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NUR 302: Evidence for Nursing Practice

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**The Burden of Chronic Lung Disease - COPD**

## **Quantitative Study**

### **Title**

Trends in the Use, Sociodemographic Correlates, and Undertreatment of Prescription Medications for Chronic Obstructive Pulmonary Disease among Adults with Chronic Obstructive Pulmonary Disease in the United States.

### **Introduction/Purpose**

Chronic obstructive pulmonary disease (COPD) is a chronic public health issue in the United States that affects millions of people, leading to substantial morbidity and mortality. There are a number of prescription medications to help manage COPD. This study examines the trends in the use of prescription medications for COPD among adults with COPD.

### **Methods**

This study used data from the National Health and Nutrition Examination Survey (NHANES) from 2001 to 2010. 1,426 participants aged 20 years and older with different genders, race, ethnicity, and educational level participated in the study. This study used spirometry to measure lung function and classified COPD as either self-reported or spirometry-defined.

### **Results**

From 2009 to 2010, there was an increase of the use of prescription medications for COPD. 44.2% of adults with COPD used any kind of prescription medication. The most commonly used medications were short-acting agents, inhaled corticosteroids, and LABAs. Compared with White people, Mexican Americans were less likely to use any kind of COPD medication. In 2007-2010, 19% of participants aged 20-79 years with spirometry measurements reported using any medications, while 72.6% of those with self-reported COPD used medication.

## **Discussion**

There was a substantial change in the use of medications to treat airflow limitations among adults with COPD. There was a higher percentage of adults with self-reported COPD reported having medications used to treat COPD than those with spirometry measurements. Overall, there was a significant increase in the use of prescription medications for COPD patients due to increased awareness, improved access to healthcare, and more effective medications. The findings highlight the need for continued surveillance of COPD, and efforts to prevent and manage COPD especially among high-risk populations. The study contributed to our understanding of the burden of COPD in the United States. However, there are disparities in the use of medications and more future studies are needed to ensure people have access to the medications.

## **Critique and Appraisal**

This quantitative study by Ford and his researchers (2015), provided valuable insights into the prevalence and trends of the use of medications for COPD patients in the U.S. The study findings highlight the need for a health system surveillance of COPD among high-risk populations and efforts to prevent and manage COPD. Because the study was cross-sectional, the presence of symptoms and the use of medications were collected at a single point in time. The findings of this study relied upon self-reported COPD, which may underestimate the true prevalence of COPD and cause bias. One of the strengths was the use of a phenomenological approach to explore the subjective's experiences. The analysis of data show the trends of COPD medication use over a 10-year period.

## **Qualitative Study**

### **Title**

Experiences of Older People Following an Acute Exacerbation of Chronic Obstructive Pulmonary Disease: A Phenomenological Study.

### **Introduction**

This qualitative survey aimed to explore the experiences of older individuals living with chronic obstructive pulmonary disease (COPD) using a phenomenological approach. COPD is caused by smoking, air pollution, and occupational exposure to dust or chemicals. It is the third leading cause of death in the United States. Older adults are at an increased risk for developing COPD and for having more severe acute exacerbations due to other chronic health conditions.

### **Methods**

The survey included 12 participants who were recovering from an acute exacerbation of COPD. Data collection was conducted using semi-structured interviews and analyzed using thematic analysis. Colaizzi's phenomenological method was used for the transcription of the phenomenological data and participant's experience.

### **Results**

The findings identified four major themes related to the experiences of individuals living with COPD: (1) a sense of loss and frustration, (2) hopelessness, (3) uncertainty about the future, (4) and the fear of becoming a burden to their families. Survey findings showed that COPD had a significant impact on physical limitations, fatigue, anxiety, depression, negative emotions, and difficulty concentrating on tasks (Rosa et al., 2018).

### **Discussion**

The findings of this study show the impact on the quality of life of older people with COPD and the range of emotions and themes they experience with COPD. These findings suggest that healthcare providers need to be aware of the emotional needs of older people and help them cope by providing emotional support, support groups services, and education.

### **Critique and Appraisal**

This study provides important insights into the experiences of older individuals living with acute exacerbation of COPD. The study is consistent with other studies on this topic. The use of a phenomenological approach allowed for an in-depth exploration of the subjective experiences of participants. The study also had a clear research question and methodology, which were well-described in the manuscript. One limitation of this study is the small sample size of 12 participants. The study did not report the demographics of the participants, which may impact the generalizability of the findings. Future studies should be conducted with larger samples and explore different demographics affected by COPD.

### **Research Question - PICO**

**Population:** Adults with COPD

**Intervention:** Use of COPD medications

**Comparison:** Standard care without COPD medications

**Outcome:** Impact on the quality of life

**Research question:** In a population of adults with COPD, does the use of medication compared to standard care without medication improve quality of life?

### **References**

Ford, E. S., Mannino, D. M., Wheaton, A. G., Presley-Cantrell, L., Liu, Y., Giles, W. H., & Croft, J. B. (2015). Trends in use, Sociodemographic correlates, and Undertreatment of prescription medications for chronic obstructive pulmonary disease among adults with chronic obstructive pulmonary disease in the United States from 1999 to 2010. *PLoS ONE*, 9(4), e95305. <https://doi.org/10.1371/journal.pone.0095305>

Rosa, F., Bagnasco, A., Ghirotto, L., Rocco, G., Catania, G., Aleo, G., Zanini, M., Dasso, N., Hayter, M., & Sasso, L. (2018). Experiences of older people following an acute exacerbation of chronic obstructive pulmonary disease: A phenomenological study. *Journal of Clinical Nursing*, 27(5-6), e1110-e1119. <https://doi.org/10.1111/jocn.14189>