Preconference Form

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Medical Diagnosis/Disease: Chronic Obstructive Pulmonary Disease (COPD)

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

NCLEX IV *(7)*: Reduction of Risk

Anatomy and Physiology

Normal Structures

involves the trachea, primary, secondary and tertiary bronchi, bronchioles, and alveoli sacs and alveolar ducts. 3 lobes on the right and 2 on the left, alveoli sac where gas exchange occurs O2 enters, and CO2 is removed. O2 travels through the trachea, bronchi, bronchioles, alveoli where O2 diffuse into bloodstream. Diaphragm muscle that separates the thoracic cavity from the abdominal cavity it contracts and relax to change the volume of the thoracic cavity. Respiratory system is responsible for ventilation (inhaling and exhaling) and maintaining homeostasis in the body)

Pathophysiology of Disease

COPD a progressive lung disease due to airflow limitations that is not fully reversible. Chronic inflammation of airways and lung tissues, inflamed neutrophils, macrophages. Inflames the air sacs in one or both lungs, when pathogens are inhaled microorganisms can reach alveoli tiny sacs for gas exchange. Long term exposure to irritants leads to production of excess mucus, which clogs the airways and obstruct airflow. Alveoli in the lungs are damaged, losing their ability to expand and recoil > impaired gas exchange.

Anticipated Diagnostics

Labs

CBC, blood cultures, Sputum culture, Pulse Ox, arterial blood gases.

Additional Diagnostics

Chest x-ray, CT scan of the chest, spirometry (How much air can be inhaled and exhaled and how quickly exhale happens), Bronchoscopy, Serology test (detect antibodies against certain pathogens) Exercise testing (how body reacts to physical activity with COPD)

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

NCLEX IV *(7)*: Reduction of Risk

Contributing Risk Factors

Age older adults lung function naturally declines, alpha 1 antitrypsin particularly in younger adults, asthma, diabetes, smoking, immunosuppression, HIV/AIDS, environmental factors (exposure to pollutants,

Signs and Symptoms

Wheezing, impaired gas exchange, Nasal congestions, sinus pressure/ pain. Headaches, increase mucus production. Cough, fever, chills, chest pain, dyspnea, yellow green sputum

Possible Therapeutic Procedures

Non-surgical

Bronchodilators, inhaled steroids (reduce inflammation in the airways), pulmonary rehab, O2 therapy, Vaccinations, lifestyle changes No smoking

Surgical

Pneumonectomy, Bullectomy, lung transplant, LVRS (removing damage tissues from the lungs for the healthier parts to work better

Prevention of Complications

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

Quit smoking, Vaccination, good hygiene, healthy lifestyle. Complications may include sepsis, pleural effusion,

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

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

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

Anticipated Medication Management

Antibiotic therapy, bronchodilators (open airways and make breathing easier), corticosteroids used to reduce inflammation, O2 therapy, anti-pyretic (fever), anti-fungal, expectorant.

Non-Pharmacologic Care Measures

Promote hydration to help clear mucus in lungs, vitamins and minerals rich diet, breathing exercises pursed lips, splinting of the abdomen when breathing, sit up fowlers position,

What stressors might a patient with this diagnosis be experiencing?

Physical discomfort, financial concerns, uncertain in recovery, fear, anxiety, disrupt ADLS, guilt.

Client/Family Education

List 3 potential teaching topics/areas

- quit smoking
- Breathing exercises to promote clearance of mucus
- Hydration and vaccination

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)

Dietitian, physician, speech, social worker, respiratory therapist, pharmacist, case manager,