

CONTINUOUS LATERAL ROTATION THERAPY- ICU

PURPOSE: To outline the nursing management of Continuous Lateral Rotation Therapy (CLRT) in pulmonary patients at high risk for developing pulmonary complications and to provide early mobility.

SUPPORTIVE DATA: Continuous lateral rotation therapy (CLRT) is a method of positioning the patient from side to side on a continuous or intermittent basis with the aim of preventing or treating respiratory complications in the critically ill patients. This is done through a programmable bed. The literature cites that continuous side to side rotation of the patient helps improve drainage of secretions, improves gas exchange, helps prevent or reduce respiratory complications such as atelectasis, ventilator associated pneumonia, Acute Respiratory Distress Syndrome (ARDS) and reduces the risk of venous thrombosis and associated pulmonary embolism from immobility.

CLRT may also be used to promote early mobilization for patients who cannot participate in mobility (e.g. RASS score -5 to -3) or who have hemodynamic or respiratory instability (e.g. hypotensive, on high FiO₂). CLRT should be used along with maintaining head of bed >30 degrees and passive range of motion.

Initial implementation of this standard may be done after consultation with the provider on patients who meet any of the following criteria:

- Requirement of FiO₂ of 50% or greater for longer than 1 hour
- Requirement of PEEP of 8 cm H₂O or higher
- FiO₂ increased by 20% or PEEP >3cm H₂O from baseline within 2 calendar days
- Existing pulmonary complications
- Cannot participate in mobility (e.g. RASS -5 - -3, on neuromuscular blocking agent)
- Pulmonary-hemodynamic instability with manual turning
- Desaturation induced by nursing care

Patients with the following should not receive CLRT include:

- Spinal injury
- Unstable intracranial pressure (greater than 20 mm Hg)
- Long bone fractures/traction
- Marked agitation that fails to respond to treatment
- Severe nausea or vertigo that fails to respond to medication
- Severe, uncontrolled diarrhea

ASSESSMENT/ REASSESSMENT:

1. Assess if the patient meets the criteria of CLRT and for any contraindication upon admission and every shift and consult with provider regarding initiation of CLRT.
2. Assess the following prior to initiation of therapy and as per Physiologic Monitoring/ Hygiene/ Comfort - ICU Standard:
 - Vital signs
 - Arterial Blood Gas (ABG) as ordered
 - Respiratory assessment
3. Reassess patient's response to CLRT 15 minutes and 30 minutes after initiation of therapy then a minimum of every two hours:
 - Signs and symptoms of agitation
 - Changes in vital signs
 - Respiratory pattern and any improvement or deterioration in respiratory status
 - ABGs as ordered
 - Proper positioning: one lung on top of the other, shoulders aligned with lung picture on bed
4. Assess skin and pressure sites a minimum of every two hours by temporarily stopping lateral rotation.
Note: CLRT is not a substitution for turning to prevent pressure injuries; skin must be carefully assessed and offloaded as necessary:

- Use “turn assist” mode and keep rotation mode off
 - Turn and inspect posterior side of patient and other at-risk pressure areas.
 - If pressure relief is indicated, off load pressure from affected pressure areas with a positioning device (e.g. pillows) for as long as necessary (usually 30 minutes- 1 hour) to allow for recovery in circulation
 - Then remove positioning device and resume rotation.
5. Assess CLRT settings a minimum of every shift.

MANAGEMENT:

6. Implement rotational therapy to achieve optimal pulmonary outcomes as follows:
- For initiation, start Training mode which starts rotation at half the % and increases incrementally each hour to full setting
 - Program % rotation using pre-set settings and increase % (ideal is 100%) for patient safety and maximum benefit
 - Program hold times: 1-2 minutes; center setting should never be more than 1 minute
 - Goal is for patient to be rotated a minimum of 18 out of 24 hours
 - Ensure rotation is not stopped for more than 45 minutes at a time or maximum of 6 hours within 24 hours

DISCONTINUATION:

7. Discontinue CLRT if any of the following criteria are present:
- Improved respiratory status:
 - Decreased secretions
 - Improved breath sounds
 - Stable oxygenation
 - Improved mobility:
 - Patient is able to participate in mobility (e.g. RASS greater than -3)
 - Patient is able to turn by self with moderate assistance
 - Patient is able to tolerate manual turning
 - Patient develops hemodynamic or respiratory instability during CLRT
 - Contraindication has developed

SAFETY:

8. Ensure side rails are up.
9. Do not use positioning devices (e.g. pillows) to turn patient during rotation.

REPORTABLE CONDITIONS:

10. Notify provider of the following:
- Sudden changes/deterioration in vital signs
 - Increasing respiratory distress
 - ECG changes
 - Significant changes in ABGs
 - Occurrence of unrelieved skin pressure
 - Sustained agitation
 - Need for discontinuation of rotational therapy

PATIENT/FAMILY TEACHING:

11. Instruct on the purpose of CLRT.

ADDITIONAL STANDARDS:

12. Implement the following as indicated:
- Mechanical Ventilation - ICU
 - Mechanical Ventilation – Alternative Modes - ICU
 - Pressure Ulcer Prevention and Management
 - Immobility
 - Falls and Injury Prevention
 - Intravenous Sedation and Analgesia - ICU

DOCUMENTATION: 13. Document CLRT therapy on iView, ADL section, Progressive Mobility, Level I.

Initial date approved: 6/01/2010	Reviewed and approved by: Critical Care Committee Professional Practice Committee Nurse Executive Council Attending Staff Association Executive Committee	Revision Date: 2/14, 5/19
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