

Concept Map

Learner's Name

Capella University

Biopsychosocial Concepts for Advanced Nursing Practice I

Concept Map

April, 2019

Concept Map

Patient Info
Name: Jane Doe | **Gender:** Female | **Age:** 72
Vitals: Temp: 37 °C (98.6 °F), BP: 162/94, Pulse: 92, Respiratory rate: 26 and shallow
Chief complaint: Shortness of breath (SOB) and difficulty breathing
Medical history: Hypertension, hyperlipidemia, and chronic obstructive pulmonary disease (COPD)

Nursing Diagnosis
Impaired gas exchange related to destruction of the alveoli, narrowing of bronchioles, and trapping of air resulting in loss of lung elasticity
Subjective data: Difficulty breathing and SOB
Objective data: Crackles and wheezing heard upon auscultation, dyspnea, tachypnea, nasal flaring, use of accessory muscles, late signs of cyanosis (Linton, 2015), and oxygen saturation is 90% on room air

Nursing Interventions
Independent intervention (II): Monitor the patient’s arterial blood gases, oxygen saturation, vital signs, and color and assess for manifestations such as restlessness, anxiety, lethargy, and confusion
Rationale: This process will help detect potential hypoxemia or hypercapnia (LeMone et al., 2015)
Collaborative intervention (CI): Supervise oxygen (O₂) at 2 L/min through nasal cannula as ordered. Instruct the patient and kin not to increase the O₂ level
Rationale: Oxygen therapy is used to treat hypoxia and is prescribed for chronic and acute breathing problems (Rees, 2017). However, a sudden increase in the O₂ level can lead to respiratory failure (Linton, 2015)
II: Position the patient in an upright or high Fowler’s position (Linton, 2015)
Rationale: This posture promotes lung ventilation (LeMone et al., 2015)
II: Instruct and teach the patient to perform the pursed-lip breathing technique
Rationale: This technique slows the respiratory rate and reduces air trapping and fatigue (LeMone et al., 2015)

Expected Outcomes
 Arterial blood gases and vital signs will be consistent with patient norms, indicating improvement in gas exchange (Linton, 2015)
 The pursed-lip breathing technique will reduce dyspnea (Linton, 2015)

Nursing Diagnosis
Ineffective airway clearance related to bronchoconstriction, increased mucus production
Subjective data: The patient states she has been sleeping in a recliner chair for the past three nights because of difficulty breathing
Objective data: Wheezing heard upon auscultation, dyspnea, tachypnea, and use of accessory muscles (Linton, 2015)

Nursing Interventions
II: Demonstrate pursed-lip and diaphragmatic breathing and encourage the patient to practice them periodically
Rationale: These techniques reduce air trapping and fatigue and help maintain open airways (LeMone et al., 2015)
II: Position the patient in an upright or high Fowler’s position
Rationale: This posture promotes lung ventilation (LeMone et al., 2015)
CI: Encourage deep breathing and the use of an incentive spirometer
Rationale: Using an incentive spirometer prevents complications such as pneumonia and atelectasis (LeMone et al., 2015)
CI: Collaborate with a respiratory therapist to teach the patient how to cough effectively
Rationale: This technique helps open distal alveoli and remove secretions (LeMone et al., 2015)
II: Provide emotional support to the patient
Rationale: This intervention will be therapeutic, make the patient feel comfortable, and help her cope with the diagnosis (Kazanowski, 2017; LeMone et al., 2015)

Expected Outcomes
 The patient will have open airways. Signs of clear and open airways are normal depth and rate of respiration, normal breathing sounds, and effective coughing of secretions (Linton, 2015)

Nursing Diagnosis
Activity intolerance related to hypoxia (imbalance between oxygen supply and demand)
Subjective data: “I find it difficult to breathe. I can’t catch my breath when I walk a few feet.” — Jane Doe
Objective data: Late signs of cyanosis, crackles and wheezing heard upon auscultation, and use of accessory muscles (Linton, 2015)

Nursing Interventions
II: Teach and encourage the use of the pursed-lip breathing technique while performing activities
Rationale: This technique can lower breathlessness and improve respiratory function (Ackley, Ladwig, Makic, 2016)
II: Advise the patient to take rest periods before and after activities
Rationale: Resting reduces fatigue and lowers the demand for oxygen (LeMone et al., 2015)
CI: Recommend a pulmonary rehabilitation program
Rationale: Pulmonary rehabilitation can lower exertional dyspnea and perceived intensity of breathlessness (Ackley et al., 2016)
CI: Collaborate with a respiratory therapist for cough control and improved breathing
Rationale: This will help improve or maintain oxygenation in the patient (Boon, 2018)
CI: Supervise oxygen (O₂) at 2 L/min through nasal cannula as ordered. Instruct the patient and kin not to increase the O₂ level
Rationale: Oxygen therapy is used to treat hypoxia and is prescribed for chronic and acute breathing problems (Rees, 2017). However, a sudden increase in the O₂ level can lead to respiratory failure (Linton, 2015)

Expected Outcomes
 The vital signs of the patient will show normal fluctuation during physical activity, which is a measure of activity tolerance (LeMone et al., 2015)

Introduction

This paper presents an evidence-based concept map that illustrates a nursing care plan to achieve high-quality outcomes for a patient experiencing SOB and difficulty breathing. The concept map contains urgent diagnoses, possible nursing interventions, and opportunities for interprofessional collaboration as well as rationales and possible high-quality outcomes. The narrative justifies the value and relevance of the evidence used in the concept map and provides additional evidence, conflicting data, and the scope of interprofessional collaborations in achieving high-quality outcomes.

Additional Evidence

Jane Doe is a 72-year-old female experiencing SOB and difficulty breathing. The suspected diagnoses are based on the patient's medical history and physical examination. The evidence used in the concept map is a combination of subjective (patient-reported distress) and objective (symptoms or characteristics related to a condition observed in the patient) data obtained after an investigation. Doe also suffered from emphysema in the past. Fatigue, SOB, edema, and wheezing are common symptoms of COPD. The diagnoses in the concept map are related to various conditions related to COPD such as emphysema and chronic bronchitis. This evidence suggests that the client's current distress could be related to COPD. However, symptoms such as wheezing, edema, SOB, and fatigue can also be observed in a person suffering from congestive heart failure (LeMone et al., 2015). Even though COPD and congestive heart failure have several risk factors and symptoms in common, the causes and treatments are different.

Interprofessional Strategies

An interprofessional collaboration between health care professionals, patients, and their caregivers is required for high-quality outcomes. Successful collaborations require positive reinforcement and mutual feedback in an objective and non-discriminatory setting (Amalakuhan & Adams, 2015). COPD will benefit from a combination of pharmacological and non-pharmacological interventions guided by an interprofessional collaborative practice. The concept map clearly identifies interventions that can be performed independently and those that need interprofessional collaboration. For instance, it is necessary to collaborate with a respiratory therapist to teach and assist a patient in coughing effectively. Similarly, referring the patient to a pulmonary rehabilitation program can help lower exertional dyspnea and the perceived intensity of breathlessness. The concept map also facilitates communication in an interprofessional team by identifying the types of nursing interventions required, thereby preventing conflict.

Health care professionals must collaborate with caregivers and COPD patients to achieve high-quality outcomes. This collaboration should effectively optimize non-pharmacological interventions such as providing smoking cessation counseling for patients who find it difficult to quit the habit, promoting pulmonary rehabilitation programs, and administering appropriate vaccinations. Interprofessional collaborations should also focus on helping patients gradually incorporate more physical activity into their lifestyles and managing comorbidities common in COPD in addition to the interventions discussed in the concept map. Health care professionals, caregivers, and COPD patients must work together to deliver the prescribed pharmacotherapy (Amalakuhan & Adams, 2015).

Value and Relevance of Evidence

An evidence-based concept map with interprofessional strategies allows health care professionals to collaborate and analyze patient data as well as think critically (Aein & Aliakbari, 2017). According to Cook, Dover, Dickson, and Colton, concept map development is an alternative to a traditional nursing care plan for evidence-based practices. The traditional linear format of a nursing care plan may not have the scope to record a holistic picture of patients' requirements. It does not facilitate visualization of the interrelated nature of patient data. On the other hand, a concept map allows for a systematic visualization of psychological, physiological, and pathophysiological relationships and interactions, which promotes quality analysis (as cited in Aein & Aliakbari, 2017). The findings of a study conducted by Gerdeman, Lux, and Jacko show that medical students approached concept mapping as

an instrument to improve clinical judgment and make better clinical decisions. Finally, the minimal use of text in a concept map facilitates easy searching for terms related to the disorder or condition being treated (as cited in Aein & Aliakbari, 2017).

Conclusion

COPD is a group of progressive lung diseases such as emphysema and bronchitis. Interprofessional strategies to treat COPD can improve outcomes, and collaboration between health care professionals can aid in providing comprehensive care to patients. Concept mapping is useful in improving critical thinking among professionals. A concept map helps in recording a holistic picture of the patient's needs and facilitates visualization of the data. Therefore, a concept map is an essential tool to develop nursing care plans to achieve high-quality outcomes.

References

- Ackley, B. J., Ladwig, G. B., & Makic, M. B. F. (2016). *Nursing diagnosis handbook: An evidence-based guide to planning care* (11th ed.). Retrieved from <https://books.google.co.in/books?id=s3OKCwAAQBAJ&lpg=PP1&pg=PP1#v=onepage&q&f=false>
- Aein, F., & Aliakbari, F. (2017). Effectiveness of concept mapping and traditional linear nursing care plans on critical thinking skills in clinical pediatric nursing course. *Journal of Education and Health Promotion, 6*(13).
- Amalakuhan, B., & Adams, S. G. (2015). Improving outcomes in chronic obstructive pulmonary disease: The role of the interprofessional approach. *International Journal of Chronic Obstructive Pulmonary Disease, 10*(1), 1225–1232.
- Boon, C.W. (2018). Oxygenation. In Potter, P. A., Perry, A. G., Stockert, P. A., & Hall, A. M. (Eds.), *Essentials for nursing practice* (9th ed., pp. 865–916). Retrieved from <https://books.google.co.in/books?id=wDtRDwAAQBAJ&lpg=PP1&pg=PR3#v=onepage&q&f=false>
- Kazanowski, M. K. (2017). End-of-life-care concepts. In Ignatavicius, D. D., Workman, M. L., & Rebar, C. R. (Eds.), *Medical-surgical nursing: Concepts for interprofessional collaborative care* (9th ed., pp. 103–116). Retrieved from <https://books.google.co.in/books?id=Qzg1DwAAQBAJ&lpg=PA244&dq=incentive%20spirometer%20prevent%20pneumonia&pg=PA112#v=onepage&q&f=false>
- LeMone, P., Burke, K., Dwyer, T., Levett-Jones, T., Moxham, L., & Reid-Searl, K. (2015). *Medical-Surgical nursing: Critical thinking for person-centred care* (2nd Australian ed.). Retrieved from <https://books.google.co.in/books?id=MDXiBAAAQBAJ&lpg=PP1&dq=LeMone%2C%20Burke%2C%20Dwyer%2C%20Levett-Jones%2C%20Moxham%2C%20Reid-Searl%2C%202015&pg=PP1#v=onepage&q=LeMone,%20Burke,%20Dwyer,%20Levett-Jones,%20Moxham,%20Reid-Searl,%202015&f=false>
- Linton, A. D. (2015). *Introduction to medical-surgical nursing* (6th ed.). Retrieved from <https://books.google.co.in/books?id=o5jTBgAAQBAJ&lpg=PP1&pg=PP1#v=onepage&q&f=false>
- Rees, H. (2017). Care of patients requiring oxygen therapy or tracheostomy. In Ignatavicius, D. D., Workman, M. L., & Rebar, C. R. (Eds.), *Medical-surgical nursing: Concepts for interprofessional collaborative care* (9th ed., pp. 529–546). Retrieved from <https://books.google.co.in/books?id=Qzg1DwAAQBAJ&lpg=PA244&dq=incentive%20spirometer%20prevent%20pneumonia&pg=PA529#v=onepage&q&f=false>