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Improving patient outcome using discharge bundle intervention for chronic obstructive pulmonary disease patients in a respiratory ward

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Introduction

Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in Hong Kong. The discharge planning for chronic respiratory disease patients involves multidisciplinary effort for the transition between the hospital and the home. The role of non-physician health professionals is becoming increasingly important because of their good holistic vision and they are more prone to coordination. Patient education and their participation with a multidisciplinary approach to the transition out of hospital can improve on-going patient care for COPD. A study from the United Kingdom suggested a 6% reduction in hospital readmissions upon implementation of a care bundle. Prolong hospital stay will also result in poor patient outcome.

Objectives

To enhance the discharge management for chronic respiratory disease patients by reducing length of hospital stay, reducing readmission, enhancing patient empowerment and improving the co-ordination of services following discharge from hospital for uncomplicated COPD patients.

Methodology

Introducing discharge bundles for patients with acute exacerbation of COPD to improve the care pathway and reduce length of hospital stay, decrease hospital readmission and enhance patient empowerment. Factors consistently associated with readmission include older age with respiratory failure, poor lung function, recent hospitalization for COPD, comorbidities, and psychosocial issues. Key components of discharge bundle include smoking cessation, education, inhaler technique, assessment for pulmonary rehabilitation, and scheduling follow-up appointment prior to discharge. We exclude those COPD with high chance of readmission. In order to ensure success in early discharge management, it is necessary to spend enough time on education of the patient and the caregiver. They should be given all the information and technical support so as to establish a plan to minimise the risks for readmission.

Result

We have recruited 35 patients with acute infective exacerbations of COPD in a

respiratory ward during the study period. Ten patients are excluded due to various risk factors for high risk for readmission. The average length of hospital stay is significantly reduced to 4.8 days when comparing to the average LOS of 6.4 days in respiratory ward during Dec 2015. The readmission rate in 30 days is lower for the study group than the high risk group. Conclusion: Several systems initiatives have shown promise in reducing length of hospital stay and minimizing readmissions for uncomplicated COPD patients. These interventions include improved collaboration between the care team, patients, and aftercare providers prior to discharge; medication reconciliation; enhanced patient education and empowerment; home visits by community nurses after discharge; and early post-discharge follow up. A discharge bundle comprising multiple concurrent interventions may be more effective than single component.