Spinal or Suspected Spinal, Injury: Logrolling Technique with C-Spine Precautions

Corporate Policy & Procedures Manual

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Approved by: Vice President and Chief Medical Officer; and Vice President and Chief Operating Officer

CAUTION: Sound Alike / Look Alike Warning

➢ The title of this policy and procedure is similar to another policy/procedure entitled “Logrolling Technique without C-Spine Precautions”.

Purpose

To provide step-by-step instructions for patient care providers participating in patient logrolling.

Goal

To maintain spinal alignment, patient safety, and comfort during log roll procedures and to ensure consistent logrolling technique among all care providers.

Applicability

This policy and the corresponding procedures apply to all Covenant Health facilities and the staff and physicians who assess or care for patients with a suspected or confirmed spinal injury.

*Please see attached algorithm addendums for procedure modifications for Sites/Units which may not have adequate resources to perform this procedure as outlined.*

Education/Training Requirements

Refer to Covenant Health P/P #VII-B-150, Spinal, or Suspected Spinal, Injury.

Spine Management education program.

Procedure

NOTE: Logrolling technique should not be provided when there are not enough personnel to safely perform the technique or when other conditions are priority; eg. need to obtain and secure an airway for the patient, etc.

1. Review C-Spine Management – Patient Care Orders” for spinal motion restriction.

2. Determine need for analgesic / antiemetic prior to turn.

3. Assess the patient’s ability to understand and cooperate with the procedure.
4. Assess patient’s motor and sensory status prior to and after each turn. See Spinal Signs Measurement procedure. This assessment must be documented on the Neurological Assessment Form.

5. Determine the number of staff required to safely turn the patient:
   a) A minimum of five staff are required using the lifting sheet method
   b) Additional staff are required as determined by size of the patient and/or presence of additional injuries
   c) The head of the bed must always be flat, patient supine and in good alignment
   d) Ensure collar is correctly sized, applied properly and secure.

The Leader (hereon identified as Person A) is in charge of the turn. This person is responsible for:
- Communicating with the patient
- Instructing staff throughout the turn
- Clarifying the direction and distance of the turn
- Maintaining alignment of the C-Spine as the body moves
- Assessment and documentation of the patient’s motor and sensory status prior to and after each turn. Refer to Spinal Signs Measurement Procedure for motor and sensory check.

6. Gather equipment:
   • Pillows 3 – 5 depending on the patient’s size
   • Full length flannel lifting sheet if not already under the patient
   • Head Supports (i.e. rolled towels) Note: Sandbags are not recommended
   • Soaker or folded flannel sheet for head support
   • If required an extrication collar or Philadelphia Collar®
   • Appropriate personal protective equipment (PPE)

7. Ensure all staff who is participating in the logrolling procedure is clear on their duties and responsibilities.

8. Prepare patient for the logroll
   a) Explain the procedure
   b) Communicate with the patient the importance of not assisting but allow the staff to have complete control of the procedure
   c) The patient should use verbal communication or if unable, blink eyes in response. The patient is not to move his or her head
   d) Ensure the patient is in good alignment prior to the turn:
      • nose should be in line with the umbilicus
      • upper limbs should be in close to body
      • lower limbs should be parallel to midline
9. Prepare bed area for the turn:
   a) Apply PPE
   b) Remove headboard
   c) Raise the bed and position the bed for Person A to take head control at the top of bed and others to access the patient at the sides
   d) Ensure brakes are in the locked position.

10. **Person A** takes control of the patient’s head by placing his or her hands on each side of the patient’s head with thumbs along the mandibular edge of the collar and fingers behind the head on the occipital ridge, maintaining gentle firm stabilization of the neck. The elbows and proximal forearms are planted on the bed.

11. **Person B** removes head supports once the person in charge has firm control of the head.

12. **Person A** does a brief verbal motor/sensory assessment to determine if patient can wiggle their fingers and toes and to determine baseline motor/sensory status.

**LIFTING - Move the patient to the edge of the bed using the following method:**

13. **5 Person Lift Using a Lifting Sheet**

   In addition to Person A at the head of the bed:
   a) Position two staff members on each side of the bed.

   b) Additional staff is required to move the lower limbs.

   c) Ensure the full length flannel lifting sheet extends from the patient’s shoulders to lower limbs.

   d) Place pillows between the patient’s legs to keep proper spinal alignment and provide patient comfort.

   e) Roll the edges of the lifting sheet inward close to the patient’s body. The staff member located at the upper torso will grasp the sheet at shoulder and hip. The staff member at hip level will grasp the sheet at hip and lower calf.

   f) All staff members should concentrate on using good body mechanics for the lift.

   g) Additional staff responsible for moving the lower limbs should slide their arms under the patient’s thighs and knees.

   h) Person A gives instruction to lift and move on the 3-count “1 - 2 - 3”.
i) Lift the patient with minimal clearance of the mattress, always maintaining alignment of the spine.

15. Place a soaker or folded flannel sheet under the patient’s head to provide support and neutral alignment.

**TURNING THE PATIENT**

16. *Four people are required for the turn; one additional person is required to move the pillows and provide skin care. Additional staff may be necessary based on patient size, equipment or based on presence of other injuries.*

  a) Person A remains at the head.

  b) Person B positions self near patient’s scapular area and a second assistant positions self at patient’s hip area.

  c) Reinforce with the patient to allow staff to perform the turn without patient assistance, relax his or her arms on abdomen, and exhale on count of three as he or she is turned.

  d) Person B places a hand at patient’s shoulder and lower hand at the hips.

  e) Second assistant overlaps their upper arm with Person B to place hands at patient’s hip and above knee. Cris-cross arm positioning improves ability to move spine as a single unit.

  f) The third assistant places both hands under the patient’s far leg, reaching over the patient’s near leg in doing so. The knee of the patient’s upper leg may be flexed unless contraindicated. Flexion of the knee is contraindicated if unstable lumbar spine or pelvic fractures are present.

  g) Use good body mechanics to align squarely with the patient.

  h) Person A at the head gives instructions to turn on the 3-count – “1 - 2 - 3”.

  i) All staff applies adequate pressure in unison to roll the patient smoothly on to his/her side facing the staff, maintaining alignment of the spine throughout the roll. Person A must have his or her arms adequately braced to support the weight of the patient’s head.

  j) An additional person moves to the other side of bed to position the pillows behind back to support the patient while Person A and assistants maintain the patient in position. Place one pillow lengthways from the shoulders downward and place the second pillow at the buttocks.

  l) Adjust pillows between patient’s legs to maintain alignment and comfort.
m) Settle patient back into the pillows.

n) Place soaker or folded flannel under the head to provide support and maintain neutral position.

o) Secure head position with head supports.

p) Person A may now release the head.

17. Person A will repeat and document a full motor/sensory assessment to determine if any changes have occurred. If any change detected the patient is to be returned to original position and the physician or nurse practitioner is to be notified. See Spinal Measurement procedure.

18. Seek feedback from patient regarding comfort.

19. Check position of any tubes, lines, or leads.

20. Cover the patient, raise side rails and ensure the call bell is within reach.

21. Remove PPE and complete hand hygiene.

22. Document
   - Document performance of spinal motion restriction and logrolling as applicable.
   - Document and report any changes in motor/sensory status.

23. To return the patient to the supine position reverse the above steps

**Definitions**

*Spinal Motion Restriction* – maintaining the patient in a neutral, in-line position while trying to protect the spine from further damage

**Related Documents**

Procedures related to this Policy:

- Spinal, or Suspected Spinal, Injury, #VII-B-150
- Spinal, or Suspected Spinal, Injury – Logrolling Technique – Without C Spine Precautions, #VII-B-160
- Spinal, or Suspected Spinal, Injury – Application and Maintenance of Extrication Collar, #VII-B-165
- Spinal, or Suspected Spinal, Injury – Collar Care – Philadelphia® Collar, #VII-B-170
- Spinal, or Suspected Spinal, Injury – Surface to Surface Transfer, #VII-B-175
- Spinal, or Suspected Spinal, Injury – General Care of the Patient, #VII-B-180
- Spinal, or Suspected Spinal, Injury – Spinal Signs Measurement, #VII-B-185

**References**

See P/P #VII-B-150, *Spinal, or Suspected Spinal, Injury*

**Revisions**

June 6, 2014