Preconference Form

Student Name: Veronica Diego_____
Medical Diagnosis/Disease: COPD

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

NCLEX IV *(7)*: **Reduction of Risk**

Anatomy and Physiology
Normal Structures

The respiratory system is divided into the upper airway and lower airway. Upper airway includes the nose, nasal, and oral pharynx, epiglottis and larynx
Below the larynx is the lower airway consisting of the trachea, bronchus, and bronchiole tubes which is further divided into smaller bronchioles and the end of small air sacs called alveoli.
At the alveolar level, the capillaries & the smallest vessels that connects arteries and veins, surround the alveoli and exchange oxygen for CO2. When the bronchioles and alveoli become constricted and get full of mucus and are less able to expand and dilate, air becomes trapped and gases are not exchanged. This creates a pressure that can make the lungs stiff and causing the result of a barrel chest seen in many patients with COPD.

Pathophysiology of Disease

-Chronic abnormal inflammatory response of the lungs to harmful particles or gases such as cigarettes smoke.
-Results small airway & narrowing, mucus production, vascular changes such as peripheral blood vessels in COPD patients don't dilate normally.
-Inflammation, tissue destruction
-airflow limitation caused by airway narrowing/obstruction, loss of elasticity recoil
-COPD begins to irritate the inner lining of the lungs causing inflammation & reduces the airflow that goes into the lungs which leads to coughing & sputum production.
-COPD causes the destruction of alveolar walls & airway inflammation

Anticipated Diagnostics
Labs

-CRP
SED rate
-Alpha-1 antitrypsin: checks levels of AAT protein in blood. (AAT is a protein made in the liver that protects the lungs) if it is lower than normal you have a deficiency of AAT & risk of damage to lungs.
-sputum culture to identify microorganisms
-pulmonary function test

Additional Diagnostics:

Chest x-ray or CT
Incentive spirometry
CBC/WBC

NCLEX II *(3)*: **Health Promotion and Maintenance**

NCLEX IV *(7)*: **Reduction of Risk**

Contributing Risk Factors

-exposure to tobacco smoke
-muscle weakness
-respiratory failure/history of asthma/infection
-long term cigarette smoking
- greater than 40yrs
History of HIV
-living in poverty

Signs and Symptoms

-dyspnea: usually progress over time & is persistent
- cough may be associated with recurrent wheeze
-Sputum production
Chest tightness
-fatigueless

Possible Therapeutic Procedures

Non-surgical

-pulmonary rehabilitation: to alleviate symptoms
-breathing techniques
-nutrition counseling
-weight management
-oxygen therapy

Surgical

-lung transplant
-lung volume reduction surgery removes about 30% of damaged lung tissue
-endobronchial valve placement

Prevention of Complications

(What are some potential complications associated with this disease process)

-quit smoking
-avoid second hand smoking exposure
-consuming healthy diet high in whole grains
Low in red/processed meats

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

Anticipated Medication Management

-mucolytic agents: med that breaks down mucus in respiratory tract & helps to clear it
-PDEA4 inhibitors
Montelukast: helps to stop you airway from narrowing, helps breathing make easier
-bronchodilators

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

Non-Pharmacologic Care Measures

-to quit smoking
-nutrition
-physical activites/yoga
-maintain airway
-incentive spirometer

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

What stressors might a patient with this diagnosis be experiencing?

-guilt of smoking
-death
-interference with ADL's
-changes to daily life

Client/Family Education

List 3 potential teaching topics/areas

- **Educate why smoking is not good for lungs**
- To avoid secondhand smoking at all costs
- To have support groups & teach importance of frequent follow up with providers

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)

-Nurses
-respiratory specialists
-mental health therapist
-mental health therapist
-primary care physician
-dietician/nutritionist
-palliative care specialist