



Clinical Practice Guidelines for the Management of Asthma

Source: American College of Allergy, Asthma & Immunology (1997), American Academy of Allergy & Immunology (1997), Expert Panel Report: Guidelines for the Diagnosis and Management of Asthma Update on Selected Topics 2002. National Heart, Lung, and Blood Institute. NIH Publication No. 02-5074 June 2003

Assessment:

Precise measurement of lung function to determine the severity of asthma and to monitor the course of therapy is critical.

When establishing the diagnosis of asthma, determine:

- Medical history and physical examination
- Episodic symptoms of airflow obstruction are present
- Airflow obstruction is at least partially reversible
- Alternative diagnoses are excluded particularly COPD and vocal chord obstruction in adults; aspiration, cardiac failure, inhaled foreign body, structural abnormality and cystic fibrosis in children
- Medication evaluation (Short-acting bronchodilators used more than twice per week may indicate need for medication adjustment)
- Determine smoking and alcohol use
- Supportive diagnostic testing

Measures of assessment and monitoring to be evaluated as indicated:

- **Spirometry:** At least once a year before and after inhaled bronchodilator
 - Significant reversibility is indicated by an increase of $\geq 12\%$ and 200 ml in FEV1
- **Peak Flow:** Symptomatic patients with normal spirometry:
 - Daily assessment of peak flow monitoring upon rising and before bedtime
 - Maintaining accurate daily readings can help detect subtle changes in lung function that may otherwise go unnoticed
- **Influenza Vaccination:** Annually

Contributing Factors:

To be assessed at the patient's initial examination and each additional visit based on seasonal variations:

- Identification of possible inhalant allergens, indoor irritants, pet dander and air pollution
- Viral Infection
- Identification of modifiable risk factors: lifestyle, obesity, stress, smoking
- Other factors: rhinitis/sinusitis, gastro-esophageal reflux, drugs (ASA/NSAIDS, sulfites, beta-adrenergic blockers in sensitive patients)

Pharmacotherapy:

Based on individual needs and severity of disease:

- Control chronic and nocturnal symptoms
- Maintain normal activity levels, including exercise
- Maintain near normal pulmonary function
- Prevent acute episodes of asthma
- Avoid adverse effects of asthma medications
- Influenza and Pneumococcal vaccination as appropriate

Preferred formulary based on individual's needs:

Inhaled Corticosteroids..... MDI-Pulmicort Turbuhaler[®] Flovent[®], Azmacort[®], Nebulizer-Pulmicort Respules[®], and Advair[®] [combination corticosteroids and long-acting bronchodilator]
Short Acting Beta2 Adrenergic Agonist Bronchodilator albuterol, terbutaline, metaproterenol
Long Acting Beta2 Adrenergic Agonist Bronchodilators Servent[®], Advair[®], [combination corticosteroids and long acting bronchodilators]
Leukotriene Modifiers Singulair[®]
Other anti-inflammatory inhalers..... Intal[®], Tilade[®]
Theophylline & Aminophylline Theodur[®], Uniphy1[®], and aminophylline

Patient Education:

Patient should have a written Asthma Action Plan that is revised annually or as needed with the assistance of an Asthma team consisting of the physician, certified asthma educator, and appropriate specialists. The action plan should incorporate all facets of care:

- Short and long term goals
- Written environmental control recommendations
- Lifestyle changes including sick day interventions
- Self-monitoring of peak flows with use of a record system (monthly calendar, charting seasonal variations in asthma symptoms)
- Basic facts about asthma (provide written material for patient reference)
- Provide list of environmental controls (stressing the importance of implementing them)
- Role of medication:
 - Explain use of controller and reliever medications
 - Provide Asthma Action Plan for medication use
 - Provide instructions on MDI (observe and check technique)
 - Refer to WellCare Asthma Disease Management Program

Monitoring and Reporting:

- Establish therapeutic goals
- Provide instructions for monitoring and reporting
 - Practice use of peak flow meter and explain its uses as monitoring tool
 - Instruct patient to record missed school/work days, reduced activity, and changes in symptoms

Follow up:

- Routine office exams every 1 to 6 months while stable, with increased frequency in acute cases
- Assess attainment of patient goals and concerns
- Adjust treatment plans as necessary
- Provide updated asthma action plan and self-management plan as indicated
- Assess patient's peak flow and inhaler technique
- Smoking cessation program referral as indicated

Legal Disclaimer:

These clinical practice guidelines were developed to assist practitioners in making decisions about appropriate health care for specific clinical circumstances. These guidelines are not fixed protocols that must be followed, but are intended for health care professionals and providers to consider. While they identify and describe generally recommended courses of intervention, they are not presented as a substitute for the advice of the physician or other knowledgeable health care professional or provider service provider treating the patient. Individual patients may require different treatments from those specified in a given guideline. Guidelines are not entirely inclusive or exclusive of all methods of reasonable care that can obtain/produce the same results. While guidelines can be written that take into account variations in clinical settings, resources, or common patient characteristics, they cannot address the unique needs of each patient nor the combination of resources available to a particular community or health care professional or provider. Deviations from clinical practice guidelines may be justified by individual circumstances. Thus, these guidelines must be applied based on individual patient needs and are not a substitute for the professional medical judgment of the provider of care.