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ORIGINAL RESEARCH

The feasibility of a primary care model for the management of COPD

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Abstract
Aims: To investigate the feasibility of a primary care model to improve the management of COPD.
Methods: An intervention study on 1497 patients with documented COPD from 22 general practices, involving 11 practice nurses and a COPD Support Service (CSS). Outcome measures included the successful delegation of tasks from general practitioners (GPs) to the CSS and practice nurse, and performance in daily practice according to the model components — keeping a patient register with a recall system, periodical history taking and lung function measurements, asking diagnostic and therapeutic advice, and performing regular follow-up visits with education and counselling.
Results: In the 22 general practices, all components of the model were performed systematically, with the exception of 'asking for diagnostic and therapeutic advice' which occurred in 10 practices only. Of the 1497 patients, 374 (25%) were treated by chest physicians. Of the remaining patients 88% were included in the primary care model and 12% refused regular follow-up.
Conclusion: This primary care model for COPD management proved to be very feasible; GPs delegated the tasks, almost all patients were included in the control system, and a large majority of patients accepted follow-up according to the model.

Introduction

Chronic obstructive pulmonary disease (COPD) is a chronic disease with a broad spectrum of

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severity and a large number of patients who have less severe disease. Care for this group of patients can best be provided in primary care, at least in terms of continuity, comprehensiveness and coordination [1]. To that end, internationally accepted guidelines have been developed and distributed [2,3]. It is recommended that clinicians use lung function measurements when diagnosing and monitoring COPD, checking health status and symptoms, and if necessary, adjusting medication. Furthermore, education should be used to help patients take over the daily management of their disease. Periodical contact appears to have a positive effect on long-term patient outcomes and quality of life [4].

In the Netherlands, the usual management of COPD patients is not optimal; in particular, regular follow-up visits and periodical lung function measurement are often not offered [5,6]. For general practice care to meet guideline recommendations, a number of factors are required which are often lacking [7—12]. These are: (1) decision support; (2) registries and reminder systems to ensure active follow-up; and (3) patient education and self-management support. Decision support means introducing specialist expertise for consultation in diagnosis and treatment [13]. A register is a list of all patients with a specific chronic disorder from which the care needed for each patient can be planned. An active recall system spots non-attendees, so steps can be taken to contact those patients [14]. Self-management education is provided to increase self-efficacy for improving clinical outcomes [15]. These three factors all require a different type of expertise. Decision support has to be given by a medical expert, while registries for follow-up and patient self-management education include major roles for non-physicians [16—19].

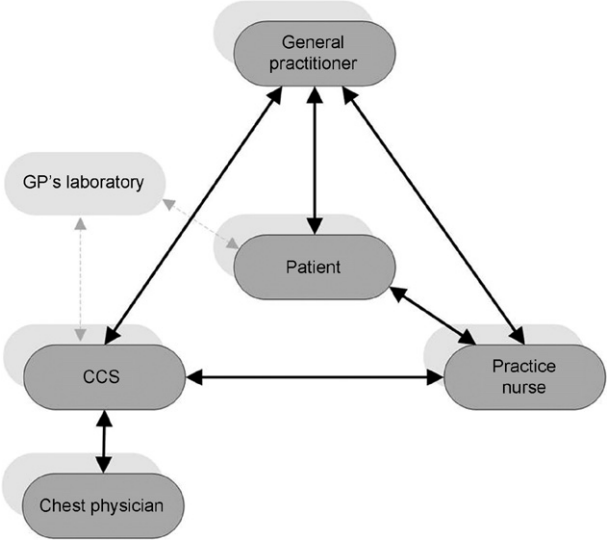

Figure 1 Actors primary care model for COPD.

We have developed a primary care model that integrates these different factors which require specific expertise (Figure 1). The implications of this model are twofold. On the one hand, it aims to help general practitioners (GPs) provide care according to guidelines. On the other hand, it needs to be accessible and attractive to patients so that they will participate. In this study the feasibility of the model in daily practice was tested.

Methods

Study population

This study evaluates the two-year implementation of a primary care disease management model in 22 practices (involving 29 GPs) in the South of the Netherlands. In the one-year run-in period, practice nurses were trained and the COPD Support Service (CSS) was organised. All 149 practices in the region were invited to participate by open invitation. General practices qualified for the care model if they met various inclusion criteria: co-operation with other practices to reach a total population of at least 4500 patients; a working space for the practice nurse; and the use of an electronic medical register. Of the 81 practices that showed interest, 44 met the inclusion criteria. Based on regional distribution criteria 22 practices were allocated to the intervention group.

After 18 months, the 22 practices had appointed 11 practice nurses with 2.1 nurses per 1000 COPD patients.

All patients with documented COPD after two years intervention (documentation is part of the intervention) in these 22 practices were included in the study.

Model—see Box 1

Measures and data collection

Data collection took place 18 months after the general practices started to implement their own protocol. The following data were collected to answer the research question concerning implementation of the model: the percentage of practices (1) with a patient register and recall system; (2) performing periodical case history reporting and lung function measurements; (3) asking for diagnostic and therapeutic advice; (4) arranging periodical visits; and (5) providing