

UTMB RESPIRATORY CARE SERVICES <b>PROCEDURE - Portable Oxygen Transport</b>	Policy 7.3.35 Page 1 of 4
Portable Oxygen Transport  Formulated: 10/78	<b>Effective:</b> 11/06/94 <b>Revised:</b> 07/25/16

## Portable Oxygen Transport

**Purpose** Oxygen is provided for patients who require continuous oxygen therapy when they need to be removed from their primary oxygen source for transport within the hospital.

**Policy** Respiratory Care Services (RCS) supplies oxygen for the transport of patients who require continuous oxygen therapy. Critically ill patients or those with special needs (i.e. patients with tracheostomies) may require the assistance of and/or evaluation by a respiratory therapist prior to or during transport.

**Scope** Nurses, Respiratory Care Practitioners, and Transportation personnel trained to transport patients requiring continuous oxygen.

**Request for Transport** Transports may be requested by nursing services or any other responsible unit personnel. Requests for transports for patients requiring continuous oxygen are called into the Transportation department, designating the patient's name, place of patient pick-up, need for oxygen and destination. Therapists are to be notified in advance of the need for assistance or evaluation so that arrangements can be made to provide adequate coverage for other areas as needed.

- Equipment**
- Portable oxygen cylinder (E) with integrated valve or Liquid Oxygen Companion T (LOX)
  - Cart with wheels or bed cylinder holder for portable oxygen cylinder
  - Oxygen Liter Meter

**Procedure** **Non-Emergent Transports**

Step	Action
1	Once a request for transport with oxygen is received, obtain a LOX canister or portable e-cylinder with integrated valve.
2	Ensure that LOX canister is full or that the e-cylinder has <u>&gt;1000 psi</u> prior to transport. For LOX canisters, ensure that the oxygen regulating device is in proper working order by verifying the oxygen output using an oxygen liter meter.
3	Identify patient to be transported using two identifiers.
4	Verify with the patient's nurse or attending personnel the liter flow required for transport.
5	Turn on the LOX or e-cylinder and adjust flow meter to match the liter flow the patient is receiving. Remove the

UTMB RESPIRATORY CARE SERVICES <b>PROCEDURE - Portable Oxygen Transport</b>	Policy 7.3.35 Page 2 of 4
Portable Oxygen Transport  Formulated: 10/78	<b>Effective:</b> 11/06/94 <b>Revised:</b> 07/25/16

	oxygen connecting tubing from the oxygen source and connect to the transport LOX/cylinder. Turn the flow meter at the wall source off.
6	Transport the patient safely to destination.
7	Upon arrival to the procedural area or new destination, inform the nurse or attending staff that the patient has arrived and is oxygen.
8	Place the patient on the receiving area's oxygen source (wall source or large cylinder) and ensure that the flow is set appropriately and that there is adequate pressure (>1000 psi) to support the patient if using cylinder oxygen.
9	Notify RCS at 21635 if a tank change is required.

### Emergent Transports

Step	Action
1	Patients on oxygen will be transported <b><i>emergently</i></b> with a therapist/nurse or trained Transportation personnel being present. It is the Respiratory Therapist's responsibility to ensure that the patient is safely and correctly connected to an oxygen source. Notify RCS at 21635 or on pager 409-643-0803 for assistance if needed.
2	Ensure that LOX canister or that the e-cylinder <b><i>is full prior to transport</i></b> . For LOX canisters, ensure that the oxygen regulating device is in proper working order by verifying the oxygen output using an oxygen liter meter.
3	Identify patient to be transported using two identifiers.
4	Verify with the patient's nurse or attending personnel the liter flow required for transport.
5	Turn on the LOX or e-cylinder and adjust flow meter to match the liter flow the patient is receiving. Remove the oxygen connecting tubing from the oxygen source and connect to the transport LOX/cylinder. Turn the flow meter at the wall source off.
6	It is the transporting therapist's responsibility to notify the therapist assigned to the patient's new location of

UTMB RESPIRATORY CARE SERVICES <b>PROCEDURE - Portable Oxygen Transport</b>	Policy 7.3.35 Page 3 of 4
Portable Oxygen Transport  Formulated: 10/78	<b>Effective:</b> 11/06/94 <b>Revised:</b> 07/25/16

	their impending transfer so that they can ensure that an oxygen flowmeter is available in the patient's new location.
--	---

## Cylinder Management

### Cylinder Storage Requirements:

- Medical gases ***In Storage*** must be labeled as belonging to one of two groups:
  1. Full Cylinders
  2. Empty/Partially Full Cylinders
- Unopened (full) cylinders will be physically separated from Empty/Partially full cylinders in appropriately labeled cylinder racks
- ***Unopened (full) cylinders will be used for all emergent transports***
- Once a cylinder valve has been opened (factor seal removed), it will be considered 'Empty', even if gas remains in the cylinder
- The most recent version of the National Fire Protection Association's regulation on gas storage (as adopted by the Texas State Fire Marshall) limits the number of tanks in storage to 300 cu. ft. (no more than 12 cylinders)
- E Cylinders properly secured (i.e. on a stretcher, code cart) are considered "In Use" and are not counted as part of the 12 cylinder storage limit

### Transport with Oxygen Cylinders:

- Never leave a cylinder standing free or unsecured on the top of a patient bed or cart. All gas cylinders must be stored in approved storage racks or securely restrained.
- Oxygen cylinders may not be placed in the bed with a patient during transport. Cylinders must be secured in an appropriate cylinder holder on or under the bed.

### Transport with LOX:

- Keep canister upright at all times. If units are turned over oxygen will escape. If a spill should occur for any reason, open doors and windows to ventilate the area.
- Liquid oxygen is extremely cold (-300F or -184C). Liquid oxygen or parts of the equipment which have been in contact with liquid oxygen can cause the skin to freeze upon contact.

UTMB RESPIRATORY CARE SERVICES <b>PROCEDURE - Portable Oxygen Transport</b>	Policy 7.3.35 Page 4 of 4
Portable Oxygen Transport  Formulated: 10/78	<b>Effective:</b> 11/06/94 <b>Revised:</b> 07/25/16

**Undesirable Side Effects**

Patients that are not ambulatory may experience distress when moved. Respiratory Care Service staff and other clinical personnel must be aware of signs such as dizziness, nausea, weakness, a drop in blood pressure or a rise in pulse. If these signs occur, immediately notify the patient's nurse or physician of the change in patient status.

**Patient Teaching**

Instruct the patient as follows:

- Explain to the patient why he or she is being moved.
- Reassure the patient that everything will be done to make the move as comfortable as possible and that his/her oxygen therapy will continue uninterrupted.

**Infection Control**

Follow procedures outlined in Healthcare Epidemiology Policies and Procedures #2.24; Respiratory Care Services.  
<http://www.utmb.edu/policy/hcepidem/search/02-24.pdf>

**References**

AARC Clinical Practice Guidelines; Respiratory Care; 2002: – 2002 Revision and Update; 47(7): 721-723 In-Hospital Transport of the Mechanically Ventilated Patient

NFPA 99: Health Care Facilities Code. 2015 edition.

Palmon SC, Liu M, Moore LE, Kirsch JR. Capnography facilitates tight control of ventilation during transport. *Critical Care Medicine*, 1996; 24:608-611.

Szem JW, Hydo LJ, Fischer E, Kapur S, Klemperer J, Barie PS. High-risk intrahospital transport of critically ill patients: safety and outcome of the necessary "road trip". *Critical Care Medicine*. 1995; 23:1660-1666.

Stubbs CR, Crogan KJ, Pierson DJ. Interruption of oxygen therapy during intrahospital transport of non-ICU patients: elimination of a common problem through caregiver education. *Respiratory Care*. 1994; 39:968-972.