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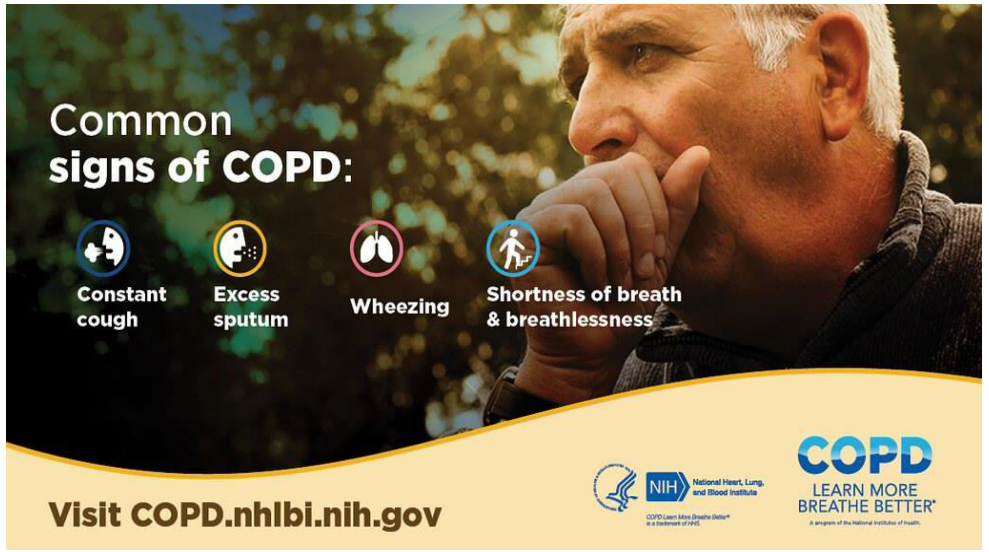
A Research to examine Chronic Obstructive Pulmonary Disease Treatment methods in United States

INTRODUCTION

COPD – Chronic Obstructive Pulmonary Disease is one the leading causes of death in the US and every year billions of dollars are spent on patient care for COPD.

It is projected that the costs associated with COPD patient care will rise to around $49 billion in 2022.

In addition to the economic burden, the social burden associated with COPD cannot be ignored. According to a Global Burden of Disease study COPD is the second leading cause of Disability Adjusted Life Years (DALYs) lost after ischemic heart disease.



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.

- 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.

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.

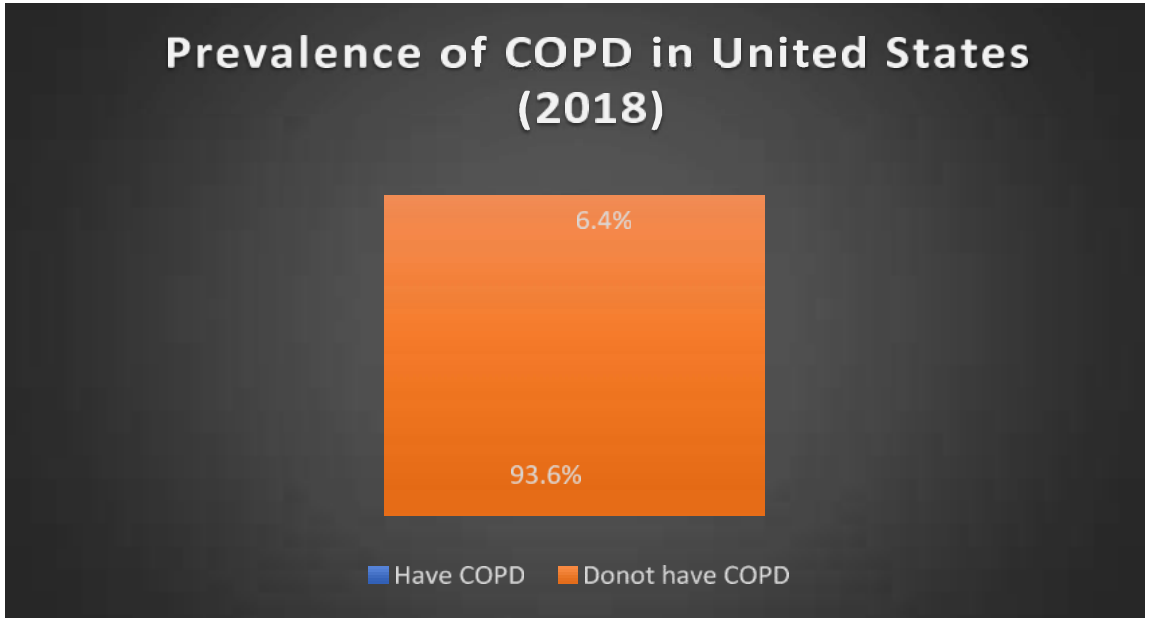
OBJECTIVES

- 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.

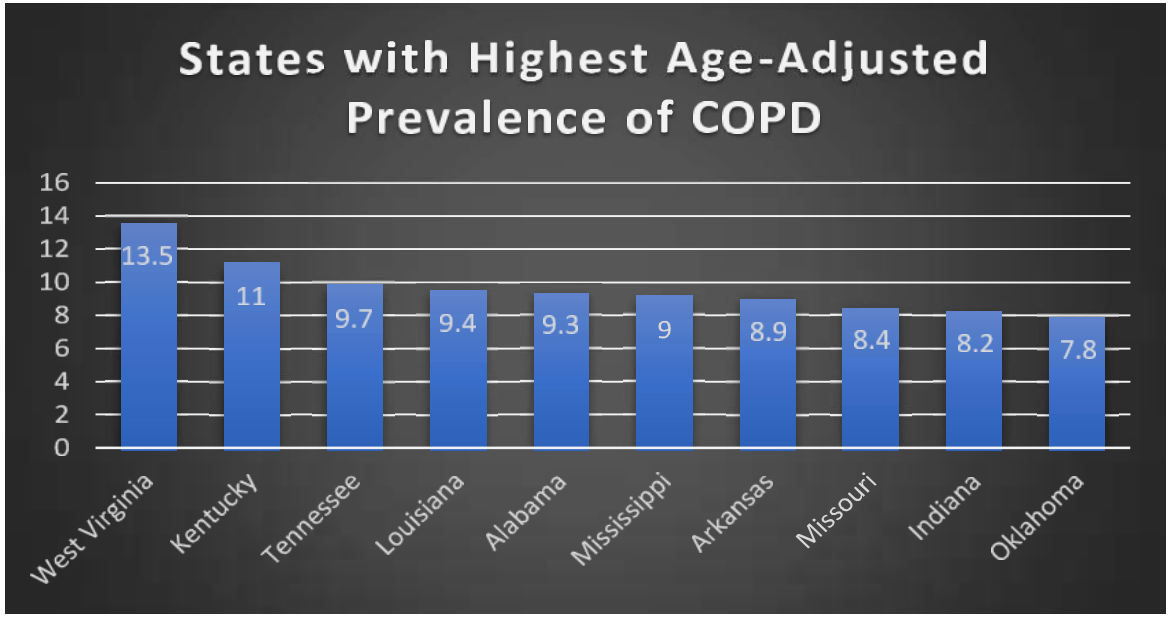
METHODOLOGY

- 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.

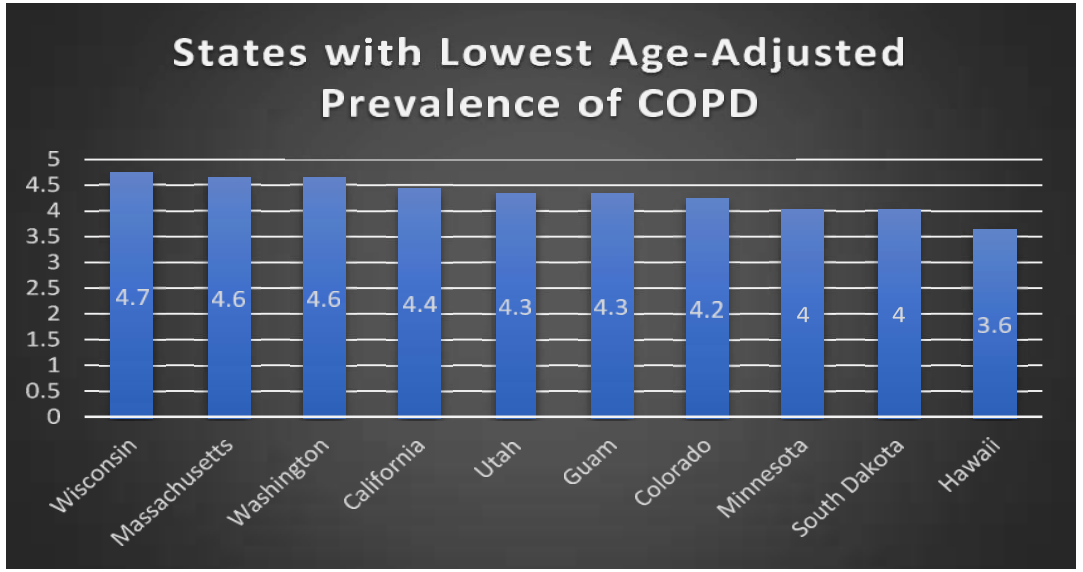
FINDINGS -



According to the 2018 BRFSS survey, the prevalence of COPD in United States is 6.4%



West Virginia has the highest prevalence of COPD (13.5%)



Hawaii has the lowest prevalence of COPD (3.6%)

ANALYSIS

A)To study the prevalence of COPD in United States

- According to the 2018 BRFSS survey, the prevalence of COPD in United States is 6.4%. West Virginia has the highest prevalence of COPD while Hawaii has the lowest prevalence of COPD. The prevalence of COPD in West Virginia was highest in age group (55-64) and with annual household income < $15,000. Social determinants of health such as income level, education can impact the prevalence of the disease.

- Some of the facts reported in West Virginia BRFSS report (2018) that can be accounted to high prevalence of COPD in West Virginia include:
  - The median household income accounts to $44,097 which is much lesser than national median household income $61, 937.
  - The proportion of poverty is 19.1%.
  - State has highest prevalence of cardiovascular diseases (14.6%)
  - State has second highest prevalence of diabetes (15.0%)
  - Second highest prevalence of tobacco use (28.4%) which is a major risk factor for COPD

B) To identify the barriers to optimal care of COPD patients

- **Lack of patient education -** Developing patient education tools such as information brochures, checklists which cover topics relating to medication administration, follow-up visits, smoking cessation, treatment in case of emergency situations, pulmonary rehabilitation.

- **Improper follow-up visits schedule -** Follow-up visits are essential to keep a track of patient's progress, manage medication regimen and keep a check on comorbidities. GOLD guidelines recommend two regimens for follow-up early i.e., within first 4 weeks of discharge and late 1.e. within 12 weeks of discharge. Non-compliance to early and late follow-up visits can hampers the care delivery process.

- **Lack of standardized guidelines -** Lack of uniform guidelines leads to improper diagnosis, thereby delaying the course of treatment. Healthcare organizations should implement standardized guidelines for diagnosis and treatment of COPD patients. CDC recommends following of GOLD guidelines for diagnosis and treatment regimens.

- **Noncompliance to medications** - Compliance of patients to the medications is of utmost importance. Patients should be educated regarding the inhaler techniques and the medication regimen. Treatment regimen provided by GOLD guidelines should be followed.

Conclusion –

- In United States COPD is one of the major causes of mortality and morbidity. According to the BRFSS survey the prevalence of COPD is 6.4% with West Virginia being the state with highest prevalence of COPD. Various social factors such as lack of education, income levels, tobacco use can be accounted the high prevalence of COPD. Meanwhile states like Hawaii, South Dakota, Minnesota have the lowest prevalence of COPD.

- Being chronic in nature COPD requires multidisciplinary care by team of professionals consisting of physicians, pulmonologists, respiratory therapist, and nurses.

- Various barriers can hinder optimal care include lack of patient education, improper follow-up visits, non-compliance to treatment and lack of care coordination. These barriers need to be addressed to improve care delivery and provide patient centered care.

- High readmissions rates due to COPD is a major issue faced by healthcare organizations across the globe. With Centers for Medicare and Medicaid Services imposing penalties for high readmission rates, healthcare organizations across United States are continuously working unreducing the readmissions rates by adopting innovative strategies.

Recommendations –

After reviewing the above-mentioned studies, we can recommend that adopting strategies such as standardizing workflows and treatment protocols, adopting care bundle approach, can significantly contribute to reducing the readmission rates. Along with this a major focus should be given on early diagnosis of the patients. Transition from hospital to home is one of the major challenges faced by the patients. Patient navigator’s system, rehabilitation programs, telehealth programs, post discharge follow-up visits and patient education can play an important role in reducing complications after discharge from the hospital.