CREATING AND SUSTAINING RN VENTILATOR/TRACHEOSTOMY COMPETENCY: A COLLABORATIVE APPROACH

Michelle L. Rhoney MS, RN, CNL, CMSRN
Christy Pruitt BSN, RN, CMSRN
Adam Turigliatto RRT, RCS
Tracey Loudon MN, RN, CNS, CCNS, CCRN
Kimberly Kirkpatrick MS, RN, CNL
PROBLEM

No evidence-based nursing competency for care of Vent/Trach patients
OBJECTIVE

Nurses will be competent and confident in caring for vent/trach patients
STRATEGY

- Interdisciplinary workgroup:
  - 5D Charge RN
  - 5D’s two Clinical Nurse Leaders
  - Respiratory Therapy Care Coordinator
  - CCU Clinical Nurse Specialist

- Evidence-based, interactive in-service
STRATEGY CONTINUED

- The vent/trach in-service included:

  - Pre/Post Questionnaire
  - PowerPoint
  - Hands-on, interactive
  - Intermittent mini “Quiz”
1. Is the trachea located in the upper or lower respiratory tract?

2. What is the critical function of Ventilation?

3. What is the normal range for cuff pressure?

4. What must be done before Passy Muir valve is applied to the patient?

5. True or False: Cuff must be inflated when on ventilator.

6. How often should the suction system be changed?

7. What is the maximum suction time during each pass?

8. The (color)_____ end of the Ambu bag must be connected to the (color)_____ output of the O2 source.

9. What are the four “must haves” in a vent/trach patient's room?

10. Who is the 1st line responder?

11. What are the four items need at the bedside for a vented/trach patient?

12. The PIP has increased, what could cause this?

13. What is PEEP?

14. Name 4 things you can do as the nurse to help prevent VAP.

15. What % compliance with the bundled nursing interventions is needed to prevent VAP?

16. Do you need to suction the patient before turning, after turning, or both?

On a scale of 0 to 10, with 0 being entirely unconfident and 10 being completely confident, how would you rate your current confidence with ventilators and trach care/maintenance? ______________
PRACTICE CHANGES

- All RNs required to attend

Specific changes included:

- Holistic and patient-centered care
- Mobilization of secretions
- Suctioning both orally and in-line before/after turns
- VAP prevention techniques

Management Support
RESULTS

Overall:

- 100% (N = 31) RNs attended
- Staff knowledge and confidence increased
Average # of CORRECT questions on Vent/Trach Knowledge Test
(15 Questions total; N = 28 pre/post, N = 17, 3-month post)

Pre-Test: 5.6
Post-Test: 14.6
Three-Month Post: 11.2
Average RN Confidence Level in Caring for Vent/Trach Patients

Likert Scale: 0 = No Confidence; 10 = Complete Confidence

N = 28 Before/After, N = 17, 3-Months After

Before In-service: 6.5

After In-Service: 8.4

Three-Months After In-service: 8
PLANS FOR SUSTAINMENT

- Workgroup meeting 2014
- Yearly competency

45 minute competency check:
- Questionnaire
- Review
- Three case studies
PDSA CYCLE -- MODIFICATIONS

- Requirement changes
- Vent/Trach supply checklist
Room Readiness: Care for the patient with Tracheostomy Tube Supply Checklist

<table>
<thead>
<tr>
<th>Supply</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obturator</td>
<td>Defined location</td>
</tr>
<tr>
<td>Replacement tracheostomy tube (Shiley)</td>
<td>Taped to the wall at the head of bed</td>
</tr>
<tr>
<td>one the same size, one one size smaller</td>
<td>On top of bedside cabinet</td>
</tr>
<tr>
<td>Ambu bag</td>
<td>Hanging from O₂ meter: ready for use at anytime</td>
</tr>
<tr>
<td>Wall suction regulator with tubing</td>
<td>Ready for use at any time</td>
</tr>
<tr>
<td>Tonsil (Yankaur) suction</td>
<td>Set up ready for use at any time</td>
</tr>
<tr>
<td>Single use sterile suction kits</td>
<td>Bedside cabinet, top drawer</td>
</tr>
<tr>
<td>Disposable inner cannula (if applicable)</td>
<td>Bedside cabinet, top drawer</td>
</tr>
</tbody>
</table>

Safety Mantra: *Everything in its place and everything has a place*
ENSURING SUCCESS

- Collaboration with experts
- Management support
- To maintain RN competence and confidence
  - An educational plan should be developed for new nurses
  - A yearly review should be provided
  - Resources accessible
REFERENCES

Thanks to 5D staff for participating and supporting one another to ensure 100% of eligible nurses received the education!

Thanks to 5D Manager Jamie for all the support!