

N311 Care Plan 1

Macy Clark

Lakeview College of Nursing

N311: Foundations of Professional Practice

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Demographics:

Date of Admission 09-21-2023	Client Initials MC	Age 63	Gender Female
Race/Ethnicity Caucasian	Occupation Retired teacher	Marital Status Married	Allergies None
Code Status DNR	Height 5'4"	Weight 100 lbs	

Medical History:

Past Medical History: diagnosed with melanoma in 2010, left wrist fracture 2017, fractured coccyx November 2022

Past Surgical History: tonsillectomy at age 16

Family History: parents are deceased; mother diagnosed with Alzheimer's, father had diabetes and kidney failure; no kids

Social History: never has smoked, occasionally drank when younger; stopped at age 50

Admission Assessment:

Chief Complaint: chest pain

History of Present Illness:

Patient complains of pain in the chest that onset two weeks ago. The pain is consistent everyday and lasts mostly all day. Patient says it is an "sharp and nagging pain" with great feeling of pressure. The pain gets worse as the day goes on and especially worse at night when laying down in bed. Patient says the only thing that is relieving is to "sit hunched over with my head in between my legs". Patient has been taking anti inflammatory OTC drugs to stimulate the pain. Patient rates the pain an 8/10.

Primary Diagnosis:

Primary Diagnosis on Admission: Pneumonia

Secondary Diagnosis (if applicable): n/a

Vital Signs:

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0900	110	122/80	8	98.5	85%

Pain Assessment:

Time	Scale	Location	Severity	Characteristics	Interventions
0900	8/10	Chest	Severe	Sharp & consistent	Place in fowler's for full lung expansion, pulse oximetry, auscultation of the lungs q. 20 minutes

Pathophysiology:

Capriotti and Frizzell (2020) define pneumonia in the textbook, *Pathophysiology Introductory Concepts and Clinical Perspectives*, as “inflammation of the lung tissue in which alveolar air spaces fill with purulent, inflammatory cells, and fibrin” (Capriotti & Frizzell, 2020, p. 449). Most of the time, a patient will come in contact with this disease through another person or simply by infection from bacteria or a virus. According to an article titled “The use of artificial intelligence systems in diagnosis of pneumonia via signs and symptoms: A systematic review”, there are 30 different pathogenic causes of pneumonia (Stokes et al., 2021). That being said, inhalation of chemicals, aspiration of contents from the oropharynx or stomach, or infection from other infectious agents can inspire this disease as well (Capriotti & Frizzell, 2020). **The most common cause of pneumonia, according to the book, is inhalation of droplets containing bacteria or other pathogens (Capriotti & Frizzell, 2020, p. 450).** The droplets enter the airways which gives them access to the lung tissue where pathogens stick to the epithelium and trigger an inflammatory response (Capriotti & Frizzell, 2020). The inflammation begins to spread to the lower respiratory tract and alveoli in which vasodilation occurs exposing neutrophils into the air spaces, which will eventually phagocytize microbes and stimulate an excessive amount of goblet cells that secrete mucus (Capriotti & Frizzell, 2020). The alveoli and capillaries consist of persistent edema and mucus and when the alveoli attempt to open and close, some are restricted from opening. The book states “there is a layer of edema and infectious exudate at the capillary-alveoli interface that hinders optimal gas exchange” (Capriotti & Frizzell, 2020, p. 450). Signs and symptoms of pneumonia include the following: fever, chills, cough with sputum production, chest pain, and shortness of breath (Stokes et al., 2021). There are many factors that can play a role in how seriously a patient is affected by pneumonia including age, the type of pathogen

causing the infection, and overall health status (Stokes et al., 2021). Those who are suffered from other respiratory diseases or infections or are immunosuppressed are also at high risk for severe pneumonia. The diagnostic testing used to confirm a patient positive for pneumonia is a chest x-ray, which also shows whether it is a bacterial or a viral infection (Capriotti & Frizzell, 2020). Auscultation of the lungs can be performed and sounds heard will be a cackling sound. Arterial blood gas tests and pulse oximetry will show oxygenation of the patient (Capriotti & Frizzell, 2020). Antigen testing can also be done through sputum, serum, or urine (Capriotti & Frizzell, 2020).

References

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives*. (2nd ed.). F.A. Davis Company.

Stokes, K., Castaldo, R., Federici, C., Pagliara, S., Maccaro, A., Cappuccio, F., Fico, G., Salvatore, M., Franzese, M., & Pechia, L. (2021, November 12). *The use of artificial intelligence systems in diagnosis of pneumonia via signs and symptoms: A systematic review*. Biomedical Signal Processing and Control.

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