**Preconference Form**

Student Name: Jordan Cottrell

Medical Diagnosis/Disease: COPD

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

**Anatomy and Physiology**
Normal Structures

- airflow limitation not fully reversible during forced exhalation
  - ↳ $CO_2$ trapped under inflammed airways causing impaired gas exchange

**Pathophysiology of Disease**

- loss of elastic recoil & airflow obstruction, from mucus hypersecretion, mucosal edema, & bronchospasm
- remodeled airways
- impaired and destroyed lung tissues
- COPD is progressive with enhanced chronic inflammation in airways & lung parenchyma

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

**Anticipated Diagnostics**

Labs
- ABG
- CBC
- VBG

Additional Diagnostics
- Chest X-ray
- 6 min walk test
- Pulmonary function test
- Sputum culture
- ECG

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

**Contributing Risk Factors**

- smoking (cigarette)
- Asthma
- Air pollution
- Infections → as child can cause scarring
- Occupational chemicals/drugs
- Aging · Genetics
- poor nutrition

**Signs and Symptoms**

- diminished lung sounds
- ↑ dyspnea
- ↑ sputum
- fatigue
- wheezing
- insomnia
- ↓ exercise tolerance
- using accessory muscles

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

**Possible Therapeutic Procedures**

Non-surgical
- O2 therapy
- drug therapy
- nutrition therapy (malnutrition ↑ inflammation)

Surgical
- lung volume reduction surgery
- Bronchoscopic lung volume reduction
- lung transplant

**Prevention of Complications**

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

- pulmonary hypertension
- death · pain
- acute respiratory failure
- hospital admissions
- Permanent lung damage

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

**Anticipated Medication Management**

- Drug therapy
- Antibiotics
- Bronchodilators – albuterol (relaxes muscles)
- corticosteroids
- Mucolytic Agents

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

**Non-Pharmacologic Care Measures**

- positioning
- breathing exercises
- avoid irritants
- nutrition
- promote rest periods
- avoid extreme temperatures

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

**What stressors might a patient with this diagnosis be experiencing?**

- uncertainty
- financial burden → out of work
- chronic condition → fear of death
- lack of control
- difficulties in self care
- decreased energy for social life

**Client/Family Education**

**List 3 potential teaching topics/areas**

- Avoid smoking
- pursed lip & diaphramatic breathing exercises
- Medications → correct use

**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)

- social worker
- Physical therapy
- Dietician
- Respiratory therapist
- Pulmonologist
- Pharmacist

2024

A & P Structures

Lungs in pluera cavity

Left lung: 2 lobes
Right lung: 3 lobes

upper: nose, mouth, pharynx, epiglottis, larynx, trachea → divides between left & right is carina
↳ nasopharynx, oropharynx, & laryngopharynx
→ warms & moistens / hairs filter / smell

• except for the right & left mainstem bronchi, and lower is in lungs

Lower: bronchi, bronchioles, alveolar ducts, and alveoli

conduct gases to and from alveoli

smooth muscles that constrict & dilate with stimuli
- Bronchoconstriction
- Bronchodilation

• pressure change allows ventilation

small sacs, primary site of gas exchange for $O_2$ & $CO_2$

• diaphragm to aid in breathing

Gases are exchanged across the alveolar-capillary membrane where the alveoli come in contact with pulmonary capillaries

Blood Supply

pulmonary: provides lungs with blood that takes part in gas exchange.

deoxygenated blood from R ventricle → pulmonary artery → pulmonary capillaries (lies directly alongside alveoli), $O_2$–$CO_2$ exchange occurs now

pulmonary veins return oxygenated blood to the L Atrium → L ventricle → systemic circulation

*closed circuit between heart & lungs

*Surfactant: lipoprotein that ↓ surface tension in alveoli. Reduces amount of pressure needed to inflate the alveoli and less likely to collapse

Bronchial: thoracic aorta → bronchial arteries

*does not take part in gas exchange, provides $O_2$ to bronchi & tissues in lungs

Deoxygenated blood returns from the bronchial circulation through the azygos vein → superior vena cava

mucus membranes → Cilia cover airways and move mucus. Allows tissues to move easily against each other

COPD classified as mild, moderate, severe, very severe

Anatomy and physiology (first box) is the whole page on the back. The A & P and pathophysiology box on the front is both pathophysiology!!