

Public Health Interventions to Minimize the Impact of Chronic Obstructive Pulmonary Disease

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Abstract

Chronic obstructive pulmonary disease (COPD) is one of the most frequent, preventable, and manageable lung diseases that results due to the narrowing of small airways. Owing to the tiredness and breathlessness linked to the disease, the individuals fail to work to their potential in both workplace and home settings, and thus, it poses a financial load on the family. Even though there is no cure for the disease, strategies to promote early diagnosis and initiate appropriate treatment are crucial to arrest not only the progression of the disease but also minimize the risk of exacerbation of the disease. There is a definite need to create awareness about the condition among the general population, the potential risk factors, treatment modalities, the significance of self-care, and the services available in health-care establishments. To conclude, COPD is a global public health concern that has been linked to morbidity, impairment of quality of life, and mortality. It is high time that specific measures are taken to minimize the impact of the disease on the affected individuals, family members, and health-care establishments.

Keywords: Chronic obstructive pulmonary disease, rehabilitation, smoking

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is one of the most frequent, preventable, and manageable lung diseases that results due to the narrowing of small airways.^[1,2] From the epidemiological perspective, the disease has been reported on both men and women; however, the major cause of concern is that COPD has been ranked as the third-most common cause of reported deaths on the global scale in the year 2019 accounting for more than 3.2 million deaths globally.^[2,3] Further, it is an alarming fact that 9 out of 10 attributed deaths among people aged less than 70 years are reported in low- and middle-income nations, thereby highlighting the need to augment the efforts to minimize the suffering and deaths.^[1]

POTENTIAL RISK FACTORS AND IMPACT

This chronic disease generally occurs owing to long-term exposure to either harmful gas (such as tobacco smoke – active or passive second-hand smoke, indoor air pollution due to the burning of biomass fuel or coal, and fumes) or occupation-related dust or chemicals.^[2,3] In addition, the role

of hereditary factors and events that influence lung growth in childhood (viz. premature birth, intrauterine growth retardation, recurrent respiratory infections, etc.) also tend to play a major role in the development of disease.^[3-5] Moreover, the presence of asthma in childhood or deficiency of alpha-1 antitrypsin has also been linked with the development of disease and thus should be kept in mind.^[4-6]

Patients with COPD generally present with chronic cough with mucus (often), breathlessness, tiredness, and difficulty to perform daily activities.^[3,4] Most of the symptoms of the disease overlap with asthma, and many people might present with both conditions.^[7] Owing to the tiredness and

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breathlessness, the individuals fail to work to their potential in both workplace and home settings, and thus, it poses a financial load on the family.^[4,5] Further, the cost involved in the medical treatment and management of exacerbation of COPD might require hospitalization for emergency care, which can be even life-threatening.^[5,8] In addition, the disease has also been linked with the simultaneous presence of other comorbidities (viz. heart disease, osteoporosis, lung cancer, mental disorders, etc.), which further adds burden on the health-care delivery system.^[2-4]

PUBLIC HEALTH STRATEGIES TO REDUCE THE IMPACT

Even though there is no cure for the disease, strategies to promote early diagnosis and initiate appropriate treatment are crucial to arrest not only the progression of the disease but also minimize the risk of exacerbation of the disease.^[6,9] The effective approach will be to diagnose the disease at the earliest using spirometry; however, owing to the nonavailability of the procedures in rural and remote settings, more often than not the condition is missed.^[1,8] This calls for the need to expand health-care services to make them more accessible and affordable to people from all walks of life.^[8,9] There is a definite need to create awareness about the condition among the general population, the potential risk factors, treatment modalities, the significance of self-care, and the services available in health-care establishments.^[2-4] This calls for the need to intensify and strengthen information, education, and counseling activities to enhance overall knowledge about COPD, and the ways in which the onset or development of COPD can be delayed.^[2-4]

People who are suffering from COPD should be advised to quit smoking, and if required, we have to provide support for the same.^[2] In addition, patients are advised to practice regular exercise and get vaccinated against the common respiratory infections (viz. pneumonia, coronavirus, and influenza virus) that have the propensity to result in severe infections.^[1-3] Further, considering the utility of inhaled medications in minimizing the severity of symptoms or management of exacerbation episodes, it is very much essential that people should be taught the correct way to use these inhalers. In continuation, we have to also ensure that these inhalers are available and accessible in all geographical locations.^[3-6]

The World Health Organization has initiated a new strategy titled “Rehabilitation 2030,” wherein the aim is to prioritize and strengthen pulmonary rehabilitation services for ensuring

better outcomes for COPD patients.^[1] In addition, many steps have been taken as a part of the global approaches like interventions aimed at the management of noncommunicable diseases in low-resource areas, reduction in exposure to tobacco smoke, and promotion of clean energy household solutions to minimize indoor air pollution.^[1,4-7] Further, an alliance on an international level has been established to prevent and control chronic respiratory diseases and thereby improve the overall quality of life of patients.^[1,10]

CONCLUSION

To conclude, COPD is a global public health concern that has been linked to morbidity, impairment of quality of life, and mortality. It is high time that specific measures are taken to minimize the impact of the disease on the affected individuals, family members, and health-care establishments.

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Conflicts of interest

There are no conflicts of interest.

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