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Asthma outpatient education by multiple implementation strategy. Outcome of a programme using a personal notebook

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Summary More than 10 years after publication, international guidelines remain poorly implemented. To better implement them, we need to develop new strategies adapted to the expectations of patients and health professionals outside hospital settings and to ensure better outpatient follow up in the community.

We developed a bilingual education programme including a brochure designed to support an interdisciplinary health care network and measured hospitalisations (H), work absenteeism (WA), emergency visits (EV), asthma medication (AM) and quality of life (QL Juniper) before and 12 months after the intervention.

All QL scores improved significantly in comparison with pre-intervention values. Health service use decreased dramatically when comparing the 12 months prior to and after the intervention(H: 35–8%, WA: 39–14%, EV: 88–53%). The final cost/benefit ratio of the programme was 1.96.

Interdisciplinary implementation strategy of patient education is cost-effective, improves quality of life for asthmatics, and reduces strain on health services. Such a health care network does not require an expensive infrastructure and is better adapted to the reality and competences of clinical practice.

Introduction

The social and economic impact of asthma remains high more than 10 years after publication of international guidelines.[1–3] A recent European

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survey[4] showed that the current level of asthma control throughout Europe falls far short of the goals for long term management of asthma.

Patient education is recommended as a key component of asthma management because many randomised controlled studies have proven its efficacy in decreasing asthma morbidity and utilization of health care resources.[5] However, many of these studies have been done in university or hospital settings[6–9] in selected populations. Bailey et al.[8] have shown that replication of an education programme which has been proven to be efficient in a university medical centre does not work in routine medical practice. Participation in these programmes is often low.[10] Offering patient education through family physicians, repeatedly and without hospitalisation for acute attacks might prove more successful. As most asthmatics are outpatients, there is a need to develop new strategies adapted to expectations of both patients and health professionals, and thus better implement the guidelines in clinical practice.[11,12]

We therefore decided to perform a multidisciplinary community study involving local family physicians, specialists, pharmacists and nurses, in collaboration with a university centre competent in adult education. Before beginning the study, we took great care to teach the educators not only about asthma as a disease, but also about concepts of adult learning and behavioural changes.[13,14] We also believed that a regular outpatient follow-up through a team of health professionals might be more productive in reinforcing the key messages.

Material and method

The study was conducted in Valais, an alpine and bilingual Swiss canton of 270 000 inhabitants with no university and with a low density of medical specialists. We thus needed to optimize health professionals resources over long distances in a very mountainous area. Patients were enrolled from May 1999 to January 2001. The protocol was approved by the Ethical Committee of the Geneva Faculty of Medicine, and partially supported by the Swiss Academy for Medical Sciences.

Recruitment

In order to include mild and stable asthmatics, medical doctors participating in the program recruited asthmatics from their own practice as they came to their doctor for a regular visit and not for exacerbation of their asthma. First we randomly selected 10–20 patients per practitioner using their patients files and who had the diagnosis of asthma. Inclusion criteria were therefore: outpatient asthmatics with an $FEV_1 \geqslant 50\%$ of predicted value without any acute exacerbation in the previous 30 days, aged between 16 and 70 years, and with good French or German fluency. The diagnosis of asthma was confirmed by a chest physician, and an improvement of $FEV_1 \geqslant 20\%$ after inhaled salbutamol had to be documented in the 2 weeks before entering the study. Asthmatics with any somatic comorbidity or those unable to communicate efficiently with the health professionals were excluded from the study. Presence of a psychiatric disorder was not considered as an exclusion criteria.

Adult asthma education programme (EP)

We first devoted considerable time to writing a 56-page brochure[15] in collaboration with university patient education specialists. This was done via an interdisciplinary focus group comprising all required health professionals, enhanced by the unique insight of an asthmatic patient who was also a communication specialist. His presence was a key element as it gave the health professionals a unique perspective into the real life of asthmatics. We decided to write the brochure with a straightforward, humorous approach. We assumed only a basic reading level, and incorporated many illustrations to make the brochure accessible to any patient while retaining the degree of accuracy required by health professionals.

The contents of the brochure (entitled: ''How to live better with asthma'') are listed in Table 1.

Table 1 Content of the brochure.

- Definition of asthma, focusing on both inflammation and bronchoconstriction
- Identification and control of triggers
- Therapeutic modalities with or without drugs, insisting on prophylactic use of inhaled steroids
- A detailed description of inhalation devices available in Switzerland
- Recognition of acute asthma exacerbation using symptoms and/or peak flows
- Preprinted action plan