

# A Study to Assess the Knowledge, Attitude and Practice about Management of Acute Exacerbation of Chronic Obstructive Pulmonary Disease amongst EMS Professionals in India

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## ABSTRACT

**Background:** Chronic obstructive pulmonary disease (COPD) is a widespread, slowly progressing condition of the respiratory system that is often regarded as a major source of morbidity and mortality. Despite being a chronic condition, COPD can experience severe exacerbations that cause coughing and shortness of breath. To reduce COPD-related mortality and morbidity, it is crucial to have knowledge of the diagnosis, proper oxygen titration, and effective therapy.

**Objective:** To assess the Knowledge, Attitude and Practice level about management of Acute Exacerbation of COPD among EMS Professionals.

**Methodology:** In India, the study included 120 emergency medical professionals. The study made use of a KAP questionnaire created by Sylvia Saade et al [2] that had already been tried and verified. After receiving the respondents' informed consent, the questionnaire was conducted online.

**Discussion:** The data analysis reveals that while EMS workers are knowledgeable of the aetiology, pathophysiology, and clinical characteristics of COPD, they still need further training in its management. Broad consensus was found among respondents about attitudes toward COPD, including the need for COPD patients to stop smoking and the role of passive smoking in the disease. However, there was disagreement among respondents regarding advice on exercising. Broad agreement was discovered among the respondents about COPD practises, specifically the use of and safety precautions for metered dosage inhalers (MDI).

**Conclusion:** The study's findings suggest that EMS professionals have a healthy level of knowledge, attitude, and practise regarding COPD. However, the results do highlight areas that need work, which might be the subject of subsequent training sessions. Despite having a small sample size, the study makes an effort to present a comprehensive picture of knowledge, attitudes, and practises related to COPD.

**Keywords:** COPD, Acute exacerbation, EMS professionals, Knowledge, Attitude and Practices.

## 1. INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a prevalent, slowly progressing respiratory condition that is widely recognised as a significant global cause of morbidity and mortality [1, 2]. By 2030, COPD is anticipated to rank third among all causes of death worldwide and second in India, behind road traffic accidents [3]. Despite being a chronic condition, COPD can experience severe exacerbations that cause coughing and shortness of breath. This may result in medical emergencies that necessitate hospitalisation and increase mortality risk [4]. In the early stages of managing a COPD acute exacerbation, enough oxygen must be given to prevent hypoxemia, but if too much is given, it can lead to hazardous hypercarbia or hypoventilation. The consequences could be fatal. According to a study by Michael A. Austin et al., routine use of titrated oxygen in a prehospital setting for COPD acute exacerbations dramatically lowers death rates when compared to high flow oxygen therapy. In order to prevent cardiac or respiratory failure, emergency medical professionals are trained to provide oxygen before any of these conditions arise. In order to recognise COPD early, treat it effectively, and reduce complications, a study by Goktalay T et al.[1] stressed the significance of training primary care clinicians. Therefore, it is crucial to have knowledge about COPD diagnosis, adequate oxygen titration, and effective therapy in order to reduce COPD-related mortality and morbidity

## 2. METHODOLOGY

In India, the study included 120 emergency medical professionals. The study made use of a KAP questionnaire created by Sylvia Saade et al [2] that had already been tried and verified. The initial 37-item survey was created with pharmacists in mind. Only 23 things that are important to emergency medical professionals were kept. Three criteria made up the twenty-three-item questionnaire, which included nine items testing knowledge, four of which required answers to be provided in between 25 and 30 words and the remaining five of which just allowed for yes/no responses. Responses on the Likert scale were requested for six items measuring attitude and eight items indicating practise related to managing acute COPD exacerbations. Every item had to be filled out in full. After getting the respondents' informed consent, the questionnaire was distributed online. The questionnaire has to be completed and returned within two days by the respondents. Any questions about the questionnaire were answered during the data gathering process. All 100 respondents returned with fully completed surveys. Using SPSS version 23, the data was tallied and statistically examined.

## 3. RESULTS

Table 1 : Symptoms of COPD

Symptoms	Percentage
Cough	92%
Dyspnoea	74%
Wheezing	39%

Table 2: Two complications of COPD

	Percentage
Heart Disease	54%
Lung Cancer	46%

On the items pertaining to Knowledge regarding aetiology and management of COPD, as many as 94% respondents felt COPD is not contagious while 87% respondents were of the opinion that COPD cannot be completely cured. 65% believed antibiotics are recommended in acute exacerbation of COPD due to viral aetiology while 86% felt that steroids could be prescribed to COPD patients. All the respondents attributed smoking to be an important cause of COPD.

Broad agreement was found amongst respondents in parameters pertaining to attitude and practices regarding COPD.

#### 4. DISCUSSION

Most of the respondents were able to correctly differentiate between COPD and Chronic Bronchitis based on clinical picture. They were aware of the common symptoms of COPD. More than half of the respondents stated correctly that COPD is a non communicable disease and has no permanent cure. All the respondents considered smoking to be an important cause and risk factor contributing to COPD. This shows that the respondents had a clear idea and in-depth knowledge regarding the aetiology of COPD. In terms of Knowledge regarding management of COPD, most of the respondents correctly stated that steroids could be prescribed to COPD patients. However, more than half of the respondents incorrectly recommended antibiotics for acute exacerbation of COPD due to viral aetiology. The analysis of data shows EMS professionals are aware of the aetiology, pathophysiology and clinical features but require more training in management aspects of COPD.

In terms of attitude towards COPD, broad agreement was found amongst respondents that COPD patients must quit smoking and passive smoking contributed to COPD. Majority of the respondents agreed that inhalers and humidifiers are useful in acute exacerbation of COPD and there is requirement of long-term treatment in COPD patients. However, opinion amongst respondents with respect to recommendations regarding exercise was divided.

In terms of Practices in COPD, broad consensus was found amongst the respondents on the usage and precautions regarding metered dose inhalers (MDI). Majority of respondents believed that counselling the patient about worsening of situation and admission to tertiary care hospital during an exacerbation was essential.

#### 5. CONCLUSION

The study finding point towards a healthy degree of knowledge, attitude, and practice with regards to COPD amongst EMS professionals. Although the finding do red flag areas of improvement which can be focused upon in future training session. The study is limited by number of respondents yet attempts to provide a broad view on Knowledge, Attitude and Practices in COPD.

**Acknowledgement:**

**Conflict of Interest:**

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