

## BACKGROUND

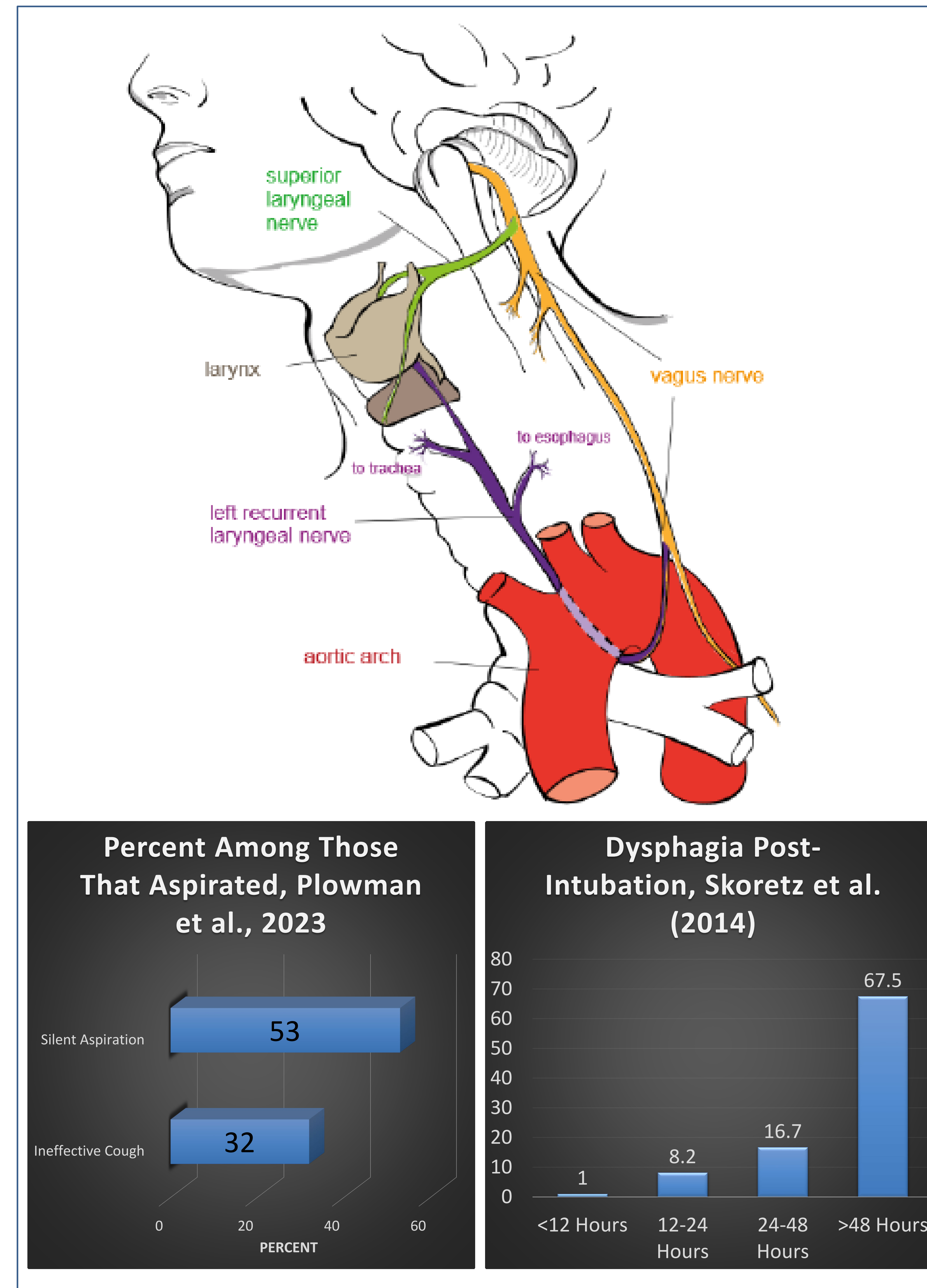
Dysphagia is commonly observed in the cardiac critical care patient. At the bedside, clinicians and nurses may be accustomed to reliance on patient's outward signs/symptoms to identify dysphagia. However, research verifies that this population is highly prone to silent aspiration (an absence of outward signs/symptoms of swallow dysfunction) based upon contributing factors. To identify those at risk for aspiration and silent aspiration dysphagia, risk factors specific to the cardiac care population should be considered.

## METHODS

The identified population are patients in cardiac critical care. The focus of the poster is to discuss risk factors of aspiration/dysphagia in patients of this population via use of the existing literature.

## RESULTS

Dysphagia among patients in the cardiac critical care population is prevalent. "A prospective single-center study was conducted in postoperative adult cardiac surgery patients with no history of dysphagia... in 182 patients examined, imaging confirmed inefficient swallowing (residue) in **52%** of patients and unsafe swallowing in **94%** (65% penetrators, 29% aspirators)." (Plowman, et al., 2023). Among those identified as aspirating, **53%** were **SILENT** aspirators with **32%** of those unable to clear the aspirated material.



## REFERENCES

Plowman, E. K., Anderson, A., York, J. D., DiBiase, L., Vasilopoulos, T., Arnaoutakis, G., Beaver, T., Martin, T., & Jeng, E. I. (2023). Dysphagia after cardiac surgery: Prevalence, risk factors, and associated outcomes. *The Journal of thoracic and cardiovascular surgery*, 165(2), 737–746.e3. <https://doi.org/10.1016/j.jtcvs.2021.02.087>

Skoretz, S. A., Yau, T. M., Ivanov, J., Granton, J. T., & Martino, R. (2014). Dysphagia and associated risk factors following extubation in cardiovascular surgical patients. *Dysphagia*, 29(6), 647–654. <https://doi.org/10.1007/s00455-014-9555-4>

Unknown Artist. *Recurrent Laryngeal Nerve*. [https://en.wikipedia.org/wiki/Recurrent\\_laryngeal\\_nerve](https://en.wikipedia.org/wiki/Recurrent_laryngeal_nerve)

## RESULTS CONT.

### Contributing factors:

- Mechanical Trauma (e.g. aerodigestive injury, recurrent laryngeal nerve damage-which may affect vocal fold closure, pharyngeal constriction, velopharyngeal closure)
- Impaired Cognition (from sedation) which may influence the coordination or sensation of swallowing
- Respiratory deficits which may affect the breath-swallow coordination
- Esophageal impairments
- Deconditioning
- Prolonged intubation- significant impact on the swallow as the length of time intubated directly correlates with risk of developing post-extubation dysphagia (A retrospective study of cardiac surgery patients by Skoretz et al. (2014) reports that dysphagia occurs in 1% of patients intubated less than 12 hours, 8.2% of patients intubated 12-24 hours, 16.7% of patients intubated 24-48 hours, and 67.5% of patients intubated greater than 48 hours).

## CONCLUSIONS

Given the high frequency of silent aspiration in this population, potential of unidentified dysphagia remains high. Patients in this population present an increased risk of developing worsened outcomes (e.g. reintubation, increased stay/hospital cost, pneumonia, higher odds of death). This emphasizes the importance of early and collaborative intervention. In the CCU/CVCU at UMC, we seek to trial and implement a screening tool, sensitive enough to more readily improve advocacy for and identify these patients.

