

Care Guide for Asthma

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ASSESSMENT	INDICATION	MEASUREMENT/VALUE	INTERVENTION	FOLLOW-UP
Symptoms³	Routine	<ul style="list-style-type: none"> ■ Symptoms: cough, episodic wheeze, chest tightness, shortness of breath ■ Severity: mild intermittent, mild persistent, moderate persistent, severe persistent 	<ul style="list-style-type: none"> ■ Identify symptom etiology ■ Educate regarding symptom control ■ Step-up or step-down therapy as indicated by symptom control (See Medication Step Approach) 	Each visit
Smoking Status^{1,7}	All asthma patients	<ul style="list-style-type: none"> ■ Ask all patients if they smoke ■ If yes, then smoking cessation should be addressed <ul style="list-style-type: none"> - Pack/year history - Stage of readiness to quit ■ Ask patients about exposure to secondhand smoke 	<p>Follow the Five A's</p> <ol style="list-style-type: none"> 1. Ask 2. Advise - Strongly urge all tobacco users to quit. Educate patient regarding available nicotine replacement therapies and other pharmacologic therapies.* 3. Assess - Willingness to quit. <ul style="list-style-type: none"> - Social support during treatment. - Social support after treatment. 4. Assist - Devise quit plan, prescribe nicotine replacement therapies* as indicated and provide supplementary educational materials. 5. Arrange - Schedule follow-up contact during the first week of the quit date. Refer to formal smoking cessation program as indicated. Educate on effects of secondary smoke exposure. 	Each visit
Environmental Control¹	All patients with asthma	<ul style="list-style-type: none"> ■ Identify factors that contribute to asthma severity ■ Patient to complete self-assessment of environmental factors that may trigger asthma symptoms ■ Patient to record symptom diary over two- to three-week period to identify triggers ■ Document pets in house ■ Consider immunotherapy ■ Avoid documented allergens, irritants and pollutants which may trigger asthma symptoms 	<ul style="list-style-type: none"> ■ Encourage the patient to remove the trigger ■ Provide education on trigger elimination and environmental control ■ Counsel patients who are sensitive to pets ■ Obtain agreement from patient to initiate one or two simple control measures ■ Recommend allergy testing for those with persistent asthma 	Initially and as indicated
Medications^{1,6}	All receiving pharmacological therapy	<ul style="list-style-type: none"> ■ Document current medications ■ Document control of symptoms 	<ul style="list-style-type: none"> ■ Educate on indications, frequency, dosage and possible side effects ■ Emphasize importance of continued role of anti-inflammatory medication in those who have reached symptom control ■ Consider controller medications in persistent asthma ■ Step-up or step-down therapy as indicated by symptom control (See Medication Step Approach) ■ Ensure patient has 30-day supply of rescue meds on hand such as a short-acting bronchodilator 	Each visit
Spirometry^{1,5}	Initially to confirm diagnosis and establish baseline	<ul style="list-style-type: none"> ■ Abnormal: FEV₁ < 80% predicted normal values (indicates airflow obstruction) and FEV₁/FVC < 65% predicted normal values ■ Improvement of FEV₁ > 12% post short-acting Beta₂-agonist (at baseline evaluation) 	<ul style="list-style-type: none"> ■ Educate patient on the meaning of spirometry results and the effect of short-acting Beta₂-agonist ■ Educate patient on the value of using PEFr (see peak flow monitoring section) 	<ul style="list-style-type: none"> ■ After symptoms and peak flow rate have stabilized ■ Consider every 1 to 2 years when asthma stable ■ More often as indicated by unstable asthma or change in therapy
Goals of Asthma Therapy¹	All asthma patients	<ul style="list-style-type: none"> ■ Frequency of asthma symptoms and exacerbations ■ Normal activity level ■ Normal or near normal lung function (spirometry) ■ Satisfaction with asthma care ■ Frequency of side effects associated with medicines ■ Frequency of exacerbating conditions (rhinitis, sinusitis and gastroesophageal reflux) 	<ul style="list-style-type: none"> ■ Collaborative development of asthma therapy goals ■ Assess patient's ability to reach and/or maintain these goals ■ Identify barriers to goal attainment or maintenance ■ Modify asthma treatment plan as indicated 	Initially and as condition warrants change in therapy and/or goals
Asthma Action Plan^{1,2}	All asthma patients	Establish action plan and specific recommendations of the plan	<ul style="list-style-type: none"> ■ Review with patient and provide written instructions on use of plan ■ Have patient explain exact steps to take when PEFr zones and/or symptoms warrant action 	Each visit
Assess for Risk of Fatal Asthma Attack^{1,2}	<ul style="list-style-type: none"> ■ Patients with history of severe exacerbations requiring emergency visit or hospitalization ■ Patients with co-morbid conditions (emphysema, chronic bronchitis, CHF, nasal polyps and history of sensitivity to aspirin or nonsteroidal anti-inflammatories) 	<ul style="list-style-type: none"> ■ Evaluate ways to decrease risk of fatal asthma attack ■ Assess history of sudden exacerbations, intubations, ICU admissions 	<ul style="list-style-type: none"> ■ Educate for early warning signs ■ Advise to seek medical attention early ■ Provide instruction on how and when to call for an ambulance ■ Provide with supply of steroid tablets or liquid to intervene early in acute exacerbations ■ Instruct to carry rescue medications such as a short-acting bronchodilator at all times and instruct how to use for acute asthma attack ■ Consider Epinephrine-auto-injector for patients with potentially dangerous allergic reactions to food, to insect stings or bites, drugs or other substances 	Each visit
Influenza Vaccination¹	All asthma patients unless allergic to the vaccine or a component of the vaccine. Caution is also warranted for those patients allergic to eggs	Document last immunization	Administer and document every year	Annually

* Recommended pharmacotherapies for smoking cessation include: First line – Bupropion SR, nicotine gum, nicotine inhaler, nicotine nasal spray and nicotine patch. Second line – Clonidine and Nortriptyline. Over-the-counter nicotine patches.

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Pneumococcal Conjugate Vaccination⁴	<ul style="list-style-type: none"> All children less than or equal to 23 months. Children age 24-59 months WITH ASTHMA SHOULD NOT RECEIVE VACCINATION UNLESS ON HIGH DOSE CORTICOSTEROID THERAPY. * The Pneumococcal Polysaccharide vaccination is not recommended for asthma patients 2-64 years of age 	Document last immunization	<ul style="list-style-type: none"> All children less than or equal to 23 months receive 4 routine doses Children age 24-59 months who have asthma and are on HIGH DOSE CORTICOSTEROID THERAPY SHOULD RECEIVE THE VACCINE IF NOT PREVIOUSLY VACCINATED 	<ul style="list-style-type: none"> Routine schedule is four doses, one at each of these ages: <ul style="list-style-type: none"> • 2 months • 4 months • 6 months • 12 to 15 months Children age 24-59 months who are on high dose corticosteroids should receive a single dose of vaccine
Symptom Monitoring and Use of Peak Flow Meters^{1,2}	All asthma patients	<ul style="list-style-type: none"> Improved symptom management Track peak flow values (for patients > 5 years of age, establish personal best number) Assess for severity class 	<ul style="list-style-type: none"> Educate patient on importance of monitoring PEFr, of establishing personal best number, of the green/yellow/red zone indications and of taking appropriate action Observe patient's PEFr technique Educate on recording PEFr and/or symptom severity by using a daily diary 	Each visit
Medication Delivery Device^{1,2}	Patients receiving inhaled medications with metered-dose inhalers (MDIs), nebulizers, dry powder inhaler (DPI), spacers and holding chambers	Document education on proper technique and use of these tools	<ul style="list-style-type: none"> Demonstrate proper technique and then observe that patient technique is correct Review proper cleaning, care and storage of delivery device Consider use of GPN, spacer or holding chamber for those who cannot properly use an MDI 	Each visit or as indicated
Specialty Referral¹	<p>Consider Specialty referral if patients meet criteria:</p> <ul style="list-style-type: none"> Problematic differential diagnosis Requiring allergy testing Severe persistent symptoms or requiring more than two treatments of oral steroids in one year Younger than three years, requiring step 3 or 4 care Not meeting goals of asthma therapy after 3 to 6 months Occurrence of life-threatening asthma exacerbation Exacerbations associated with multiple infections 	Document severity level and medications utilized to attempt long-term control	Inform patient of indications for specialty referral, including benefits of referral.	After specialty referral has taken place

REFERENCES:

- Expert Panel Report II: *Guidelines for the Diagnosis and Management of Asthma*, National Heart, Lung, and Blood Institute, 1998.
- Veterans Health Administration: *Clinical Guideline for the Management of Asthma and COPD*, 1997.
- American Academy of Asthma, Allergy, and Immunology: *Pediatric Guideline for the Management of Asthma*, 2000.

- Centers for Disease Control and Prevention: *Pneumococcal Disease*, Updated 09-26-2001. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4909a1.htm#tab8>. For additional vaccination recommendations, check the Centers for Disease Control website at: www.cdc.gov/nip/publications.

- American Association of Respiratory Care: *Clinical Practice Guidelines, Spirometry*, 1996.

- National Asthma Education and Prevention Program (NAEPP) Report: *Guidelines for the Diagnosis and Management of Asthma - Update on Selected Topics 2002*. MH Publication No. 02-5075, June 2002.

- U.S. Department of Health and Human Services, Public Health Service, *Treating Tobacco use and Dependence. A Clinical Practice Guideline*, 2000.