

Routine early tracheostomies in severe pneumonia: should TRACMAN have put this to bed?

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Introduction

- Early tracheostomy is routine practice in Cumberland Infirmary, Carlisle (CIC)
- This observation of practice at CIC and Sunderland Royal Hospital (SRH), aimed to investigate this perceived variation in practice
- TRACMAN demonstrated no mortality benefit with early tracheostomies (1)
- TRACMAN showed no increased harm with early tracheostomies
- Studies have shown a reduction in sedation and ICU length of stay with early tracheostomies, but the evidence is weak and often conflicting (2, 3)

Objectives

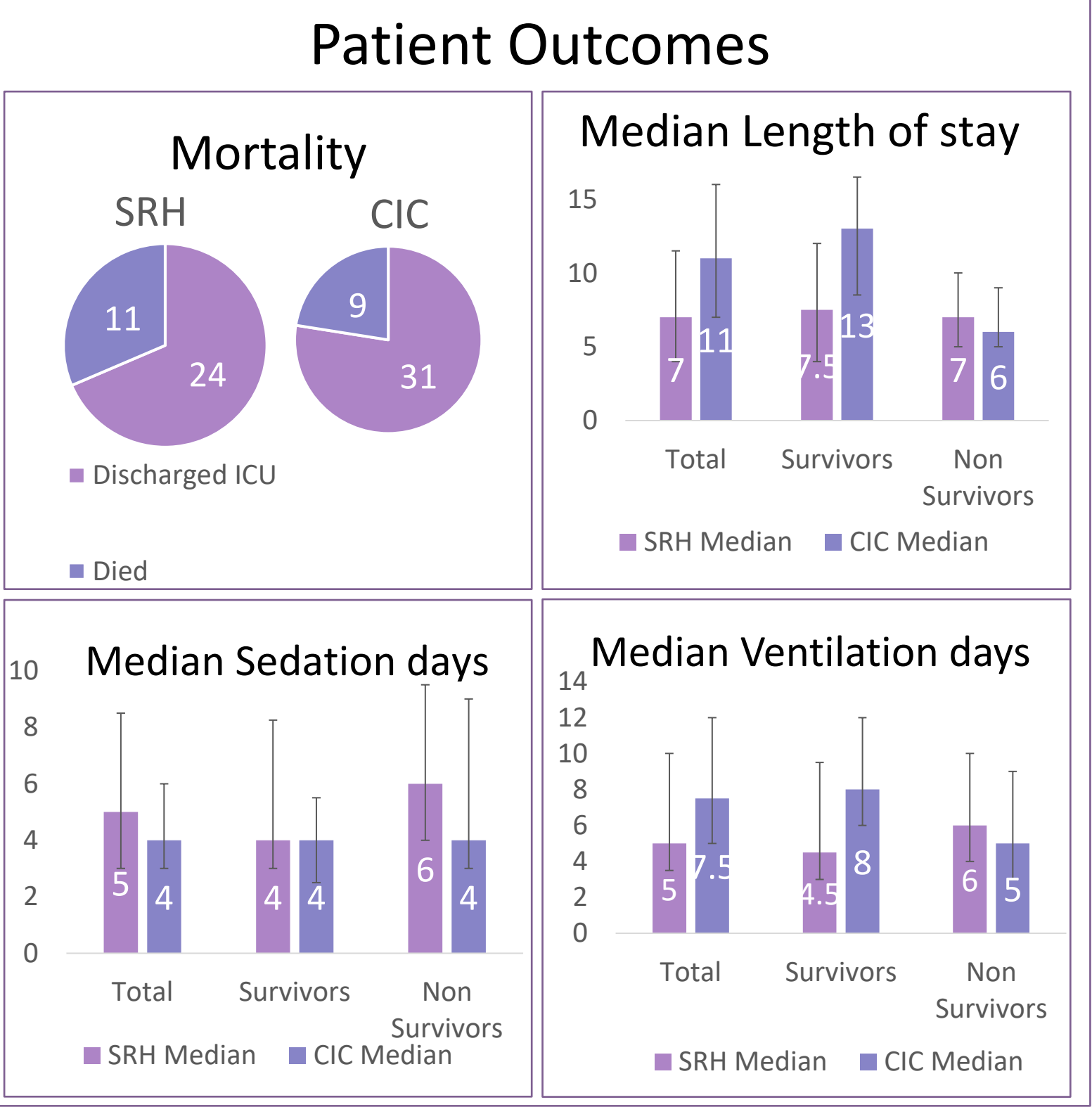
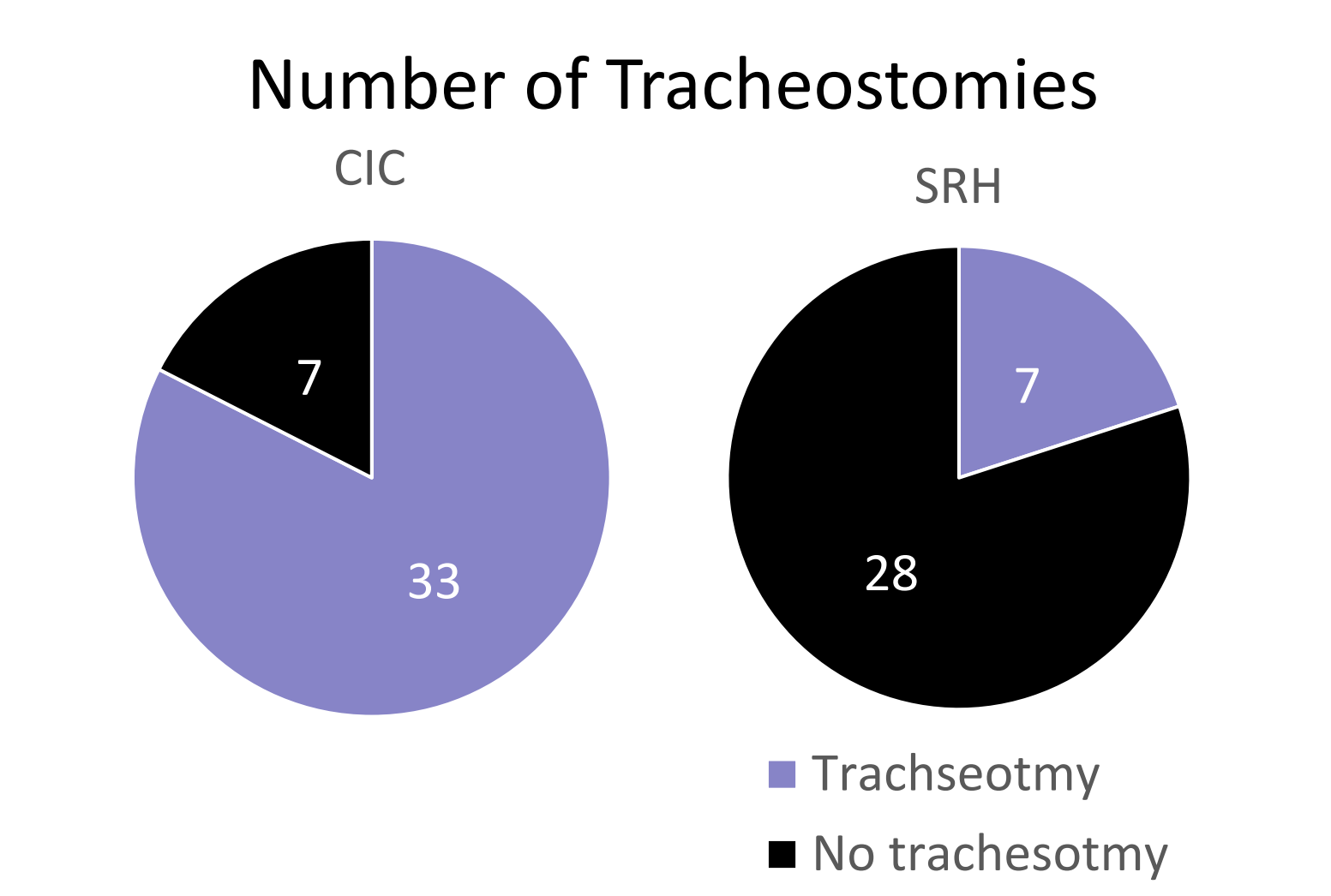
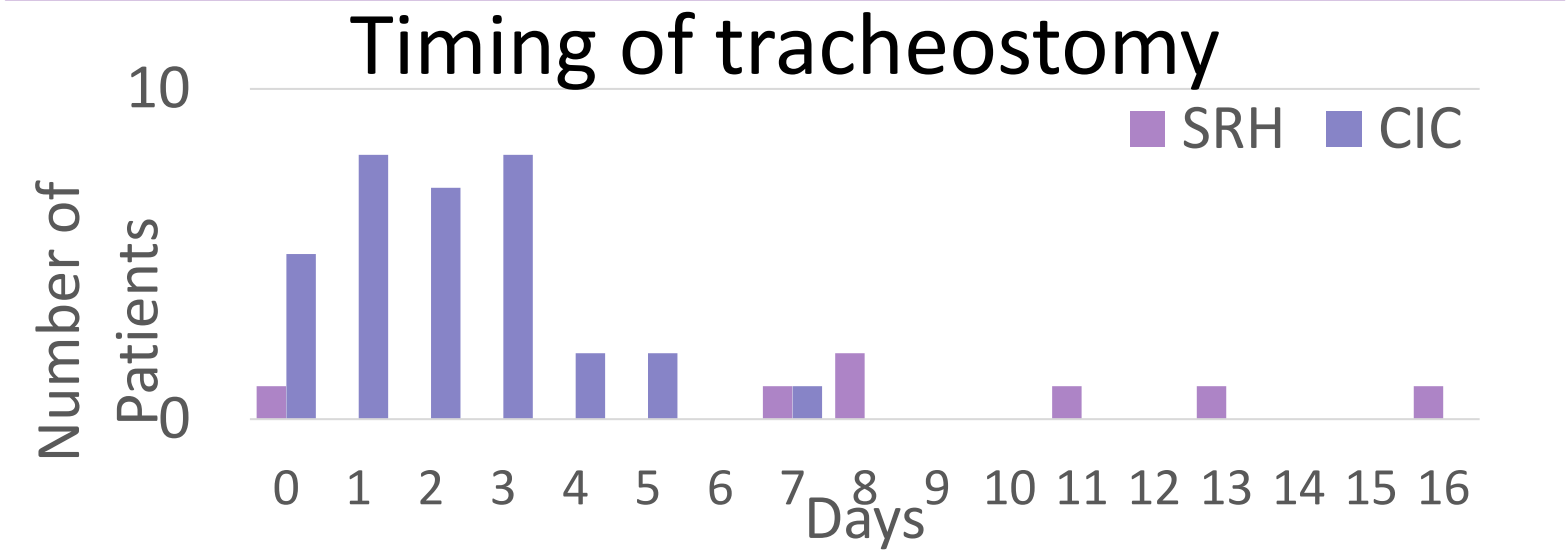
- Is the proportion of patients who underwent tracheostomy different at the two ICUs?
- Is the timing of tracheostomy different between the two ICUs?
- Is there a difference in relevant patient outcomes?

Methods

- Data collected from Ward watcher 01/08/2018 - 31/07/2019
- Patients admitted with pneumonia, ventilated for greater than 48 hours were identified
- Patients with pre-existing tracheostomies were excluded
- Data was collected:
 - If a tracheostomy was performed
 - when the tracheostomy was performed
 - number of days sedated
 - duration of mechanical ventilation
 - ICU length of stay
 - survival to ICU discharge
 - Gender, age, aetiology (community vs hospital acquired) and APACHE II scores

Results

- CIC performed tracheostomies in 82.5% of 40 patients
- SRH performed tracheostomies in 20% of their 35 patients (p< 0.00001)
- The median time to tracheostomy was 2 days at CIC (range 1-7 days) and 8 days at SRH (range 0-16 days) (p<0.001)
- No significant difference in days sedated, duration of ventilation, length of ICU stay or survival to ICU discharge
- No significant difference in age or APACHE II scores



Discussion

- Two similar ICUs had a disparate approach to the timing of tracheostomies
- CIC practice is a clear outlier
- No difference in patient outcomes were seen
- TRACMAN provided good evidence that early tracheostomies did not improve 30-day mortality, nor did they increase mortality
- Early tracheostomies may still have a place in ICU practice as it is likely that there are patients that could benefit out with mortality
- The heterogeneity of ICU patients makes differences in length of stay and consequences of ventilation and sedation, such as delirium, difficult to study
- Challenges in long term follow up of ICU patients and the low rates of complications, make study of harm difficult to quantify
- Discussion about variation in practice is important to help us reflect on our practice and apply the evidence available
- Further research into identifying patient groups that may benefit from early tracheostomies in ICU would be helpful

References

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