GERIATRIC AND LONG-TERM CARE REVIEW COMMITTEE

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Date of Birth: January 5, 1932
Date of Death: July 27, 2023
Age: 91 years
OCC file: 2023-21025 (GLTCRC 2024-03)

Reason for Review:
The committee was asked to review this death of a 91-year-old male with advanced dementia who died following a near asphyxia episode while in a wheelchair with a lap belt. He was being cared for in an Alternate Level of Care (ALC) unit of an acute care hospital. The coroner and family raised concerns about the use of restraints in the hospital.

Documents for Review:
1. Coroner's Investigation Statement
2. Hospital Quality-of-Care Review Request and Response
3. Acute Care and ALC Unit Medical Records
4. Hospital Incident Report
5. Hospital 'Nursing Policy and Procedure' Document
6. Email related to Health Canada submission, with photos of restraints
7. Health Canada Online Submission Confirmation
8. Geriatric and Long-Term Care Review Committee Referral Letter

Cause of Death:
Complications of a near asphyxia episode (Medical Device- Restraints).

Other Conditions:
Advanced dementia.

Manner of Death:
Accident

History:
The decedent was a 91-year-old male resident of a retirement home. He was admitted to the retirement home with his wife in 2017. He was moved to the memory floor of the retirement home in early June 2023 due to increasing confusion and falls. Personal Support Worker (PSW) support increased from twice weekly to twice daily at the beginning of June 2023. At the time of transfer, he was ambulatory without a gait aid. Medications were administered by staff. He had reportedly been declining in function since January 2023.

Past Medical History:
- Hearing Impairment
- Osteopenia
- Cognitive Decline since 2014
- Dementia diagnosed 2018 following the death of his wife.
- Montreal Cognitive Assessment (MoCA) in 2018 was 18/30
- Pulmonary Embolism 2018
- Factor V Leiden
- Hypertension
- Anemia
- Hypothyroidism
- Urinary Retention due to Benign Prostatic Hyperplasia (BPH)
- Venous Insufficiency
- Remote Treatment for Tuberculosis (TB)
- 25 pack per year Smoker
- Appendectomy, Prostatectomy, Bilateral Cataract Extractions

Social History:
- Widowed 2018
- Three adult children.
- Decedent was a writer for the CBC News.

On June 16, 2023, the decedent was found on the floor in his room at the retirement home and was sent to hospital. He had also suffered a fall four days prior. He was found to have urine retention with 800cc. A urinary catheter was inserted. A transurethral resection of the prostate (TURP) was not within the treatment plan, given the decedent's goals of care and the catheter

remained in place on discharge. He had worsening bilateral leg edema thought to be related to venous insufficiency and not due to cardiac issues.

While in hospital, the decedent was seen by geriatric psychiatry for an agitated delirium with paranoia and delusions secondary to behavioural and psychologic symptoms of dementia (BPSD). Neuroleptic agents were administered and adjusted. His stay was further complicated by a Citrobacter urinary tract infection (UTI) with bacteremia treated with ciprofloxacin. His functional status continued to decline and in discussions with his family, his care plan was changed to a comfort care approach.

On June 22, 2023, the decedent was assessed by an Occupational Therapist (OT) in the acute care hospital for a seating and wheelchair assessment. Recommendations were given to his family. Chair measurements and cushion recommendations were made. Position belt to "auto" which means a buckle with a button that can be pushed to release. This chair was to be a rental with Assistive Devices Programme (ADP) assessment post discharge. There are no notes to indicate if the OT assessed whether the decedent could undo the belt. There were no notes as to when the belt should be used.

On June 22, 2023, Physiotherapy (PT) assessed the decedent and found him "in OT issued manual wheelchair, working at lap belt." The PT documented the decedent saying "'I can't seem to get this thing undone' (referring to lap belt on wheelchair)." This deems this belt as a restraint.

On June 29, 2023, PT did an assessment for rehab suitability. The PT documented "transfers lie to sit- 2 maximum assistance. Sit to stand-unable to perform. Required assist x 3 to transfer back to bed from wheelchair. Recommend mechanical lift for safe transfers with staff. Not appropriate for sub-acute rehab."

The decedent was transferred to an ALC unit managed by the same hospital on July 6, 2023. At the time of discharge, a stage 2 coccyx ulcer was present.

Medications on Transfer:

- Furosemide 40 mg daily
- Acetaminophen 650 mg twice daily, and four times per day as needed.
- Trazodone 25 mg twice daily as needed.
- Amlodipine 5 mg daily
- Dimenhydrinate 25-50 mg daily as needed
- Risperidone 0.25 mg at bedtime
- Topical Voltaren as needed
- Apixaban 5 mg twice daily
- Glycerine suppository every 12 hours as needed
- Ferrous fumarate 300 mg at bedtime

On July 16, 2023, an incident of near asphyxia occurred.

Timeline as per Progress Notes/Incident Report:

- 0815 hrs: Vital Signs 127/68 HR 72 T 36.8C (Recorded at 1647 hrs by the Primary nurse)
- 0900 hrs: Meal assessment. Took 75% meal. Total feed. (Recorded at 1500 hrs by the Primary nurse)
- 1000 hrs: Turn and reposition. (Recorded at 1501 hrs by the Primary nurse)
- 1044 hrs: Vital Signs 97/61, HR 74, T 36.5C (Recorded at 1045 hrs by the Primary nurse)
- 1200 hrs: Turn and reposition. (Recorded at 1501 hrs by the Primary nurse)
- 1300 hrs: Meal assessment. Took 50% of his lunch. (Recorded at 1504 hrs by the Primary nurse)
- ~1300 hrs: The decedent's daughters visited and took him off the unit in his wheelchair. (From Incident report)
- 1350-1435 hrs: The primary nurse was off on lunch break and during that time the decedent was returned to his room by the family. Staff were not aware of his return to the unit. (From incident report)
- 1400 hrs: Turn and reposition. (Recorded at 1504 hrs by the Primary nurse)
- 1505 hrs: Primary nurse returned to the decedent's room at 1505 to administer medications. The decedent was awake and comfortable at that time. He was upright in his chair. (From Incident report)
- 1600 hrs: Turn and reposition. (Recorded at 1931 hrs by the Primary nurse)

The family returned to the room at ~1600 hrs and found the decedent had slid down from his chair and was trapped by the seat belt around his chest. He was holding the lap belt with both hands trying to relieve some of the pressure. His daughter, who is a nurse, reported to the coroner that the decedent's face, lips and ears were cyanotic. The decedent was repeatedly saying "please do not let me die" and he reportedly looked 'absolutely terrified'. The seat belt was taut, and they were unable to depress the button to liberate him. They supported the decedent by his buttocks and called for help. Staff were able to release the belt and lift the decedent into the bed. His primary care nurse was not present.

- 1639 hrs: Vital Signs BP 89/55, HR 66, T 37C. (Recorded at 1642 hrs by the Primary nurse)
- 1642 hrs: Post Fall Assessment (Recorded at 1642 hrs by the Second nurse)

Incident report was completed by the primary nurse although he did not witness the event. There were concerns raised by the family regarding the medication safety practices of the primary nurse, but they are outside the scope of this review.

The on-call physician was not notified of the incident that day. The most responsible physician (MRP) discharge summary states “the decedent was restrained without authorization of a physician”. He also stated, “the indications of use of the restraint is not clear but presumably inferred to have been used to mitigate falls risk.” Discharge summary also stated that the physician could not find any signs of physical trauma from the incident but he “did observe an accelerated medical decline there-after.”

Following the incident on July 16, 2023, the decedent continued to decline and died with his family by his side on July 27, 2023.

Discussion:

The decedent was a 91-year-old male with advanced dementia who died following a near asphyxia episode while in a wheelchair with a lap or positioning belt. These belts assist with hip positioning and are not in place to stop the user being ejected from the seat as would be needed in a car seat belt. These belts are a standard on wheelchairs, even if not prescribed. It seems the care team did not recognize this lap belt, that could not be removed by the decedent, was a restraint.

In Ontario in 2001, the *Patient Restraints Minimization Act, 2001, Bill 85* was enacted with a goal to minimize the use of physical and chemical restraints and encourage the use of alternatives. The Registered Nursing Association of Ontario (RNAO) developed guidelines for restraint minimization in 2008 (*Promoting Safety: Alternative Approaches to the Use of Restraints* guideline) in response to a Coroner’s Inquest recommendation following a death related to the use of a restraint (1). These RNAO Guidelines recommend a “move towards restraint-free care in diverse settings such as acute, long-term and home healthcare.” Restraint use is not a safe intervention to prevent falls (2).

Despite these widespread guidelines and intensive staff education, healthcare providers and families continue to view restraints as way to prevent falls, and hence, injury. It is clear from the RNAO guidelines, WHO: World Fall Prevention Guidelines (3), and the experience of this committee, that restraints do not prevent falls, and most certainly, do not always prevent injury. There was no physician’s order as required by the hospital restraint policy. The physiotherapist documented that the decedent could not undo the belt but did not raise a red flag for the team or ask the OT to reassess the belt or seating for alternatives such as a chair alarm or wedge cushion. There is no mention of initiation of the restraint policy or need for increased supervision. The hospital restraint policy states “Patients who require a waist belt would need a pelvic strap applied to prevent injury.” No pelvic strap was in place. The hospital policy also states clearly: “Use of restraints will increase the risk of falls.”

The policy gives clear guidelines for monitoring of patients in 4-point restraints, but only recommends that for non-emergent restraints: “Provide restraint-free opportunities for

ambulating, toileting, exercising and all other care **at least 10 minutes every 2 hours**, if safe to do so." The decedent had slid down from his chair and was trapped by the seat belt around his chest in less than 2 hours from last being seen.

The hospital's quality review of this incident pointed out that they "generally are liberal in use of seatbelts and other restraints in patients at risk" and that this is not the case in long-term care settings. Restraint use in acute care is under reported. The hospital will be reviewing their policies on restraint use. It should be recognized that there is likely a greater risk of injury due to restraints in an acute care setting as patients are more likely to be delirious, agitated and using seating that has not been prescribed for them. RNAO and WHO recommendations apply to both acute care and long-term care settings.

Occupational therapists prescribe many devices for patient use (splints, braces etc.) and usually provide a "wearing schedule" or instructions on use. These types of instructions could also be given for the use of a lap belt. It should only be used when adequately supervised. Families should be given information on the safety and proper use of restraints including lap belts.

The Regional Supervising Coroner, in their report, stated "I sincerely believe that what happened to the decedent should be a never event. I would like to recommend to Health Canada that this kind of belt be banned and that a 3-point belt be used instead when restraints are required." Unfortunately, the care team did not recognize this lap belt as a restraint, and therefore did not follow the hospital's own policy on the use of a pelvic strap. The committee supports the Regional Supervising Coroner's plan to notify Health Canada of this incident.

Recommendations:

To the Ministry of Health (MOH), Ministry of Long-Term Care (MLTC) and Ontario Hospital Association (OHA):

1. Education regarding restraints should be directed to the entire health care team and not just focused on nursing. A process should be developed to communicate concerns regarding restraint safety when identified.

2. Hospitals and LTC homes should advise families to return their family member to the nursing station or common area after being off the unit to ensure appropriate safety measures are put in place when returning to their room/bed.

To the College of Occupational Therapists of Ontario:

3. When prescribing a lap belt, a "wearing schedule" or instructions on use should also be provided. Alternatives to a lap belt for positioning should be considered such as wedge cushions and tilt wheelchairs. Occupational Therapists should assess the user's ability to release the belt buckle, and if unable, then remove the lap belt or initiate the facility restraint policy.

To Health Canada (including wheelchair lap belt manufacturers and vendors):

4. A lap belt should not be provided with a wheelchair unless requested by the prescribing therapist.

5. Health Canada should request that manufacturers of lap belts explore release mechanisms that are easier to release.

To the Hospital Involved:

6. This report should be reviewed by Quality Committee.

References:

1. RNAO. Clinical Best Practice guidelines. Promoting Safety: Alternative Approaches to the Use of Restraints.
   https://rnao.ca/bpg/guidelines/promoting-safety-alternative-approaches-use-restraints

2. RNAO Best Practices Evidence Booster, March 2024. Implementation Impact: Screening for Falls and Reducing the Incidence of Falls.
   Becoming restraint-free - The impact on falls rate | RNAO.ca

3. WHO: Step Safely: Strategies for preventing and managing falls across the life-course April 2021