



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management/Pharmaceutical Management/Rural
Management

by

Dr. Harshita Upadhyay

Under the Supervision and Guidance of

Dr. Anoop Khanna

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A Research to examine Chronic Obstructive Pulmonary Disease
treatment methods in the United States.

Dissertation Submitted to



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CERTIFICATE

This is to certify that Dr. Harshita Upadhyay in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management)/MBA (Pharmaceutical Management)/MBA (Rural Management) from the IIHMR University, Jaipur has successfully completed her/his internship at (name of the organization) during March 22, 2022, to June 19, 2022.

Place:

Date:

Preceptor/Head of the

Organization Name of the
organization

CERTIFICATE

This is to certify that dissertation titled A Research to examine Chronic Obstructive Pulmonary Disease treatment methods in the United States is a record of the research work undertaken by (Name of Student) in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management)/MBA (Pharmaceutical Management)/MBA (Rural Management) from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide -Dr Anoop Khanna
IIHMR University, Jaipur

Date 22-06-2022

School Dean – Dr Mahender Kumar
IIHMR University, Jaipur

Date 22-06-2022

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Sincerely,

Dr. Harshita Upadhyay

MBA HM 1104

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ABBREVIATIONS

- BRFSS: Behavioral Risk Factor Surveillance System
- CCMP: Comprehensive Care Management Program
- CDC: Centers for Disease Control and Prevention
- COPD: Chronic obstructive pulmonary disease
- DALYs: Disability Adjusted Life Years
- DIPLAC: Discharge Plan of Care for COPD
- ED: Emergency Department
- GOLD: Global Initiative for Chronic Obstructive Lung Disease

INTRODUCTION

The Centers for Disease Control & Prevention defines chronic obstructive pulmonary disease, abbreviated as COPD 1, as "a set of disorders that induce airflow obstruction as well as breathing-related difficulties. "It is made up of emphysema and chronic bronchitis".

This condition affects around 16 million people in the U.S. Furthermore, a sizable portion of the population stays undiagnosed. COPD is one of the main causes of mortality in the United States, as well as billions of dollars on COPD patient treatment each year. The expenditures associated with COPD patient treatment are expected to climb to roughly \$49 billion by 2020.

Aside from economic expense, social hardships connected with COPD can't be overlooked.

COPD ranks second biggest Disability Cause DALYs (adjusted life years) lost, after just ischemic heart disease, according to Global Burden of Disease research.

Coughing, cyanosis, tiredness, wheezing, excess phlegm, mucus, or sputum production are all symptoms of asthma. are the most prevalent symptoms of COPD. Smoking is one of the biggest risk factors for COPD, according to the American Lung Association. Air pollution, passive smoking, a hereditary illness (Alpha-1 deficiency), and obesity are all risk factors. chemical and dust exposure.

The Department of Health and Human Services' COPD National Action Plan outlines five major aims for addressing this chronic condition. These objectives are summarized below.

The primary objective is to raise community awareness of COPD through outreach activities and to educate people concerning the major risk factors. The primary objective of this goal is to improve illness detection and empower the population to tackle this chronic condition.

The 2nd purpose is to enhance the quality of treatment provided to COPD patients. It aims to standardize care plans for diagnosis and treatment., as well as implementing modern technologies to improve existing processes.

The third purpose is to encourage data collecting at all levels so that informed decisions may be made. The emphasis is on developing standardized systems to boost data collecting and improve treatment COPD patients are served. The fourth purpose is to concentrate on the research in order to recognize danger signs and illness progression.

The promotion of the research can assist to identify many phases of illness, progression and enhance diagnostic and therapeutic techniques.

The fifth purpose is to translate the national action plan's ideas into policies that can be implemented. It focuses on increasing funds for the plan's different initiatives with the help of federal authorities.

LITERATURE REVIEW

The burden of COPD is substantially higher in the rural areas of the United States than in metropolitan ones. Rural regions had a substantially higher Medicare hospitalizations, age-adjusted frequency, and number of fatalities attributable to COPD. This can be attributed with relation to the rural population's greater smoking prevalence and considerably lower access to smoking cessation programmes and other educational resources initiatives. Other variables such as poorer socioeconomic level, less access to diagnosis and treatment, and increased exposure to harmful chemicals also contribute to the rural population's greater prevalence. JB Croft (2018)

According to a study undertaken to recognize individuals at increased chance of readmission owing to COPD, thirty -day readmissions due to COPD show a relationship with parameters such as the patients' age and

insurance status. According to the findings of the report study, readmission rates are greater in patients who are younger (those under the age of 65) than among those beyond the age of 65. Furthermore, the patients' insurance status influences the readmission rate. Those under the age of 65 with public insurance have greater patients with private insurance had lower readmission rates., according to the study findings. J. Simmering (2016)

RATIONALE

COPD is the 3RD biggest cause of death in billions of dollars are spent in the United States on COPD patient treatment each year. The Centers for Medicare and Medicaid Services' Hospital Readmissions Reduction Program- penalizes institutions that have too many readmissions due to COPD.

OBJECTIVES

- Identifying the impediments to optimum treatment patients of COPD.
- Research of the best of the practices followed by hospitals in United States for minimizing readmissions related to COPD.
- To investigate the COPD prevalence in the U.S.

METHODOLOGY

- Research method: descriptive observational study
- Secondary research data collection is secondary research
- Study period: 3 months
- Research studies, posters, journal papers, and surveys are examples of data collection tools.

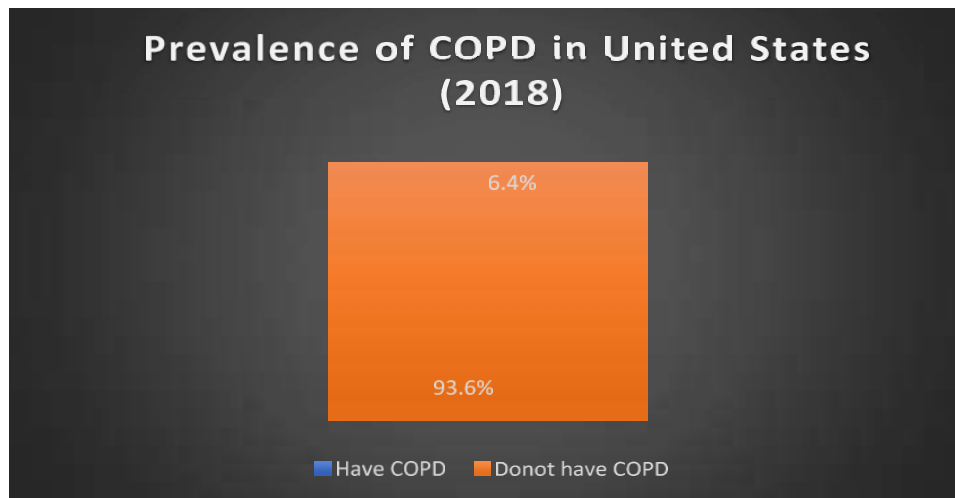
- Data analysis:

The secondary data was collected from the Behavioral -Risk -Factor - Surveillance -System (**BRFSS**) and processed in Microsoft -excel to determines prevalence.COPD prevalence was studied at the national and state levels.

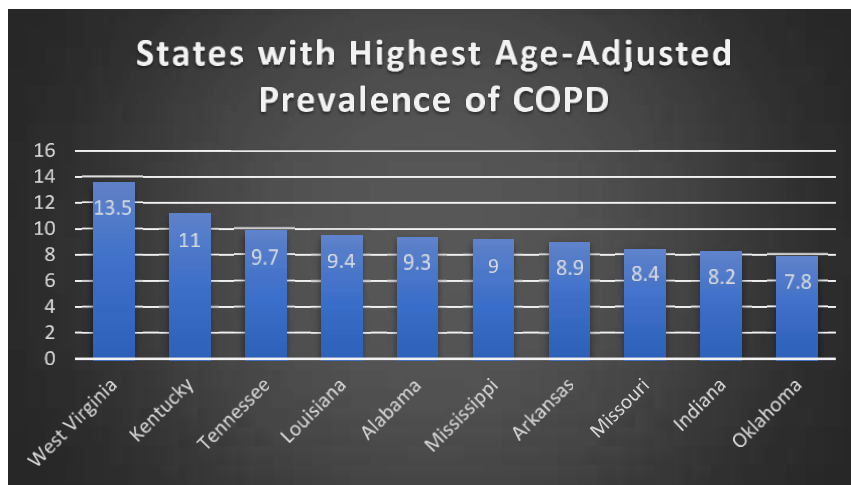
- A literature assessment of FIVE research papers & publications based on health-care delivery in the U.S was undertaken to examine impediments to optimum care of COPD patients. The results were provided in a tabular format.
- Ten hospital institutions that have established COPD readmission reduction initiatives were chosen to assess best practices. Following a detailed examination examination of research, initiatives, and results of the programmes & techniques were devised tabulated.
- Criteria for inclusion: Published studies in the United States between 2016 and 2020.
- Exclusion criteria: Studies published before to 2016 that are not based in the U.S.

FINDINGS

A. COPD prevalence in U.S

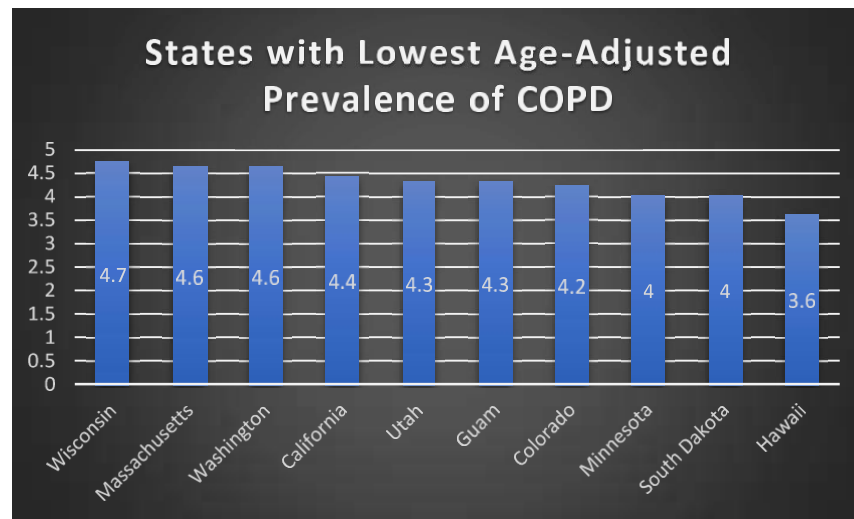


States with highest COPD Prevalence



West Virginia has the highest COPD prevalence (13.5 percent)

States with Lowest COPD Prevalence



B. HOSPITALS' PRACTICES TO LOWER READMISSION RATES:

Readmissions have been a long source of worry for healthcare institutions. With the *Centers - for Medicare and Medicaid Services* implementing fines for healthcare, readmissions institutions throughout the United States are constantly attempting to reduce readmissions rates via the use of novel solutions. Many hospitals in the United States have been closed down. effective in lowering readmissions by modifying workflows, managing discharge procedures, enhancing systems for hospital -to- home transitions, adopting a bundle care strategy, & a few other methods.

ANALYSIS:

A. To - research the COPD prevalence in the U.S, the 2020 BRFSS survey found that the COPD prevalence in the U.S is 6.4 percent.

West Virginia is where the greatest rate of COPD meanwhile Hawaii has the lowest. COPD was most common in people aged 55 to 64

and with a yearly family income of less than \$15,000. The prevalence of the disease can be influenced by social determinants of health such as poverty and education. Some information listed in the West of Virginia BRFSS report (2018) that can be attributed to West Virginia's high frequency of COPD includes:

- The average household income is \$44,097, which is much-much lower than the median national household income of \$61,937.
- Poverty is represented by 19.1 percent of the population.
- In West Virginia, 26.3 percent of individuals have fair or poor health.
- West of Virginia has the highest rate of ill-health, both physical and mental, in the country.
- 19.5 percent of the state's adults have no personal health care provider.
- The state with the greatest frequency of cardiovascular illnesses is (14.6 percent).
- Tobacco usage (28.4 percent) is the second highest (COPD risk factor)

B. Identifying the impediments to optimum COPD patient care.

According to research cited above in the document, the following are the majority prevalent impediments to appropriate COPD sufferers' care:

Patient education is lacking.

Because COPD is a chronic disease condition, education of the patient is critical in health-care delivery patients must be able to do

daily tasks and must take an active role in treatment decisions. Creating patient education materials such as information booklets and checklists that address subjects such as drug administration, follow-up visits, smoking cessation, emergency care, and pulmonary rehabilitation.

Inadequate follow-ups visit schedule.

Follow-up appointments are required to monitor the patient's progress, manage the pharmaceutical regimen, and monitor comorbidities. GOLD guidelines offer two follow-up regimens: early 1.e. within the first 4 weeks of discharge and late 1.e. within the first 12 weeks after discharge. Noncompliance with early and late follow-up visits might impede care delivery.

There are no established guidelines.

The lack of consistent rules leads to incorrect diagnosis, which delays the course of therapy. Standardized criteria for COPD sufferers' diagnosis and management should be implemented by healthcare organizations. The GOLD recommendations for diagnostic and treatment regimens are recommended by the CDC.

Medication noncompliance

The adherence of patients to drugs is critical. Noncompliance with medicine has an impact on healing and can lead to subsequent difficulties. Patients should be trained about inhaler practices as well as drug regimens. GOLD recommendations should be followed in terms of treatment plan.

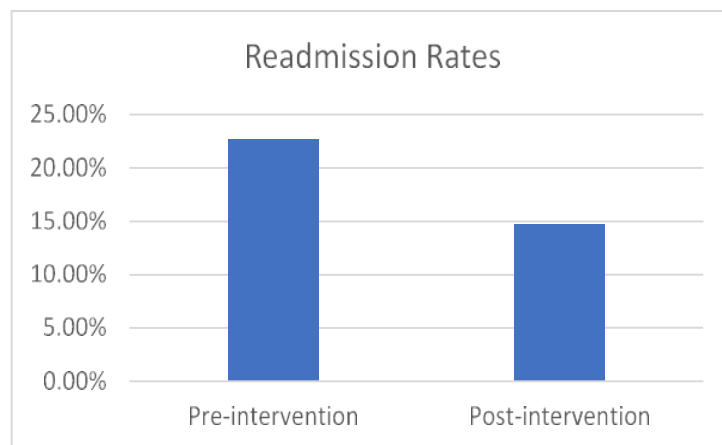
C. To investigate the best methods used by hospitals in the United States to reduce COPD-related readmissions.

The research was extensively evaluated, and the strategies used to reduce COPD-related readmission rates in the studies are outlined below. These strategies have been shown to reduce readmissions in COPD patients. The interventions are classified as pre-discharge and post-discharge.

Pre-discharge

- **Creating care packages**

The use of COPD care packages has been found to minimize readmission rates. The 30-day readmission rate at the University of Cincinnati Medical Center was reduced from 22.7 percent to 14.7 percent.



The COPD care bundle includes the following components:

- Educating patients about inhaler regimes.

- Adopting an inhaler regimen based on GOLD recommendations.
- Creating a discharge teaching platform to deliver uniform information to every patient.
- Ensure the plan for a follow-up visit.

- Using the Chronic Care Model

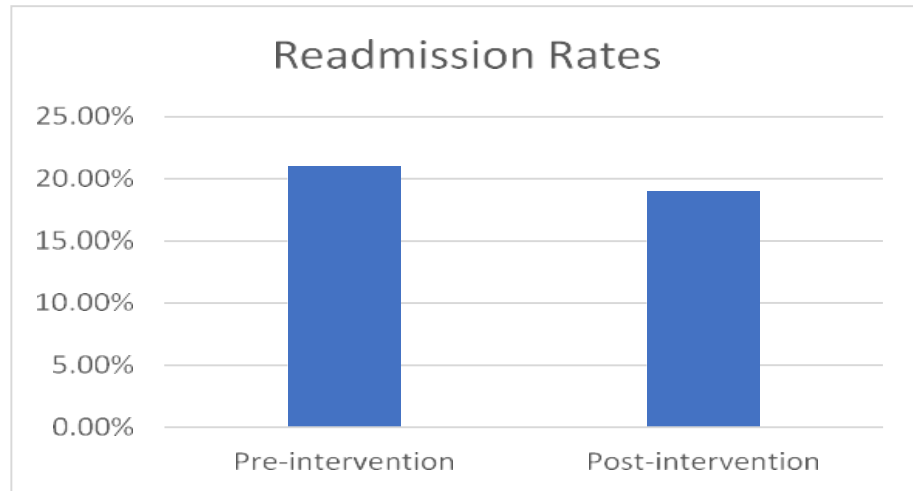
The model of chronic care is made up of numerous characteristics with, the goal of standardizing treatment techniques. Hospital was able to cut readmissions by 46.03 percent after implementing a chronic care approach. The chronic care model's main components are as follows:

- Creating based on clinical - practice recommendations to diagnose and treat on the GOLD recommendations
- focusing during patient education hospitalization
- Training of health-care personnel, to correctly advise patient on inhaler usage.

- Implementing a Multidisciplinary team approach

An interdisciplinary team of doctors, nurses, social workers, and pharmacists, and respiratory therapists work together to offer thorough and efficient treatment. When a patient with COPD comes at the emergency department, the team is notified.

The University of Miami Hospital was successful to cut readmission rates from 21% to 19% in 1 year by implementing a multidisciplinary team approach.



- Recruiting patient navigators

Navigators of patient care aided in the transition from hospitals to patient's home. The navigators of care taught patients on drug administration, handled financial and social issues, and coordinated the patients' follow-up appointments.

- Creating a COPD Discharge Plan of Care (DIPLAC)

The release care plan concentrates on expediting discharge procedure, as well as offering patients with consistent education. It emphasizes in terms of educating patients on administration of medicine, emergency procedures, and the significance of follow-up appointments following discharge. The medical facility has successfully reduced the number in terms of patients who return with COPD acute exacerbation.

Post-discharge

- Telehealth Program for Pulmonary Rehabilitation

The rehabilitation programme comprises workouts recommended by the doctors, as well as cardio activities and yoga performed via a teleconferencing equipment provided to the patients. It also concentrated on teaching patients about smoking cessation, self-management skills, and inhaler techniques.

- A COPD exacerbation clinic as well as Care – Coordinators.

The outpatient clinics concentrated on providing follow-up care to COPD patients after they were discharged. In the clinic, patients are subjected to a thorough physical examination as well as counselling. Care coordinators assist in coordinating patient follow-up after discharge and addressing any other concerns that patients may be experiencing. They operate after-discharge patient follow-up and they have been discharged.

CONCLUSION

Chronic obstructive pulmonary disease (COPD) is one of the most prevalent reasons for death and morbidity in the United States. COPD has a prevalence of 6.4 percent, according to the BRFSS study, with West Virginia having the highest frequency. The high incidence of COPD can be attributed to a variety of societal factors such as a lack of education, low-income levels, and cigarette usage.

Meanwhile, Hawaii, South Dakota, and Minnesota have the lowest rate of COPD. COPD is a chronic condition that necessitates multidisciplinary treatment from a team of experts that includes doctors, pulmonologists, respiratory therapists, and nurses. Barriers to optimum care include a lack of patient education, insufficient follow-up visits, noncompliance with therapy, and a lack of care coordination.

These impediments must be overcome in order to enhance care delivery & offer patient-centric care. High readmission rates are due to COPD are a serious concern for healthcare institutions worldwide. With the "Centers for Medicare and Medicaid Services" enforcing fines because of high readmission rates, healthcare institutions across the United States are always seeking to reduce readmission rates via the use of novel solutions.

Following a study of the research described above, we can conclude that initiatives such as standardizing workflows and treatment procedures, as well as using a care package strategy, can greatly contribute to lowering readmission rates. Along with this, a strong emphasis should be placed on early patient diagnosis. One of the most difficult problems that patients experience is the transition from hospital to home.

Patient navigator systems, rehabilitation programmes, telemedicine services, Patient education, post-discharge follow-up visits, and all be beneficial. all be beneficial. all help to reduce difficulties following hospital release.

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