

Educational camp for children with asthma

Acampamento educacional para crianças asmáticas

A. Sonia Buist, Sandra R. Wilson

Every physician who treats children sees many with asthma. The good news is that we have highly effective drugs that can treat and control asthma, thereby allowing the majority of such children to lead a normal life.⁽¹⁻³⁾ The bad news is that compliance with any chronic treatment regimen is difficult, especially when symptoms are not severe enough to significantly impair quality of life. In the case of asthma, many studies have shown that compliance with a regimen of controller medication is 50% or less.^(4,5) A choice between regular, active treatment of a chronic disorder and restricting activities in order to accommodate symptoms might be made at an unconscious level, with the default choice being to restrict activities (modify the lifestyle). Parents are often reluctant to give medications to their children on a routine basis. As physicians, we have done a very poor job of educating our asthma patients, many of whom do not yet realize that, despite the fact that asthma is a chronic disease, its symptoms can be controlled, and that they can lead a normal life. The concept that they can control their asthma, rather than their asthma controlling them, is an important one that we must teach our asthma patients of all ages.

The study conducted by Costa et al.⁽⁶⁾ and published in this issue of the Brazilian Journal of Pulmonology shows that a well-planned, simple and potentially inexpensive intervention in the setting of an asthma camp can increase patient knowledge regarding asthma and, even more important, can improve asthma management skills, thereby potentially helping children lead a more active life. This article is also important because it demonstrates that simple research studies, if done well, can provide information that motivates changes in the way we manage our patients. Research on pediatric asthma camps has been conducted in several countries. However, research carried out in another country may or may not be generalized to the setting in which we work, since patient populations and their educational backgrounds, as well as the health care systems and management settings, are likely to differ. Clinical research is most valuable when it involves patients from the environment in which it will be applied.

Costa et al. asked an important question: "Can a short (5-day) camp program for children with asthma that incorporates education and the usual types of recreational and sports activities improve the understanding that such chil-

dren have of their asthma, as well as honing their skills in the use of inhaled medications and decreasing their dyspnea?" The investigators used a multidisciplinary team that included physicians, nurses, a psychologist and a physiotherapist. They studied 37 children aged 8-10 years. The camp program included a daily 20-min interactive educational session that focused on understanding and managing asthma. In addition, peak flow and inhaler technique were assessed on a daily basis. It is of note that Rosa Mota, a famous Portuguese marathon runner who has asthma, visited the camp and talked to the children.

The investigators evaluated the efficacy of the program using questionnaires, administered to the children on the first and last day of camp, which explored knowledge regarding asthma, including triggers, symptoms, management strategies, their ability to engage in sports and their dyspnea score (an uncontrolled pre-post design). The authors reported a significant improvement in knowledge regarding asthma, in the use of asthma inhalers, and in the dyspnea score, as well as a change in perception (recognition of the fact that children with asthma can engage in sports, and that preventive medications are available for asthma).

There is now strong (level A) evidence that self-management asthma education is effective in the clinical setting.⁽²⁾ Some school-based asthma education programs have shown success in reducing symptoms and the use of relief medication, as well as in improving school attendance and performance (level B evidence).⁽²⁾ The challenge is to provide asthma education for asthmatic patients of all ages. Camps for children, where education is offered in a relaxed, recreational setting in which children can be shown, in a very direct way, that they can be quite active physically without being restricted by asthma symptoms, provide one such an opportunity. However, given the cost of providing a multidisciplinary educational program in this setting, it is important that the value of such a program be documented. Cost-effectiveness and the cost-benefit relationship, however, are difficult to determine for such programs, since randomized controlled trials are rare. In addition, the costs of asthma care and the benefits one would like to see (e.g., increasing the physical activity of the child in the home environment), would occur downstream of (after) the camp experience, thus requiring longer-term data collection.

Perhaps the most compelling program that has demonstrated cost-effectiveness at a national level was that of the National Asthma Program set up by the Ministry of Social Affairs and Health in Finland in 1994 to improve asthma care and limit projected increases in cost.⁽⁷⁾ This ambitious program incorporated education and self-management skills deep into the national health care system in Finland and demonstrated that such a program can be quite cost-effective over a 10-year period. It parallels the experience in one large community army hospital setting in the U.S. that also coupled patient and provider education with changes in the delivery of health care for children with asthma, reported as a case study by the US Centers for Disease Control.⁽⁸⁾ In that study, the investigators reported significant cost savings as a result of the program, a portion of which allowed the hospital to support the asthma education program. A key to the success of that program was that it combined an asthma education program of demonstrated effectiveness with a requirement that all physicians provide asthma action plans and refer newly diagnosed children with asthma and their parents to asthma education classes.

How to apply the Finnish and Texas experiences to other countries that are larger, more diverse, and have fewer resources is an important and challenging question. The Finnish program was multi-disciplinary and had four principles: 1) start effective anti-inflammatory treatment early, win the confidence of the patient, and improve the outcome; 2) treat according to disease severity; 3) treat exacerbations early; and 4) educate the patient and provide a written self-management plan. The camp program for children in Portugal was multi-disciplinary and incorporated most of these principles. Given the success of the program, extending the camp program to asthmatic children of all ages and to other settings in which the children come from a more diverse educational and socioeconomic background would clearly be important and worthwhile. With compelling data that demonstrate effectiveness, it might even be possible to persuade health authorities to establish a pilot national program based on the premise that such a program will control, or even reverse, the rising cost of asthma care and improve the quality of life of asthma sufferers.

A. Sonia Buist, MD
Oregon Health & Science University
Portland, OR, USA

Sandra R. Wilson, PhD
Palo Alto Medical Foundation
Research Institute
Palo Alto, CA, USA

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