

## **WHAT IS PERSISTENT ASTHMA?**

*(Children aged 5-11 yrs, and youths 12 yrs to adults)*

### **BACKGROUND INFORMATION:**

**Asthma severity** is the intrinsic intensity of disease. Initial clinical assessment of children who have asthma begins with determining the level of severity. A therapy step (there are six) is then chosen based on the child's level of asthma severity. Assessment of asthma severity is made before the child is taking long-term control medication. The preferred treatment for ALL levels of persistent asthma is an inhaled corticosteroid (ICS). Assessment is made on the basis of current spirometry (measurement of airflow) and the child's (or caregiver's) recall of symptoms over the previous 2–4 weeks. If the child is being treated for an acute exacerbation during the initial assessment, then asking the child (or caregiver) to recall symptoms in the period before the onset of the current exacerbation will be adequate. At regular follow-up visits medications are then adjusted as needed (step up in therapy if asthma control is inadequate or step down if asthma control is maximized).

**See Section G for steps of therapy (steps 1-6 and severity charts for each age group).**

**Asthma Severity – Assess Impairment & Risk:** The latest guidelines from “The Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma” (National Heart, Lung, and Blood Institute, 2007) recommends that clinicians classify asthma severity by assessing current impairment and future risk. The distinction between impairment and risk emphasizes the need to consider separately asthma's effects on current quality of life and functional capacity while also considering the risks asthma presents for adverse events in the future, such as exacerbations and progressive loss of pulmonary function. Asthma impairment and risk of asthma might respond differently to treatment.

### **ASSESSMENT OF CURRENT IMPAIRMENT**

Assessment of severity requires assessing the following areas:

- 1) Symptoms: if the child is experiencing cough, wheeze, shortness of breath, chest tightness more than 2 days a week, (past month) they have persistent asthma.
- 2) Nighttime awakenings: if the child is awakening at night more than 2 times a month due to asthma symptoms, they have persistent asthma. This is a key marker of uncontrolled asthma.
- 3) Need for SABA (short-acting beta-agonist, i.e. albuterol) for quick relief of symptoms: if the child is requiring the use of a SABA more than 2 days a week (past month) for asthma symptoms, they have persistent asthma. (This count does not include scheduled use of SABA for the PREVENTION of exercise induced bronchospasm)
- 4) Interference with normal activity (including exercise): if the child is experiencing ANY limitation in their normal activity (even a minor limitation) due to having asthma symptoms, they have persistent asthma.
- 5) Lung function, measured by spirometry: A new emphasis on using FEV1/FVC has been added to the updated guidelines to classify severity in children because it is more sensitive measure of airflow obstruction than FEV1. FEV1 can be > 80% of predicted and the FEV1/FVC ratio normal or > 80% and the child can still be classified as having persistent asthma. If FEV1 is between 60 to 80% of predicted, or the FEV1/FVC is 75-80%, the child has moderate persistent asthma. If the FEV1 is <60% of predicted, or the FEV1/FVC is <75%, the child has severe persistent asthma.

## ASSESSMENT OF RISK:

Risk is the likelihood of future asthma exacerbations, progressive decline in lung function (or, for children, lung growth), or adverse effects from medication. In general, more frequent and intense exacerbations (e.g., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate greater underlying disease severity. For treatment purposes, **children who have more than one asthma exacerbation requiring systemic corticosteroids in the past year have persistent asthma**, even in the absence of impairment levels consistent with persistent asthma. [Ask the child or caregiver if the child has had to take any special medicines after asthma flare-ups such as any of the following: Cortef, Decadron, Dexamethasone, Hydrocortisone, Medrol, Methylprednisolone, Orapred, Pediapred, Prednisolone, Prednisone, Prelone, Solumedrol, Triamcinolone.] (If available review claims databases to confirm.)

**Asthma exacerbation defined:** Exacerbations of asthma are acute or subacute episodes of progressively worsening shortness of breath, cough, wheezing, and chest tightness—or some combination of these symptoms. Exacerbations are characterized by decreases in expiratory airflow that can be documented and quantified by full spirometry, FEV1 or PEF.

The severity and interval since the last asthma exacerbation is always considered. The frequency and severity of asthma exacerbations can fluctuate over time for children in any severity category. The relative annual risk of exacerbations may be related to FEV1. Declining FEV1 is a predictor of future asthma attacks. Regular monitoring of FEV1 at school provides an opportunity to detect and treat worsening asthma. Twice daily inhalation of an ICS medication improves air flow and reduces asthma impairment and risk, including the risk of fatal attacks (Suissa et al. N Engl J Med. 2000;343:332-336).

Information adapted from: Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma. (2007). Retrieved from the National Heart, Lung, and Blood Institute of the National Institutes of Health at <http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm>.

**Asthma Ready® Communities (2010)**

***The most important medicine for all levels of persistent asthma is inhaled corticosteroids (ICS).***

***ICS is the only type of asthma medicine proven to lower the risk of death due to asthma.***

The logo features the letters "ICS" in a large, bold, sans-serif font. Below "ICS", the word "ASTHMA" is written in a smaller, all-caps, sans-serif font. The letters "ASTHMA" are slightly offset to the right and appear to have a subtle shadow or reflection effect beneath them.

***IMPORTANT: Acute exacerbations can be mild, moderate, or severe in ANY category of persistent asthma. Patients at any level of severity, even intermittent asthma, can have severe exacerbations.***