



Service Priorities and Programmes
Electronic Presentations

Convention ID: 291

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Prescription Compliance on Home Oxygen Therapy: A Longitudinal Cohort Study

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Keywords:

Home oxygen therapy

Clinical audit

Prescription compliance

Introduction

Long-term oxygen therapy (LTOT) is proven to be effective for various important outcomes for patients with COPD and other causes of chronic respiratory failure. Application of home oxygen therapy has also been extended to patients with different clinical conditions over the years. However, whether clinical benefits of the therapy can be achieved may depend on how well the specific prescription criteria are met which in fact are predominantly determined by physician's practice.

Objectives

This study evaluated physicians' compliance to prescription criteria on home oxygen therapy against recommendations from a local clinical practice guideline where international standards were incorporated, and explored areas for improvement on home oxygen therapy service for patients.

Methodology

This is a retrospective study on compliance with important prescription criteria selected from local and international home oxygen therapy guidelines by reviewing clinical records of patient newly prescribed with home oxygen therapy in an acute hospital during the period from 1 June 2013 to 31 December 2014. Demographic data, referral information, the extent of adherence to prescription criteria, and follow-up information were collected for evaluation.

Result

A total of 210 patients (134 males) with mean age of 74.1 (SD=12.5) were included. Most patients were residing at home (83.3%). Major diagnoses included lung cancer (30%), other cancer conditions (16.7%), COPD (28.6%) and cardiac conditions (20.5%). Majority of them (88.6%) was referred from in-patient acute wards. The referring specialties included Oncology (41%), Respiratory Medicine (25.2%), General Medicine (21.4%), Geriatrics (9%) and others. Major prescription regimes were assigned to LTOT (92, 43.8%) and undefined regimes (91, 43.3%). Most COPD

patients were put on LTOT (86.7%). Most undefined regimes were given by Oncology (76.9%). Significant differences were found in all four prescription criteria performed by different specialties ($p < 0.001$) and in different prescription regimes ($p < 0.001$). Most deviation was noted for prescriptions on palliative oxygen therapy. Higher compliance to prescription criteria was observed in prescriptions made by Respiratory Medicine. More changes in therapy regimes were noted in palliative oxygen therapy and undefined regimes over the course of follow-up. In conclusion, local practice in handling prescriptions for home oxygen therapy had significant deviation from international and local standards suggesting areas for improvement to ascertain quality service to be provided for patients in need.