Policies and Procedures

Title: PREVENTION OF ENTANGLEMENT, STRANGULATION, ENTRAPMENT AND FALLS - PEDIATRICS
Number: 1063

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Scope: SHR Urban - Pediatrics

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1. **PURPOSE**

1.1 To identify infants and young children who are at risk of entanglement, strangulation and entrapment related to any type of cord-like device such as blind cords, medical tubing such as monitoring cables, IV tubing or other pieces of hospital equipment, such as hospital beds or cribs/side rails, wheelchairs, highchairs and strollers.

1.2 To identify infants and young children for fall risk and to implement and evaluate a fall prevention strategy to identify trends, causes and degree of injury from falls. Accidental falls can be prevented by ensuring a safe physical environment.

1.3 To prevent falls by implementing the SHR Universal Falls Prevention Strategies.

**DEFINITIONS**

**Entanglement:** The state of body or limb, being wrapped or twisted in any tubings, cords, cables and wires.

**Strangulation:** Constriction of a body part so as to cut off the flow of blood, fluid or air.

**Entrapment:** The state of body or limb being caught, trapped or entangled such as in the space in or about the bed rail, mattress or hospital bed frame.

**Medical Tubing Stabilizer:** A two-foot long channel, slightly larger in diameter than typical IV tubing, made from food-grade plastic. The stabilizer is flexible enough to allow larger IV and other tubing within its channel, yet rigid enough to protect patients from accidental entanglement with IV tubing. See Appendix B.

**Fall:** An unexpected event where the person comes to rest on the ground, floor or lower level with or without an injury. This includes an un-witnessed fall where the person is unable to explain the event and there is evidence to support a fall has occurred. Also included is the event where the person is eased to the floor by staff or a family member.
Fall Categories:
- Anticipated Physiological Falls: due to physical or physiological factors intrinsic to the patient that can be identified.
- Unanticipated Physiological Falls: may be attributed to physiological causes but are created by conditions that cannot be predicted before the fall occurrence (e.g., undiagnosed seizure disorder).
- Accidental Falls: not due to physical factors but rather environmental hazards or errors of judgment.
- Developmental Falls: falls that are due to a child’s growth and development and are associated with children learning to walk, run and pivot.

2. POLICY

2.1 All patients will be assessed and scored by an RN / LPN (with input from other Health Care Providers (HCP) as appropriate) utilizing the Pediatric Entanglement, Strangulation and Entrapment and Falls Risk Assessment Tool: (see Appendix A)
- at time of admission,
- at transfer of care
- when there is a change of patient’s status

2.2 Guideline for Ambulatory Areas

2.2.1 Ambulatory areas (i.e. diagnostic imaging) receiving inpatients will be informed through verbal report if patients have been identified as “high risk for falls” and appropriate prevention strategies implemented. These patients will be transported to the ambulatory care setting either by support staff or nursing staff (dependent on patient’s condition). The ward staff will be responsible to supervise the patient while in the ambulatory care setting and then transport patient safely back to the unit.

3. PROCEDURE

3.1 Entanglement, Strangulation and Entrapment Prevention Interventions (see Appendix A)
- Identify “entanglement/ strangulation risk” in care plan
- Tape medical lines together
- Use medical line stabilizer attached to tubing/leads (see Appendix B)
- Secure tubings or cables through clothing or use bum netting vests
- Secure Oxygen tubing under the chin rather than behind the head
- Reduce tubing length when possible
- DO NOT add extension tubing to IV line or Oxygen tubing
- Use saline lock IV lines for intermittent medication or fluid administration. Use continuous IV infusions only when necessary
- Assess need for continued use of all tubing/leads
- Do continuous oxygen saturation monitoring
- Clear unnecessary items from crib/bed
- Adjust bed/crib and/or bedside table to prevent access to light and telephone cords
- Consider requesting a physician order for a “sitter” if constant supervision is required
- Educate patient/parent about risk for entanglement, strangulation and entrapment
3.2 **Fall Prevention Interventions according to level of risk** (see Appendix A)

3.2.1 **Low Risk Fall Prevention Interventions** - SHR Universal Falls Prevention Strategies  
Applies to ALL in-hospital patients
- Actively engage patient and family in all aspects of fall prevention
- Orientate to surroundings, bathroom and call bell
- Lower bed to its appropriate position with brakes on
- Raise bottom side rails to the highest position and lower top side rails. Keep bed side rails in upright position (see Appendix C). Reduce potentially dangerous gaps between side rails with use of commercially available gap reduction devices if appropriate.
- Encourage wearing of non-skid footwear
- Frequently check room when walking down the hall
- Assess elimination needs; supervise as needed
- Place call bell, personal items and walking aids within reach
- Keep environment clear (avoid unnecessary clutter)
- Ensure patient is appropriately secured in wheelchair/stroller/highchair/other seating equipment
- Assess for adequate lighting
- Document fall prevention teaching

3.2.2 **High Risk Fall Prevention Interventions**  
- Identify “Fall Risk” on patient care plan
- Educate patient/parent of falls protocol precautions
- Use climber crib for all children 3 years of age and younger
- Assist with ambulation
- Assess elimination needs; supervise as needed
- Evaluate medications
- Consult Physiotherapy or Occupational Therapy
- Provide lift transfer if appropriate
- Keep door to room open except when on isolation precautions.
- Increase level of observation
- Consider requesting a physician order for a “sitter” if constant supervision is required
- Assess all alternatives prior to using restraints (Least Restraint Policy #7311-60-012 Region Wide Policy Manual)

3.3 **Documentation**  
3.3.1 Document interventions or preventative strategies to minimize the risk of entanglement, strangulation and entrapment and falls related to medical and non-medical equipment in the patient chart

3.3.2 Disclose and document all occurrences of entanglement, strangulation and entrapment and falls in the patient’s chart.

3.4 **Reporting**

3.4.1 Report all occurrences of entanglement, strangulation and entrapment and falls in the patient’s chart.

3.5 **Family/Patient Education and Participation**

3.5.1 Family/caregivers have an active role in the prevention of entanglement, strangulation and entrapment and falls. Provide both verbal and/or written
information provided outlining prevention strategies to ensure the patient has a safe experience in hospital.

3.5.2 If parents refuse the suggested preventive strategies to minimize the risk of entanglement, strangulation and entrapment and Falls for their child, the following steps should be followed:

• Explain the risk of entanglement, strangulation, entrapment and falls and how preventive strategies reduce the risk. It may be necessary to involve other health care team members e.g. Clinical Coordinator, Manager of Nursing, Physician in further discussion.
• Consider increasing level of observation including use of sitters.
• Share and discuss this information with other members of the healthcare team.
• Complete a Safety Report, indicating the potential risk.
• Document, in the patient’s progress notes, the parent’s refusal to implement the suggested preventive strategies.
### Pediatric Entanglement, Strangulation, Entrapment and Falls Risk Assessment Tool

**Instructions:**
1. Complete both risk assessments at time of: admission, transfer of care and change in patient status
   - Assess patient using the criteria provided in this chart.
   - Circle the number in the two right hand columns if you have identified a risk for your patient.
   - Total scores at end of each column. Determine interventions based on the score.
   - Document risk assessment scores on the patient care plan and nursing record.

#### Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Entanglement, Strangulation, Entrapment Score</th>
<th>Falls Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulates or transfers with assistance or assistive device</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Ambulates with unsteady gait (no assistive device)</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Very active, restless, combative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes, before admission</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Yes, after admission</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Current medications include 1 or more of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Anticonvulsants, opioids, Benzodiazepines, Sedatives/hypnotics</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Surgery or Procedural Sedation within the last 48 hours</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Developmentally and/or cognitively delayed/impaired</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Aged 4 months to 4 years</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>Altered level of consciousness</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Clinical diagnosis or condition</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>MANDATORY Entanglement, Strangulation and Entrapment Field:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If patient is exposed to medical and non-medical tubing/cords/cables (eg. IV/oxygen tubing, feeding tubes, monitor cables, lighting cords) and equipment that poses risk (bed/crib/stretcher/wheelchair/stroller)</td>
<td>2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**TOTAL SCORE:**
- Implement Entanglement, Strangulation and Entrapment Prevention Interventions for a score equal to or greater than 3 (MUST include the mandatory score of 2)
- Implement Falls Low Risk Prevention Interventions for a score less than 2
- Implement Falls High Risk Prevention Interventions for a score equal to or greater than 2

Signature: ___________________________  Date: ________  Time: ______________
Entanglement, Strangulation, Entrapment and Falls Prevention Strategies

Entanglement, Strangulation and Entrapment Prevention Interventions
(Risk Score equal to or greater than 3)

Select all that apply:
- Tape medical lines together
- Use medical line stabilizer attached to tubing/leads (see Appendix B)
- Secure tubing or cable through clothing or use burn netting vests
- Secure Oxygen tubing under the chin rather than behind the head
- Reduce tubing length when possible
- DO NOT add extension tubing to IV line or Oxygen tubing
- Use saline lock IV lines for intermittent medication or fluid administration. Use continuous IV infusions only when necessary
- Assess need for continued use of all tubing/leads
- Do continuous oxygen saturation monitoring
- Clear unnecessary items from crib/bed
- Adjust bed/crib and/or bedside table to prevent access to light and telephone cords
- Consider requesting a physician order for a “sitter” if constant supervision is required
- Educate patient/parent about risk for entanglement, strangulation and entrapment

Low Risk Fall Prevention Interventions (Risk Score less than 2)

 Applies to ALL in-hospital patients - Follow SHR Universal Falls Prevention Protocol

- Actively engage patient and family in all aspects of fall prevention
- Orientate to surroundings, bathroom and call bell
- Lower bed to its appropriate position with brakes on
- Raise bottom side rails to the highest position and lower top side rails. Keep bed side rails in upright position (see Appendix C). Reduce potentially dangerous gaps between side rails with use of commercially available gap reduction devices if appropriate.
- Encourage wearing of non-skid footwear
- Frequently check room when walking down the hall
- Assess elimination needs; supervise as needed
- Place call bell, personal items and walking aids within reach
- Keep environment clear (avoid unnecessary clutter)
- Ensure patient is appropriately secured in wheelchair/stroller/highchair/other seating equipment
- Assess for adequate lighting
- Document fall prevention teaching

Entanglement, Strangulation and Entrapment

High Risk Fall Prevention Interventions (Risk Score equal to or greater than 2)

Select all that apply:
- Educate patient/parent of falls protocol precautions
- Use climber crib for all children 3 years of age and younger
- Assist with ambulation
- Assess elimination needs; supervise as needed
- Evaluate medications
- Consult Physiotherapy or Occupational Therapy
- Provide lift transfer if appropriate
- Keep door to room open except when on isolation precautions
- Increase level of observation
- Consider requesting a physician order for a “sitter” if constant supervision is required
- Assess all alternatives prior to using restraints (Least Restraint Policy #7311-60-012 Region Wide Policy Manual)
Medical Line Stabilizer - How to Use

- Position the stabilizer along the intravenous tubing so there is no more than 10 cm between the end of stabilizer and patient.
- The tubing should run parallel to the patient with the IV pole near the head or foot of bed, depending on where the IV is inserted.
- Starting at the end closest to the patient, press the IV tubing into the opening of the stabilizer, continuing to insert tubing into entire length of stabilizer.
- Double-wrap adhesive tape around the stabilizer at each end and 8 inches from each end to contain IV tubing.
- Additional lines may be attached externally along the stabilizer secured with adhesive tape using the same procedure.
- Single patient use only. Discard the stabilizer if there is any evidence of kinking, damage or excessive wear.

Examples

Contact Information to Order:

IVY Devices Inc. IV/Medical Line Stabilizer
PO Box 23241
Grande Prairie, Alberta
T8V 6X2
Canada Phone: (780) 982-6063
Email: bill@ivydevices.ca
Appendix C

Crib Side Rail Positioning

[Image of a crib with side rail positioning indicated: Top Side Rail DOWN, Bottom Side Rail UP]

Bed Side Rail Positioning

[Image of a hospital bed with side rail positioning indicated: Side Rails UP]

Policies & Procedures: Prevention of Entanglement, Strangulation, Entrapment and Falls-Pediatrics  I.D. #1063
REFERENCES

Entanglement, Strangulation and Entrapment:


IVY Devices Inc. IV/Medical Line Stabilizer: Procedures for use with typical IV tubing.

Stollery Children’s Hospital, Capital Health. (February 2003). Staff Response to Pediatric Patient Risk of Entanglement. Edmonton, Alberta.

Falls:


Safer Health Care Now – Reducing Falls and Injuries from Falls Getting Started Kit – Sept 2012