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Implementation of a nurse-administered dysphagia screening tool to prevent post-extubation dysphagia complications

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BACKGROUND

Nature & significance of problem (global)

- Post-extubation dysphagia (PED) is an addressable and **preventable harm**.

Nature & significance of problem (local)

- No **standardized practice** in the Medical ICU at UVMHC
- **Reliance** on Speech Language Pathology.
- **Delays** with nutrition and potential for decreased patient and family psychosocial wellbeing.
- Lack of oral nutrition status (PO) status:
 - Can be a barrier to transfer patient out of the ICU.
 - Can lead to delays in medication therapy.

What do we know?

- PED occurs in **3% to 62%** of intensive care unit patients (Skoretz et al., 2010).
- **Early identification of PED is crucial** so modifications and further evaluation can occur before harm is caused (Macht et al., 2011; Malandraki et al., 2016).
- Preventable aspiration events contributes to **added healthcare costs**. Each aspiration pneumonia (ICD-9 507.0) event costs hospitals an average of \$13,356 (HCUP, 2015).
- Dysphagia screening tools (mostly validated in the stroke population) have varying degrees of interrater reliability, specificity, and sensitivity (Edmiaston et al., 2010; Fedder, 2017).

What is yet to be known?

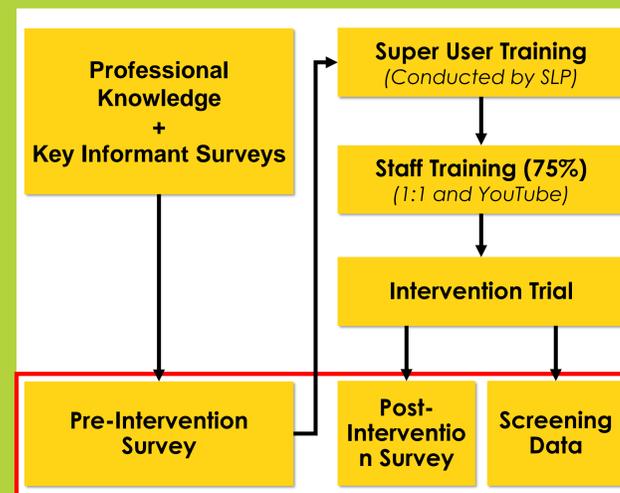
- **Limited studies on PED** interventions (Brodsky et al., 2014).
- One study looking at **a nurse led PED screening tool for ICU** (Johnson et al., 2018).

PURPOSE & AIMS

The purpose of this quality improvement project was to implement a nurse-administered dysphagia screening tool for post-extubated patients in a 21-bed mixed medical intensive care unit (MICU) at a large academic medical center.

METHODS

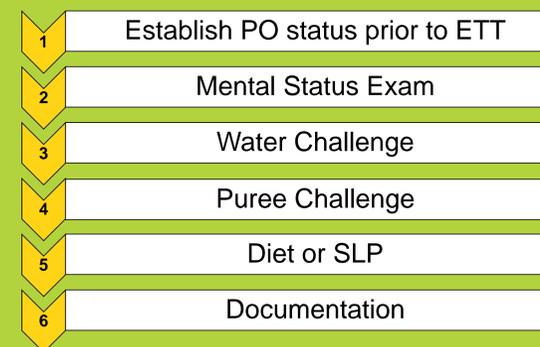
Project process flow



Highlighted in **RED** are the measurable outcomes.

Intervention protocol

- UVM IRB exempt: Quality improvement project
- Adopted from the UVMHC Dysphagia screening tool for stroke patients.



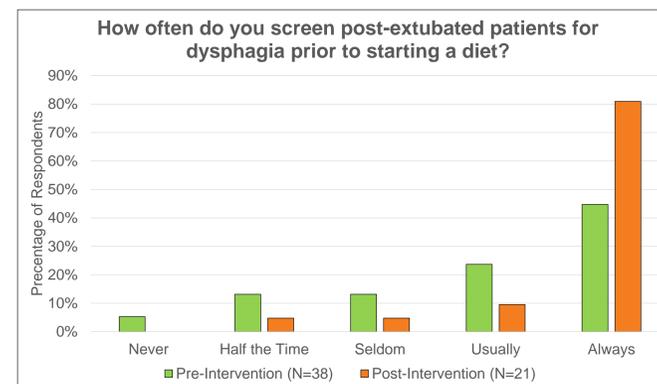
Staff Training Aids

YouTube
Nurse Led Dysphagia Screening Tool Trial

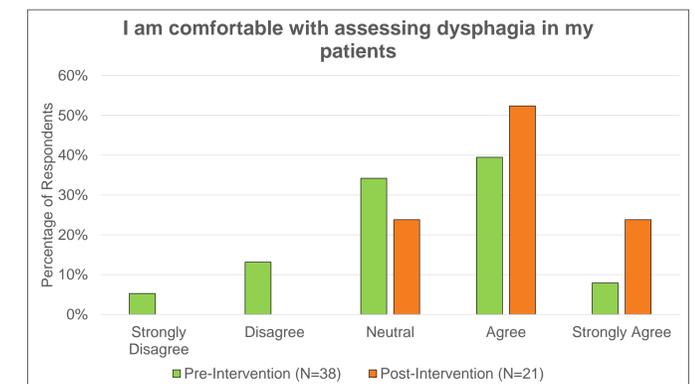
Laminated protocol and Youtube

RESULTS

	n	♂	♀	Avg. Age (Range)	Intubated Days (Avg/(range))
Eligible	59	29	30	59.6 (18-89)	1.4 (0.2-5.3)
Not Eligible*	3	3			
Screened ¹	34	16	18	60.9 (21-86)	1.6 (0.4-5.3)
Not Screened	25	13	12	57.7 (18-89)	1.3 (0.2-3.3)



		SLP?	Non-textured	Textured + Tube Feed
Screened (34/ 57.6%)	Passed (27)	9 (33%)	15 (56%)	11+1 (44%)
	Failed (7)	7 (100%)	0	5+2 (100%)
Not screened (25)		6 (24%)	15 (60%)	8+2 (40%)



DISCUSSION

- High level of pre-intervention knowledge regarding dysphagia.
- Findings and interpretation are causal assumptions.
- Challenges with fidelity to the intervention protocol.
 - Screening completed on 57.6% of eligible patients.
 - 60% of those not screen received non-textured diets.
- Providers provided with a clear algorithm: diet now versus SLP.
 - Of those that failed screenings 100% received SLP evaluation.
- As compared to the pre-intervention period, post-intervention nurses reported:
 - An increase in screening for PED prior to starting a diet.
 - An increase in comfort level with screening for dysphagia.
- Nursing felt the tool was valuable and should be adopted as a standard of care.
- Generalizability outside of the Medical ICU limited.

CONCLUSION

- The intervention:
 - contributed to addressing a little studied preventable harm.
 - promotes best nursing practice and gives nurses the power and authority to safely begin PO nutrition in their post-extubated patients.
- Decrease net nursing time by identifying aspiration complications.
- Strong support from the Nursing, Medical, and SLP teams for continued use after the end of the trial period.
- The positive findings from this project supports the adoption of the intervention protocol as a new standard of care in the MICU at UVMHC.
- Further study may focus on assessing barriers to screening and opportunities to increase screening.

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References available upon request