VARI Prevention Standard for Home Care

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Objectives: At the end of this education, the learner will:

• Define “Prevention Standard”
• Describe the components of the Home Care VARI Prevention Standard
• Implement the principles of the VARI Prevention Standard in the home setting
What is a Prevention Standard?

- A standard of care, based on evidence, to prevent harm or injury to our patients for various conditions/situations
- These standards outline the key process, details, tips for practice and rationale
- The key to success with Prevention Standards involves **everyone following every step of the standard every time**

Prevention Standard Strategies

- Defined set of interventions aimed at decreasing the risk of harm
- Provides standardization in care—all perform the tasks the same way all the time
- Interventions are based on best evidence
- Standardized education provided to all staff
- Practice audits and coaching
What is a VARI?

- **Ventilator Associated Respiratory Infection**
- This includes:
  - Pneumonia
  - Tracheitis
- Includes any patient with:
  - Tracheostomy **and**
  - Any positive pressure applied to the trach for any period of time (ventilators, BiPAP)

Background of VARI Prevention Standard

- Cincinnati Children's noted an increase in ventilator associated pneumonia (VAP) several years ago in the inpatient population
- A task force was formed and an evidence-based "VAP Bundle" was created for use in the ICUs
- Current literature has updated "VAP" to include other respiratory infections, so the name was changed to "VARI" and is now a Prevention Standard
Background (continued)

- Work has been ongoing to spread the VARI Prevention Standard to the rest of CCHMC inpatient areas.
- Home Care decided to examine the inpatient VARI Prevention Standard and adapt it for home use, since our ventilated patients are at increased risk for a VARI.

Spread to Home Care

- Alignment with Hospital Strategic patient safety goals

- The development and implementation of the Home Care VARI Prevention Standard in Home Care for PDN patients
The Home Care VARI Team includes:

- Home Care Outcomes manager
- Clinical Team, director, managers, education specialist, case manager
- Parent advisory
- CCHMC respiratory therapists
- PDN field staff

The Evidence

- There are few studies on VARI or its prevention in the home setting
- The Home Care VARI team utilized:
  - The 2003 AARC Guidelines “Care of the Ventilator Circuit and Its Relation to Ventilator-Associated Pneumonia”
  - AAP “Guidelines for Pediatric Home Health Care” (2nd Edition)
  - Survey of community home care agencies
  - Input from Cincinnati Children's inpatient VARI team
Testing

- Input was gathered from several PDN families on the Prevention Standard content
- Testing was performed with several PDN patients and nurses
- Changes were made based on self audits, feedback and identified barriers

Components of the VARI Prevention Standard

- Hand Hygiene
- Mouth Care
- Preventing Aspiration of Secretions
- Equipment Care
What is New?

- You are already doing many of the components of the VARI Prevention Standard.
- The next slides will highlight what may be new practices.

Highlights of the VARI Prevention Standard

- Standardization of care among staff and family
- Standardization of “clean” suction
- Hand hygiene and clean gloves prior to performing respiratory procedures and oral care
- Mouth care standardization: Twice/day with AM care and at bedtime
Highlights (continued)

• Head of bed elevation
• Oropharyngeal (OP) suction before repositioning
• Standardized use of tap water for rinsing suction catheters
• Discarding water after each use
• Use of separate catheters and water containers for trach vs. oral suction
• Maintaining catheters in separate labeled packages

Highlights (cont’d)

• Changing suction catheters every shift
• Checking for water in the circuit before repositioning
  – Draining water back to humidifier if clear
  – Discarding if contaminated with blood/secretions
Hand Hygiene

- BEFORE and AFTER patient care
- BEFORE and AFTER using gloves
- Respiratory procedures can be done back-to-back (e.g. trach suctioning/care, CAM, vest, nebulizer treatments, oral suctioning/care, clearing circuit condensation) with hand hygiene performed once before and once after the back-to-back procedures.

Hand Hygiene

- Repeat hand hygiene and apply clean gloves if secretions get on your hands
- Work from clean to dirty; repeat hand hygiene and apply clean gloves after doing care below the child’s waist or a “dirty” procedure (e.g. wound care)
Mouth Care

- Standard: Perform twice/day, with AM care and at bedtime and/or after meals
- Gloves are required
- BEFORE oral care, suction OP to remove secretions pooled in the oral cavity/above a trach cuff (see exceptions on upcoming slide)
- Brush teeth/tongue with toothbrush or swab using toothpaste, then swab mouth with antiseptic mouthwash

Mouth Care (cont’d)

- Suction OP again to remove secretions that can be aspirated (see exceptions on upcoming slide)
- Apply moisturizer as needed
- Why? Good oral care prevents the buildup of bacteria that can be aspirated into the lungs
- Document on Nursing Flowsheet
Preventing Aspiration of Secretions

• Three components:
  – HOB Elevation
  – Oropharyngeal (OP) suction
  – Trach suction

HOB Elevation

• Elevation of bed to be at least 30 degrees
• Cribs to be elevated 15 degrees maximum
• Protractor or visual guide to be provided for home use
• Why? HOB elevation helps prevent pooling of secretions in the back of the OP (causing bacterial growth) and reduces risk of aspiration from reflux
• Document on Nursing Flow sheet
General Suctioning Standard

- Maintain separate equipment for OP and trach suctioning
  - Separate catheters stored in labeled bags
  - Separate labeled water containers
- Use tap water for clearing suction catheters
- Discard/suction water after each use
- Suction catheters to be changed every shift
- Rinse water containers every shift; clean with soapy water daily and air dry
- **Why? Decrease risk of bacterial growth and cross contamination**

Suction/Traveling

- Away from home? Carry water for suctioning in a clean, labeled container
- Pour only enough water that you think you will need for suctioning; suction the remaining water out of the container after suctioning the patient
- Use new water for next suctioning session
Oropharyngeal (OP) Suctioning

- Gloves are required
- Suction OP prior to:
  - Manipulating the trach/cuff
  - Repositioning the patient
  - Leaving the home/transporting patient
  - As needed based on patient condition
- Store catheter in unsealed plastic bag/packet labeled “oral”

Exception for OP Suctioning

- OP suctioning is not required for patients who:
  - Have a gag reflex and
  - Can handle their own secretions
- Patients who handle their secretions during the day but not at night/during sleep should have OP suctioning at night/during sleep
Trach Suctioning

• Gloves are required
• Suction trach prior to:
  – Manipulating the trach/cuff
  – Repositioning the patient
  – Leaving the home/transporting patient
  – As needed based on patient condition
• Store catheter in unsealed plastic bag/packet labeled “trach”

Trach Suctioning (cont’d)

• Use clean technique; 2 hand disconnect from circuit is recommended to avoid decannulation
• Do NOT use saline for routine suctioning unless ordered otherwise
  – Why? Saline causes decreased oxygenation, increased HR/BP and can loosen/flush bacteria into the lungs
Equipment Care

- Wear gloves when intentionally breaking the circuit
- Assess the circuit BEFORE repositioning patient and PRN
  - Drain condensate back into humidification chamber
  - If condensate is not clear: Drain/discard appropriately

Equipment: Daily/PRN

- Change worn/dirty trach ties
- Clean/disinfect reusable respiratory equipment (see next slide) and air dry
- Wipe down unwashable equipment with alcohol or peroxide wipes; wet time of 1 minute
  - If patient has C.Diff: Wipe with bleach wipes, wet time of 3 mins

Document on Equipment Maintenance Sheet
Cleaning/disinfecting:

- Clean in hot soapy water
- Rinse
- Soak in:
  - Solution of 1 part vinegar and 3 parts water for 60 minutes OR
  - Solution of 1 ounce Control III and 1 gallon water for 10 minutes OR
  - Follow manufacturer’s directions
- Rinse thoroughly and air dry

Vinegar Solution

- Why a 1:3 ratio of vinegar: water?
  - Distilled vinegar is approx. 5% acetic acid in water
  - One part vinegar to three parts water results in a 1.25% concentration, which is recommended for disinfection
**Equipment Care: Weekly**

- Wash ventilator/BiPAP air intake filters with soap and water
- Rinse
- Dry thoroughly prior to storage or reuse

**Document on Equipment Maintenance Sheet**

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**Equipment Care: Every 2 Weeks**

- Trach change (**document on Care Plan and Nursing Flowsheet**)
- If reusing trachs: Clean and disinfect trach in accordance with manufacturer/DME guidelines
  - Track date/number of cleanings on the container in which the trach is stored
Equipment Care: Every 30 Days

- Change ventilator circuit and bacteriostatic filter
- If the humidification chamber is disposable, change this also
- Recommendation: Write the date the circuit/filter/chamber is changed on the bacteriostatic filter with a permanent marker
- Document on Equipment Maintenance Sheet

Equipment Care: Self Inflating Bags

- After each use: Clean with alcohol wipes; wet time of 1 minute
  - If patient has C.Diff: Use bleach wipes with wet time of 3 minutes
Auditing

• Auditing will be done on a regular basis to:
  – Monitor compliance with the Prevention Standard
  – Identify barriers to completing all parts of the Prevention Standard
  – Provide data to help analyze what may have contributed to a VARI in one of our patients

Auditing (cont’d)

• Staff required to perform self-audits in order to reinforce the Prevention Standard components and identify barriers to completing them
• Managers will perform audits during supervisory visits to confirm compliance with the Standard, provide education and assist with ways to overcome barriers
Self Audits

- It is important to be honest when completing the self-audits
- This will help us identify barriers to completing the Standard in all homes and develop ways to overcome those barriers
- Self Audits are to be completed and faxed after every shift in homes where the Standard has rolled out until you are instructed otherwise

Staff Education

- Power point education
- Review of education with Clinical manager
- In home supervisory visit with each nurse
What about patients/families?

- The VARI Prevention Standard initially implemented with staff
- Families will received general information about the Standard
- Formal family education is being developed
- The expectation is that family caregivers will also follow the Standard once their education is complete

Family Caregivers/Gloves

- Most families do not receive enough gloves to wear them for all of the indications in the VARI Prevention Standard
- Family caregivers will be instructed to use hand hygiene but are not required to wear gloves
What if families want to learn now?

- As staff become comfortable with the care, family education occurs
- A checklist developed for nurses to use to track and document family education on the Standard

It’s All About the “Kid in the Bed”

- The VARI Prevention Standard is all about protecting our vulnerable patients from respiratory illnesses
- Do not skip any portions of the Standard or create “shortcuts”; Any issues or barriers should be addressed with manager
- Consistent care increases family confidence in nursing care and increases nurse satisfaction when everyone is following the same practice
We’re All in This Together!

- The VARI team is maintained to support the front line staff
- Encourage staff to contact the office for questions/issues/barriers
- Encourage staff to keep a positive outlook and work with their colleagues and patients/families on how to implement the VARI Standards in each situation

Roll Out Plan

- The VARI Prevention Standard should be implemented to one patient at a time
- Staff will complete:
  - This power point
  - A Knowledge Check (return to Lisa)
  - The VARI Prevention Standard
  - Audit sheet (will also put a supply in the home)
Family Communication

- VARI team will communicate with the family to explain the VARI Prevention Standard and answer questions before the roll out begins with each patient.

Final Approval of the VARI Standard

- The VARI Prevention Standard has been tested with two patients.
- Changes were made based on the audit information.
- Some additional minor changes are possible as we roll out to additional patients.
- Final VARI prevention standards.
Staff Responsibilities

- Read the education and complete the Knowledge Check prior to working with a patient where the VARI prevention standards have been implemented
- Incorporate the Standard components in your practice; work with the family, office team and peers to mitigate potential barriers
- Complete self-audits after each shift

Staff Responsibilities (cont’d)

- Provide formal and informal education with families
- Convey a positive approach with the Prevention Standard and when mitigating potential barriers
Barriers

• What potential barriers do you see in using the VARI Prevention Standard with your patients?
• What are ways you can think of now to mitigate those barriers?

Questions?