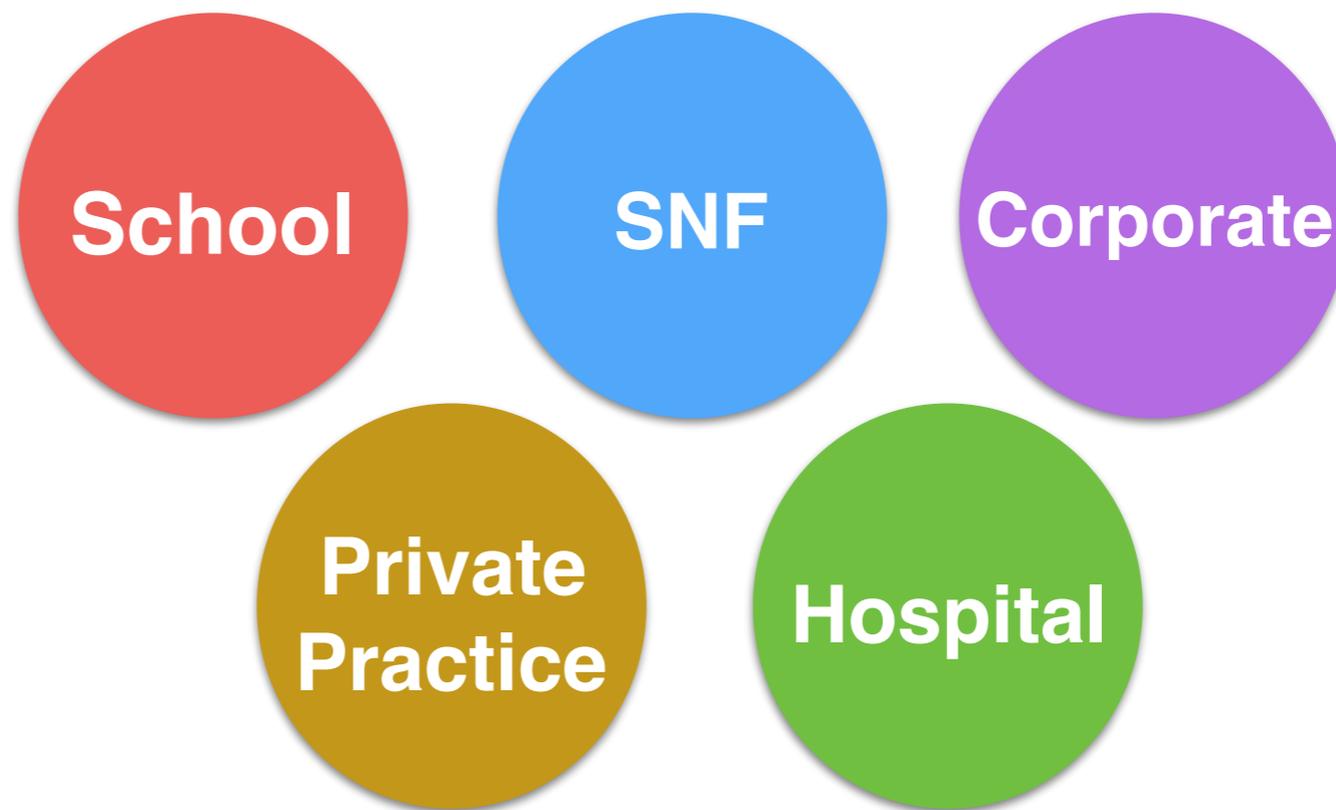
[Special Project Grant Recipients](#)

How do we understand the system influencing dysphagia management?

So, who is the SLP?

4 yr
under-
graduate
degree

2 yr
graduate
degree

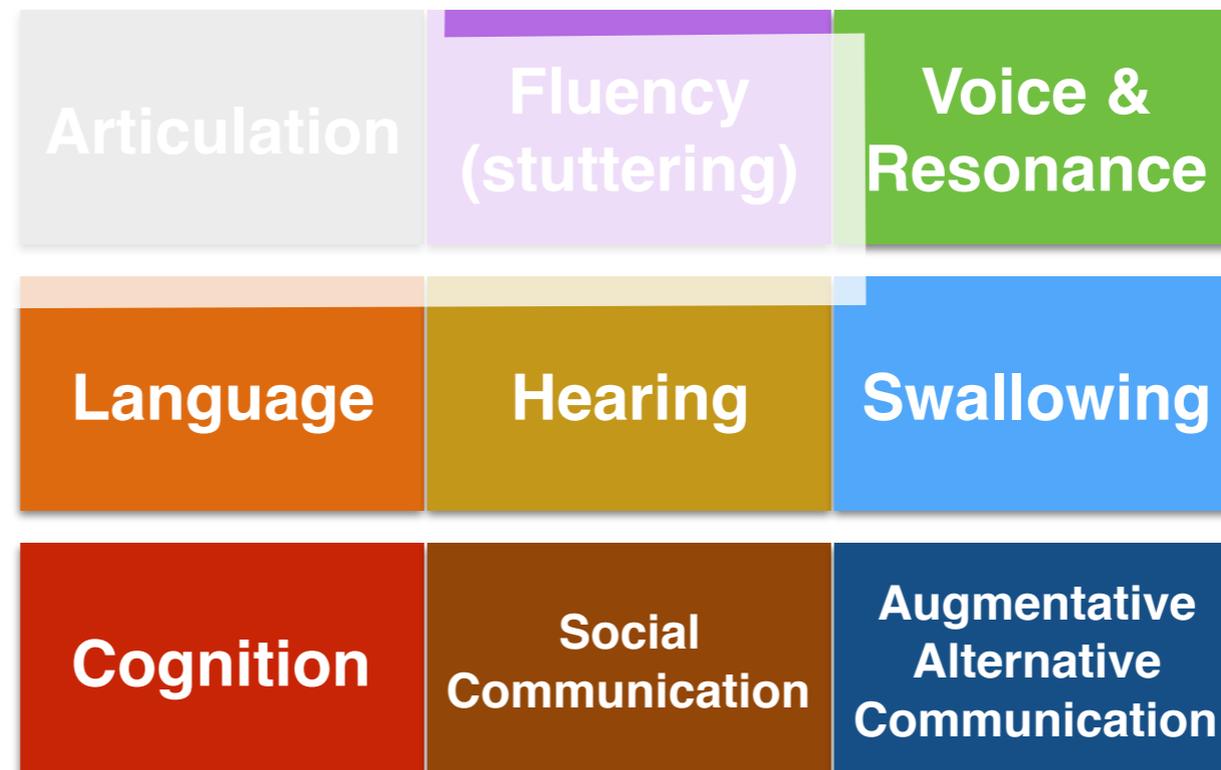


Articulation	Fluency (stuttering)	Voice & Resonance
Language	Hearing	Swallowing
Cognition	Social Communication	Augmentative Alternative Communication

So, who is the SLP?

One of these things is not like the others

not
communication



“Gulp”

Pronunciation [\[edit\]](#)

- IPA^(key): /ɡʌlp/

Noun [\[edit\]](#)

gulp (*plural gulps*)

1. The usual amount **swallowed**. [\[quotations ▼\]](#)
2. The sound of swallowing.
3. A sound of swallowing indicating fear. [\[quotations ▲\]](#)

- 1906, Upton Sinclair, *The Jungle*, Chapter 17

Little Stanislovas was also trembling, and all but too frightened to speak. "They — they sent me to tell you — " he said, with a **gulp**.

- 1994, James Charles Collins, Jerry I. Porras, *Built to Last: Successful Habits of Visionary Companies*

Indeed, the envisioned future should produce a bit of "the **gulp** factor" [...], there should be an almost audible "**gulp**".

So why do SLPs manage dysphagia?

“The academic and clinical preparation of the SLP made them unique in the medical setting”

Miller and Groher 1993

MD

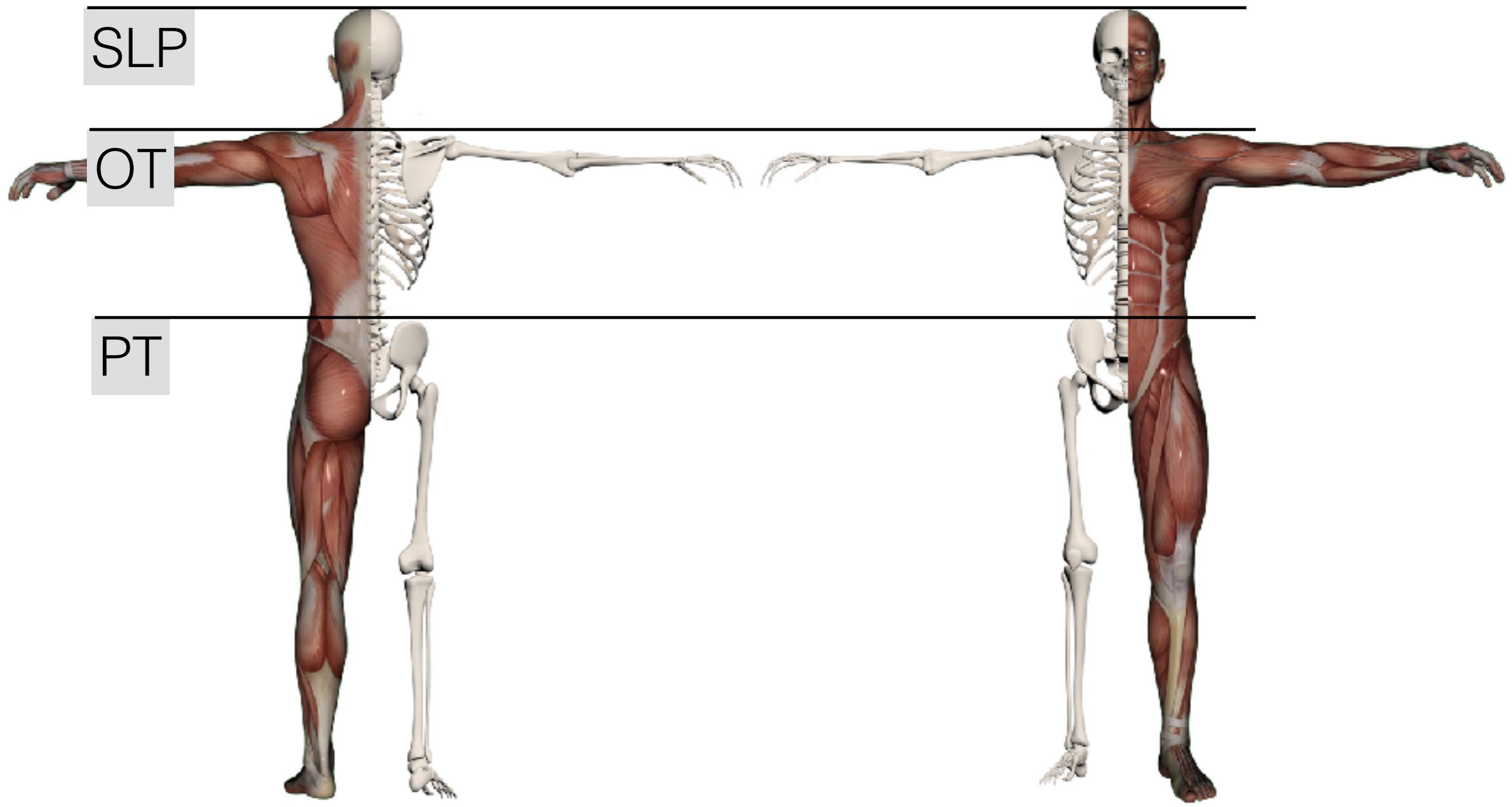
Surgery Medications ChemoRad

Nurse

Screening Consults

SLP

Behavioral Therapy



SLP

OT

PT

Exponential growth in **70s**



ASHA Technical Report (2001)

Articulation

**Fluency
(stuttering)**

**Voice &
Resonance**

Language

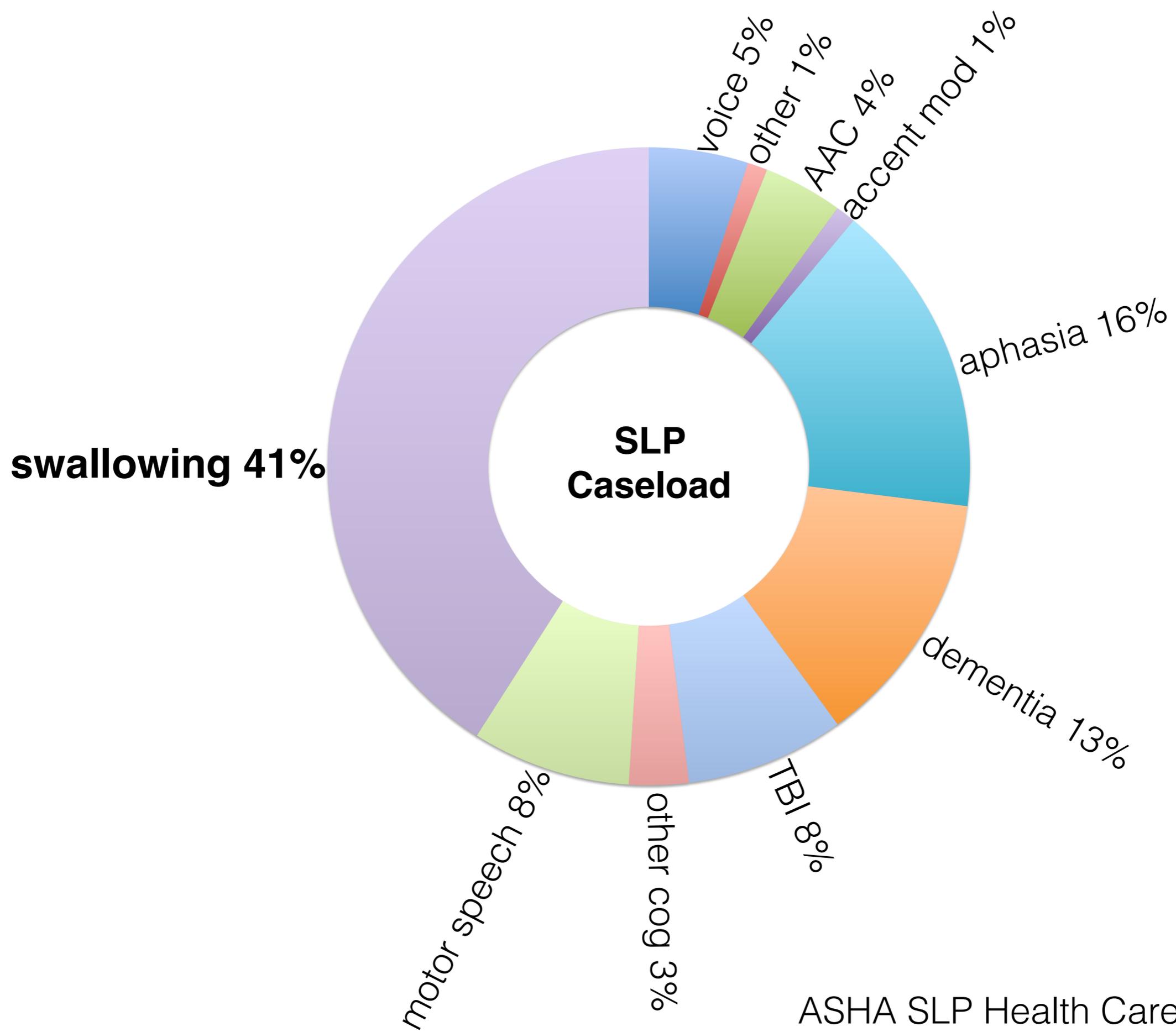
Hearing

Swallowing

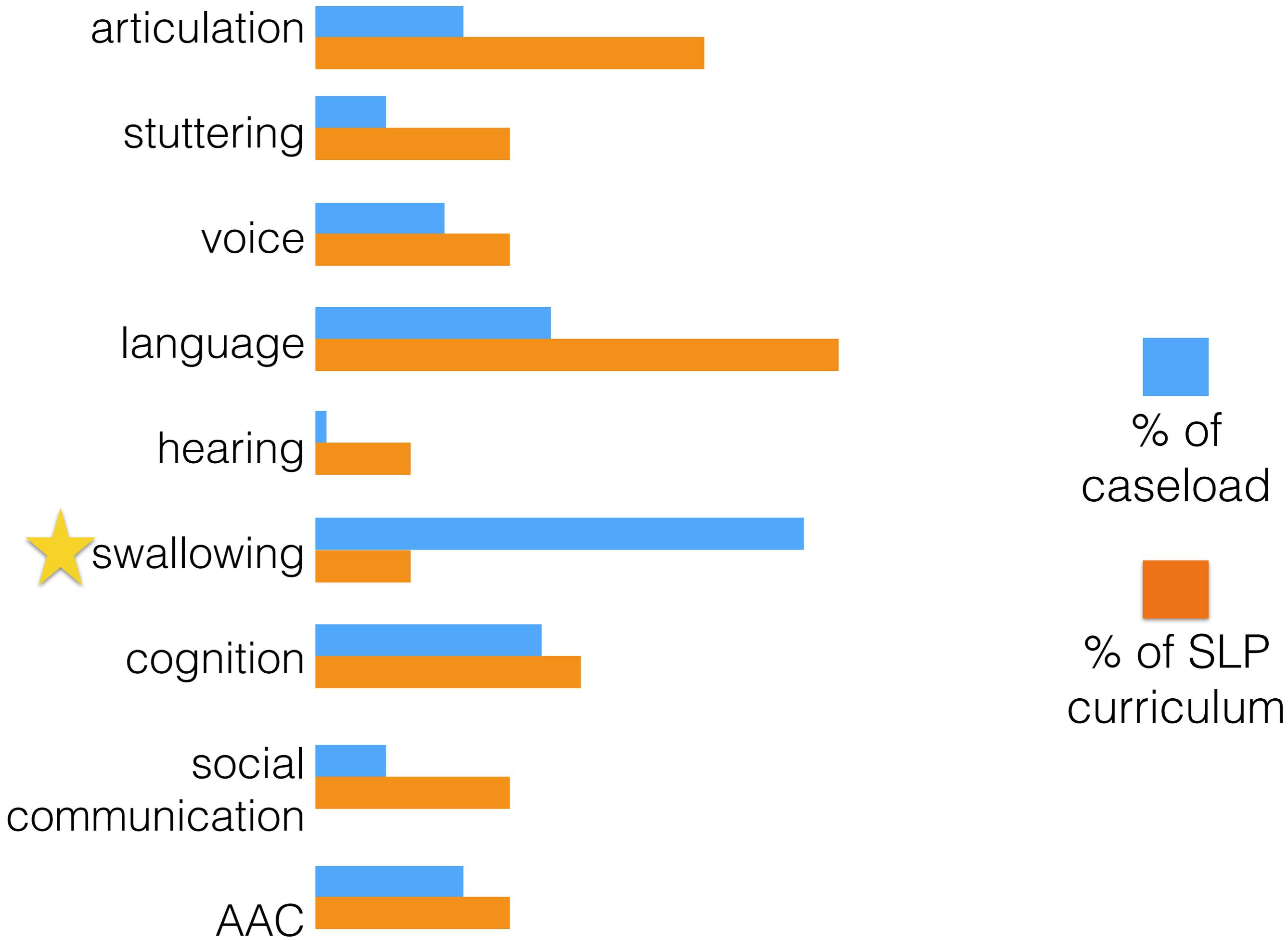
Cognition

**Social
Communication**

**Augmentative
Alternative
Communication**







Why is this problematic?



training



practice

school curriculum

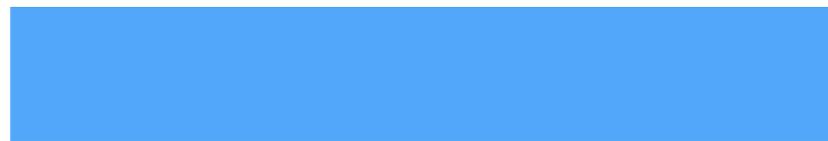
algebra



personal
finances



balancing
check book



long-term
outcomes

- credit card debt
- bankruptcy

Why is this problematic?



training



practice

school curriculum

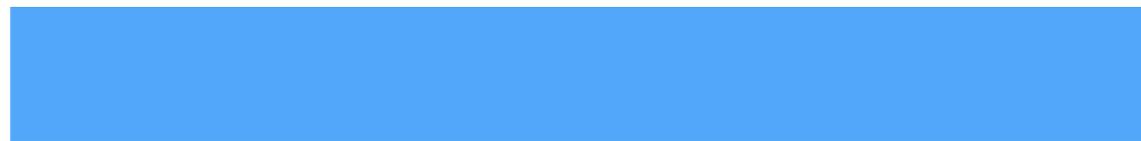
PE



nutrition



eating



long-term
outcomes

- obesity
- diabetes
- stroke
- knee
replacements
- vanity sizing

Why is this problematic?



training



practice

school curriculum

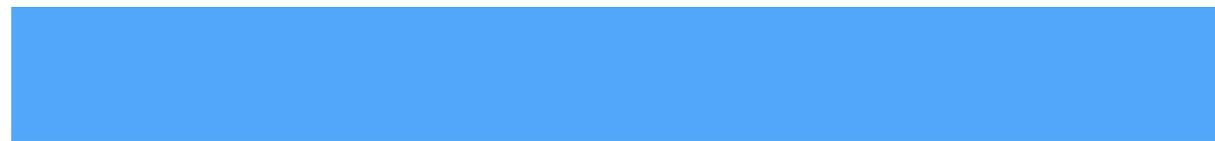
PE



sex ed



sex



long-term
outcomes

- teen pregnancy
- STDs
- sexual abuse

Why is this problematic?



training

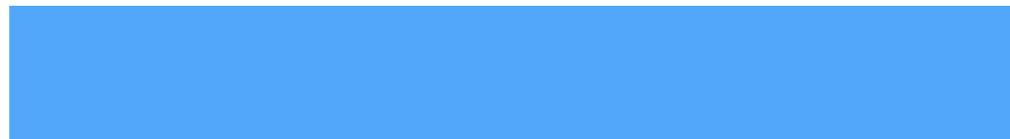


practice

swallowing
training

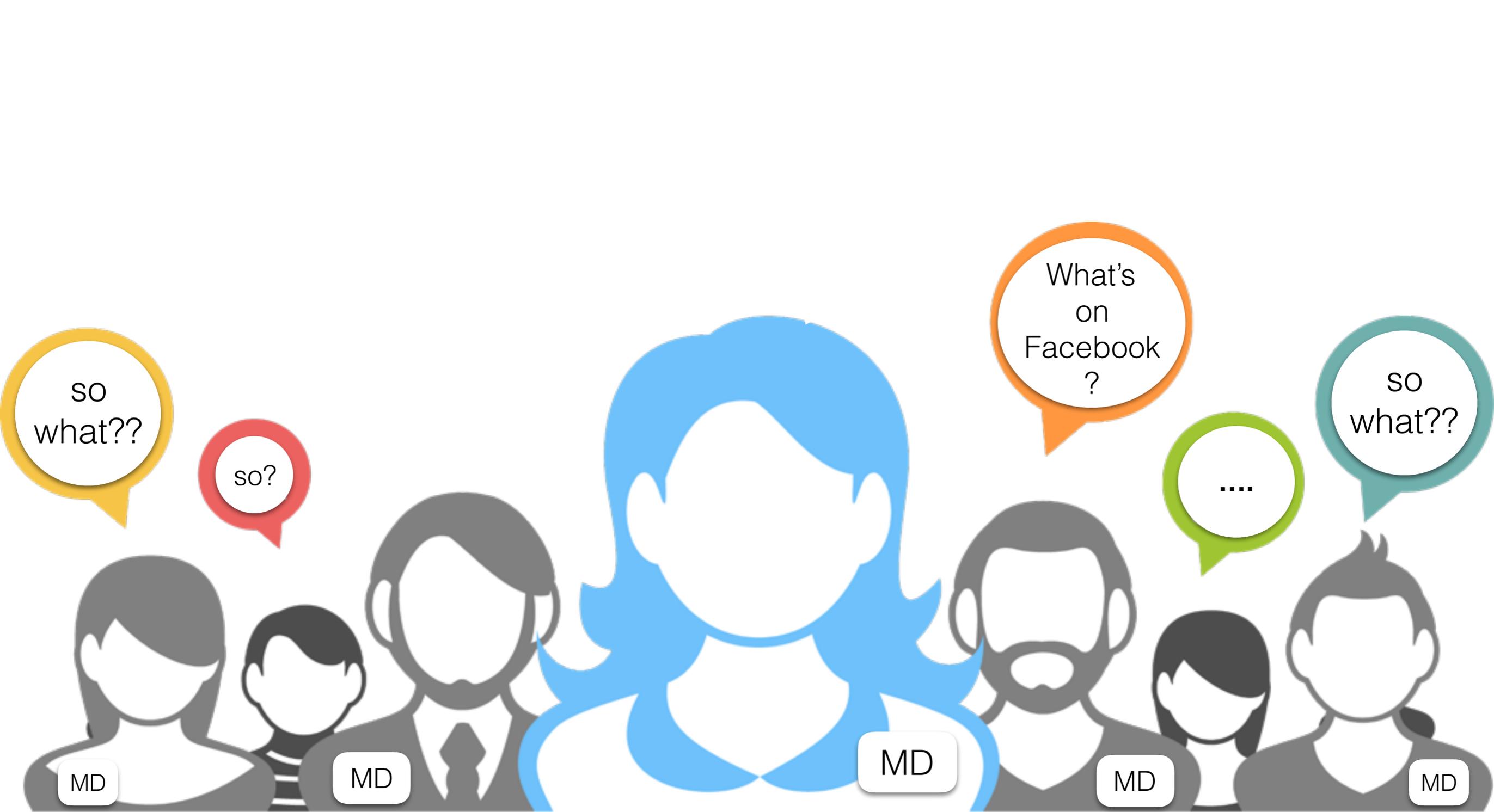


swallowing
caseload



long-term
outcomes

- dehydration
- malnutrition
- aspiration pneumonia
- length of stay
- re-admissions



so what??

so?

What's on Facebook?

....

so what??

MD

MD

MD

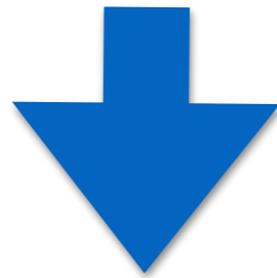
MD

MD

Why is this not just an SLP problem?

long-term
outcomes

- dehydration
- malnutrition
- aspiration
pneumonia
- length of stay
- re-admissions

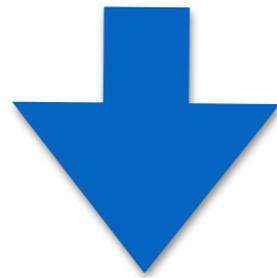


Physicians
Administrators

Why is this not just an SLP problem?

long-term
outcomes

- dehydration
- malnutrition
- aspiration
pneumonia
- length of stay
- re-admissions



Physicians
Administrators

Barrier 1: Imaging

Videofluoroscopy is the GOLD STANDARD for viewing swallowing

Fiberoptic Endoscopic Evaluation of Swallowing (FEES)

Videofluoroscopy (basics)

structures

hyoid bone

larynx

UES

velum

tongue

pharynx

jaw

swallowing events

lingual bolus forming

velar elevation

lingual propulsion

jaw positioning

laryngeal vestibule closure

UES opening

hyoid excursion

laryngeal excursion

pharyngeal shortening

pharyngeal constriction

bolus flow events

aspiration

reflux

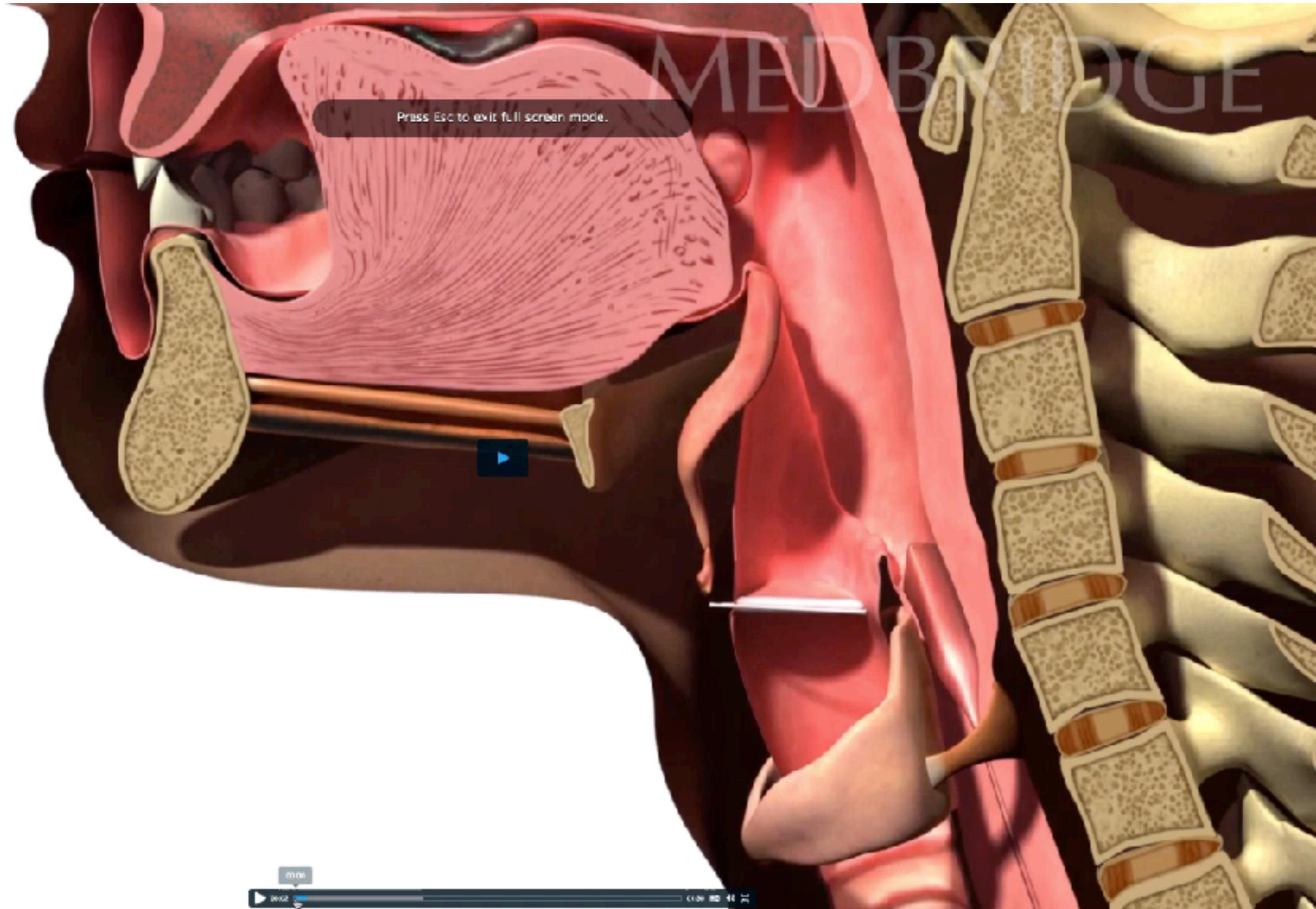
nasal regurgitation

penetration

anterior bolus loss

Videofluoroscopy (basics)

All happening in <1sec (normal)



Videofluoroscopy (basics)

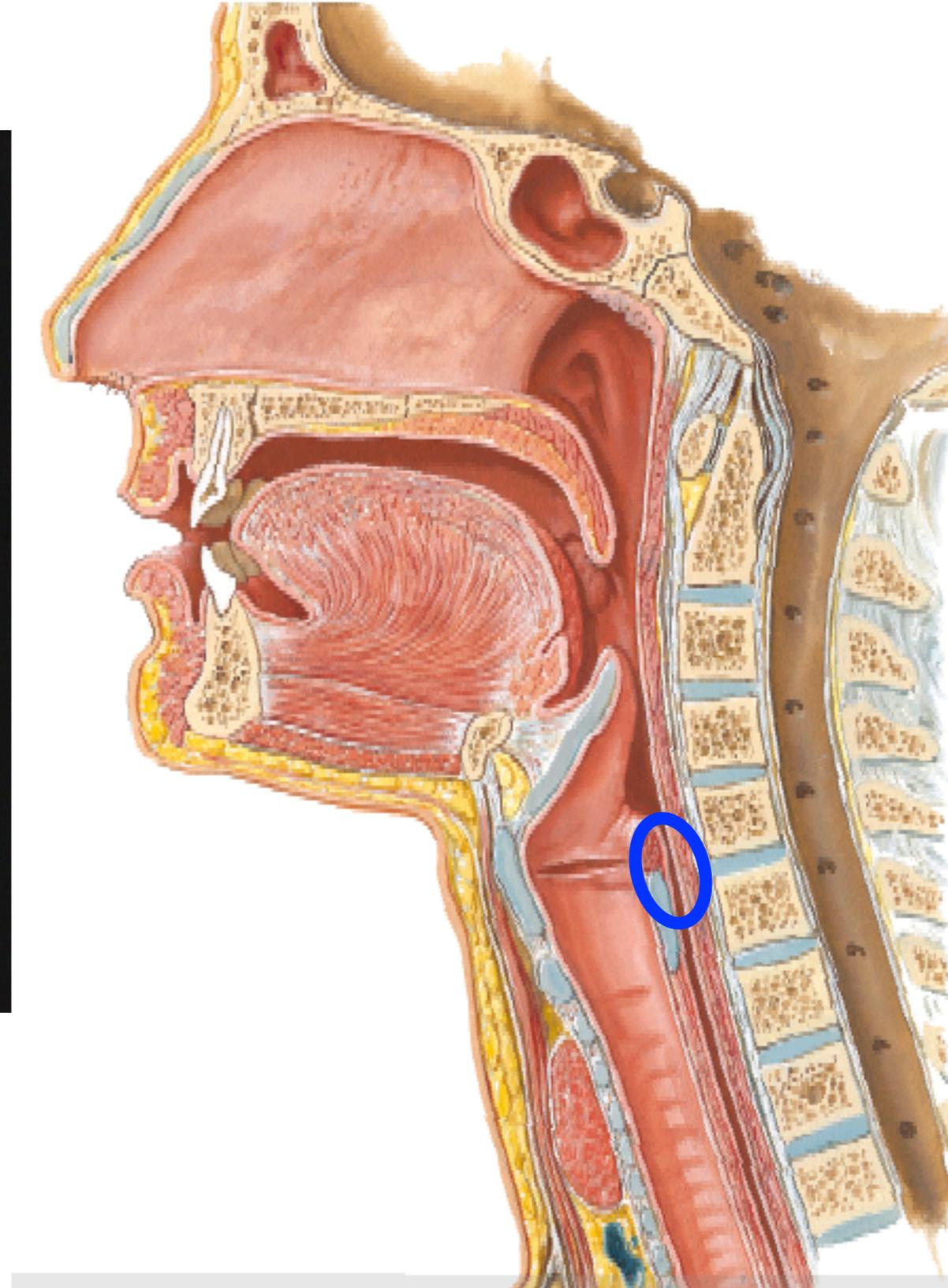
All happening in <1sec (normal)



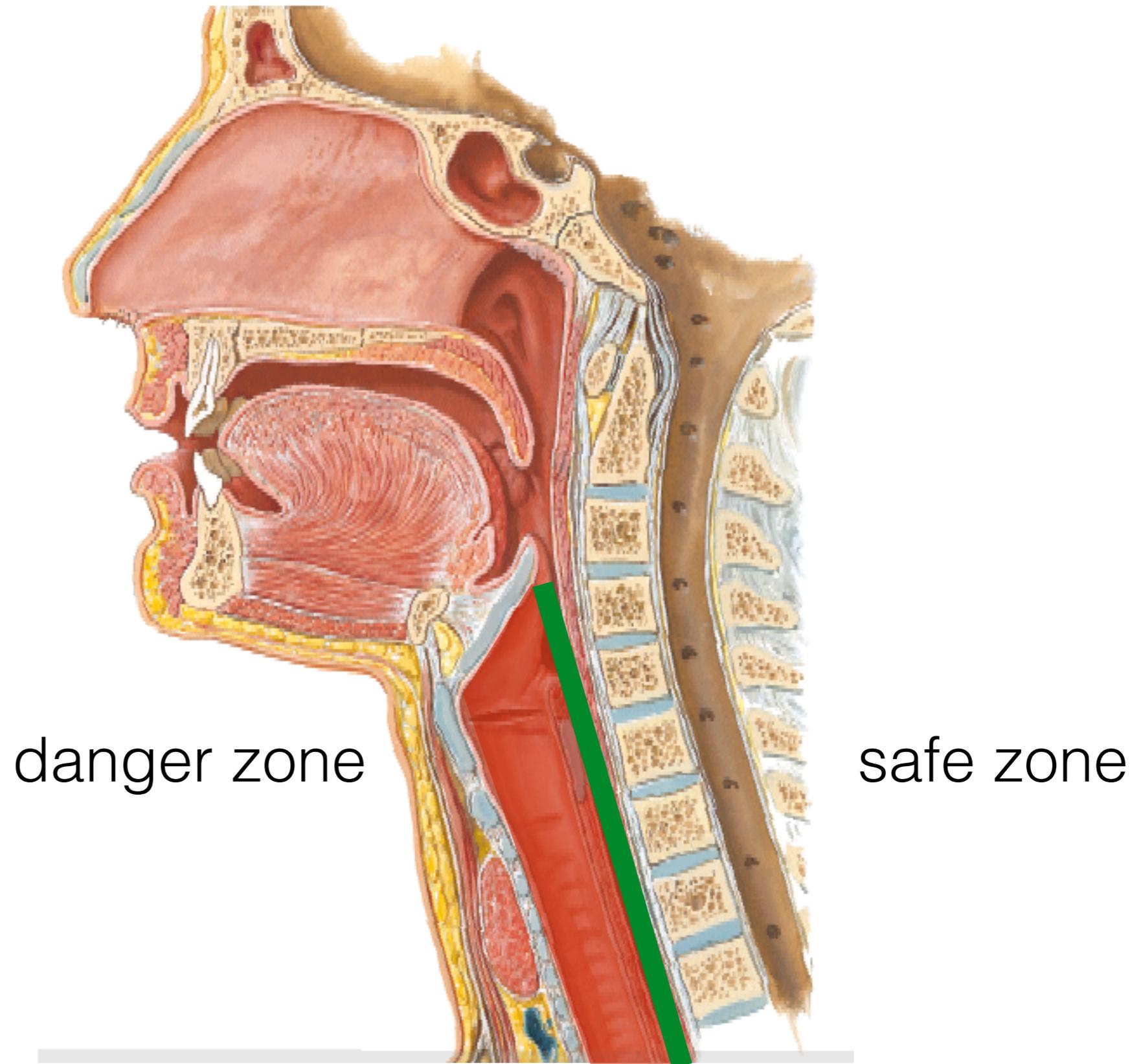
Videofluoroscopy (basics)



residue



Aspiration



Videofluoroscopy (aspiration)

video 1

Videofluoroscopy (aspiration)

video 2

Videofluoroscopy (aspiration)

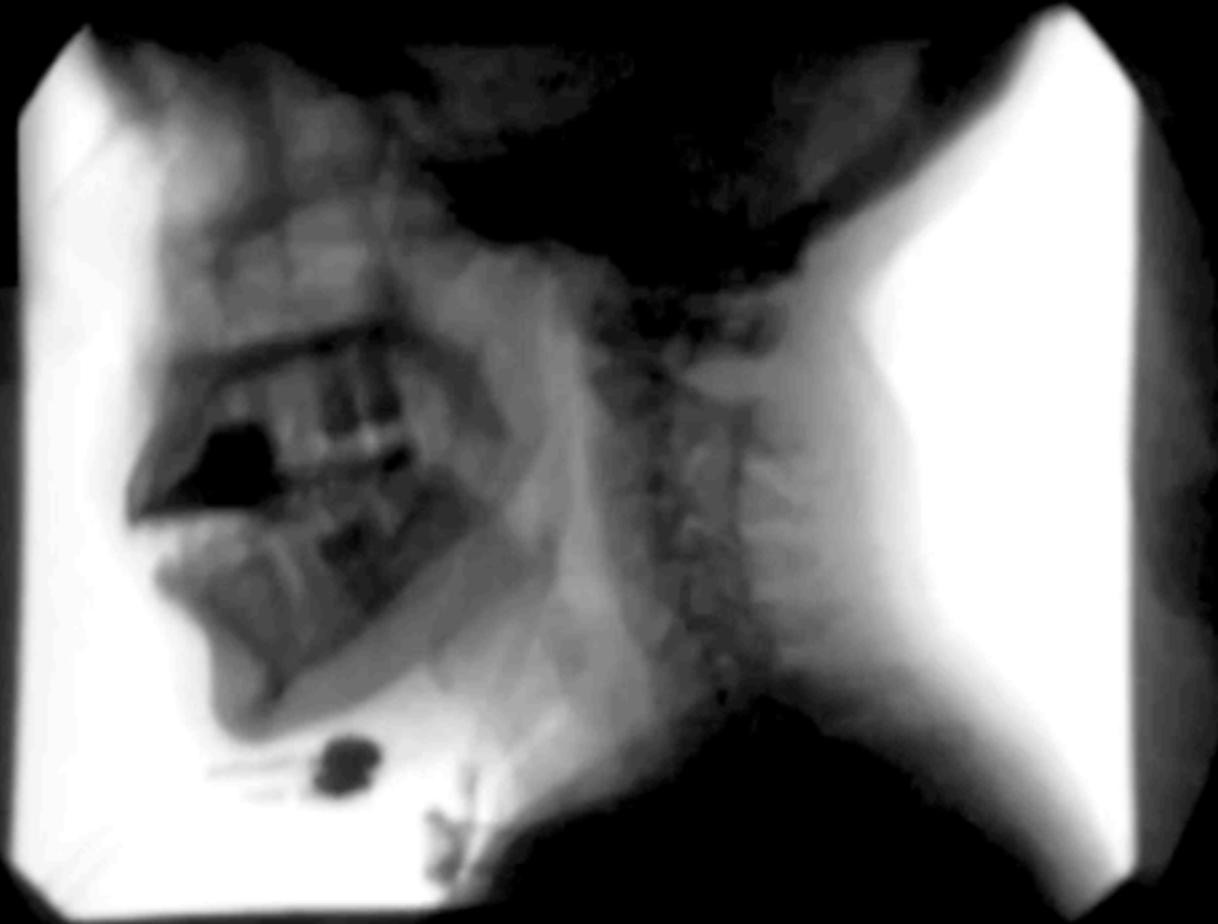
video 3

Videofluoroscopy (aspiration)



Videofluoroscopy

Patient #1 - tbsp Pudding



00:06:07:26

FEES - strong alternative

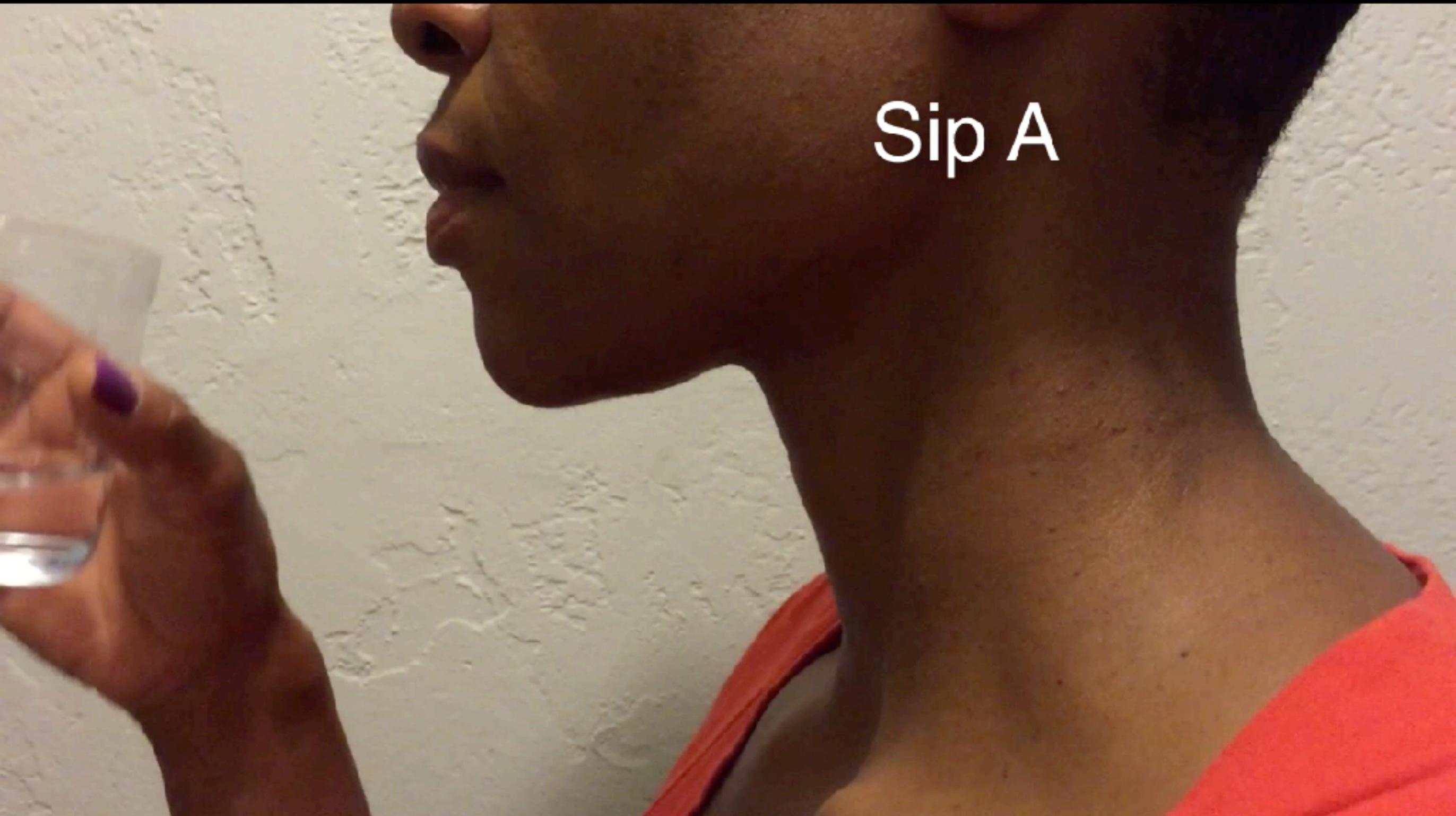


Note:

They've all aspirated for
completely different reasons

Only one coughed

no imaging (clinical bedside eval)



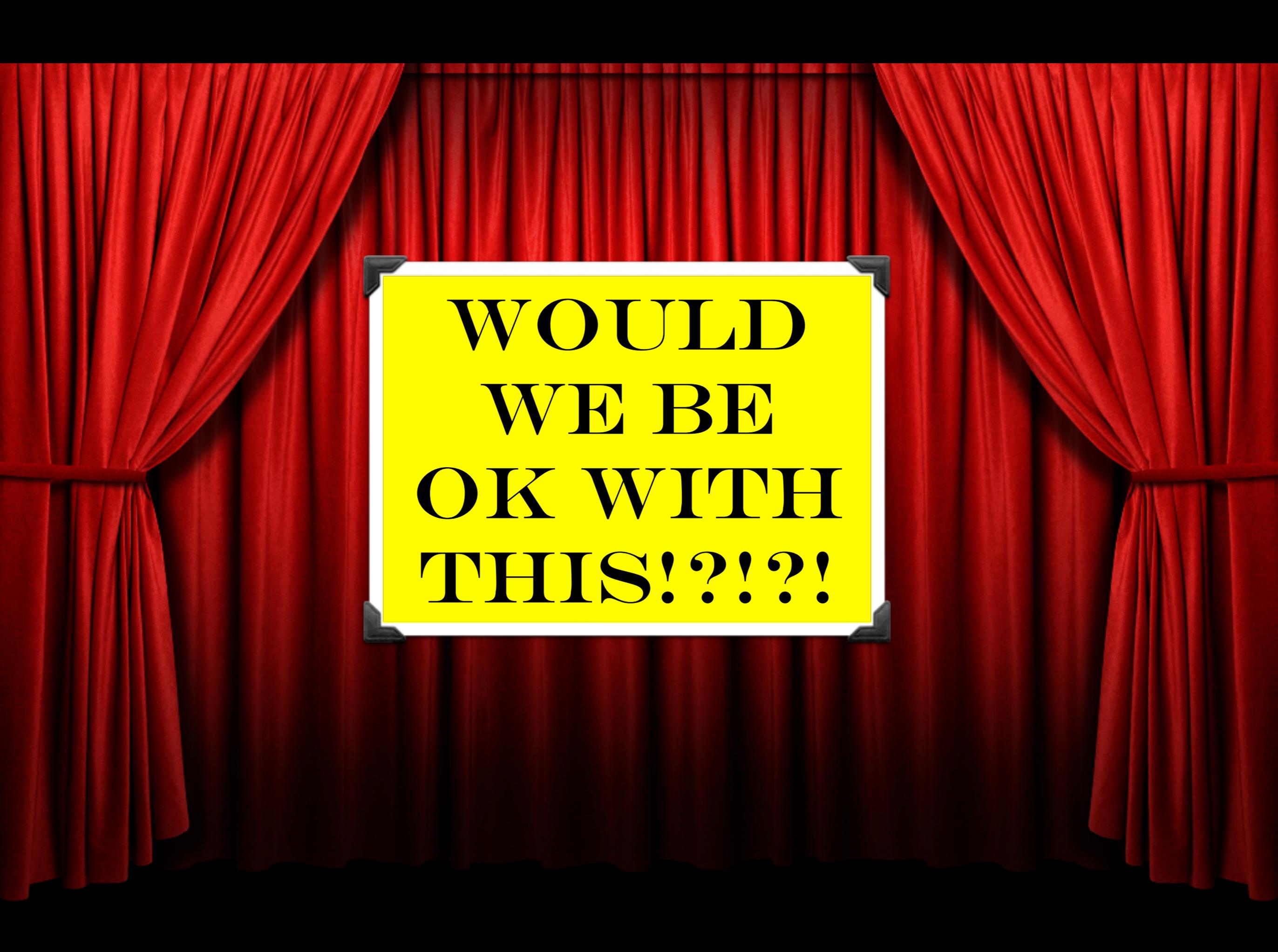
neck moving, only swallow attempts



Making decisions without ever
seeing the swallow is standard for
dysphagia management ...

...but would not be tolerated in
other medical domains

Let's play a game called...

A bright yellow rectangular sign with a white border and black corner mounts is centered against a background of red, vertically pleated curtains. The sign contains the text "WOULD WE BE OK WITH THIS!?!?!".

**WOULD
WE BE
OK WITH
THIS!?!?!**

“Would we be ok with this”

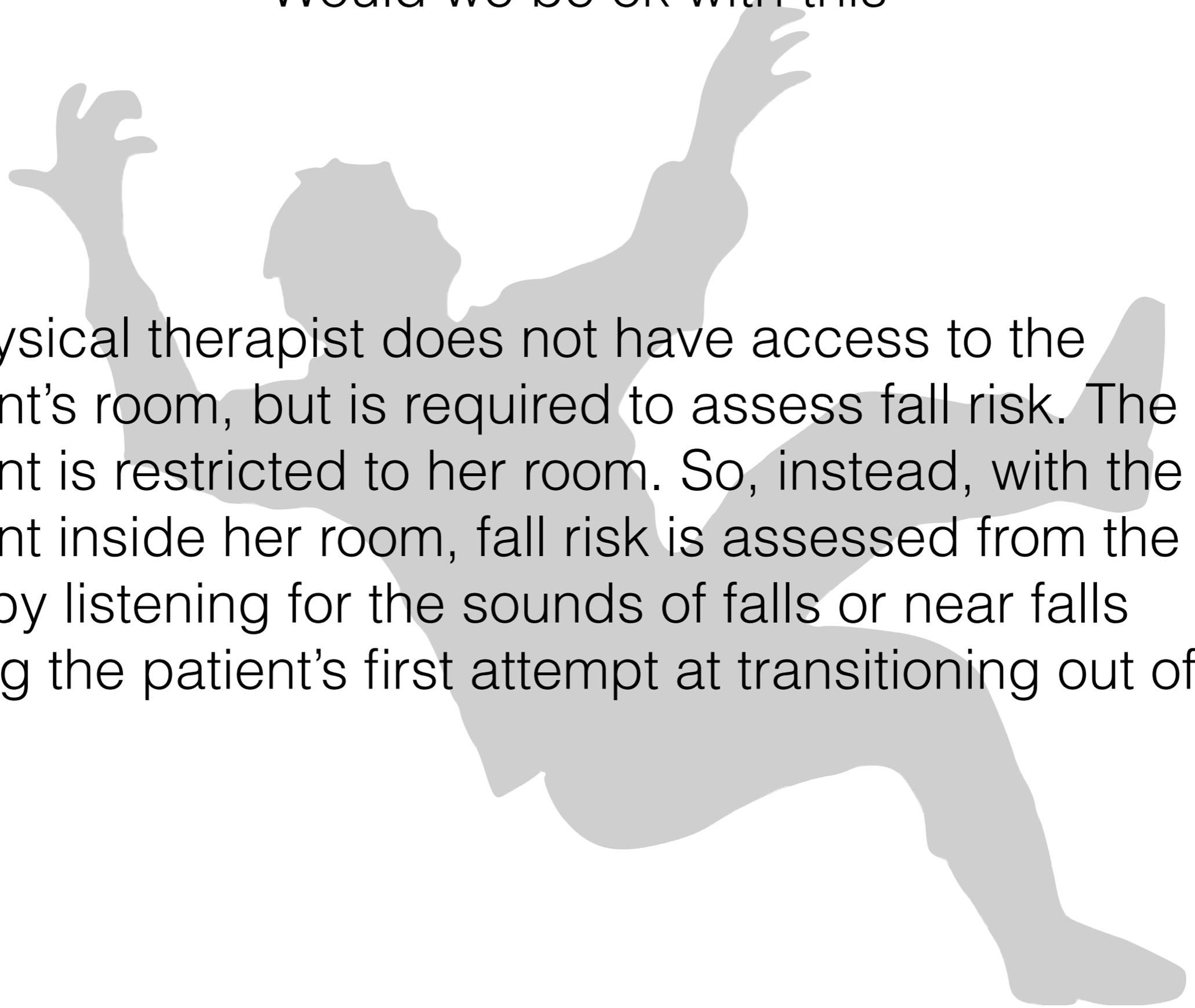
An OB does not have access to ultrasound, but is required to assess risk of intra-uterine growth restriction. So, instead of measuring the head circumference and thorax of the baby, the OB listens to the baby's heartbeat and palpates mom's belly to determine if the baby should be induced 4 weeks early.

A stage with red curtains. In the center, a yellow sign with a white border and black corner mounts displays the text "NO!!!!" in a black serif font.

NO!!!!

“Would we be ok with this”

A physical therapist does not have access to the patient's room, but is required to assess fall risk. The patient is restricted to her room. So, instead, with the patient inside her room, fall risk is assessed from the hallway by listening for the sounds of falls or near falls during the patient's first attempt at transitioning out of bed.

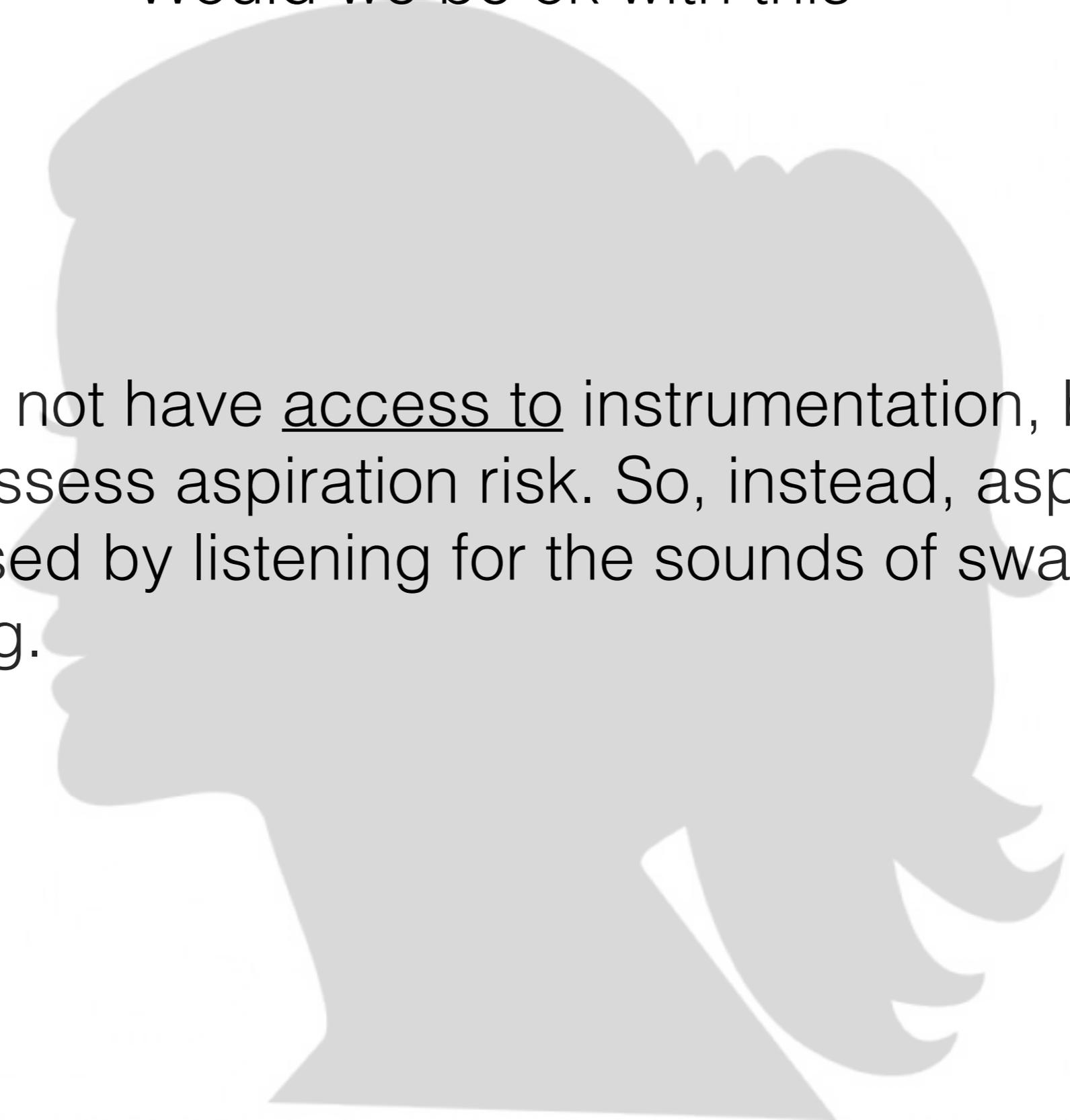


A stage with red curtains. In the center, a yellow sign with a white border and black corner mounts displays the text "NO!!!!" in a black serif font.

NO!!!!

“Would we be ok with this”

An SLP does not have access to instrumentation, but is required to assess aspiration risk. So, instead, aspiration risk is assessed by listening for the sounds of swallowing and coughing.



YES



“Would we be ok with this”

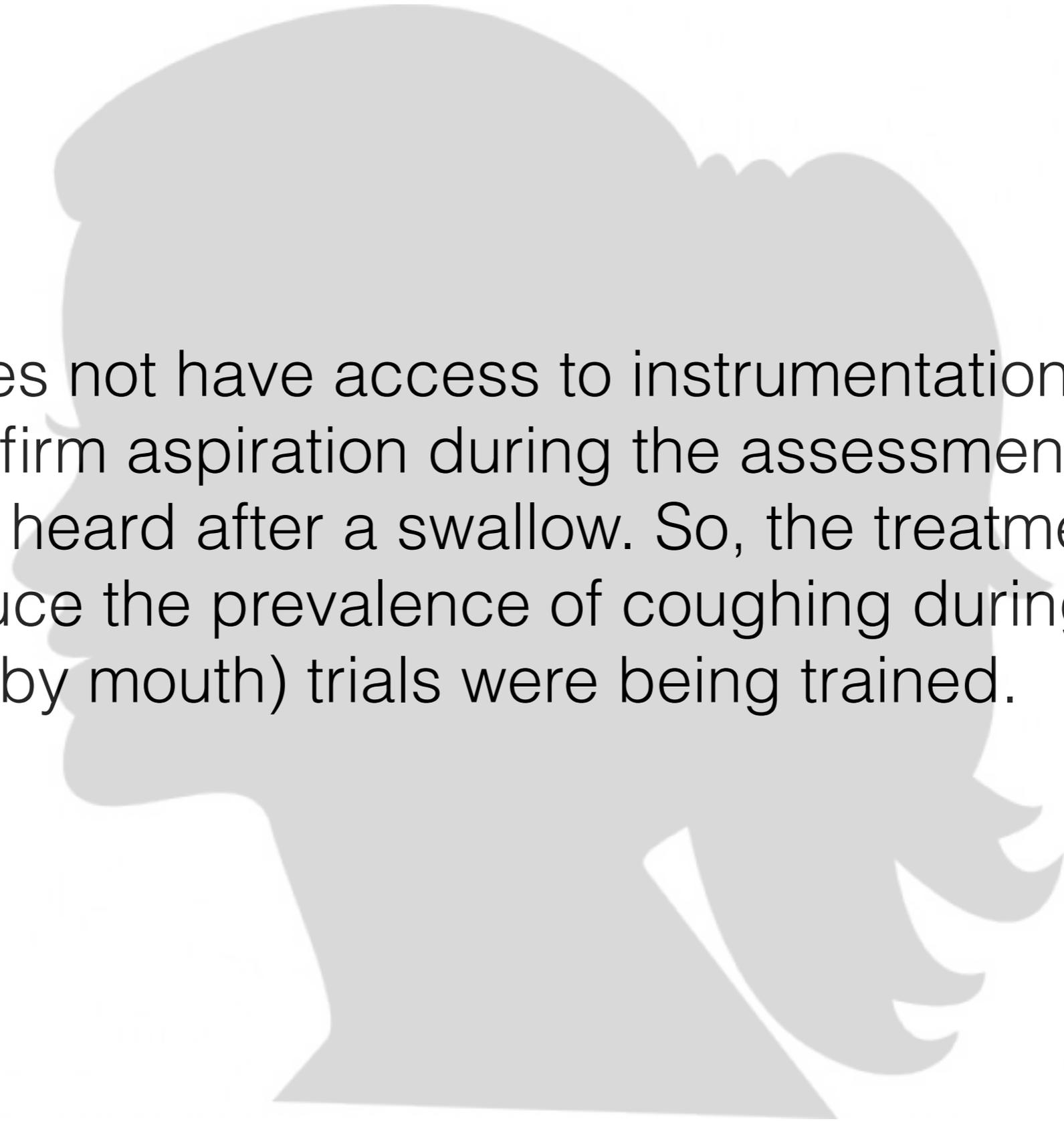
The physical therapist who does not have access to the patient's room, was able to confirm a fall during the assessment when a loud “*THUD*” was heard from the hallway. So, the treatment plan was to reduce the prevalence of “*THUD*” sounds during therapy where transferring was being trained. Therapy will continue to occur with the patient in the room and the PT listening from the hallway

A stage with red curtains. In the center, a yellow sign with a white border and black corner mounts displays the text "NO!!!!" in a black serif font.

NO!!!!

“Would we be ok with this”

An SLP does not have access to instrumentation, but was able to confirm aspiration during the assessment when a cough was heard after a swallow. So, the treatment plan was to reduce the prevalence of coughing during therapy where PO (by mouth) trials were being trained.



YES



Why **no** access to imaging?

Not on site
(i.e. long-term care, home health care)

Why **limited** access?

Fluoro is a low-tech, necessary evil

For many radiologists: necessary gig to keep up revenue (flipping burgers)



Why **ineffective** access?

(sometimes) working with unwilling clinical professional



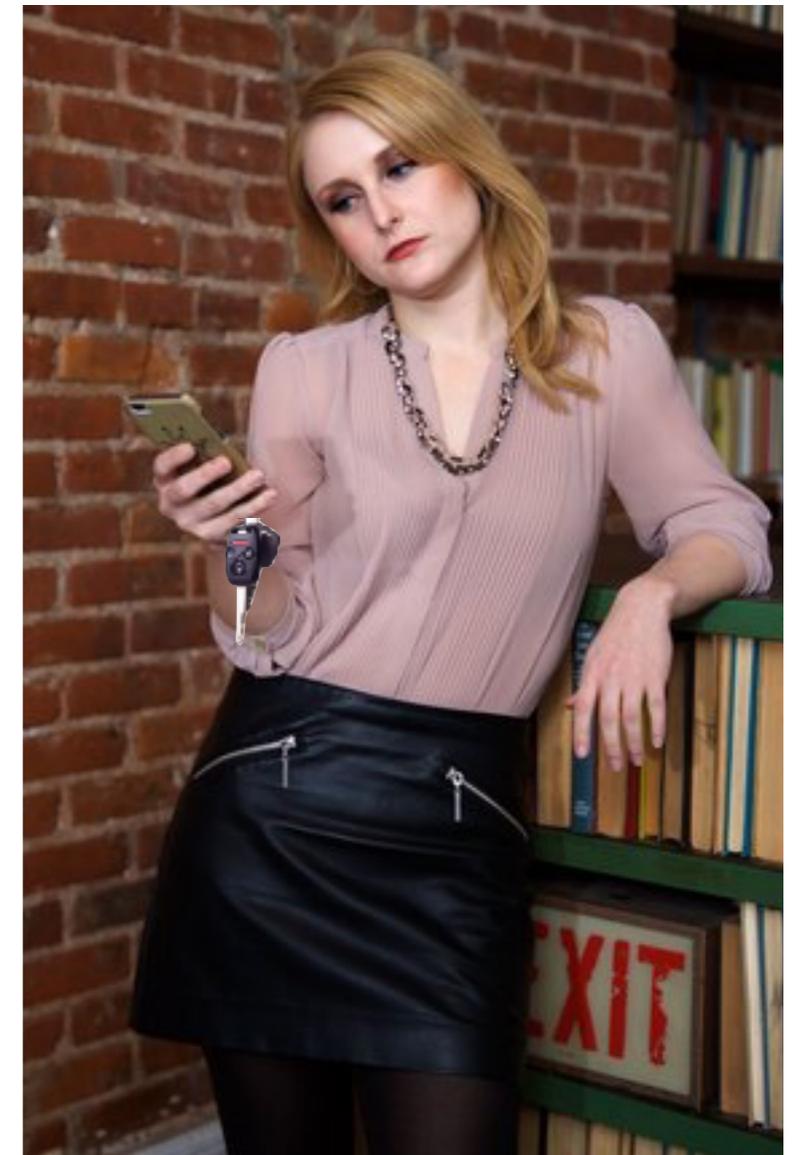
If fluoros were a party...

SLPs



time of your LIFE!

Radiologists



get me outta here

Why **ineffective** access?

Fluoros are often:

rushed

not recorded

decisions are expected with a quick turn around

little chance for collaboration, second opinion

no chance for kinematic analyses

7 fps instead of real time (30fps)

high five solutions - imaging



high five solutions



Solutions

Best - Give PATIENTS greater access to instrumentation

Our survey of 286 SLPs:
in general med setting with fluoro
Avg - 4.6 fluoros per **week**

~Avg caseload 10 patients/day!

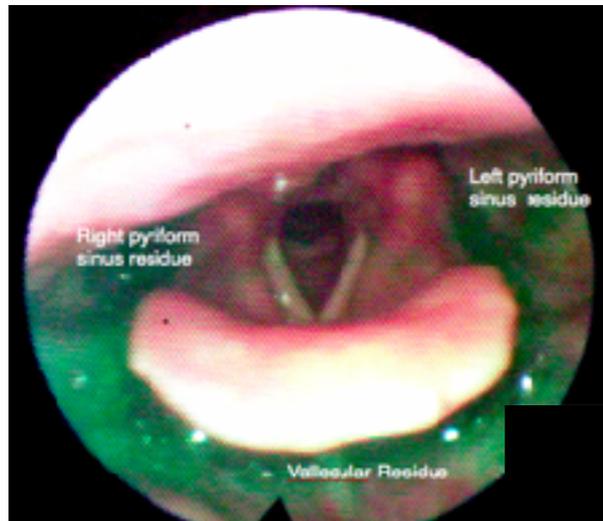
Would we be ok with:
40 stroke patients being admitted, but only 4 get CT or MRI?

worried about \$?

instrumentals increase revenue



fluoro



FEES

	Cost
Avg ER visit	\$1500/day
Semi-private room (daily)	\$500
10-day antibiotics course	\$2000
Physician fees & labs (pneumonia Dx TX)	\$19-25,000
Videofluoroscopy study	\$300

(Logemann, 1995; Kozlow, Berenholtz, Dorman, & Pronovost, 2003)

worried about radiation exposure?



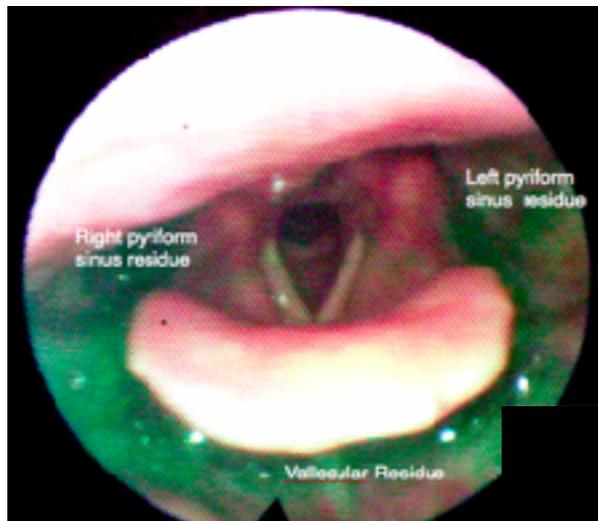
fluoro

Dysphagia (2009) 24:274–279
DOI 10.1007/s00455-008-9201-0

ORIGINAL ARTICLE

Radiation Safety for the Speech-Language Pathologist

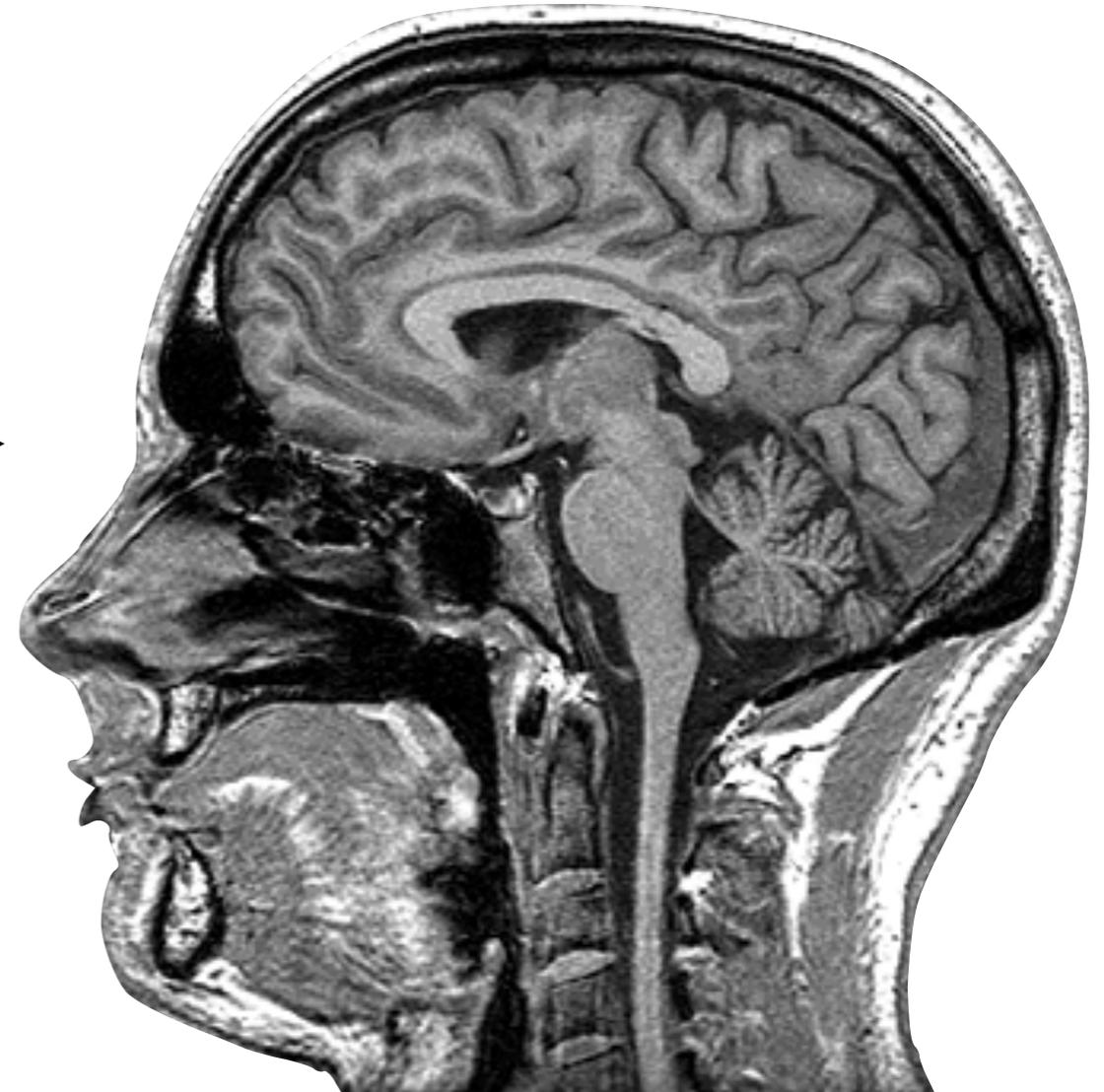
Andrea Hayes · Julie M. Alspaugh · Detlef Bartelt · Molly B. Champion ·
John Eng · Bob W. Gayler · Seanne E. Henkel · Bronwyn Jones ·
Arpana Lingaraj · Mahadevappa Mahesh · Mark Rostkowski ·
Christine P. Smith · Judy Haynos

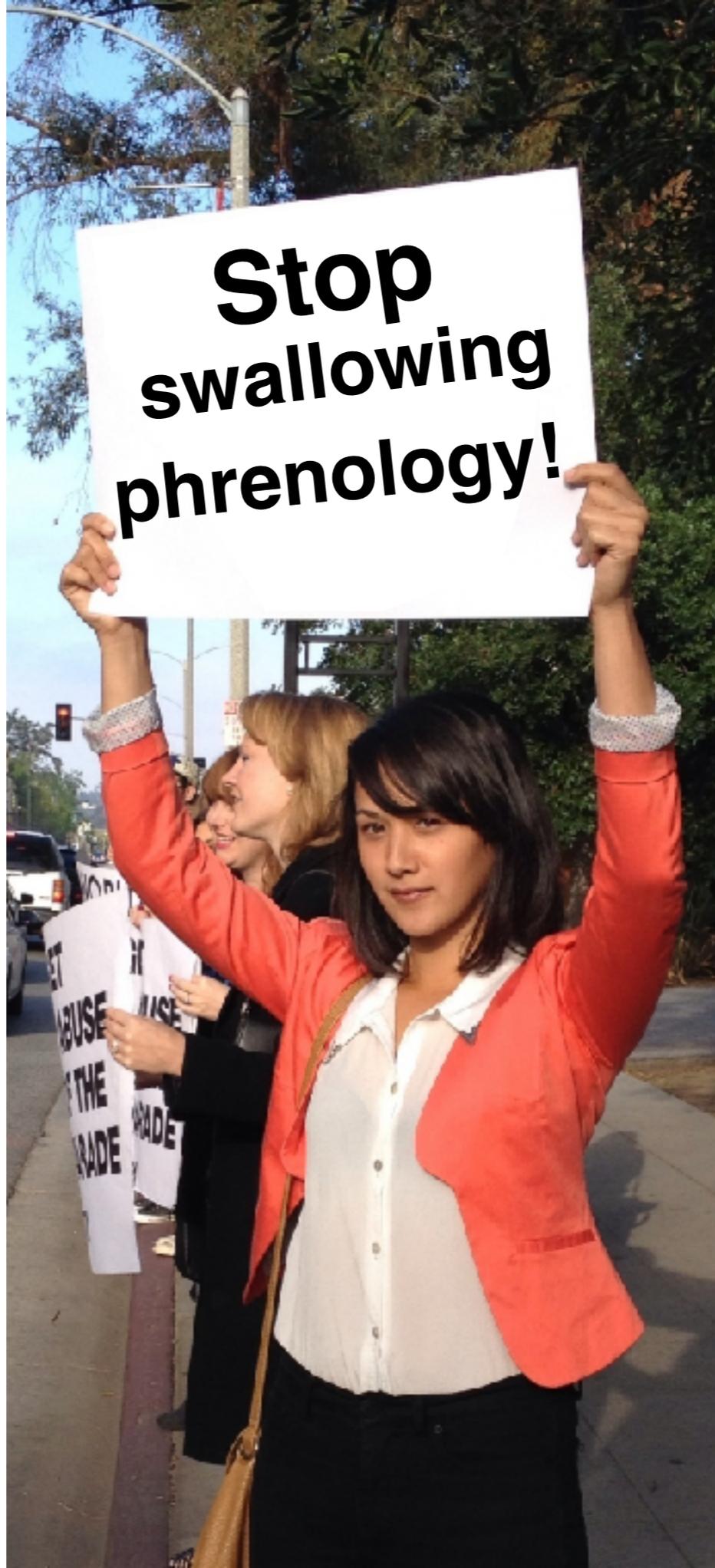


FEES

Heather Bonilha, Ph.D., - An SLP would need to do 33,333 Fluoro studies to meet the Annual Nuclear Worker Dose Limit of 50 mSv

We, too, want to escape the dark ages





**Stop
swallowing
phrenology!**

ET
ABUSE
OF THE
TRADE

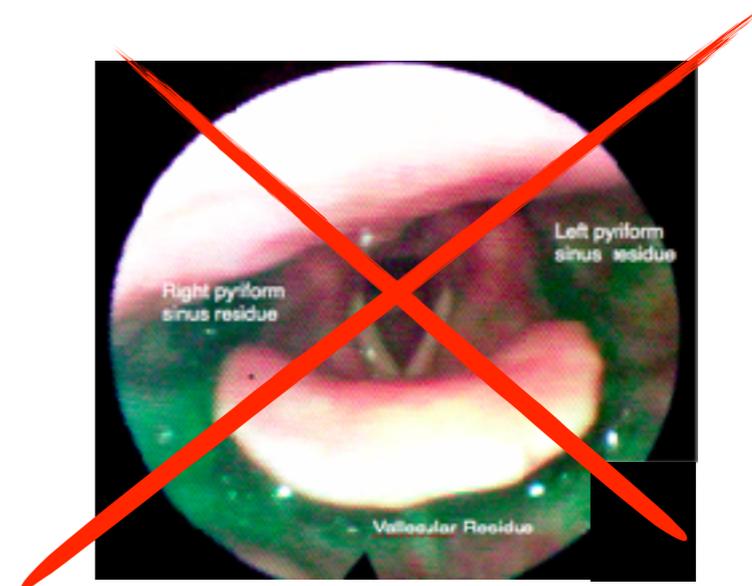
ABUSE
OF THE
TRADE



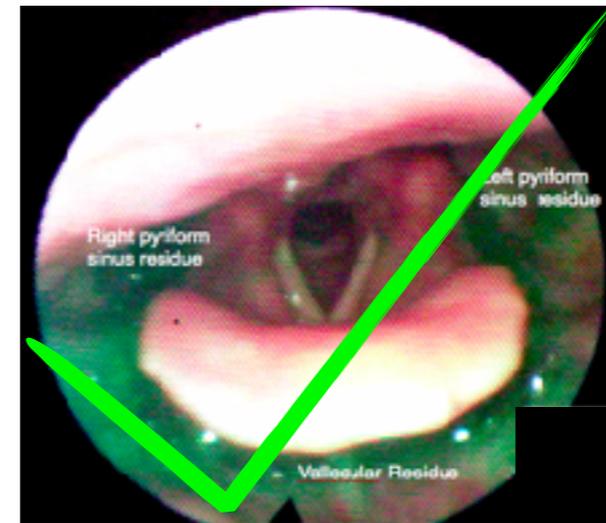
**Reduce over
reliance on
laryngeal
palpation!**

Solution

allow SLPs to operate c-arms



FEES



FEES

high five solutions



There is a reason for this



Videofluoroscopy (basics)

structures

hyoid bone

larynx

UES

velum

tongue

pharynx

jaw

swallowing events

lingual bolus forming

velar elevation

lingual propulsion

jaw positioning

laryngeal vestibule closure

UES opening

hyoid excursion

laryngeal excursion

pharyngeal shortening

pharyngeal constriction

bolus flow events

aspiration

reflux

nasal regurgitation

penetration

anterior bolus loss

A bright yellow rectangular sign with a white border and black corner mounts is centered against a background of red, vertically pleated curtains. The sign contains the text "WOULD WE BE OK WITH THIS!?!?!" in a bold, black, serif font, arranged in four lines.

**WOULD
WE BE
OK WITH
THIS!?!?!?**

Now: Make a Dx and Tx
Go!



Now: Make a Dx and Tx
Go!



Why does time matter?

Our survey of 200+ SLPs
3 videos to ID primary swallowing impairment

Easy

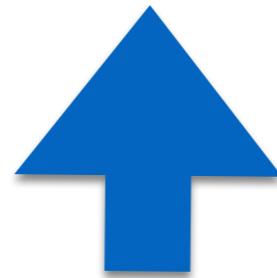
Why does time matter?

% accuracy	All
easy	67
mod	6
complex	6

Why is this not just an SLP problem?

barriers to best
practice

- imaging ✓
- over-simplification
- no vetting process



Physicians
Administrators

Barrier 2: Oversimplification

Did patient X pass his swallowing test?

Big consequences:

To PEG or not to PEG

Significant dietary restrictions

A bright yellow rectangular sign with a white border and black corner mounts is centered against a background of red, vertically pleated curtains. The sign contains the text "WOULD WE BE OK WITH THIS!?!?!".

**WOULD
WE BE
OK WITH
THIS!?!?!**

Oversimplification

Did patient X pass his walking test?

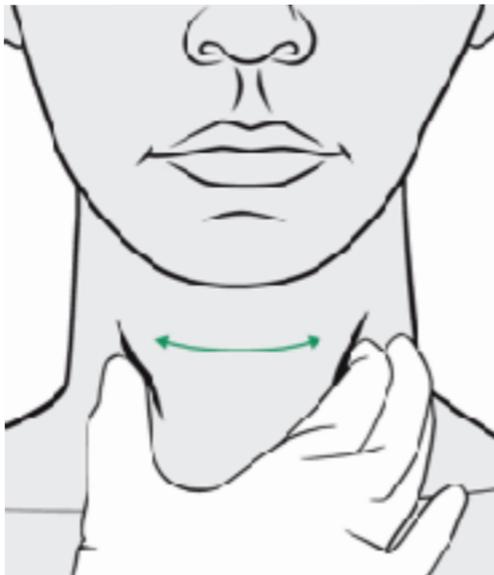
Big consequences:

Pt almost fell, so he is going to be bed ridden

Exaggeration?

Nope!

Standard practice among many SLPs:



+ swallow + cough =

PEG

Significant dietary restrictions

NO IMAGING!

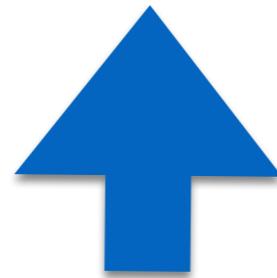
NO QUESTIONS ASKED!

Segue

Why is this not just an SLP problem?

barriers to best
practice

- imaging ✓
- over-simplification ✓
- no vetting process



Physicians
Administrators

Barrier 3: No vetting process

“besides experienced SLPs at your first clinical placement ...



...you will know more about swallowing than anyone else”

(for better or for worse)

Pros

Cons

judge

judge

jury

jury

executioner

executioner

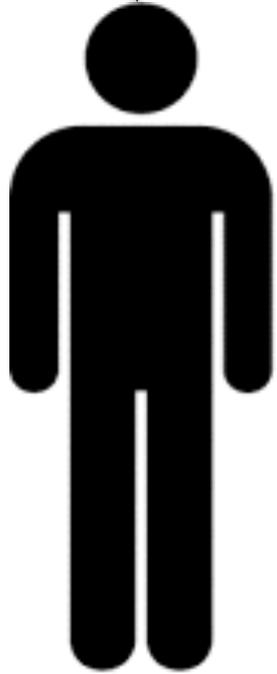


+autonomy

-vetting process

Team meeting

let's discuss
patient A



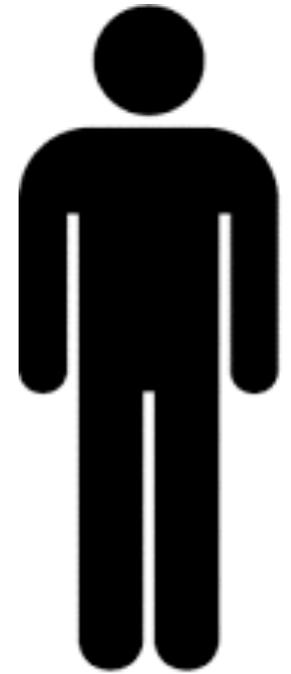
MD



PT

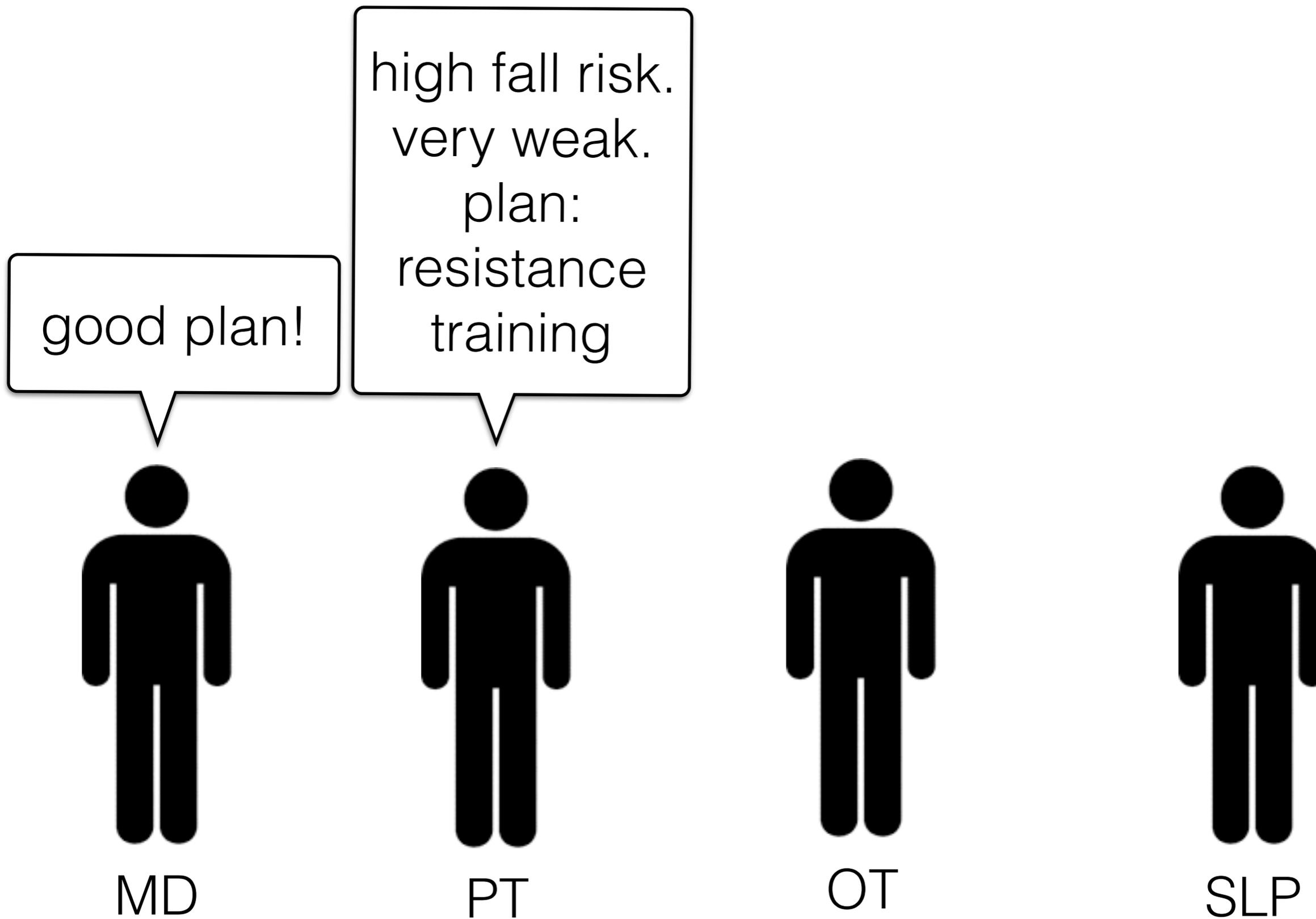


OT



SLP

Team meeting



good plan!

high fall risk.
very weak.
plan:
resistance
training

MD

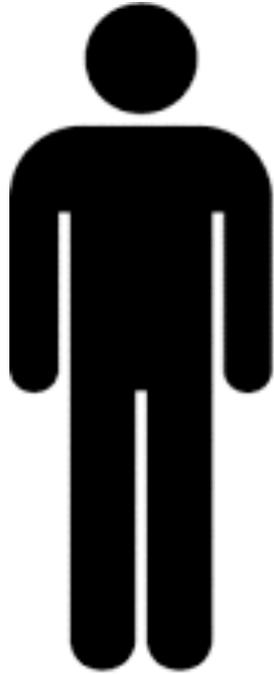
PT

OT

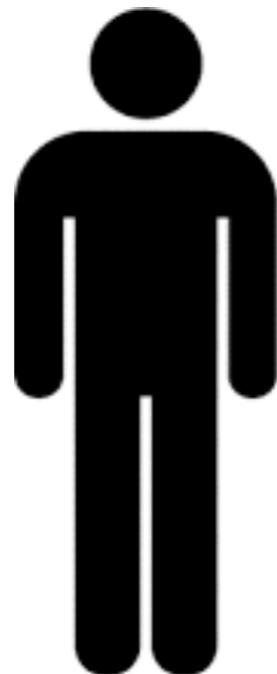
SLP

Team meeting

makes sense!!



MD



PT

unable to
manipulate utensils.
uncoordinated.
plan: adaptive
equipment



OT



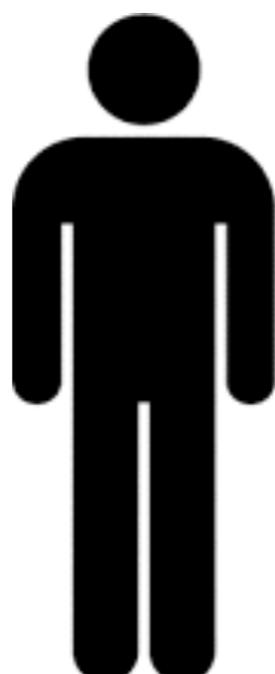
SLP

Team meeting

so... can
he eat?



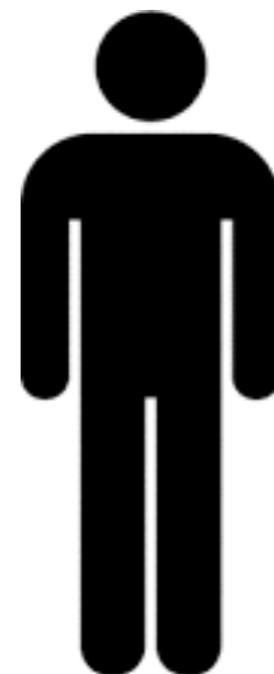
MD



PT



OT



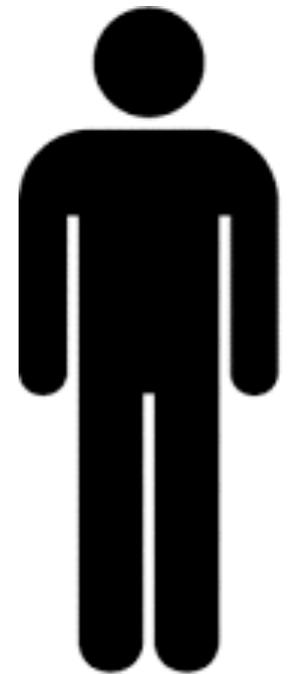
SLP

Tight upper
esophageal sphincter.
Aspirating after the
swallow. Plan: lingual
strengthening

Team meeting

This plan actually
makes zero sense

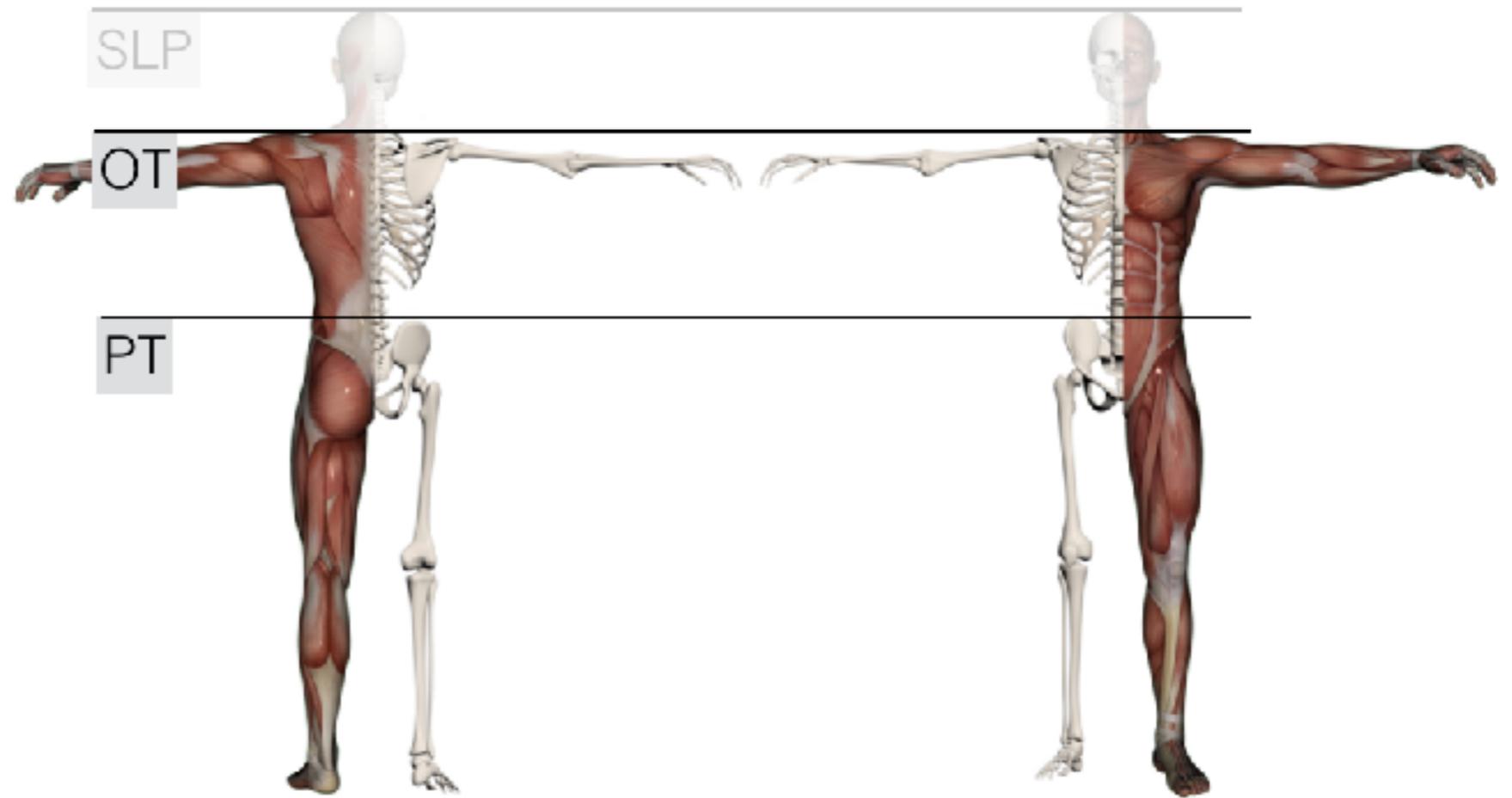
Tight upper
esophageal sphincter.
Aspirating after the
swallow. Plan: lingual
strengthening



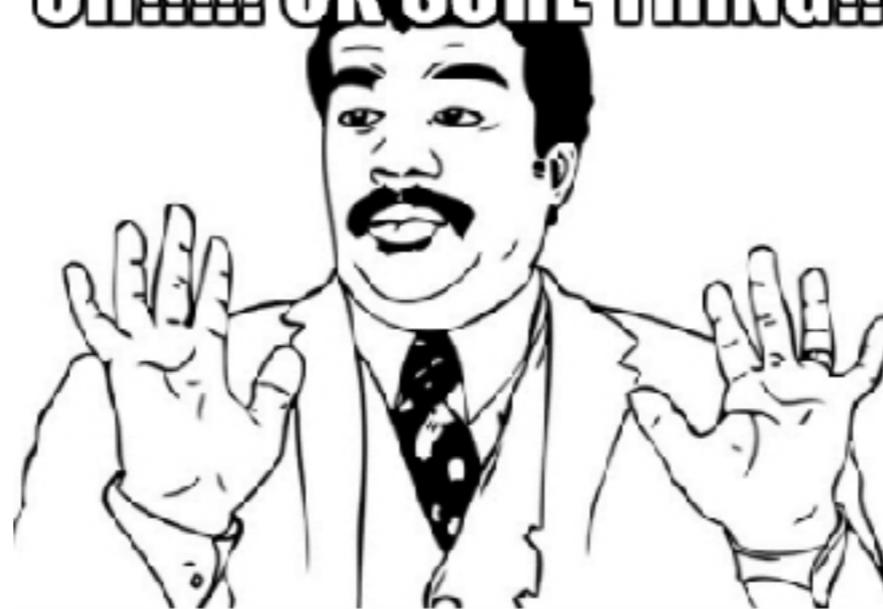
SLP



MD



OH!!!!!! OK SURE THING!!!



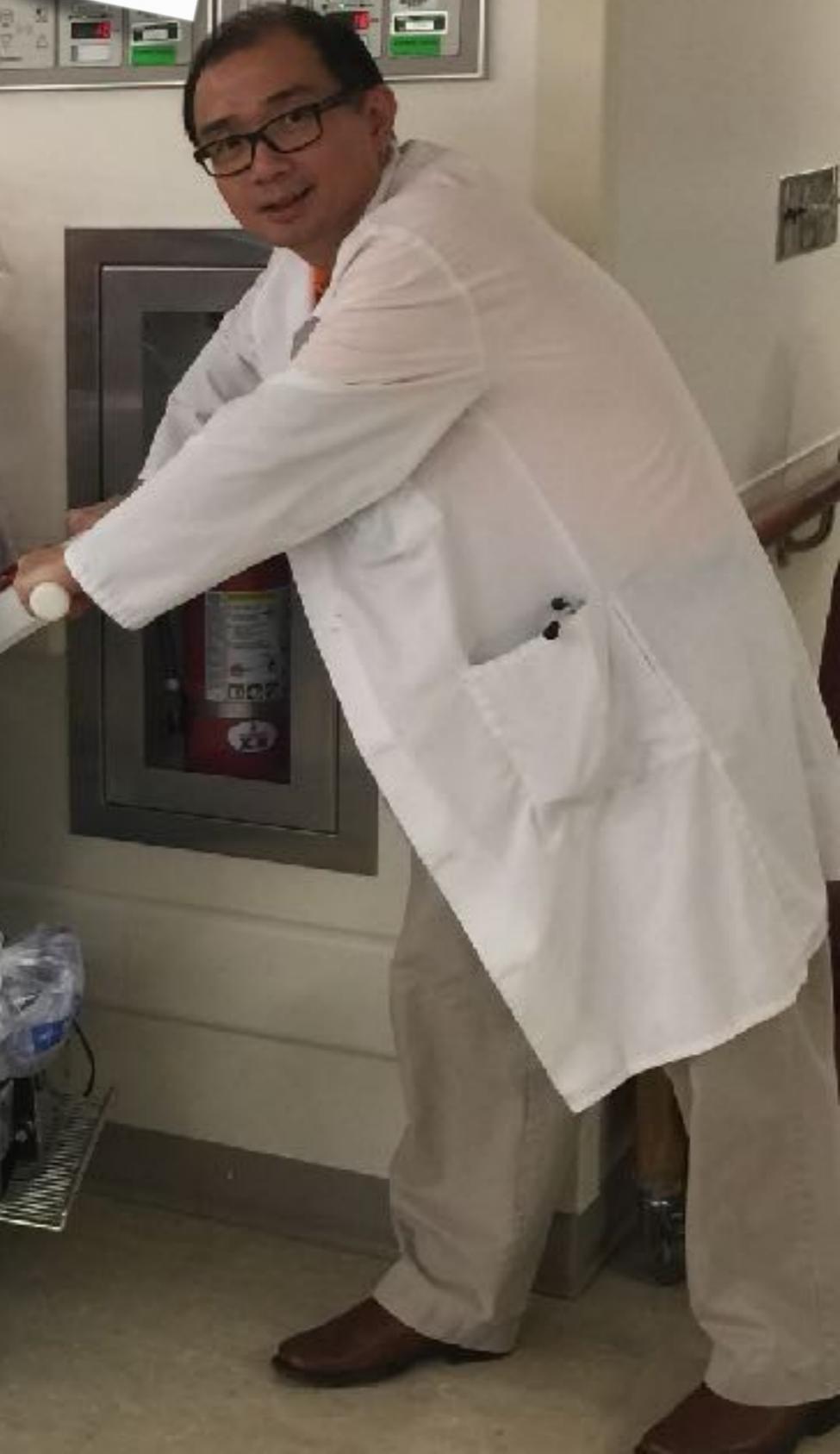
WHATEVER YOU SAY

BUDDY

memegenerator.net

My sister:
Tamay Johnson
Respiratory Tx

Dr Aung Naing
Pulmonologist



We need willing
inter- professional
collaborations



Benefits of having inter-discipline collaboration

broaden all perspectives

best patient care

advocate for patients
with dysphagia

understand re-
admissions

reduce easily preventable problems ...

Like this one.

Omission of Dysphagia Therapies in Hospital Discharge Communications

Dysphagia. 2011 March ; 26(1): 49–61. doi:10.1007/s00455-009-9266-4.

Abstract

Background—Despite the wide implementation of dysphagia therapies, it is unclear whether these therapies are successfully communicated beyond the inpatient setting.

Objective—To examine the rate of dysphagia recommendation omissions in hospital discharge summaries for high-risk sub-acute care (i.e., skilled nursing facility, rehabilitation, long-term care) populations.

Design—Retrospective cohort study

Subjects—All stroke and hip fracture patients billed for inpatient dysphagia evaluations by speech-language pathologists (SLPs) and discharged to sub-acute care in 2003-2005 from a single large academic medical center (N=187).

Measurements—Dysphagia recommendations from final SLP hospital notes and from hospital (physician) discharge summaries were abstracted, coded, and compared for each patient. Recommendation categories included: dietary (food and liquid), postural/compensatory techniques (e.g., chin-tuck), rehabilitation (e.g., exercise), meal pacing (e.g., small bites), medication delivery (e.g., crush pills), and provider/supervision (e.g., 1-to-1 assist).

Results—45% of discharge summaries omitted all SLP dysphagia recommendations. 47%(88/186) of patients with SLP dietary recommendations, 82%(93/114) with postural,



what do we do about it?

Its not just an SLP problem

I understand

mmm hmm

hmmm

ok!

!

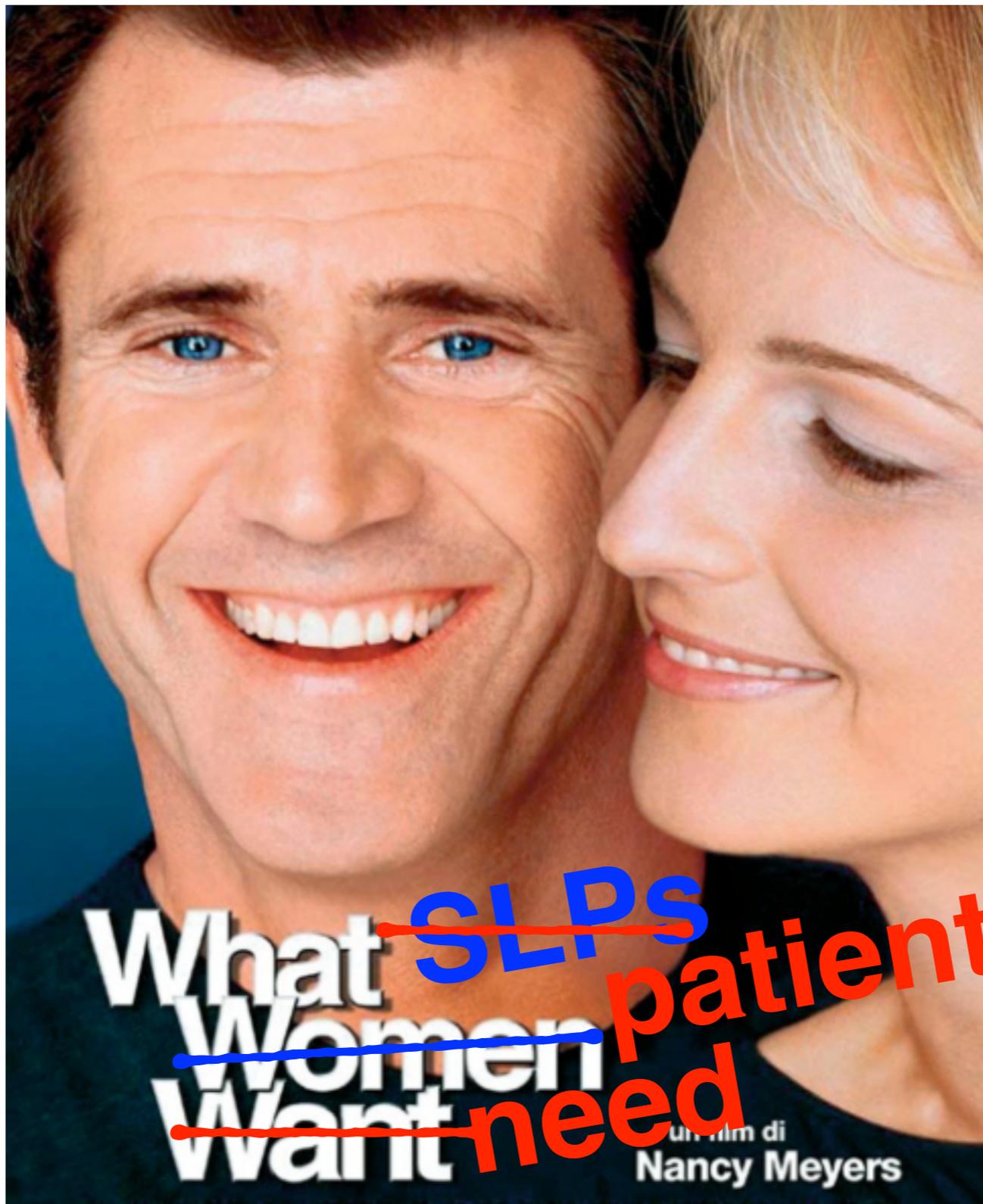
MD

MD

MD

MD

MD

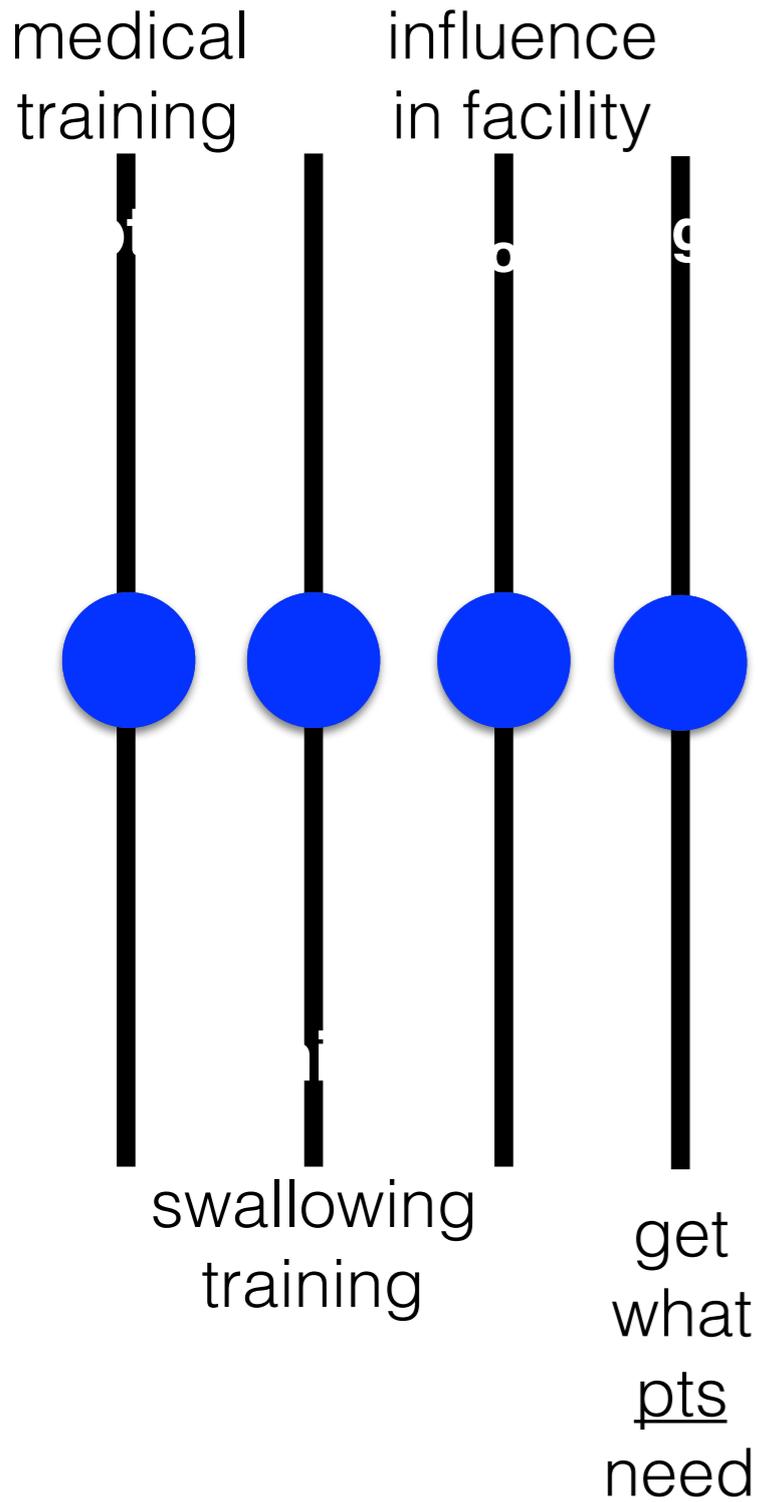


~~SLPs~~
~~patients~~
~~need~~

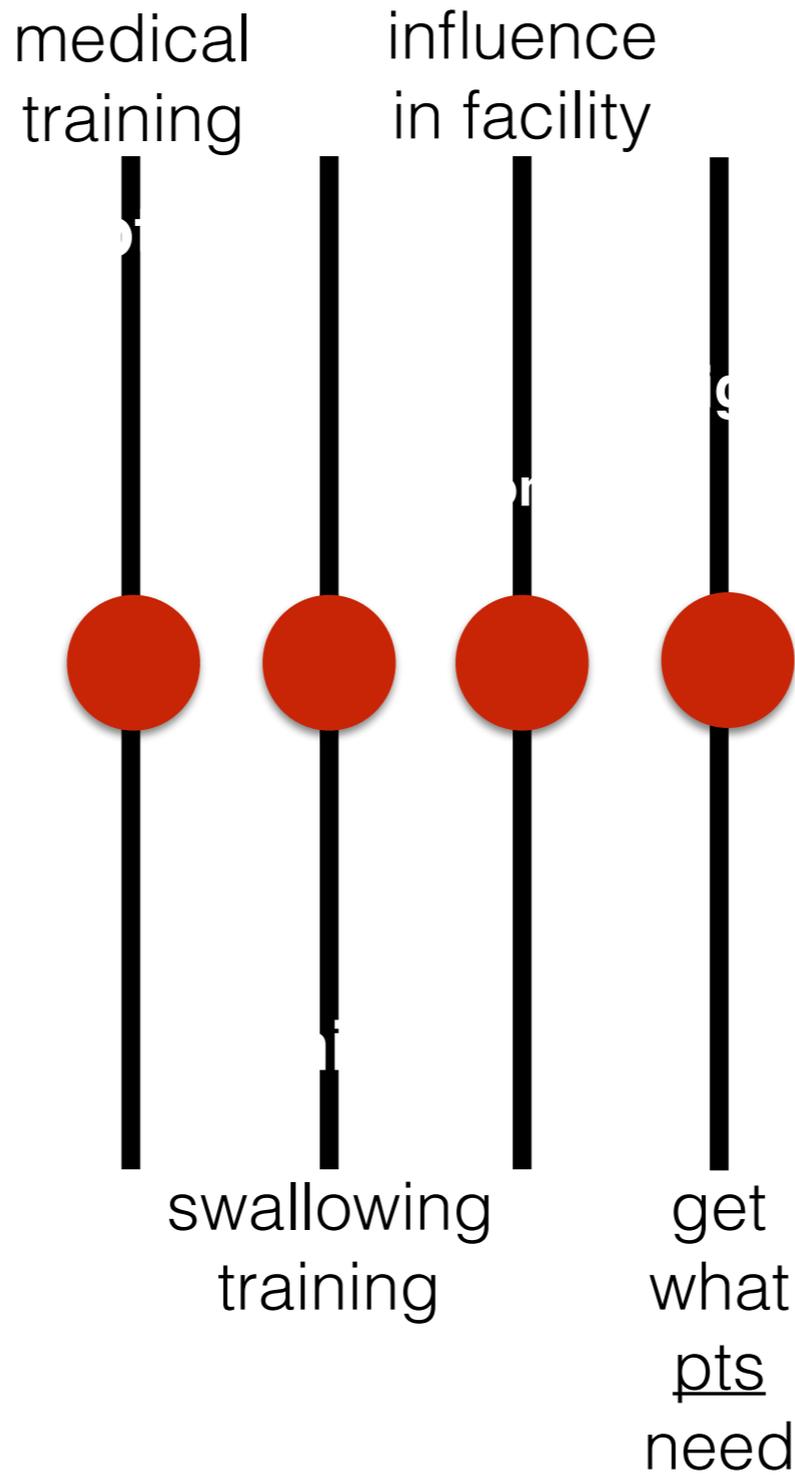
Support



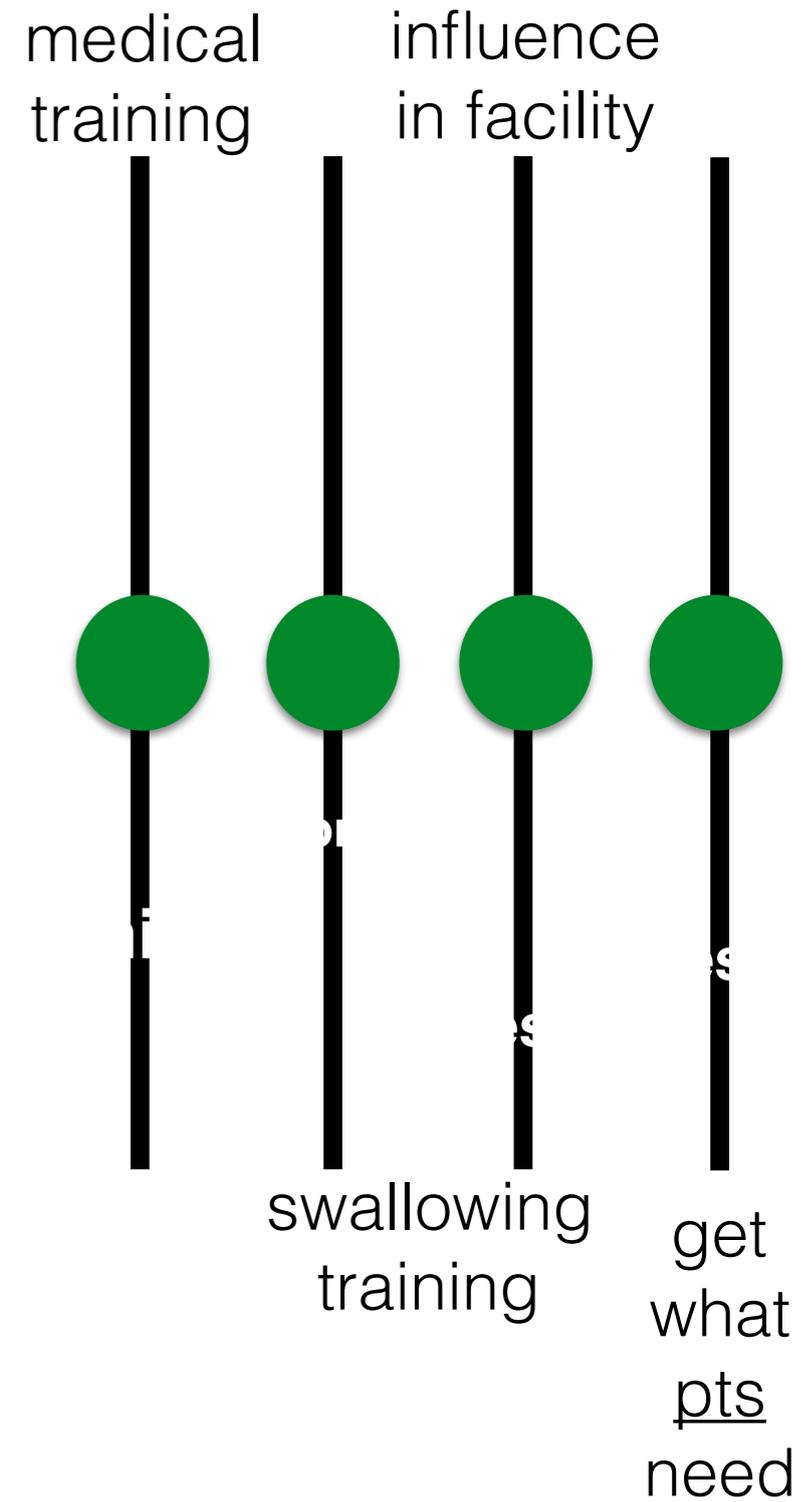
MD



Nurse



SLP



Support

Many forms:

Group chat with Radiology

Allow SLPs to obtain and train in FEES

Expect decisions based on imaging

Your attention here

THANK YOU

2016 Florida Stroke Symposium

Acknowledgements



Alicia K. Vose, MS, CCC-SLP
Doctoral Student

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