Service Priorities and Programmes

Electronic Presentations

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Patient education via telemonitoring enhances disease self-management and reduces hospitalisation

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Introduction

To raise chronic obstructive pulmonary disease (COPD) patients' symptom awareness and equip them with self-management strategies, an electronic device was developed to facilitate symptom self-reporting and deliver timely education.

Objectives

To evaluate patient acceptance and the impact of education delivered by telemonitoring device on disease self-management and hospitalisation

Methodology

A prototype TeleTREK®(Celki) Touch device that facilitated self-reporting of COPD Assessment Test (CAT) scores was developed in 2011. The 2012 version now incorporates educational materials developed by Respiratory Collaborative Care Team (RCCT), North District Hospital (NDH). Each score to the first three questions on COPD exacerbation is directed to differential information if it reaches 3 or higher. Depending on scores entered, instructions include adjustment of inhaler dosage or oxygen flow rate and use of crisis management pack of antibiotics and prednisolone. Cough management includes information on gastro-oesophageal reflux or post-nasal drip. Animated demonstrations of breathing and coughing techniques, and tips on sleep hygiene or healthy lifestyle were also available. Scores are transmitted to a password-protected website where nurses monitor and render phone support when necessary. Patients' feedback on usefulness of the information was sought.

Result

Between May 2012 and January 2013, 22 patients were recruited. One patient was recruited because of symptom deterioration at home. The rest were all recently discharged. Mean CAT score No. of patients: 22 (Mean age:70) </=10 3(14%) 11-20

(medium disease impact) 9(41%) 21-30 (high disease impact) 9(41%) >30 (very high disease impact) 1(4%) Six episodes of exacerbation were detected amongst five patients based on increase in total scores by at least 5. Mean score increased from 18 to 24 during exacerbations and improved to 18 during recovery. None required hospitalisation. Two patients, whose baseline CAT scores exceeded 20 and 30 respectively, were re-admitted. Overall 28-day hospital readmission was 9.5% (2/21). Patients unanimously agreed that the education improved their self-management of cough, dyspnoea and sputum clearance. Most (95%) felt that symptom control was enhanced and anxiety reduced when their condition worsened. Overall understanding of disease and self-management were enhanced according to 96% patients. Patient education bundled with symptom monitoring reinforced knowledge learnt, enhanced disease self-management and reduced hospitalisation. Acknowledgement: Celki Medical Company