Pulmonary rehabilitation following hospitalisation for acute exacerbation of COPD: referrals, uptake and adherence

Abstract

Rationale Several randomised controlled trials support the provision of early pulmonary rehabilitation (PR) following hospitalisation for acute exacerbation of chronic obstructive pulmonary disease (AECOPD). However, there is little real-world data regarding uptake, adherence and completion rates.

Methods An audit was conducted to prospectively document referral, uptake, adherence and completion rates for early post-hospitalisation outpatient PR in Northwest London over a 12-month period.

Results Out of 448 hospital discharges for AECOPD, 90 referrals for post-hospitalisation PR were received. Only 43 patients received and completed PR (9.6% of all hospital discharges) despite a fully commissioned PR service.

Conclusions Despite the strong evidence base, there are poor referral and uptake rates for early outpatient PR following hospitalisation for AECOPD, with only a small proportion of the intended target population receiving this intervention.

INTRODUCTION

Outpatient pulmonary rehabilitation (PR) following hospitalisation for acute exacerbation of chronic obstructive pulmonary disease (AECOPD) improves exercise capacity, health status and reduces hospital readmissions. However, there is little published data on process evaluation. The recent British Thoracic Society guidelines on PR recommend that ‘clinical services should carefully record uptake, adherence and completion rates’. The aim of this audit was to record patient flow through a post-hospitalisation PR pathway, and document referral, uptake, adherence and completion rates for PR.

METHODS

Setting The Hillingdon Hospital is the acute care provider in Hillingdon borough, northwest London. The Hillingdon respiratory outreach team routinely use a chronic obstructive pulmonary disease (COPD) discharge bundle and provide post discharge telephone and home support for 14 days. PR is fully commissioned and is provided by Harefield Hospital on an outpatient basis through three sites across the borough. Transport is provided for assessments, but not classes.

Audit

Data was collected between November 2011 and October 2012. Patients were identified through the hospital COPD outreach team and corroborated by the coding department (using ICD-10 codes for primary diagnosis: J44—COPD with an acute lower respiratory tract infection, J44.1—COPD with an AECOPD, J44.9—COPD unspecified). All identified patients had their medical and nursing notes examined. Number of post-hospitalisation PR referrals to Harefield Hospital was recorded, as well as number of post-hospitalisation PR referrals to Harefield Hospital were received. Only 43 patients received and completed PR (9.6% of all hospital discharges) despite a fully commissioned PR service.

DISCUSSION

Despite the strong evidence base, we found that less than 10% of all hospital discharges for AECOPD complete early post-hospitalisation PR. The most notable discrepancy was that only 90 out of 286 eligible patients were referred (31%). A weakness of the audit was that we were not able to formally ascertain the reasons for non-referral despite careful scrutiny of notes. There were also drop-outs at uptake, adherence and completion stages, but these were in line with rates seen during PR of stable patients.

Further studies are urgently required to investigate patient, staff and organisational barriers to post-hospitalisation PR. Quality improvement solutions may improve acceptability to patients and stakeholders, but alternative approaches to delivering early post-hospitalisation outpatient PR may need to be considered, including starting PR earlier (eg, during inpatient admission or immediately after discharge in the home) as a bridge to outpatient PR, or at a later stage when the patient is more stable.
Total number of patients discharged between 1st November 2011 and 31st October 2012 following a hospital admission with an AECOPD n = 448

Number of eligible patients for PR between 1st November 2011 and 31st October 2012 following a hospital admission with an AECOPD n = 286

Number of patients referred to early post-hospitalization PR n = 90

Number of patients attended for an initial PR assessment n = 68

Number of patients who started a PR course after an initial assessment n = 60

Number of patients who completed a PR course n = 43

Number of patients not eligible for PR n = 162

Reasons not eligible:
- Already assessed/attending PR n = 27
- Cognitive Impairment n = 69
- Unable to walk 5m n = 36
- Cardiac Instability n = 5
- Lives out of area n = 17
- Doesn’t speak English n = 1
- Coding misdiagnosis n = 2
- Terminally unwell n = 2
- Unknown n = 3

Number of patients not referred to PR at discharge n = 196

Number of patients who did not attend an initial assessment n = 22

Number of patients who did not start a PR course n = 8

Number of patients who dropped out of a PR course n = 17

Figure 1 CONSORT diagram.

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