Ineffective Airway Clearance

Ineffective airway clearance can be defined as the state in which an individual has the inability to cough to clear secretions or obstructions from the respiratory tract. Inability to maintain airway patency may threaten the respiratory status.

Basic anatomy and physiology of the respiratory system

A. The airways are similar to an upside down tree; the trachea or windpipe is like the main trunk, which divides into smaller branches.
B. At the end of the branches are small air sacs called alveoli where gas exchange takes place.

Signs and symptoms of ineffective airway clearance

C. Fast heart rate.
D. Cyanosis (blueness in fingernail beds and around lips).
E. Wheezing.
F. Shortness of breath.
G. Fever.
H. Ineffective or absent cough.
I. Inability to remove airway secretions.

Measures to improve airway clearance

J. Implement measures to liquefy secretions:
   1. Increase fluids to two to three quarts per day if not contraindicated.
   2. Use an air humidifier.
K. Perform percussion, postural drainage, and vibration as ordered.
L. Perform nasal, pharyngeal, or tracheal suctioning as ordered.
M. Use expectorants, bronchodilators, and other medications as ordered.
N. Use inhalers, nebulizer, and incentive spirometer as ordered.
O. Perform breathing exercises.
P. Use effective cough method.
Q. Avoid allergens and irritants.
R. Plan rest periods.
S. Sit in upright position for maximal air exchange.
T. Increase walking or activity as tolerated with rest periods.
U. Administer oxygen as ordered.
V. Use pain medications and splint painful area as needed.

**Measures necessary to prevent infection**

W. Report early signs of respiratory infection, i.e., fever, Increased cough, change in color and amount of sputum, fever, shortness of breath.
X. Avoid large crowds and contact with illness.
Y. Eat a well-balanced diet.
Z. Avoid smoking.
AA. Use stress management techniques.
BB. Plan regular rest periods.
CC. Keep follow-up appointments with physician.

**Possible complications**

DD. Respiratory infections.
EE. Respiratory distress.

**Resources available**

FF. American Lung Association at 212-315-8700.
GG. Medical equipment companies.
HH. Physical therapist.