DENVER HEALTH TRAUMA
LEVEL ONE ADULT & LEVEL TWO PEDIATRIC
ERNEST E. MOORE SHOCK TRAUMA CENTER

Guideline for Transport to OR with Mechanical Ventilation

PURPOSE

Transporting the mechanically ventilated patient out of the safe zone of the ICU for operations and various diagnostic procedures can inadvertently put the patient at risk. All attempts should be made to ensure a safe transport via monitoring ventilation, oxygenation, and vital signs during trip. Specifically, hypoxemia, shock, and dysrhythmias may occur when a patient requires high vent settings which are not met by hand bagging.

SCOPE

Inclusion: all intubated patients residing in the SICU going to the OR
Exclusion: patients going from Trauma bay to OR, patient not intubated that are going to OR from SICU

DHHA – All locations and departments

DEFINITIONS

Hypoxemia: is a below-normal level of oxygen in your blood, specifically in the arteries and is a sign of a problem related to breathing or circulation.

GUIDELINE

A. During transport, loss of positive end expiratory pressure by way of disconnections can result in rapid desaturation secondary to lung de-recruitment.

B. When a patient has a high CO2 clearance need via a RR >24 on ventilator, it takes skilled personnel to achieve this minute ventilation with hand bagging. Failure to achieve the set minute ventilation can lead to unwanted acidosis or alkalosis as demonstrated in various studies via arterial blood gas analysis during transport.

C. By utilizing the ICU ventilator on the hypoxic patient, safety can be maximized in multiple ways

1. A disconnection to hand bag with potential de-recruitment can be terminated.
2. Rapid swings in CO2 clearance from over bagging or under bagging can also be eliminated.
3. Limiting disconnections from the ventilator can help minimize infection transmission.

D. Transporting patients that are not on a ventilator

1. Transport on nasal cannula or other 02 delivery device

E. Transporting patients that are using a ventilator

1. Set RR>24
2. Fi02>=50%
3. Peep>=10
    i. If patient meets above criteria, transport with respiratory therapist on ICU ventilator
    ii. If patient does not meet above criteria, hand ventilate patient with Ambu bag and peep valve to destination
    iii.

F. Transport timing coordination should be communicated with bedside RN and RT assigned to patient. The Respiratory Therapist will dress in official OR attire and on arrival will give a handoff to the anesthesiologist/CRNA in charge of case detailing vent settings, alarms, troubleshooting and contact number for questions and notification of transport back to SICU.

EXTERNAL REFERENCES

1. Voigt LP, Pastores SM, Raoof ND, et al. Review of a large clinical series: intrahospital transport of critically ill patients: outcomes, timing, and patterns. J Intensive Care Med. 2009;24:108–115.
2. Waydhas C, Schneck G, Duswald KH. Deterioration of respiratory function after intra-hospital transport of critically ill surgical patients. Intensive Care Med. 1995;21:784–789.
3. Stearley HE. Patients' outcomes: intrahospital transportation and monitoring of critically ill patients by a specially trained ICU nursing staff. Am J Crit Care. 1998;7:282–287.
4. Warren J, Fromm RE Jr, Orr RA, et al. Guidelines for the inter- and intrahospital transport of critically ill patients. Crit Care Med. 2004;32:256–262.
5. Chang D. In-Hospital Transport of the Mechanically Ventilated Patient—2002 Revision & Update. Respiratory Care Journal. 2002;47(6):721-723.

DHHA RELATED DOCUMENTS

NONE

ATTACHMENTS

NONE

This Clinical Care Guideline is intended to assist care providers in the provision of patient care. This document serves as a guide, and is not a substitute for independent medical decision-making.