2007 update of the Global Initiative for Asthma management and prevention: what's new?

Paul M. O'Byrne
Firestone Institute for Respiratory Health, St. Joseph's Hospital and McMaster University, Hamilton, ON, Canada

The Global Initiative for Asthma (GINA) is an initiative developed in the early 1990's, under the auspices of the National Heart, Lung and Blood Institute (NHLBI) of the National Institutes of Health in the United states and the World Health Organization (WHO). Its initial purpose was to develop asthma diagnosis and management guidelines that were applicable to all countries, both developed and developing. Up to this time, asthma diagnosis and management guidelines were country specific.

Since its inception, GINA has undergone four major iterations. The third of these was the first asthma management guideline to be rigorously evidence based and the fourth is described below. All asthma management guidelines agree on the importance of establishing a correct diagnosis of asthma using, whenever possible, objective measures to document variable airflow obstruction and/or airway hyperresponsivness to support the clinical suspicion generated by the patients symptoms. In addition, these guidelines have been very consistent in the objectives of treatment, in identifying what is meant by ideal asthma control, and in stepwise approach to increasing or reducing the medications needed by the patient to maintain control. Until recently, the process of establishing the initial treatment options required an assessment of asthma severity to identify the best treatment step. However, attempting to initiate treatment based on assessment of severity is both complex and confusing. This focus on asthma severity has made the implementation of asthma treatment guidelines difficult as many physicians cannot easily establish the degree of severity particularly as this assessment involves both the patient characteristics as well the response to treatment.

For these reasons, the most recent iteration of the GINA guidelines IN 2007 has not used a severity grading to identify treatment needs, but rather has focused on targeting asthma control as the parameter to determine treatment needs. This approach is both more logical (as achieving good asthma control is the main outcome objective of treatment) and much easier to grasp as a clinical concept. The tools for the assessment of control had been widely published and validated. Asthma control can be assessed quickly and treatment decisions made much easier than previously. The management of an asthmatic patient becomes an iterative process, where asthma control is assessed by the health care practitioner at an initial assessment visit and a decision made on the treatment needed. The patient is then evaluated at the next appointment to decide whether asthma control has been achieved. if so, then treatment is continued or reduced; if not, then treatment is increased.

The best outcome for the patient is to achieve ideal asthma control, where the patient is asymptomatic all of the time, has normal lung function and no limitations in activities or side effects from medications. However, the GINA guidelines recognize that not all patients will achieve such a beneficial result from treatment. Uncontrolled asthma is when patients have symptoms needing rescue medication more than twice per week and/or having airflow obstruction (the forced expired volume in one second [FEV_1] <80% predicted normal, or the ratio of the FEV_1 to vital capacity [FEV_1/VC] <70% predicted normal). These patients need an increase in treatment. The GINA guidelines has also identified that there are patients whose asthma is not controlled, and for whom an increase in treatment may be recommended, but requires discussion between the patient and the health care professional. These patients are considered partly controlled and the correct treatment decision may be not to change the treatment plan. In addition, the importance of patient education about the disease, its causes and treatment options continues to be stressed.

The GINA asthma treatment paradigm consists of 5 steps of treatment. At each step a preferred option and other alternatives are identified. Step 1 is as needed rapid acting inhaled β_2-agonist. The other 4 treatment steps include a controller option, ranging from low dose inhaled corticosteroids (ICS) as the preferred treatment option at Step 2 to high dose ICS plus oral corticosteroids at Step 5. Once the level of asthma control has been established, a decision is made about the treatment. if asthma is controlled, consideration should be given to reducing the amount of treatment. By contrast,

Correspondence to:
Professor Paul M O'Byrne, MB, FRCPI, FRCP(C), Firestone Institute for Respiratory Health, St. Joseph's Hospital, McMaster University, 1200 Main St West, Hamilton, ON, Canada L8N 3Z5, phone: 001-905-521-2100 ext. 76373, fax: 001-905-521-4972, e-mail: obyrnep@mcmaster.ca
Received: February 15, 2008. **Accepted in final form:** February 27, 2008.
Declared conflict of interest: Author is a consultant of AstraZeneca, CSK, Resistentia and member of the Advisory Boards of Topigen, Nycomed, Merck.
Pol Arch Med Wewn. 2008; 118 (4): 179-180

if asthma is uncontrolled, treatment needs to be increased to the next step.

Finally, the current GINA guideline is shorter than previous iterations and "pocket guides" are available to help improved implementation of the guidelines. The GINA guidelines also remains rigorously evidence based and updates, based on an extensive review of the previous year's peer reviewed literature on asthma management, are available on the web version of the guidelines. It is likely that the new approach, which focuses on asthma control, will become widely accepted by other national asthma treatment guidelines.