

Barriers to Percutaneous Tracheostomy in a Canadian ICU



DALHOUSIE UNIVERSITY

INTRODUCTION

- Tracheostomy for prolonged ventilatory support is required in 5-10% of ICU patients.
- Two options for placing a tracheostomy are a bedside percutaneous technique or an open surgical approach in the operating room.
- Percutaneous tracheostomy has several clinical advantages over open tracheostomy, including lower risk of bleeding and infection. Bedside percutaneous tracheostomy also costs less and uses less hospital resources.
- However, there are contraindications to performing percutaneous tracheostomy including spinal instability and inability to identify anatomic landmarks. Relative contraindications include uncorrectable coagulopathy and difficult airway.

OBJECTIVES

- To determine if there is ICU physician variability in the rate of performing percutaneous tracheostomy compared to referring the patient for an open tracheostomy performed in the operating room.
- We hypothesized many patients who were eligible for bedside percutaneous tracheostomy were instead being referred for an open tracheostomy because of physician preference.
- We want to identify physician rational for referring a patient for open tracheostomy compared to accepted contraindications.
- This is the first step to identifying barriers to performing bedside percutaneous tracheostomy and inform future quality improvement initiatives.

METHOD

- A retrospective chart review was performed on all ICU patients who had tracheostomies at the QEII Health Sciences Centre in Halifax, Nova Scotia between January 2018 and June 2022.
- We determined whether the patient had a bedside percutaneous or open surgical tracheostomy placement.
- For each intensivist at the QEII, we determined the number of percutaneous tracheostomies performed relative to the number of patients who were referred by them for open tracheostomy performed in the operating room. We hypothesized that some intensivists were more likely to refer patients for open tracheostomy for reasons other than absolute or relative contraindications.
- For open tracheostomies, we determined through chart review why this approach was chosen over the percutaneous technique.
- For both approaches, we recorded the total days intubated when the tracheostomy was performed and any complications.

AUTHORS

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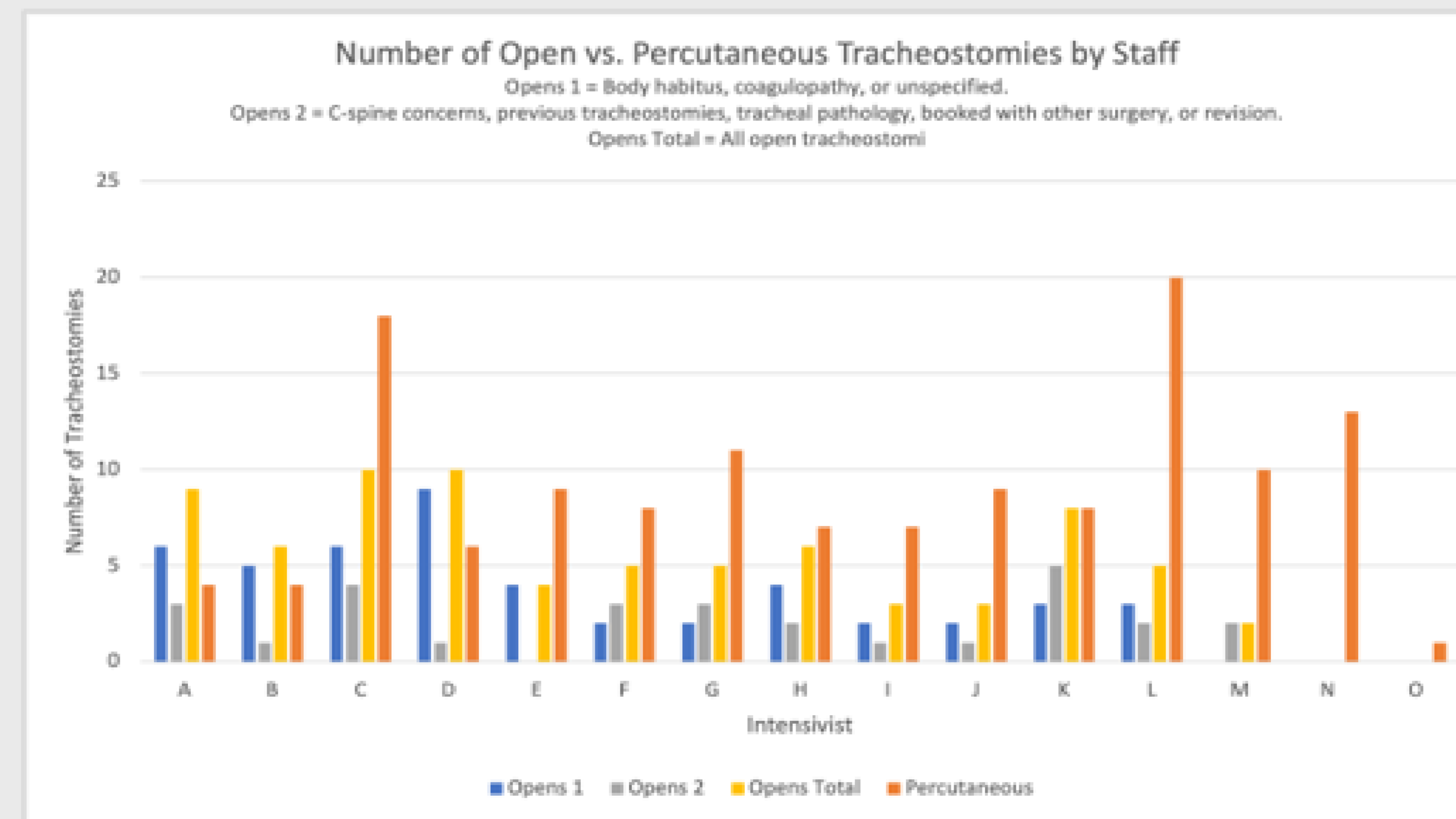
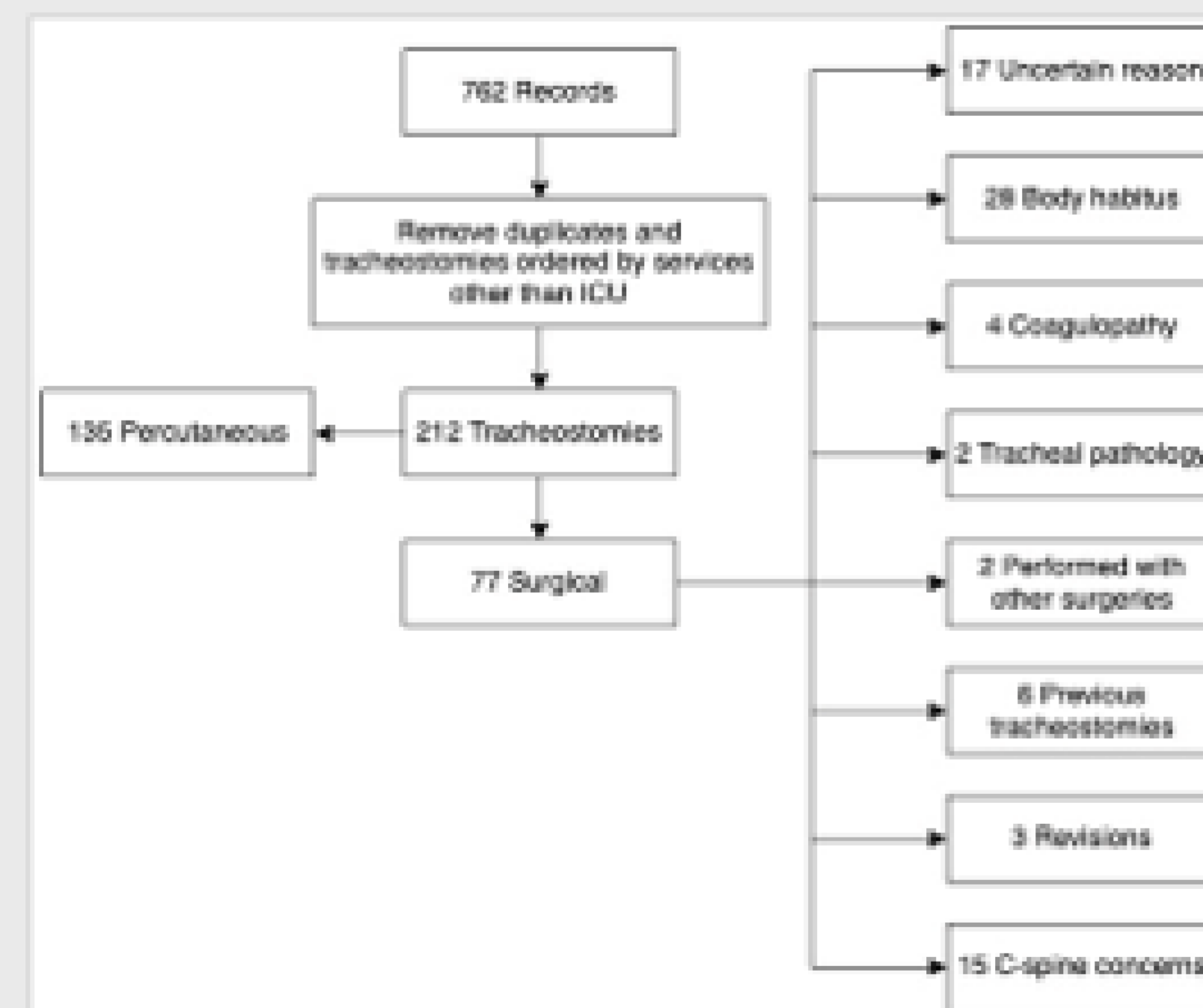
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RESULTS



- A total of 212 tracheostomies were performed during the study period. Of these, 135 (64%) were percutaneous and 77 (36%) were open.
- Median time from intubation to tracheostomy was 10 days for both open and percutaneous procedures. **Of the open tracheostomies, 49 (64%) were performed for unspecified reasons, concerns related to patient body habitus, or coagulopathy.**
- **In the group without a clear indication for open tracheostomy, there was significant physician variability in consult rates.**

CONCLUSION

There is significant physician variability in whether an open or percutaneous technique is preferred.

In over half of patients referred for open tracheostomy, there is no identified contraindication.

Opportunity exists at our centre for quality improvement initiatives to decrease the rate of open tracheostomy.

ACKNOWLEDGEMENTS

We would like to thank all members of the Department of Critical Care Medicine for their participation in the care of our patients and in efforts such as this one to generate new knowledge and increase the quality of our practice.

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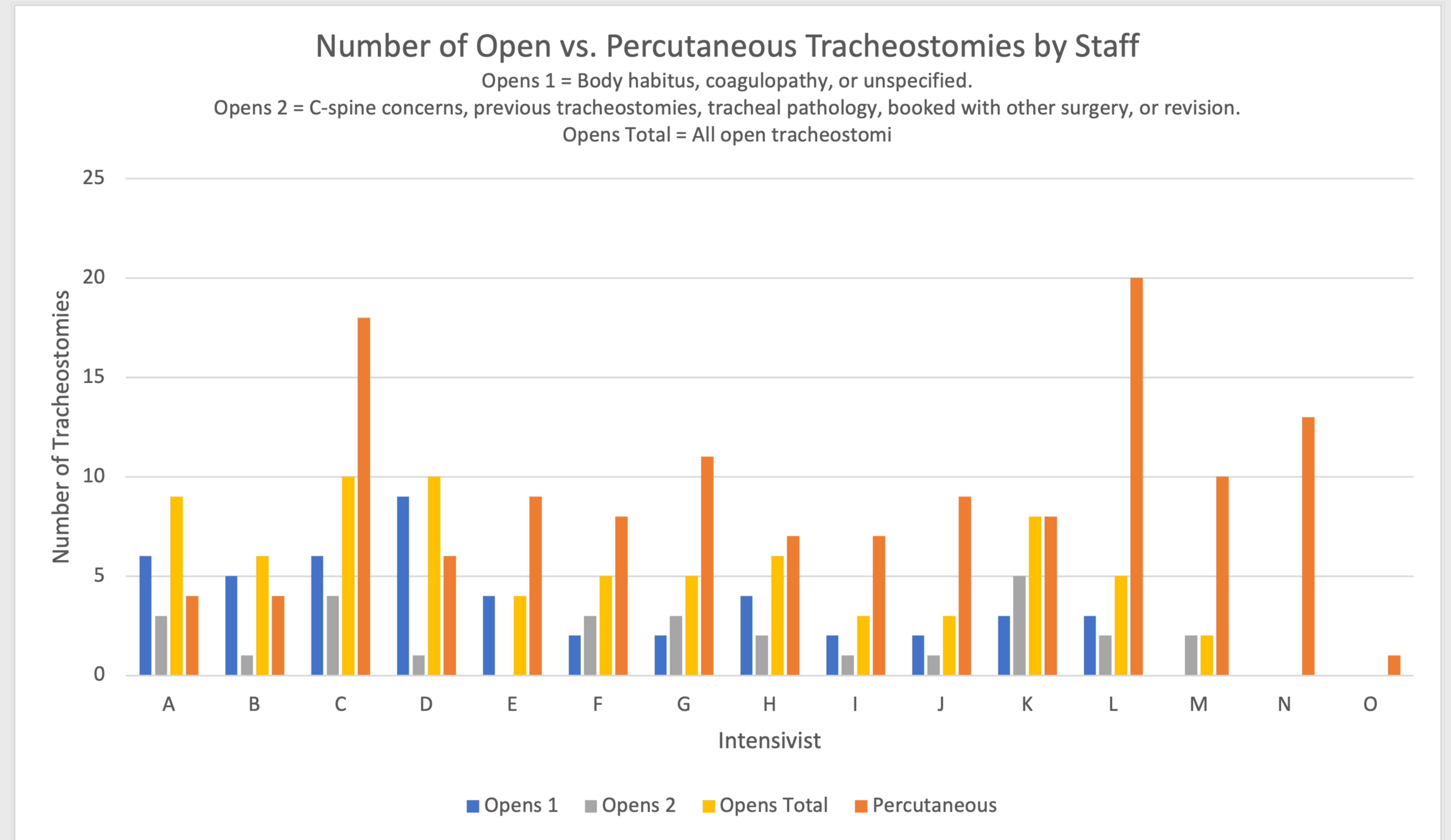
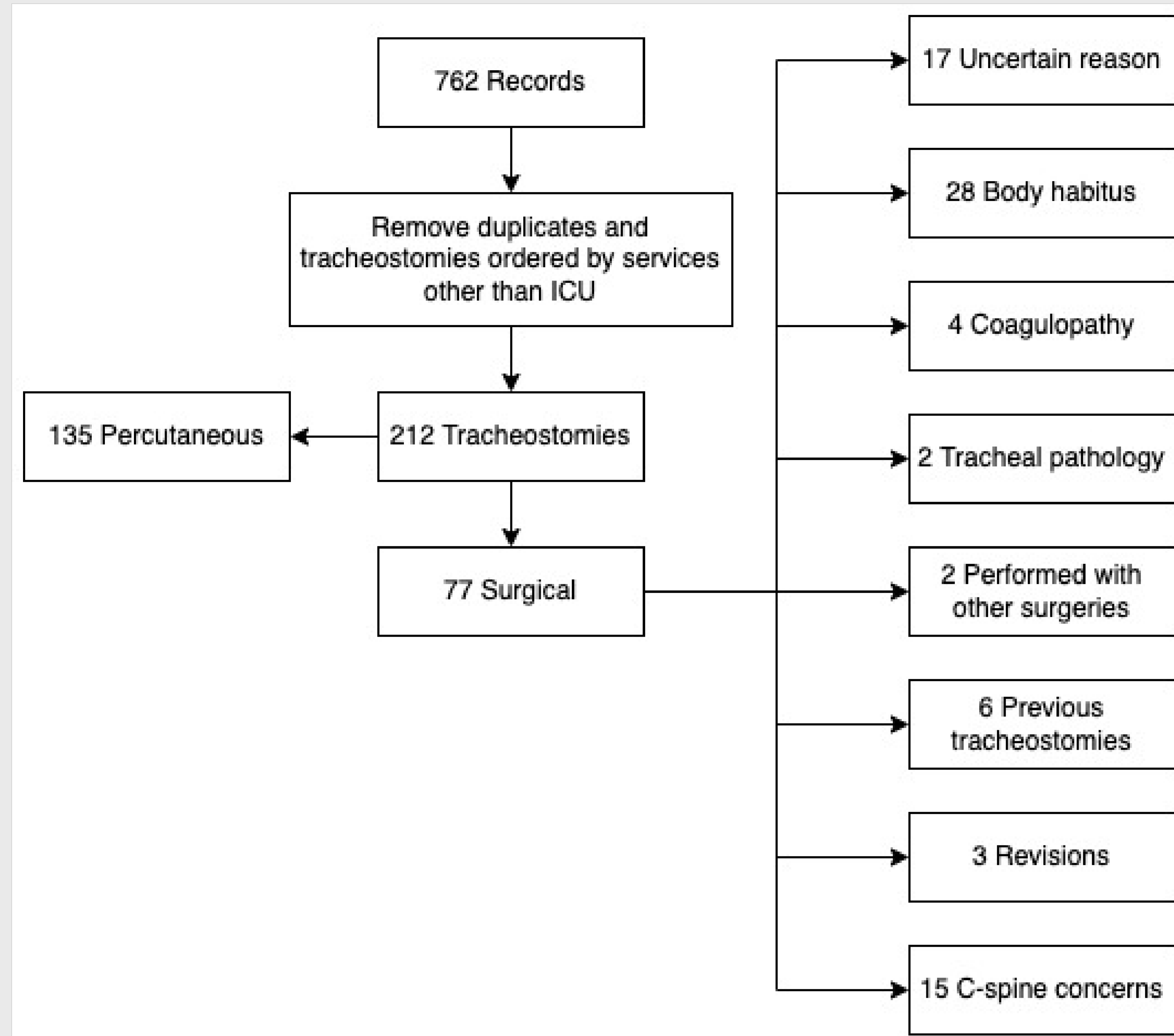
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