Deep Breathe and Cough

Purpose

To identify accountability and to standardize the procedure to mimic the attributes of an effective cough.

Policy

- Respiratory Care Services encourages patients to utilize normal physiologic mechanisms to improve ventilation and remove secretions.
- Deep Breathe and Cough may be administered by a Licensed Respiratory Care Practitioner, Licensed Nurse trained in the proper procedure with an understanding of age-specific requirements for the age of the patient.

Physician's Order

An order by a physician is required specifying:

- Cough and deep breathe to be performed by Respiratory Therapy.
- Frequency of therapy.
- Technique to be used to elicit effective cough (if voluntary effort is not sufficient).
- Deep breathe and cough is an important part of all therapy done and does not need to be ordered in conjunction with other therapies (i.e., I.S./CDB).

Indications

Deep Breathe and Cough is indicated in any hospitalized patient whose own ability to deep breathe and cough is compromised, or has the possibility of being compromised.

Contra-indications

Usually temporary until situation is diagnosed and/or stabilized:

- Acute or impending medical or surgical emergencies.
- Frank overwhelming hemoptysis.
- Acute undiagnosed chest pain.
- Severe bronchospasm or dyspnea.
- Acute vital sign change.
- Recent MI.
- Untreated significant pneumothorax.
- Significantly increased intracranial pressures.
- Leaking aneurysms.
- Some types of eye, vocal cord or neurosurgery.
- Known hypersensitivity to vagal stimulation: arrhythmias, vaso-vagal response.

Goals

- To maintain, evaluate, or improve the patient's pulmonary toilet and function.
- Hypoventilation and an ineffective cough will result in atelectasis, accumulation of bronchial secretions, hypoxemia, and increased risk of pneumonia. The therapeutic objective is prevention.

Continued next page

Equipment and Supplies

These are variable, depending upon the specific adjunct needed to ensure a deep breathe and cough.

Procedure

Step	Action
1	Verify physician orders and patient ID. Wash hands.
2	Record heart rate, respiratory rate, and breath sounds. Observe patient briefly before beginning therapy.
3	Explain need to deep breathe and cough.
4	Position patient for best effort, as allowed by condition, (i.e., sit and brace if indicated). Auscultate chest.
5	Demonstrate a proper deep breathe/cough technique for patient, and then ask him to mimic effort. • Ask patient for deep breath, noting breath sounds, expansion and splinting if present (auscultation, palpation). • Ask patient for cough effort.
6	If cough mechanism is inadequate, use cough stimulation technique as discussed with and ordered by the physician. Effective cough mechanism: adequate volume (deep breath) and velocity (muscle power) specifically abdominal muscle contractions to propel secretions out of the airway.
7	Following therapy, auscultate/palpate chest, take pulse, and count respirations.
8	If therapy is not effective, no longer required, or should be modified, contact the physician.
9	Record pertinent data in EPIC , progress notes (by appropriate personnel) and RCS department treatment card; notify physician/R.N. as necessary.

Documentation

RCS Policy and Procedure Manual, Guidelines for Medical Record Documentation, # 7.1.1.

Continued next page

Infection Control

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

Reference

AARC Clinical Practice Guidelines, Directed Cough, Respiratory Care 1993; 38: 495-499.

Bakow ED; Bronchial Hygiene. In: Dantzker DR, MacIntyre NR, Bakow ED, Eds. Comprehensive Respiratory Care. Philadelphia: WB Saunders; 1995.

Peruzzi WT, Smith B. Bronchial hygiene therapy. Critical Care Clinics. 1995; 11:79-96.

Hasani A, Pavia D, Agnew JE, Clarke SW. Regional lung clearance during cough and forced expiration technique (FET): effects of flow and viscoelasticity. Thorax. 1994; 49:557-61.