

Introduction

Chronic obstructive pulmonary disease (COPD) is the third leading cause of death in the U.S.

Patients living with COPD are more vulnerable to illnesses such as flu and pneumonia (8th leading cause of death in the U.S.)

Despite incredible efforts by the World Health Organization, American Lung Association and the Centers for Disease Control to improve vaccination rates, rates still remain below the nation's target among people living with COPD.

The goal of this project is to improve vaccination rates through the implementation of an educational pamphlet and to improve education on the significance of vaccination among the COPD population.

Background/Significance

COPD (bronchitis and emphysema) causes poor reversible airflow (Calverley, 2008). This obstruction in airflow results in wheezing, shortness of breath, coughing, and increased sputum production (WHO, 2017).

Patients living with COPD have weak respiratory systems and with the use of inhaled corticosteroids, the lung tissue is even more vulnerable to respiratory infections (i.e. flu and pneumonia). Respiratory infections, changes in weather, pollution, and allergens can trigger acute exacerbation of COPD (AECOPD).

AECOPD can cause severe illness, most of the time require hospitalization, and can result in death

Background/Significance (cont.)

AECOPD is preventable with management of COPD symptoms and with flu and pneumonia vaccination. AECOPD admissions/readmissions contributes to larger health care issues. Preventable admissions due to AECOPD, flu and pneumonia, costs our health care system millions of dollars (American Lung Association, 2015).

According to the CDC, there are essential, cost-effective ways of preventing flu and pneumonia:

- Proper hygiene: coughing/sneezing into your elbow
- Education on prevention and vaccine significance
- Vaccination

Theoretical Framework



Methods

Design of Project: QI; Pretest/Post test
Setting: Primary Care Office in New Jersey
Study Population/ Subject Recruitment/Size:

- 60 patients
- Patients were recruited via chart audit.
Inclusion criteria: English-speaking adults (35 years old and above) living with COPD and have not previously been vaccinated for flu/pneumonia

Consent Procedure:

In person/Verbal

Risks and Harms:

No more than average risk (vaccine side effects)
All non-identifiable information is secured and will be shredded at the appropriate time

Intervention

Chart Audit (prospective and retrospective)
Distribute:

- WHO SAGE Vaccination Hesitancy Survey (VHS)- to assess for vaccine hesitancy
- Implement Brochure via in person/telephone call- discuss facts about COPD + Flu+ Pneumonia, which vaccines to get and side effects to vaccines
- Pre/Post Quiz to test understanding of information

Evaluation

Statistical Analysis

- Descriptive statistics-demographic data
- Paired t-test- pre/post vaccination rates and quiz scores

Results

Education was associated with a statistically significant increase in test scores ($t(44) = 9.284$, $p < 0.001$)

Education was **not** associated with change in vaccine intention:

Flu vaccine: ($t(44) = 1.000$, $p = 0.323$)

- Pre: 57.8% of patients intended to receive the flu vaccine
- Post: 66.7% actually agreed to get the vaccine

Pneumonia: ($t(44) = 1.274$, $p = 0.209$)

- Pre: 8.9% intended to receive the pneumonia vaccine
- Post: 17.8% agreed to vaccination

Discussion

Providing education and spending adequate time with patients improved patients' knowledge of COPD and how it relates to flu and pneumonia

Education alone does not improve vaccination rates

Barriers to vaccination need to be addressed

- Combination of techniques needs to be utilized to possibly improve rates in the future

Limitations

- Inadequate Care Provider Documentation
- Vaccination status
- COPD diagnosis
- Exclusion of non-English speaking participants

References

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