Preconference Form

Student Name: Chandler Moore

Medical Diagnosis/Disease: COPD

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

Respiratory System:

Upper Respiratory Tract:

Nasal Cavity: Heats, humidifies, and filters the air inhaled through inspiration

Mouth: Secondary pathway for air to enter the respiratory system. Allows more air to be inhaled than the nasal cavity, however it does not filter any air it encounters.

Pharynx: Routers air from the mouth and nasal cavity to the larynx trachea and the lungs. The pharynx also prevents particle of food or liquid from reaching the trachea and entering the lungs.

Larynx: The larynx is the voice box, this is what allows you to speak. When you speak it causes the larynx to vibrate and produce sound which is your voice. The larynx also funnels air to the trachea and then to the lungs.

Lower Respiratory Tract:

Trachea: This carries air to and from the lungs. During inhalation the trachea also aids it warming the air and moisturizing the air before it enters the lungs.

Bronchi: Bronchi carries oxygen into the lungs and expels carbon dioxide. However, before it enters the lungs the bronchi moisten the air as well as screen out foreign particles. Once the air enters the lungs through the bronchi it is distributed to the function tissues of the lungs (alveoli).

Bronchioles: The bronchioles serve as a transition between the large

Pathophysiology of Disease

COPD is chronic inflammation of the airway's parenchyma (bronchioles and alveoli). The defining feature of COPD is airflow limitation that is not fully reversible during exhalation. The main cause of this is the loss of elastic recoil and an obstruction of the airway. The inflammation process most often starts with the repeated exposure of noxious particles causing tissue destruction and disruption of the normal defense mechanisms in the lungs. The main site of airflow limitation is in the smaller airways. As the peripheral airways become obstructed it causes air to get trapped and the chest starts to expand. This causes the respiratory muscles not being able to function effectively. As a result, the client becomes dyspneic with limited exercise compacity. This also commonly causes an impairment of gas exchange across the respiratory system and the entire body.

NCLEX IV *(7)*: Reduction of Risk

Anticipated Diagnostics

Labs

Serum a1-antitrypsin levels, WBC, CBC, ABG's

Additional Diagnostics

H and P

CXR

Spirometry

6 min walk test

COPD Assessment test

Cough and deep breathing

bronchi and the alveolae ducts. The bronchioles carry oxygen rich air into the lungs and carbon dioxide rich air out of the lungs. The bronchioles deliver air to around 300 million alveoli. Bronchioles also allow gas exchange to take place between the blood and the alveoli.

Alveoli: During inspiration alveoli expand and take in oxygen rich air. During exhalation the alveoli shrink and expel carbon dioxide. Within the alveoli there are alveolar sacs where gas exchange takes place between the oxygen rich air and the bloodstream. This allows the blood to always take in oxygen rich blood to keep the body healthy.

Lungs: The lungs are the main source of gas exchange in the body. During inhalation the lungs expand and take in lots of oxygen rich air. During exhalation, the lungs shrink and expel carbon dioxide which is a waste product of the human body. The lungs also assist in delivering oxygen to the bloodstream during gas exchange. Lastly, the lungs also protect the body from harmful substances as the lungs expel waste during every ventilation.

Diaphragm: The diaphragm is a skeletal muscle that flattens and contacts during inhalation, which causes a vacuum effect an assist in pulling air into the lungs. When you exhale the diaphragm relaxes and allows the lungs to expel air.

Contributing Risk Factors	Signs and Symptoms	Possible Therapeutic Procedures	Prevention of Complications
Smoking Infection Asthma Air pollution Aging Genetics Alpha -1 Antitrypsin Deficency	Shortness of breath Dyspnea Dizziness Cough Wheezing Chest tightness Lack of energy Drowsiness Restlessness Weight loss Loss of appetite	Non-surgical Endobronchial Valve Therapy Surgical Lung Volume Reduction Surgery (LVRS) Bronchoscopic Lung Volume Reduction (BLVR) Bullectomy	(What are some potential complications associated with this disease process) Pulmonary Hypertension Dyspnea Acute Respiratory Failure Pneumonia Acute Exacerbations Fall Risk Impaired activity

NCLEX IV *(6)*: Pharmacological and Parenteral Therapies

Anticipated Medication Management

Oxygen Therapy
Bronchiodialtors
Anticholinergics
B2 adrenergic agonists (SABA)
Ipratropium bromide (SAMA's)
ICS
Mucolytic
Expectorants

NCLEX IV *(5)*: Basic Care and Comfort

Non-Pharmacologic Care Measures

Nutritional Therapy: If client is obese or has impaired nutrition
Use of Incentive Spirometer and other breathing techniques
Occupational Therapy: Be able to perform ADL's while keeping oxygen levels up
Adequate Sleep
Moderate Exercise

NCLEX III *(4)*: Psychosocial/Holistic Care Needs

What stressors might a patient with this diagnosis be experiencing?

- Fear of not being able to breathe
- Trouble coping: With the fact if they smoked
- Fear of not being able to go back to their "normal life" activities

Client/Family Education

List 3 potential teaching topics/areas

• Activity: Educate the client that their activity level is going to be impaired, and encourage them to create a plan for each day of activity with plenty of time for breaks in between

• Psychosocial Care: Educate client that if they are having trouble coping or trouble with anxiety that they can talk to a psychologist or other professionals in a private setting. Encourage client to let their emotions free

• Sleep: Educate client on the possible problems they may have when trying to get sleep. Encourage client to get as much rest as they can if they feel tired.

NCLEX I *(1)*: Safe and Effective Care Environment

Multidisciplinary Team Involvement

(Which other disciplines do you expect to share in the care of this patient)

Respiratory Therapy
Occupational Therapy
Respiratory Surgeon
Nutritionist
Pharmacologist
Psychologist
Radiology
Respiratory Nurse