MAINTAINING AIRWAY CLEARANCE AND EFFECTIVE GAS EXCHANGE

- Emphasize to the client and family the importance of not smoking or lighting any flammable materials (e.g., candles) in the same room. Refer them to smoking cessation programs as needed. For family members resistant to not smoking, emphasize the need to avoid smoking inside the home.
- Instruct the client in effective coughing techniques such as controlled coughing or “huff” coughing (see “Deep Breathing and Coughing” in the “Implementing” section).
- Discuss the significance of changes in sputum, including the amount and characteristics such as color, viscosity, and odor. Instruct the client when to contact a health care provider.
- Teach the client to maintain a fluid intake of 2,500 mL (2.5 qt) to 3,000 mL (3 qt) per day.
- Instruct the client of the rationale for using and how to use nebulizers or inhalers if prescribed; see Chapter 35, pages 895–898.
- Teach the client and family how to use home oxygen delivery systems.

PROMOTING EFFECTIVE BREATHING

- Teach relaxation techniques such as progressive muscle relaxation, meditation, and visualization. Use prerecorded tapes as needed.
- Help the client identify specific factors that affect breathing such as stress, and exposure to allergens or air pollution, and exposure to cold. Assist with identifying possible interventions and measures to avoid these factors.

These outcomes provide direction for planning interventions and as criteria for evaluating client progress.

A clinical example of desired outcomes, interventions, and activities are provided in the Nursing Care Plan and the Concept Map later in the chapter.

Planning for Home Care

To provide for continuity of care, the nurse needs to consider the client’s learning needs and needs for assistance with care in the home. Planning incorporates an assessment of the client’s and family’s knowledge and abilities for self-care, financial resources, and evaluation of the need for referrals and for home health services. The Home Care Assessment outlines a home care assessment related to the client’s oxygenation problems and needs. Client Teaching: Home Care Oxygenation addresses the learning needs of the client and family.

Implementing

Examples of nursing interventions to facilitate pulmonary ventilation may include ensuring a patent airway, positioning, encouraging deep breathing and coughing, and ensuring adequate hydration. Other nursing interventions helpful to ventilation are suctioning, lung inflation techniques, administration of analgesics before deep breathing and coughing, postural drainage, and percussion and vibration. Nursing strategies to facilitate the diffusion of gases through the alveolar membrane include encouraging coughing, deep breathing, and suitable activity. A client’s nursing care plan should also include appropriate dependent nursing interventions such as oxygen therapy, tracheostomy care, and maintenance of a chest tube.

Promoting Oxygenation

Most people in good health give little thought to their respiratory function. Changing position frequently, ambulating, and exercising usually maintain adequate ventilation and gas exchange. Client Teaching lists other ways to promote healthy breathing.

MEDICATIONS

- Teach the client about prescribed medications, including the rationale for the medications, the dose, the desired and possible adverse effects, and any precautions about using a medication with food, beverages, or other medications.

SPECIFIC MEASURES FOR OXYGENATION PROBLEMS

- Provide instructions and rationale for specific procedures and problems such as
  a. Suctioning oropharyngeal and nasopharyngeal cavities.
  b. Caring for a temporary or permanent tracheostomy.
  c. Preventing the spread of tuberculosis and other respiratory infections to family members and others.

REFERRALS

- Make appropriate referrals to home health agencies or community social services for assistance in obtaining medical and assistive equipment such as grab bars, respiratory and physical therapy services, and home health or housekeeping services to assist with ADLs.

COMMUNITY AGENCIES AND OTHER SOURCES OF HELP

- Provide information about where durable medical equipment can be purchased, rented, or obtained free of charge; how to access home oxygen equipment and support services; physical and occupational therapy services and where to obtain supplies such as tracheostomy supplies or nutritional supplements.
- Suggest additional sources of information such as the American Lung Association and the Asthma and Allergy Foundation of America.

CLIENT TEACHING

Promoting Healthy Breathing

- Sit straight and stand erect to permit full lung expansion.
- Exercise regularly.
- Breathe through the nose.
- Breathe in to expand the chest fully.
- Do not smoke cigarettes, cigars, or pipes.
- Eliminate or reduce the use of household pesticides and irritating chemical substances.
- Do not incinerate garbage in the house.
- Avoid exposure to secondhand smoke.
- Use building materials that do not emit vapors.
- Make sure furnaces, ovens, and wood stoves are correctly ventilated.
- Support a pollution-free environment.