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SHORT REPORT

Measures to improve knowledge and self-care among patients with COPD: a UK general practice audit

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Summary The Parchmore Partnership, London, audited 11 evidence-based criteria relating to patient knowledge and COPD morbidity during December 2004 to March 2005 using questionnaires and practice records. 32 patients with moderate to severe COPD participated, and during the project they received information and extra care. Patient knowledge and clinical indicators showed significant improvements. Crown Copyright © 2006. Published by Elsevier Ltd on behalf of General Practice Airways Group. All rights reserved.

Introduction

Various criteria concerning the management of Chronic Obstructive Pulmonary Disease (COPD) are included in the Quality and Outcomes Framework (QOF) of the UK general practice contract, which sets out a system of financial incentives for improving quality of care [1]. The National Institute for Clinical Excellence (NICE) has published guidelines for COPD care [2].

In the winter of 2004/2005, the Met Office (the UK's national meteorological service) ran a trial of COPD health forecasting with anticipatory care [3]. Participation in the trial prompted The Parchmore Partnership to conduct an audit, aiming

to assess and improve the knowledge of patients with moderate to severe COPD with regards to self-care, and the key clinical indicators of good practice for COPD care.

Methods

Patients with COPD were identified from the practice electronic disease register, and subdivided by spirometry-based severity into three categories: mild (Read Code H36); moderate (H37); and severe (H38) [2].

The care of patients with moderate to severe COPD was audited with regards to eleven evidence-based criteria relating to COPD morbidity and corresponding targets (Table 1) [1,2,4,5]. Four criteria and targets related to the QOF. Seven criteria related to the Met Office project, setting

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Table 1 Audit criteria, standards and outcomes

Patients should...	Target	Dec04 ^a	Mar05 ^a	Increase Dec04–Mar05
1. Have had a pneumonia or flu vaccination this year [1,2]	85% ^b	87%	96%	9% (p < 0.05)
2. Understand how to use their inhalers [1,2]	90% ^b	81%	97%	16% (p < 0.001)
3. Know what to do if they develop a cold or their breathing worsens [2,4]	90%	84%	98%	14% (p < 0.001)
4. Have the right telephone numbers to call if they start to feel ill [4]	90%	87%	97%	10% (p < 0.01)
5. Have discussed their level of exercise with their nurse/GP [2]	70%	48%	91%	43% (p < 0.001)
6. Wrap up to keep warm when outside in cold weather [5]	90%	89%	98%	9% (p < 0.01)
7. Have a thermometer to keep their living-room at $\geq 21^{\circ}\text{C}$ and bedroom at $\geq 18^{\circ}\text{C}$ [5]	70%	47%	92%	45% (p < 0.001)
8. Keep spare antibiotics/steroids at home in case their breathing worsens [2]	90%	50%	93%	43% (p < 0.001)
9. Have had a review of their condition with spirometry [1,2]	90% ^b	67%	92%	25% (p < 0.001)
10. Have been given smoking cessation advice if they smoked [1,2]	90% ^b	81%	96%	15% (p < 0.001)
11. Have given up smoking [1,2]	90%	82%	88%	6% (not sig)

^a Missed targets **highlighted**.

^b Quality and Outcomes Framework.

realistic targets given the practice socio-economic profile.

The Met Office provided forecasts of the risk of COPD hospital admission during November 2004 to March 2005. Patients with moderate to severe COPD were written to on 21 December 2004 seeking their consent to participate, i.e. giving their contact details to NHS Direct (a 24-hour nurse-led advice service), receiving subsequent telephone contact, and completing questionnaires.

Participating patients received extra care during January-February 2005. This constituted:

- NHS Direct nurses making three telephone calls when elevated risk was forecast
- information packs about COPD and knowledge for self-care were sent by request from NHS Direct
- systems were established to fast-track COPD patients who contacted the practice
- the practice multidisciplinary team utilised opportunistic patient contacts, review of hospital letters and call/recall

Audit data were collected in two cycles. Data for the four QOF-related criteria were obtained from the practice computer system in December 2004 and March 2005. Data for the remaining seven criteria were obtained through a questionnaire in the initial letter to patients, and questionnaires were completed by NHS Direct nurses during patient contacts in January and February.

The audit outcomes corresponding to the 11 criteria were converted into percentage rates, and changes between the two cycles were tested for statistical significance using the chi-squared test.

Results

In this practice of 12,566 patients, 98 patients (0.8%) were identified with COPD. 44 out of the 98 patients had moderate to severe COPD. 34 out of these 44 patients responded to the letter of December 2004. 32 patients gave written consent to participate.

In December 2004, one audit target – influenza vaccination – was met, but several targets were missed by substantial margins (see Table 1). During the audit, standards for the 11 criteria improved (p < 0.05 except for smoking cessation), in particular those criteria concerning exercise, indoor temperature and patients having a spare supply of antibiotics/steroids. By March 2005, ten targets were met, but the criterion regarding smoking cessation was not.

Following calls by NHS Direct nurses, six patients phoned the surgery to request antibiotics or steroids, and two patients arranged spirometry. Many patients requested more information about COPD, especially with regards to symptoms and exercise, and NHS Direct nurses provided them with information packs.

Discussion

The audit aims – to improve key clinical indicators and the patients' knowledge of their condition and measures for self-care – were met.

The patients demonstrated a previously unmet need for basic information about COPD. Patient feedback suggests that the information provided by the NHS Direct nurses was helpful, particularly when they had continued contact with the same nurse.

The practice's view is that information and care can be successfully provided by telephone, and that the use of an external agency to contact patients enhanced the efficiency and consistency of care by the multidisciplinary practice team.

The Met Office project prompted the provision of extra care through education and telephone contacts. The audit did not investigate whether the timing of patient contact (when elevated risk was forecast) was important.

Audit follow-up will include training lay Health Care Assistants to run smoking cessation clinics with guidance and to undertake spirometry and to disseminate information about COPD, thereby freeing practice nurses to concentrate on the clinical management of COPD patients.

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