

Improving Healthcare Staff Knowledge and Comfort in Caring for the Child with a Tracheostomy

Amanda Wise, Ashley Sparks, Denise Willis
Arkansas Children's Hospital, Little Rock Arkansas

Background

- Children with tracheostomies (trachs) with/without ventilator dependency are one of the most medically fragile, high-risk patient populations.
- Care practices should be consistent throughout different areas of a healthcare organization.
- Nurses and respiratory therapists who provide care at the bedside must remain proficient in trach care procedures.
- Admitting a trach-dependent child to an area where staff are not as comfortable or accustomed to providing routine trach care can potentially present safety concerns.
- We hypothesized that a multimodal educational intervention would increase healthcare provider comfort with trach management.



Methods

- Registered nurses (RN) and respiratory therapists (RT) at one children's hospital were invited to anonymously complete a survey regarding staff comfort and knowledge in caring for trach-dependent children.
- The survey domains were comfort with caring for a child with a trach, caring for a child with a trach and ventilator, routine trach care (cleaning neck/area around the stoma, changing trach ties), routine trach tube change, and emergency trach tube change.
- A 5-point Likert scale used to evaluate comfort-related items.
- Educational interventions provided after initial survey included a presentation for staff and instructional videos about trach skills for caregivers and staff.
- The survey was repeated 6 months following interventions to evaluate change in staff comfort and knowledge.
- Descriptive statistics were used to summarize results.
- The Mann-Whitney test was used to compare data.
- $P < 0.05$ considered significant.

Results

Respondent Role and Work Area	Pre Survey	Post Survey
OVERALL	n=275 (%)	n = 142 (%)
ICU (NICU, PICU, CVICU, step-down)	76 (27%)	40 (28%)
Designated ventilator ward	27 (10%)	22 (16%)
Medical/Surgical ward	25 (9%)	13 (9%)
Emergency Department	14 (5%)	7 (5%)
Outpatient	61 (22%)	29 (20%)
Rotating staff	36 (13%)	15 (11%)
Other area	36 (13%)	16 (11%)
RT	59 (21%)	39 (27%)
ICU (NICU, PICU, CVICU, step-down)	12 (4%)	8 (6%)
Designated ventilator ward	3 (1%)	7 (5%)
Medical/Surgical Ward	1 (<1%)	2 (1%)
Emergency Department	4 (1%)	1 (<1%)
Outpatient	11 (4%)	7 (5%)
Rotating staff	21 (8%)	10 (7%)
Other area	7 (3%)	4 (3%)
RN	216 (79%)	103 (73%)
ICU (NICU, PICU, CVICU, step-down)	64 (23%)	32 (23%)
Designated ventilator ward	24 (9%)	15 (11%)
Medical/Surgical Ward	24 (9%)	12 (8%)
Emergency Department	10 (4%)	6 (4%)
Outpatient	50 (18%)	23 (16%)
Rotating staff	15 (5%)	7 (5%)
Other area	29 (11%)	8 (6%)

Conclusions

- Increased comfort was reported for all aspects of care following the educational interventions.
- The most significant increase in comfort was with routine trach tube change.
- Overall, RTs were more comfortable with all areas as compared to nurses.
- The targeted educational interventions seemed beneficial in helping both nurses and respiratory therapists feel more comfortable in caring for a trach-dependent child.
- Ongoing education will be necessary to increase knowledge and comfort in performing life-saving maneuvers, including emergent trach change.

