

Managing the Laryngectomy in the Field: Educating the First Responder



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Objectives

To educate first responders about the differences between tracheotomy and laryngectomy patients, and increase confidence in treating these patients in the emergent setting.

Introduction

- With an increase in organ preserving treatments, the prevalence of laryngectomies for cancer has decreased.
- Because of the relative rarity of this procedure, many health professionals are unfamiliar how to assist and care for this population.
- Specifically, it is important to understand the distinction between laryngectomy stomas and tracheotomies.
- In the emergent setting, understanding this difference can save crucial minutes in providing advanced life support, even for non-airway emergencies in the field.

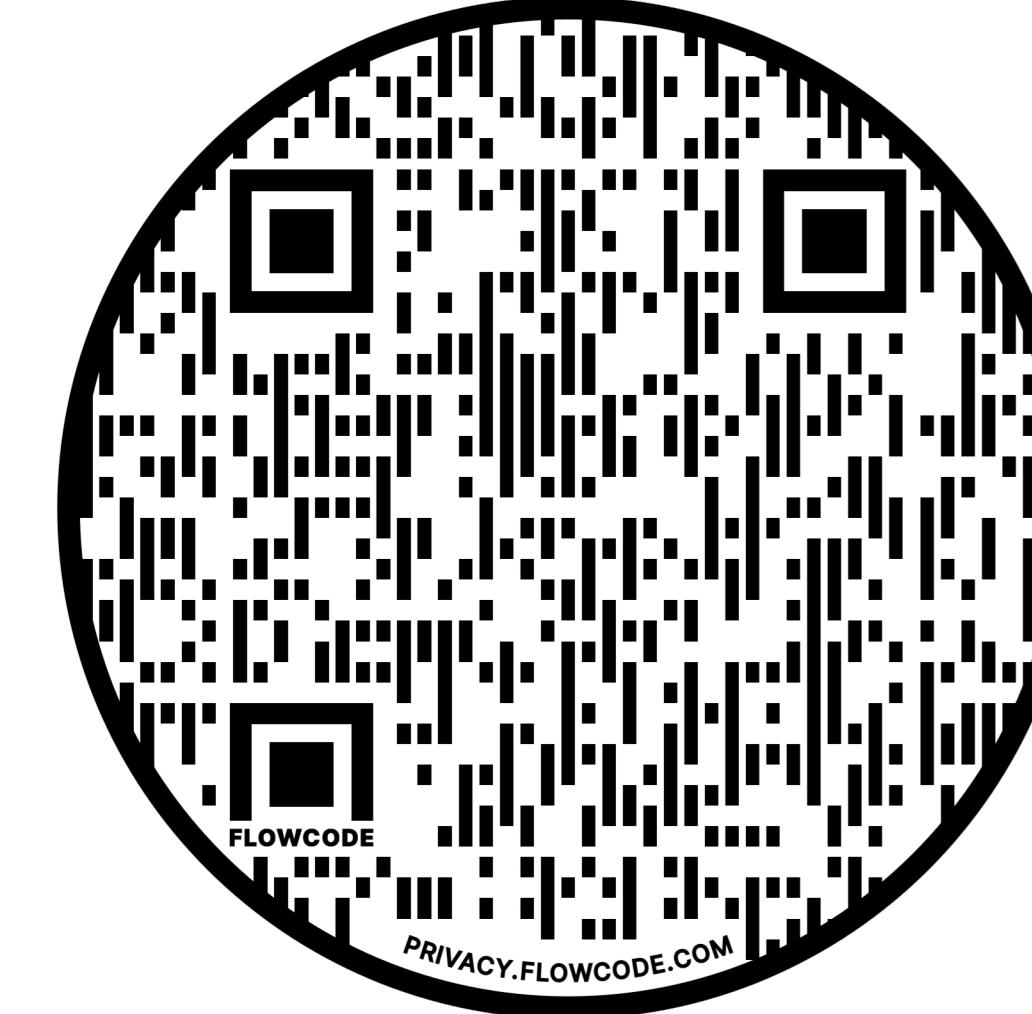
Methods

A brief paper survey was given to first responders to assess their knowledge in identification and treatment of laryngectomy and tracheotomy patients. Following this, a head and neck surgeon provided an interactive lecture regarding the management of both laryngectomy and tracheotomy patients. A post-intervention paper survey was completed by participants to assess changes in knowledge and confidence after receiving this education.

Statistical analysis was performed using t-tests and Mann-Whitney U tests.

References

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- https://en.wikipedia.org/wiki/Laryngectomy#/media/File:Diagram_showing_the_position_of_the_stoma_after_a_laryngectomy_C_RUK_361.svg.
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SCAN for a patient story: The importance of recognizing a laryngectomy patient

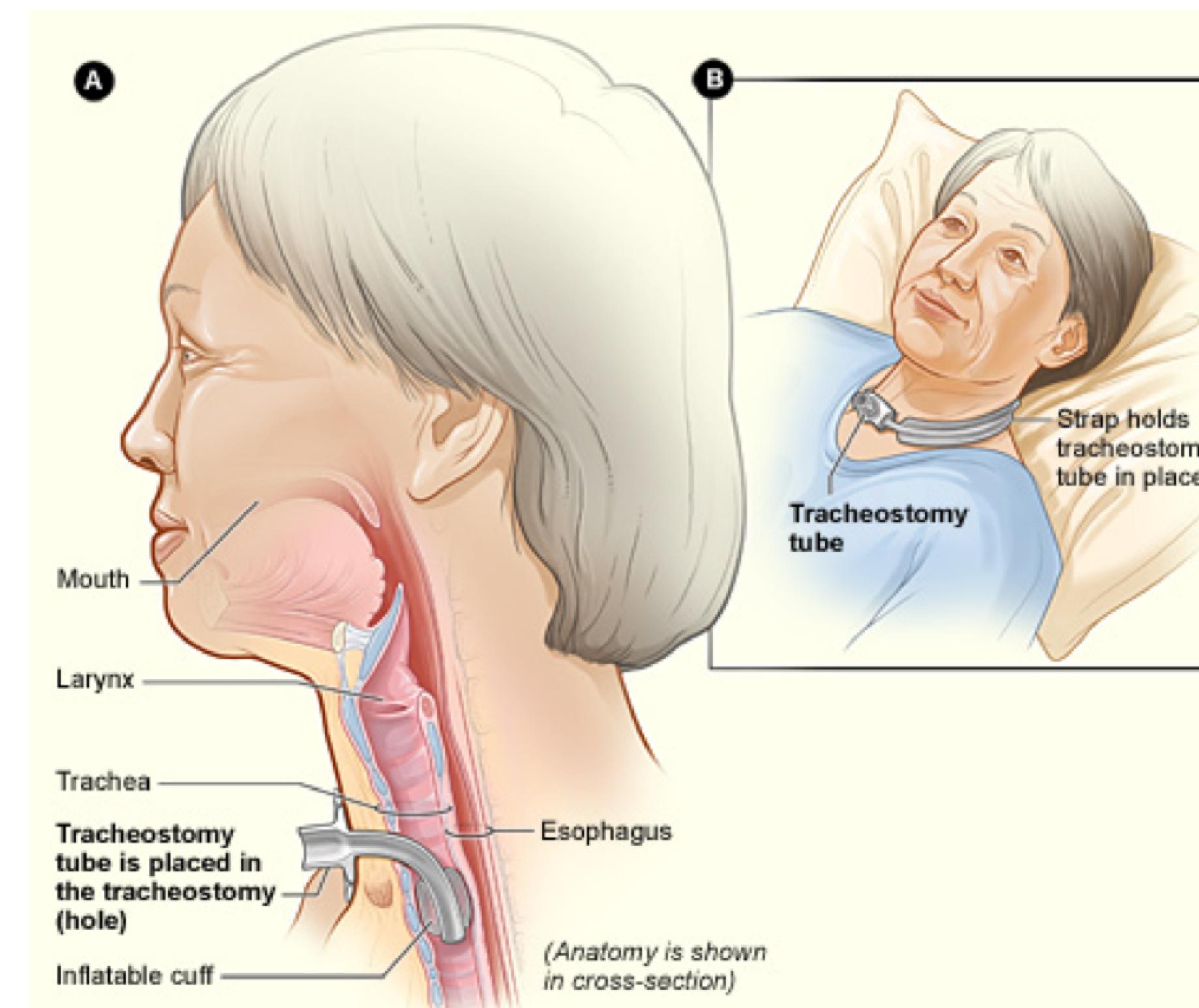


Figure 1. Tracheotomy Anatomy

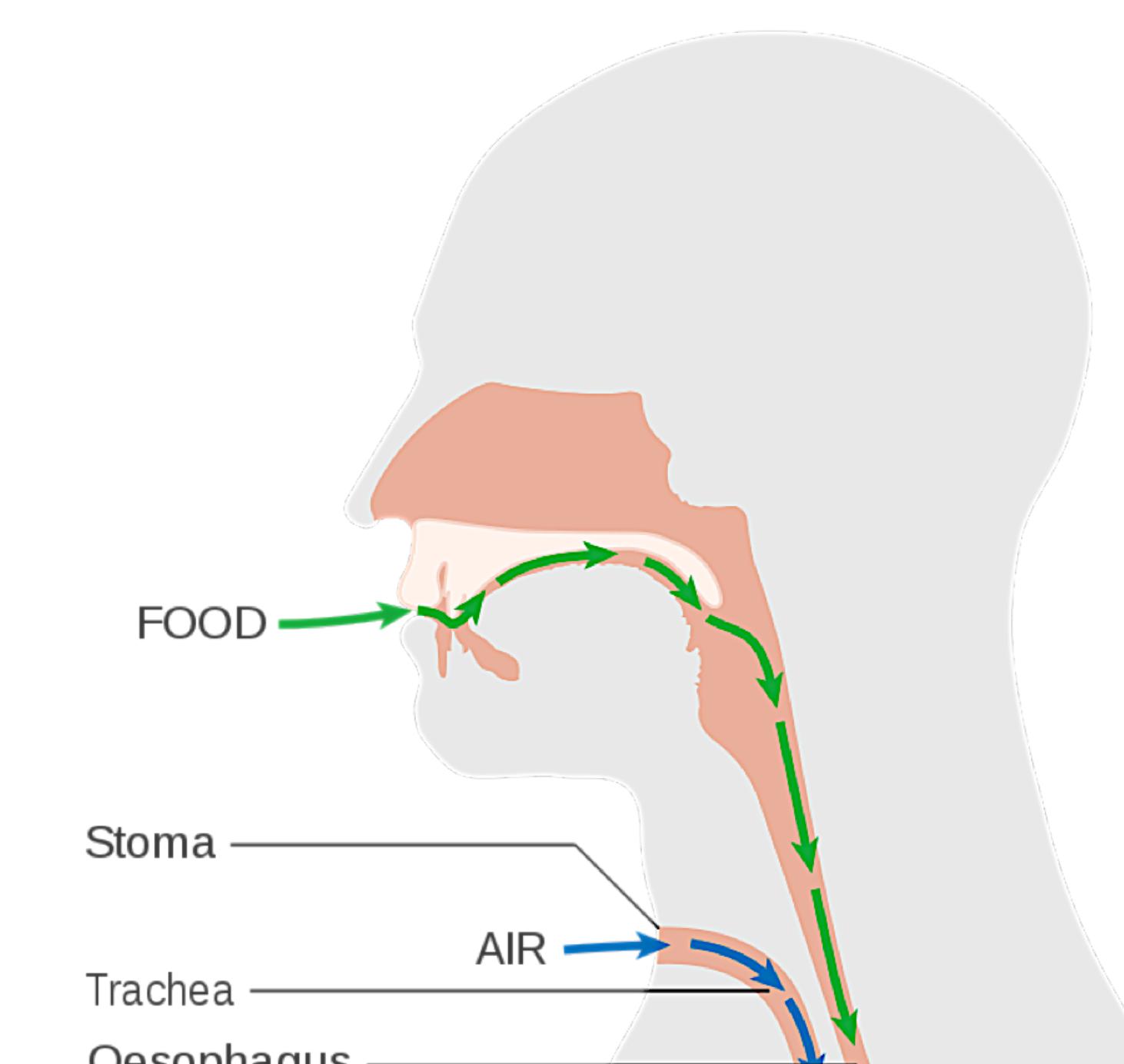


Figure 2. Laryngectomy Anatomy

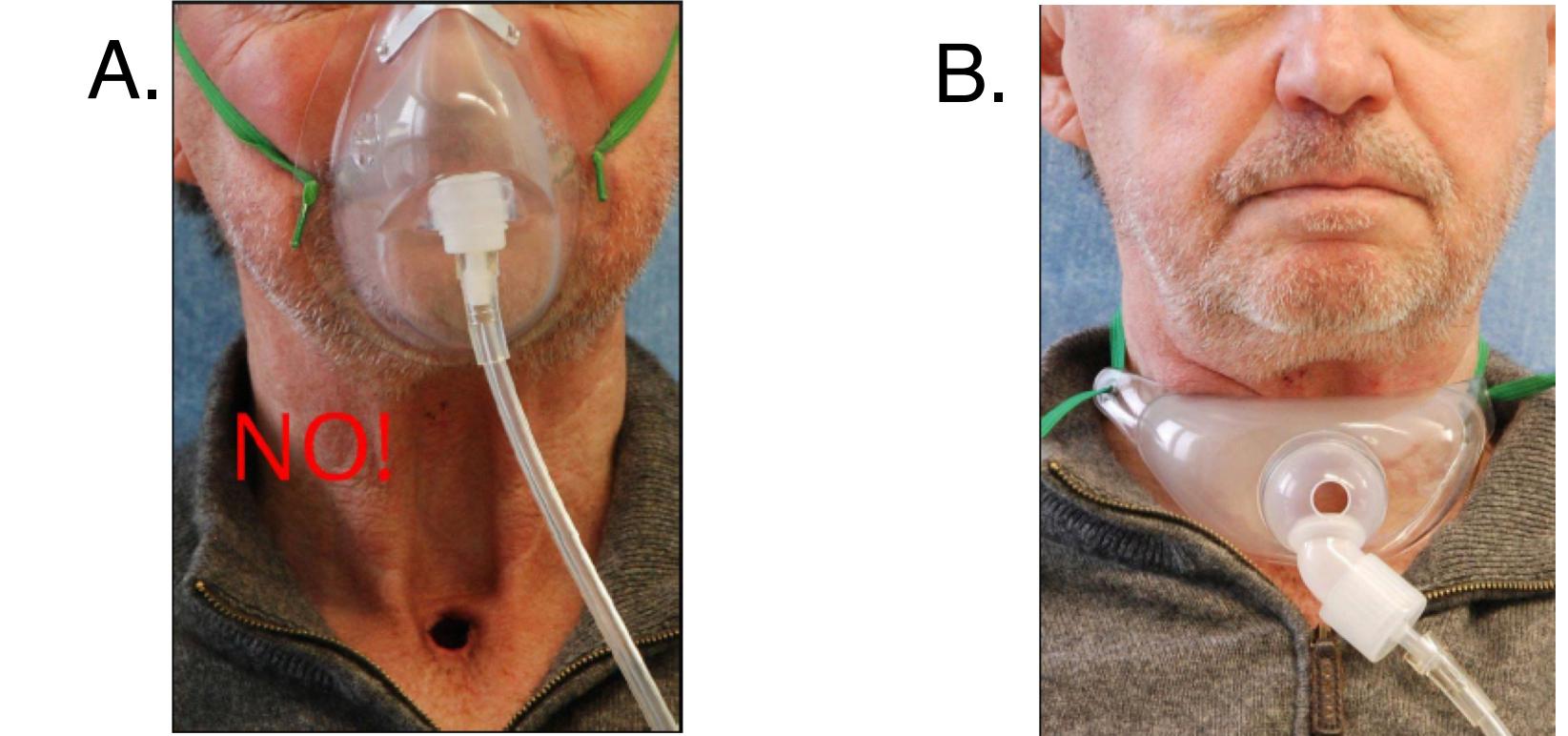


Figure 3. A. Incorrect way to provide supplemental oxygen to a laryngectomy patient. B. Correct way to provide supplemental oxygen to a laryngectomy patient

Table 1: Pre-Education Survey Questions

Question Number	Question
1	What is your role/occupation?
2	How many tracheotomy patients have you treated in the past year?
3	How many laryngectomy patients have you treated in the past year? Are you confident in your ability to differentiate between Tracheotomy Patients and Laryngectomy Patients?
4	On a scale from 1-5 rate your knowledge and preparedness to treat a tracheotomy patient.
5	On a scale from 1-5 rate your knowledge and preparedness to treat a laryngectomy patient.
6	

Table 2: Post-Education Survey Questions

Question Number	Question
1	Rate the change in your knowledge as a result of this education session. After the presentation how confident are you in your ability to treat tracheotomy patients?
2	After the presentation how confident are you in your ability to treat laryngectomy patients?
3	
4	What is the most significant thing you learned from the education session?

Results

A total of 53 attendees completed the pre-training survey. The average number of tracheotomy patients treated in the past year was 3.9 versus 0.3 laryngectomy patients ($p < 0.01$). Participants reported feeling significantly more confident about treating tracheotomy patients ($p < 0.05$). There were 48 participants who also completed a post-educational survey. Every attendee indicated an increase in knowledge after the educational session. 95.8% of participants reported an increase in confidence for treating tracheotomy patients and 91.7% reported increased confidence in treating laryngectomy patients.

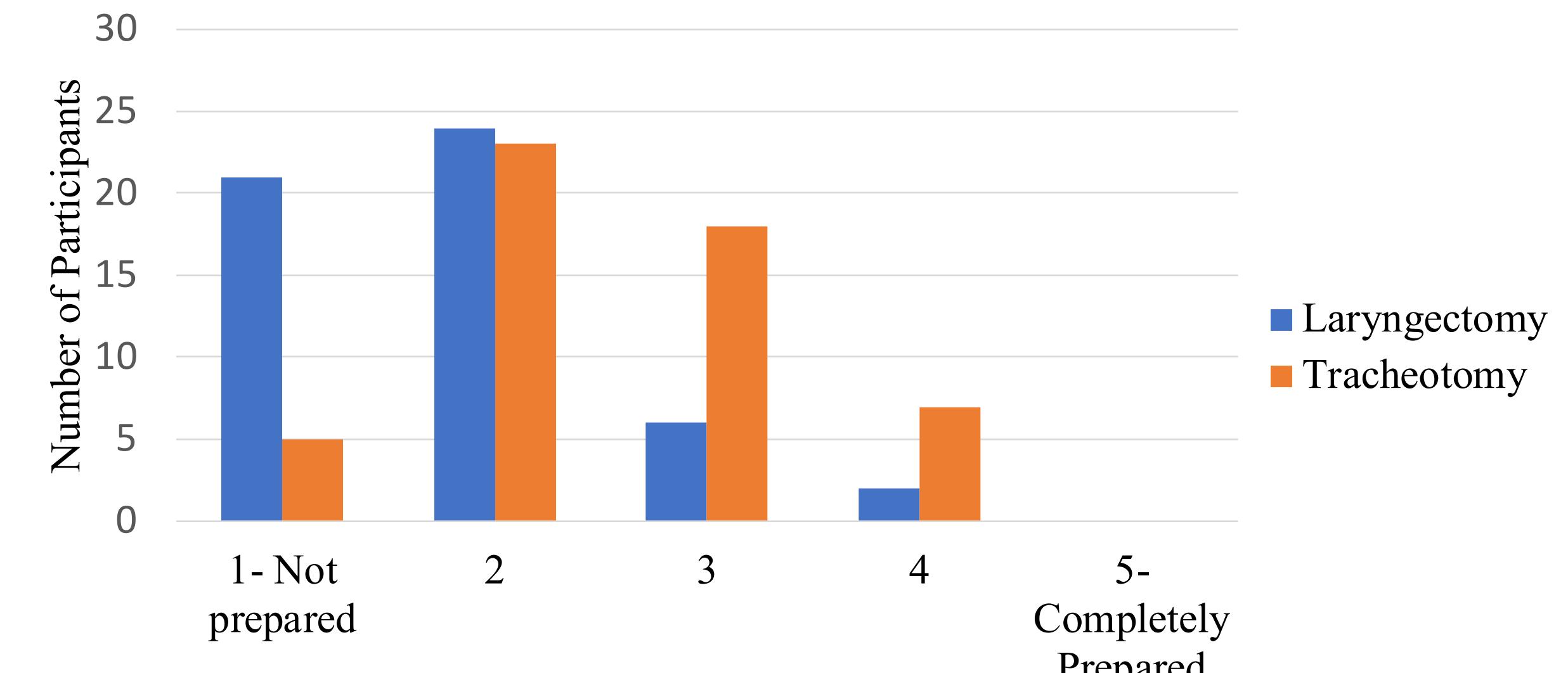


Figure 4: Pre-Education Survey: Knowledge and Preparedness to Treat Laryngectomy and Tracheotomy Patients

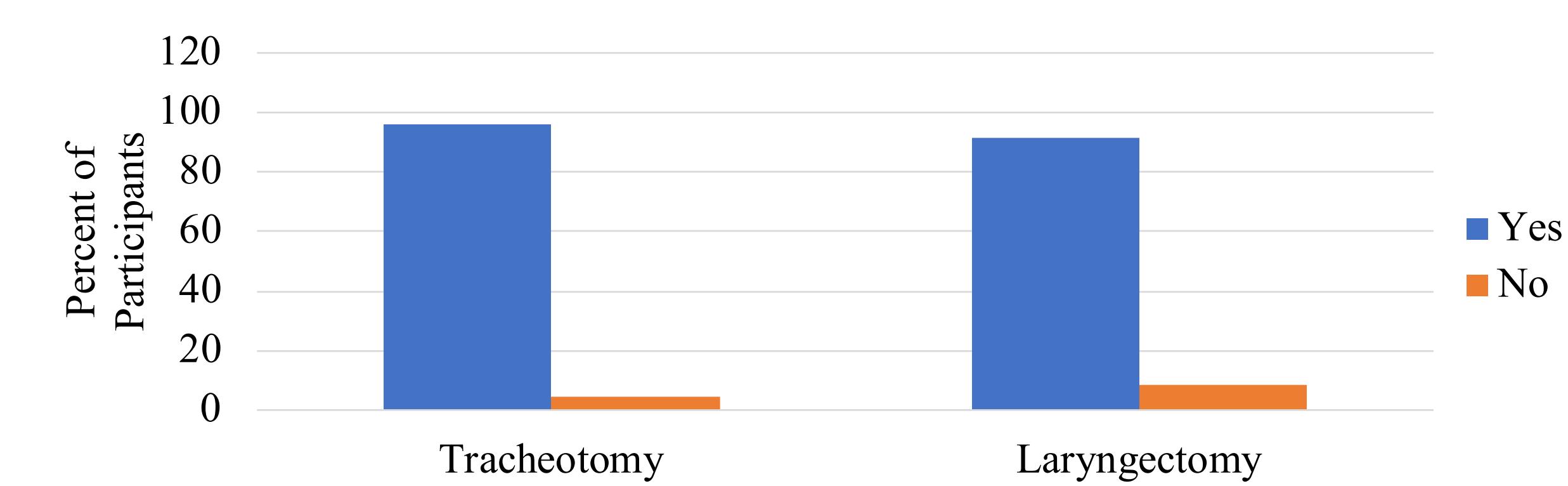


Figure 5: Post-Education Survey Question Responses: Was There a Change in Your Confidence for Treating Tracheotomy and Laryngectomy Patients?

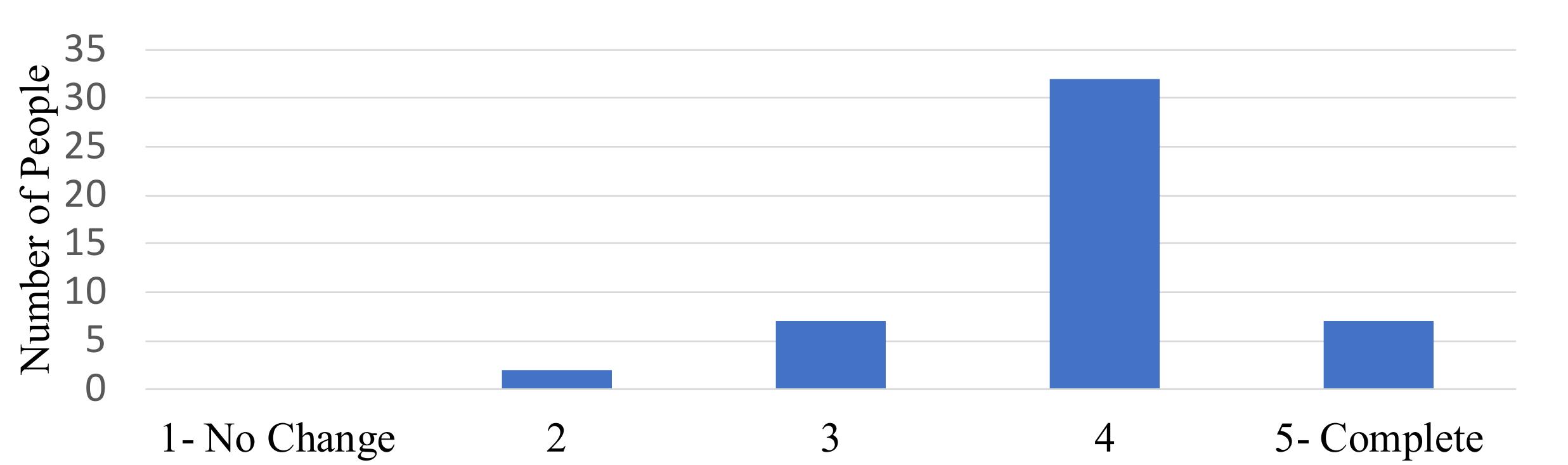


Figure 6: Post-Education Survey Question Responses: Rate Your Change in Knowledge as a Result of This Educational Course

Conclusions

This study shows that paramedics are more comfortable with treating tracheotomy patients than laryngectomy patients. After education from a head and neck cancer surgeon, confidence in treating both groups increased. Educating care teams in the local community and especially first responders can help improve their knowledge and confidence in evaluating and managing laryngectomy patients in the acute and emergent setting.