

# **Bed Entrapment**

**Taigh Na Mara Pilot**

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# Taigh Na Mara



PeopleCare

Full electric hospital bed with 2 split rails, 11 3/4" opening in the rail, bed rail covers one on top rail and one on bottom rail, air mattress and head elevated to >30 degrees.



PeopleCare

During the first routine check of night shift staff found one of the resident's head completely through the top bedrail. An unsuccessful attempt to remove the residents head from the rail resulted in a 911 call and the Jaws of Life were required to free the resident.



# Resident, Family and Staff



# What is Entrapment?

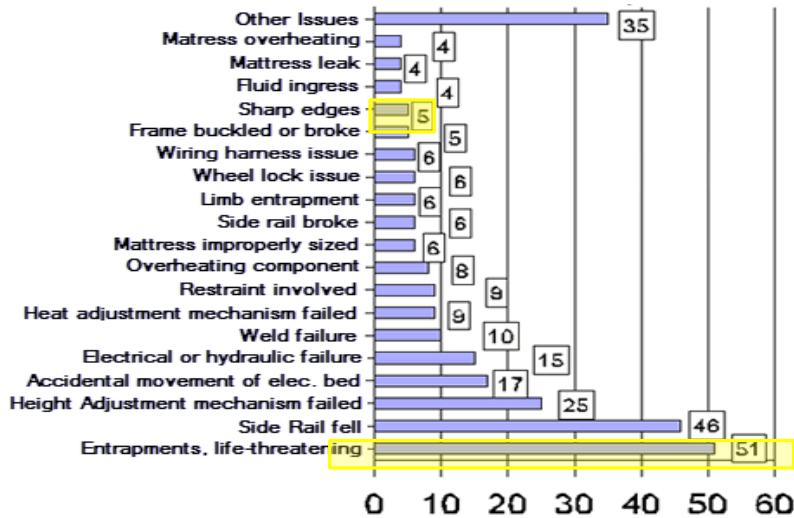
- Involves a client being caught, trapped or entangled in the bed rails, mattress or bed frame of a hospital bed
  - Can result in serious injuries
    - Head, neck or chest can get trapped causing difficulty breathing and possibly lead to death
  - Can happen to anyone in health care setting but increased risk for clients with
    - Cognitive and communication impairments
    - Clients who are frail
    - Agitation
    - Pain
    - Uncontrolled body movements or restless
    - Bladder or bowel dysfunction
    - Significant health decline
  - Risk is greater if mattress does not fit the bedframe, mattress is deflated (LAL or ROHO) or is compressed

# Why is Bed Entrapment an Important Topic?

- Bed rails are commonly believed to provide protection from falls but the risks posed by bedrails often outweigh their benefits particularly for people with cognitive challenges
- Risk of injuries from bedrails are often more serious than those caused by falls out of bed when rails down
- Even when a bed/bedrail pass safety standards there is still a risk to the client
- It is possible to improve safety by increasing awareness of the risks of entrapment

# Health Canada Statistics

Incidence of bed problems -  
Reported to Health Canada 1980 to  
April 2006



Limb entrapment - 6

Entrapments, life threatening - 51

Health Canada completed a  
review from  
July 2013- June 2016  
and reported the following  
outcomes:

**44 Entrapment in hospital beds**

Of those 44,

**13- no injuries**

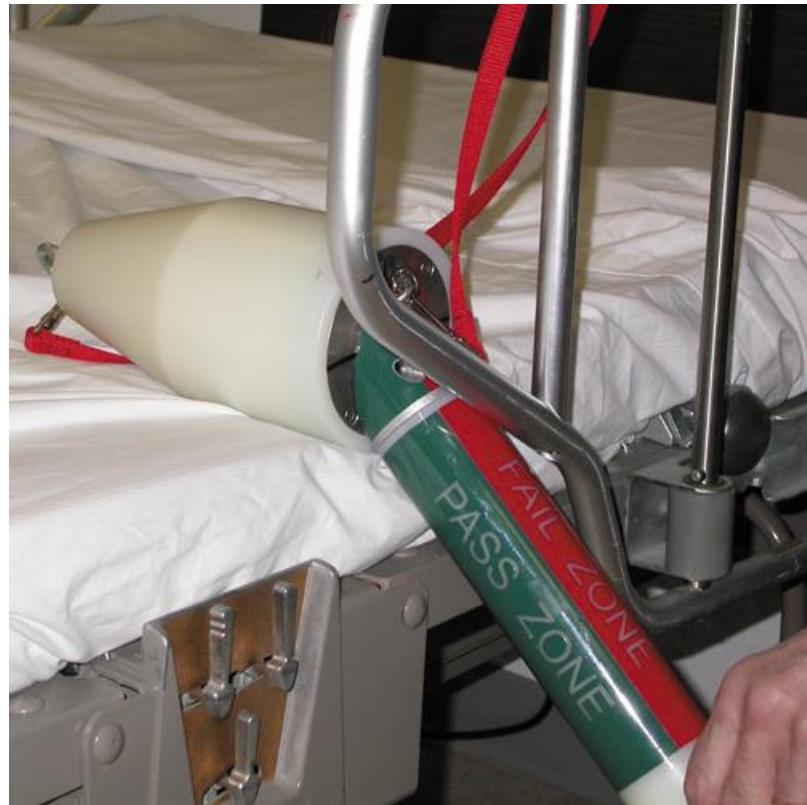
**16- injuries (cuts and bruises)**

**1- unresponsive but successfully revived**

**6- died**

**8- outcome unknown**

All beds in facility measured using tool which determines pass or fail for each zone of risk



# Bed support sheet developed for each client and put in chart

Date \_\_\_\_\_  
Updated By: \_\_\_\_\_

**SAMPLE DATASHEET**

The diagram illustrates a bed frame with a central vertical support post. The top section is labeled "HEAD BOARD" and the bottom section is labeled "FOOT BOARD". The bed is shown in a "Rails Fully Raised" position. The support system is divided into several zones:

- Head Board:**
  - Top row: ZONE 1 (P), ZONE 2 (P), ZONE 3 (P)
  - Middle row: ZONE 4 (P), ZONE 5 (P), ZONE 6 (P)
  - Bottom row: ZONE 7 (P), ZONE 8 (P), ZONE 9 (P)
- Foot Board:**
  - Top row: ZONE 1 (P), ZONE 2 (P), ZONE 3 (P)
  - Middle row: ZONE 4 (P), ZONE 5 (P), ZONE 6 (P)
  - Bottom row: ZONE 7 (P), ZONE 8 (P), ZONE 9 (P)

**Annotations:**

- Zone 6: pass**: Located at the top center of the head board.
- Zone 5: pass**: Located in the middle of the head board.
- Zone 4: pass**: Located in the middle of the foot board.
- Zone 3: pass**: Located at the bottom center of the foot board.
- Zone 2: pass**: Located in the middle of the head board.
- Zone 1: pass**: Located at the top center of the foot board.
- pillow (removed)**: A note indicating the pillow has been removed.
- If the bed only has 2 rails, use these boxes to record your results.**: A note for beds with fewer than 4 rails.
- If the bed has 4 rails, use these boxes to record your results.**: A note for beds with 4 rails.
- If the bed only has 2 rails, use these boxes to record your results.**: A note for beds with fewer than 4 rails.
- If the bed has 4 rails, use these boxes to record your results.**: A note for beds with 4 rails.
- Zone 7: Potential low risk if resident's condition changes and head of bed elevation is more than 10 degrees.**: A note about potential risks for head-of-bed elevation.
- Zone 3: Potential risk if fitted sheet is used on bed: Causes corners of mattress to curl so mattress can slide over frame instead of being anchored in corner pieces of bed frame**: A note about potential risks for fitted sheets.

**Carroll Arco bed, 1/4 rail, bed ext. kit - 0014**

**V4 Re-Act mattress with 3 ROHO inserts, 84"**

**Currently sleeps with two rails in the down (locked) position**

\*IF ANY CHANGES RETURN TO OT DROP BOX\*

Hospital Bed Entrapment Support Sheet

Determined zones of risk are highlighted and put on deck of bed frame

Zone 1 - Entrapment within the rail



Zone 3 - Entrapment between the rail and the mattress



Zone 5 - Entrapment between split bed rails



Zone 7 - Entrapment between headboard or footboard and the mattress end



Zone 2 - Entrapment under the rail, between the rail supports or next to a single rail support



Zone 4 - Entrapment under the rail, at the end of the rail



Zone 6 - Entrapment between the end of the rail and the side edge of the headboard or foot board



Carroll Arro bed,  $\frac{1}{4}$  rails - 0027

### Cognitive Performance Scale (CPS) Assessment Form

Resident Name: \_\_\_\_\_ Date: \_\_\_\_\_

Completed by: \_\_\_\_\_ PLEASE CIRCLE APPLICABLE NUMBERS

#### Comatose: (Persistent vegetative state or no discernable consciousness)

0. No

1. Yes (skip to Eating)

#### Memory: (Recall of what was learned or known.)

-Short term memory okay – seems or appears to recall after 5 minutes

0. Memory okay

1. Memory problem

#### Cognitive skills for daily decision making: (Made decisions regarding tasks of daily life.)

0. Independent – decisions consistent and reasonable

1. Modified independence – some difficulty in new situations only

2. Moderately impaired – decisions poor; cues or supervision required

3. Severely impaired – never/rarely made decisions

#### Making self understood: (Expressing information content – however able.)

0. Understood

1. Usually understood – difficulty finding words or finishing thoughts

2. Sometimes understood – ability is limited to making concrete requests

3. Rarely or never understood

#### Eating: (How resident eats or drinks – regardless of skill – includes intake of nourishment by other means e.g. tube feed, total parental feeding: Resident's performance overall shifts during the last 7 days, not including setup.)

0. Independent – no help or oversight, OR help or oversight provided less than 2 times during the last seven days  
1. Supervision – oversight, encouragement or cueing provided 3 or more times during the last seven days, OR supervision plus physical assistance provided only 1 or 2 times during the last seven days.

2. Limited assistance – resident highly involved in activity; but received physical help 3 or more times in the form of guided maneuvering of limbs (or other assistance that did not involve physically supporting the weight of resident's limb to bring food to his/her mouth), OR more help provided only 1 or 2 times during the last seven days.  
3. Extensive assistance – although resident performed part of the activity, full staff performance was needed during part (but not all) of the last seven days. (For example, by physically supporting the weight of resident's limb to bring food to his/her mouth, etc.)

4. Total dependence – full staff performance of activity during entire seven days.

\*\* Place this form in file folder with PT/OT communication book \*\*

### Cognitive Performance Scale (CPS) Scoring Form

	<u>Initial code</u>	<u>Impairment count</u>	<u>Severe impairment count</u>
Comatose			
Memory		Check if =1	
Decision-making		Check if 1-2	Check if 2-3
Making Self Understood		Check if 1-3	
Eating			
		Total Checks:	Total Checks:

Coma, if yes (1), proceed to Eating ADL.

Under Eating ADL, if 4 = Very Severe Impairment (Final CPS score 6)

Under Eating ADL, if 0-3 = Severe Impairment (Final CPS score 5)

Coma, if no (0), proceed to Decision-making.

Under Decision-making, if 3, proceed to Eating ADL.

Under Eating ADL, if 4 = Very Severe Impairment (Final CPS score 6)

Under Eating ADL, if 0-3 = Severe Impairment (Final CPS score 5)

Under Decision-making, if 0, 1, or 2, proceed to Impairment count.

Under Impairment count, if Total Checks is 0 = Intact (Final CPS score 0)

Under Impairment count, if Total Checks is 1 = Borderline Intact (Final CPS score 1)

Under Impairment count, if Total Checks is 2 or 3, proceed to Severe Impairment count.

Under Severe Impairment count if Total Checks is 0 = Mild impairment (Final CPS score 2)

Under Severe Impairment count if Total Checks is 1 = Moderate impairment (Final CPS score 3)

Under Severe Impairment count if Total Checks is 2 = Moderate Severe Impairment (Final CPS score 4)

CPS scale is completed  
for each client

CPS≥3 research suggests  
no bed rails be used

## BED RAILS CHECKLIST

- New Admission
- Reviewed during monthly assessment
- Significant change in client or their bed (*medication, physical, behavioral, mental, equipment*)



Month						
Year						
Decade						

LATS decal

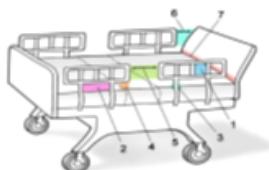
*CPS Score - 0 1 2 3 4 5 6 ( $\geq 3$  NO RAILS)*

### Recommendations:

1.  No Bed rails to be utilized.
2.  Upper split rail to be used to assist client with bed mobility and/or transfer assist.
  - Left Upper Rail in use
  - Right Upper Rail in use
3.   $\frac{1}{2}$  length rail in use, or split rails in use.
 

<input type="checkbox"/> Left $\frac{1}{4}$ Rail in use	<input type="checkbox"/> Left Upper rail in use	<input type="checkbox"/> Left Lower rail in use
<input type="checkbox"/> Right $\frac{1}{4}$ Rail in use	<input type="checkbox"/> Right Upper rail in use	<input type="checkbox"/> Right Lower rail in use

  - All other options have been explored (i.e. low bed height, falls mat, bed position).
  - Mesh bed rail protectors in use.
  - Bed rail pads to be utilized extend below and between rail and mattress. Fasteners allow for secure attachment of pad to rail.



### If request for Bed Rails to be used made by client, family member or guardian:

- Discussed purpose of bedrail, risks of entrapment, Nova Scotia Health Authority Least Restraint Policy, and other options as outlined above.
- Managed Risk Agreement completed.

### For all client's bed entrapment zones and mattress compatibility must be assessed:

1.  Client entrapment support sheet form on chart and up to date (completed by rehab dept)
2.  HS sheet posted in room is up to date (completed by nursing staff)
3.  Identified risk zones are circled on diagram on this page

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Bed rail checklist allows for discussion of options and recommendations among team

Risk vs. Benefit



#### MANAGED RISK AGREEMENT

Format to support recommendations and use to explain to client, family member and/or substitute decision maker.

It allows for client, family or SDM to disagree and express wishes

I am \_\_\_\_\_ a client or legal representative of \_\_\_\_\_  
a client who is currently admitted to \_\_\_\_\_

I have been informed that the health care team is of the opinion that the following choices or decisions pose some risk to the client:

The possible risks/consequences may include:

Risk Management strategies to be implemented:

I have read the above and my questions were answered to my satisfaction.

Client or Legal Representative agrees with proposed managed risk agreement  
If NO, Client or Legal Representative's wishes are:

Y / N

Signature of Client/Legal Representative

OR

Verbal Consent given by

Date

Signature of Witness:

Date

Signature of Manager or designate:

Date

Managed Risk Agreement Draft: Last Modified April 4, 2017

Modified from CareWest Innovative Health care Managed Risk Agreement August 4, 2016

It is understood that this agreement must be reviewed annually and updated from time to time depending on the client's health status or changes in decisions about assuming personal risks against the health care team's advice. Any changes in strategies for managing this risk are documented on the plan of care. Changes to the agreement will require termination of this agreement and creation of and signing a new agreement.

This agreement may also be terminated at any time at the request of the client or legal representative.



### Bed Entrapment- Managed Risk Agreement Phone Call Script

I am \_\_\_\_\_ (I.D staff member) and I'm calling regarding use of bed rails with \_\_\_\_\_ (your family member).

We have a bed entrapment program in place at Taigh Na Mara, based on Health Canada Recommendations and the Least Restraint Policy, to determine potential risk associated with the use of bed rails.

We have assessed \_\_\_\_\_ (your family member) and have determined *the following recommendations would present the least risk of entrapment.* (Based on CPS score results)

- No rails
- Right / Left upper rail in transfer position to assist with bed mobility or transfers
- Right / Left rail on low to floor bed in use position
- % rail in use
- Split rails in use (specify which rails \_\_\_\_\_)

*The possible risk/consequences may include:*

- Entrapment
- Climbing
- Room set up
- Falling out of bed
- Loss of independence
- Frequency of transfers
- Other \_\_\_\_\_

*The team has determined the following risk management strategies should be implemented:*

- Low to floor bed
- Bed rail pads
- Floor mats
- Bed position
- No rails
- Transfer rails
- Bed alarm
- wireless alarm
- Other \_\_\_\_\_

Phone script allows for consistent information being shared regardless or who is discussing information with client and/or representative





# Some Alternatives to bed rails



# References

- Publication of Final Guidance Document - Adult Hospital Beds: Patient Entrapment Hazards, Side Rail Latching Reliability, and Other Hazards. March 17, 2008. Health Canada. <http://www.hc-sc.gc.ca/dhp-mps/md-im/applic-demande/guide-lit/lits-eng.php>
- Rethinking bedrail safety- people Care dramatically reduce the use of bedrails when they looked at whether residents could safely use the equipment. Long Term Care Today Fall/Winter 2015,
- Summary Safety Review- Hospital Beds- Assessing the potential Risk of Patient Entrapment. April 10, 2017. Health Canada  
<Http://www.hc-sc.gc.ca/dhp-mps/medeff/reviews-examens/beds-lits-eng.php>