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Evaluation of self-administered crisis management pack use by chronic obstructive pulmonary disease patients

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Introduction

Chronic obstructive pulmonary disease (COPD) exacerbations affect disease course, leading to hospitalisation and mortality. As disease progresses, exacerbation frequency also increases. Since 2009, self-management of exacerbations was incorporated into COPD patient education at North District Hospital. Patients were taught how to recognize early exacerbation symptoms and when to escalate inhaler dosage or start a crisis management pack (CMP) of antibiotics and prednisolone.

Objectives

This study aims to find out if CMP prescription could avoid hospitalization among patients who demonstrated a good understanding of self-management education.

Methodology

A five-item exacerbation management assessment was developed. Questions involved testing patient understanding on (1) when to use inhalers, (2) inhaler types involved, (3) when to use antibiotics, (4) completing a full course and (5) when to use oral corticosteroids. Data on CMP prescription and COPD hospitalization in the year 2013 was retrieved for patients who gave correct answers to all five questions.

Result

Assessment was administered to 274 patients (mean age: 75 years) in 2013. Of these, 56% (154) patients scored 100%. However, 19% (30/154) patients were never prescribed standby CMP for self-management. In fact, 27% (8/30) patients subsequently required hospitalization in 2013. Seventy-three (47%) patients were prescribed one to two CMP courses and hospitalization was avoided for 42.5% (31/73). Thirty-five (22%) patients were prescribed three to four CMP courses and 54.3% (19/35) did not require hospitalization. Although 16 patients took more than four CMP courses in 2013, none escaped hospitalisation. Majority of the CMP was

prescribed at the outpatient setting (74%) while 26% was at discharge after hospitalization. This study shows that hospitalization was not avoided for patients taking more than four CMP courses a year. These patients could suffer from more severe disease or the CMP antibiotics were not matched with the patients' microbial flora. Around half of the patients taking one to four CMP courses avoided hospitalization despite occurrence of exacerbations. Further studies are needed to identify which patients would benefit the most from CMP use. Mechanisms should also be implemented to avoid CMP over-prescription.