Evaluation of the implementation of a Tracheostomy Review Service (TRS) – do all get the same positive outcomes?

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Background:
There is an increasing trend in the literature suggesting multidisciplinary tracheostomy teams may improve safety and patient outcomes.

Method:
This project evaluated the effect of a multidisciplinary Tracheostomy Review Service (TRS) on outcomes at Western Health (WH). The TRS was commenced in 2012 and reviewed all tracheostomised patients admitted to the wards. Data was collected via medical record audit. Two years of retrospective data of pre-TRS patients (n=39) was compared with twelve months of prospective data of post-TRS patients (n=28) for: length of cannulation (LOC); length of ward-based cannulation (LOWBC); length of stay (LOS); ICU LOS (ICU-LOS); the frequency and time to trial one way valve (PMV); and tracheostomy-related adverse events (AE) occurring on the ward. Staff were also surveyed regarding their knowledge and confidence in tracheostomy management pre and post the TRS trial.

Results:
No significant difference was seen in LOC, LOWBC, LOS, ICU-LOS and AE following the TRS trial. A significant increase (p=0.04) was seen in the frequency of one way valve use, with 74% of patients using these pre-TRS, compared with 100% post-TRS. Results from the staff surveys indicated an improvement (p<0.05) in staff self-reported knowledge and confidence in more complex areas of tracheostomy management, including inner cannula care, cuff deflation trials, PMV use, emergency management and decannulation. 78% of the staff surveyed reported a desire for the TRS to continue into the future.

Discussion:
Although contributing to improvements in some aspects of staff knowledge and confidence, limited measureable improvements in patient outcomes was seen following the implementation of a multidisciplinary TRS. Limitations of this study include a small sample size and extreme heterogeneity of patient characteristics. A better understanding of our patient group may help to identify patients who would benefit from this specialised, multidisciplinary team approach to their tracheostomy management.