GIST
Guideline Implementation Steps & Tools

Asthma Guideline Implementation Steps & Tools (GIST)

A provider education and practice redesign project by the Michigan Department of Community Health based on the 2007 NAEPP Asthma Guidelines. GIST makes it easier for primary care clinicians to use the asthma guidelines in their everyday care of patients with asthma. Visit GetAsthmaHelp.org/GIST for more information.

"Questions About Your Breathing" or "Asthma Control Test"	Given prior to seeing clinician • Gets "Questions" form if being seen for respiratory complaints- history and symptom questionnaire •"ACT" form for returning asthma patient, patient control assessment
"Asthma Diagnosis Tool" or "Asthma Patient Follow-Up Tool"	Patient with clinician, who uses: •"Diagnosis" form if patient in for respiratory complaints- diagnoses/rules out asthma, finds severity level if asthma, step care started • "Follow-Up" form for returning asthma patient- finds control level, steps up, down or maintains as needed
"Stepwise Approach to Managing Asthma" Asthma Action Plan, Ed & Meds	• Use Stepwise Approach to find medication needs, management approach • Opportunity for patient ed about asthma triggers, meds, barriers, etc. • Patient receives prescription(s) and Asthma Action Plan • No specified AAP for GIST, many good ones available at GetAsthmaHelp.org
Evaluate, improve system, repeat	Monitor progress by tracking these or other outcomes: • number of asthma patients in practice • number (or %) of asthma patients with current asthma action plan • number (or %) of asthma patients with control assessment at last visit • number (or %) of asthma patients with appropriate prescription of ICS

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ASTHMA DIAGNOSIS TOOL *Consider the diagnosis of asthma if patient states any of the following:*

❒ Family history of asthma, allergies or eczema ❒ Symptoms occur seasonally ❒ Symptoms when near chemicals, dusts, fumes at work
❒ Symptoms worsened by URI lasting longer than ten days, smoke, allergens or exercise

AND SPIROMETRY DEMONSTRATES OBSTRUCTION AND/OR REVERSIBILITY BY AN INCREASE IN FEV_1 OF 12% OR MORE AFTER BRONCHODILATOR.
Rule out co-morbid conditions. If in doubt, consult with an asthma specialist.

HIGHEST LEVEL OF CHECKED BOX = SEVERITY LEVEL / FOLLOW SEVERITY LEVEL DOWN TO FIND TREATMENT STEP → SEE TREATMENT STEPWISE APPROACH

	INTERMITTENT	MILD PERSISTENT	MODERATE PERSISTENT	SEVERE PERSISTENT
IMPAIRMENT	**SYMPTOMS:** ❒ 2x/week or less **NIGHTTIME AWAKENINGS:** ❒ 2x/month or less **INTERFERENCE W/NORMAL ACTIVITY:** ❒ None **SHORT-ACTING B_2-AGONIST USE:** ❒ 2 days/week or less **LUNG FUNCTION:** ❒ FEV_1 more than 80% pred.	**SYMPTOMS:** ❒ More than 2x/week, not daily **NIGHTTIME AWAKENINGS:** ❒ More than 2x/month **INTERFERENCE W/NORMAL ACTIVITY:** ❒ Minor limitation **SHORT-ACTING B_2-AGONIST USE:** ❒ More than 2 days/week but not daily or more than 1x/day **LUNG FUNCTION:** ❒ FEV_1 more than 80% pred.	**SYMPTOMS:** ❒ Daily **NIGHTTIME AWAKENINGS:** ❒ About 1x/week, not nightly **INTERFERENCE W/NORMAL ACTIVITY:** ❒ Some limitation **SHORT-ACTING B_2-AGONIST USE:** ❒ Daily **LUNG FUNCTION:** ❒ FEV_1 60-80% pred.	**SYMPTOMS:** ❒ Throughout the day **NIGHTTIME AWAKENINGS:** ❒ More than 1x/week, often nightly **INTERFERENCE W/NORMAL ACTIVITY:** ❒ Extremely limited **SHORT-ACTING B_2-AGONIST USE:** ❒ Several times/day **LUNG FUNCTION:** ❒ FEV_1 less than 60% pred.
RISK	**EXACERBATIONS REQUIRING ORAL STEROIDS:** ❒ All ages: 0-1/year	**EXACERBATIONS REQUIRING ORAL STEROIDS:** consider severity and interval since last exacerbation ❒ Age 0-4: more than 2 in 6 months or more than 4 wheezing episodes/year lasting more than 1 day ❒ All ages: more than 2/year • *Exacerbations of any severity may occur in patients in any severity category.* • *Frequency and severity may fluctuate over time.*		
TREATMENT STEP	✓ **All ages: STEP 1**	✓ **All ages: STEP 2**	✓ **All Ages: STEP 3;** consider short course oral steroids option	✓ **Age 0-4: STEP 3;** short course oral steroids option ✓ **Age 5-11: STEP 3;** STEP 4 short course oral steroids option ✓ **Age 12 & over: STEP 4 or 5**; short course oral steroids option
		TREATMENT FOR PERSISTENT ASTHMA: ✓ Daily inhaled steroids (see treatment stepwise approach) ✓ Assess response within 2-6 weeks		

FOR ALL PATIENTS WITH ASTHMA: ❒ Rescue medication for all ages, all severity levels: Short-acting B_2-agonist PRN. Treatment intensity depends on symptom severity.
❒ Provide written Asthma Action Plan ❒ Identify & avoid triggers ❒ Flu vaccine recommended annually, pneumococcal vaccine for adults ❒ Review correct device technique each visit

Reference: National Heart, Lung, and Blood Institute's Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma 2007, NIH Publication 07-4051. This tool was adapted from Washington Asthma Initiative materials.

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STEPWISE APPROACH TO MANAGING ASTHMA

Quick reference medication guides, asthma action plans and more: GetAsthmaHelp.org/GIST

Intermittent Asthma

Persistent Asthma: Daily Medication

Step up **as indicated although address possible poor adherence to medication. Re-assess in 2 to 6 weeks.**

Step down **if well controlled and re-assess in 3 months. If very stable then assess control every 3 to 6 months.**

All LABAs and combination agents containing LABAs have a black box warning.

Reference: National Heart, Lung, and Blood Institute's Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma 2007, NIH Publication 07-4051. This tool was adapted from the Colorado Clinical Guidelines Collaborative.

STEP 1 (all ages)

Short-acting beta-agonist (e.g., albuterol prn)

If used more than 2 days per week (other than for exercise) consider inadequate control and the need to step up treatment.

STEP 2

ALL AGES

Preferred: Low-dose inhaled steroid

Alternative: Leukotriene blocker **or** cromolyn

AGE 0-4 YRS

Consider referral (especially if diagnosis is in doubt)

STEP 3

AGE 12+ YRS

Preferred: Low-dose inhaled steroid + long-acting beta agonist **or** Medium-dose inhaled steroid

Alternative: Low-dose inhaled steroid + leukotriene blocker

AGE 5-11 YRS

Low-dose inhaled steroid + long-acting beta agonist **or** leukotriene blocker **or** Medium-dose inhaled steroid

AGE 0-4 YRS

Medium-dose inhaled steroid + referral

STEP 4

AGE 12+ YRS

Preferred: Medium-dose inhaled steroid + long-acting beta agonist

Alternative: Medium-dose inhaled steroid + leukotriene blocker

AGE 5-11 YRS

Same as 12+ yrs

AGE 0-4 YRS

Medium-dose inhaled steroid + either long-acting beta-agonist **or** leukotriene blocker

STEP 5

AGE 12+ YRS

High-dose inhaled steroid + long-acting beta agonist **—and—** Consider omaluzimab if allergies

AGE 5-11 YRS

Preferred: High-dose inhaled steroid + long-acting beta agonist

Alternative: High-dose inhaled steroid + leukotriene blocker

AGE 0-4 YRS

High-dose inhaled steroid + either long-acting beta-agonist **or** leukotriene blocker

STEP 6

AGE 12+ YRS

High-dose inhaled steroid + long-acting beta agonist + oral steroid **—and—** Consider omaluzimab if allergies

AGE 5-11 YRS

Preferred: High-dose inhaled steroid + long-acting beta agonist

Alternative: High-dose inhaled steroid + leukotriene blocker + ***oral steroid***

AGE 0-4 YRS

High-dose inhaled steroid + either long-acting beta-agonist **or** leukotriene blocker + ***oral steroid***

All ages Steps 4 through 6: Consult with asthma specialist

Consider immunotherapy if allergic asthma

RESCUE MEDICATION: Short-acting beta-agonist (e.g. albuterol) as needed for symptoms. Treatment intensity depends on symptom severity. Frequent or increasing use of rescue medication may indicate inadequate control and the need to step up treatment.

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ASTHMA PATIENT FOLLOW-UP TOOL *Assess patient's asthma control and device technique.*

❒ ACT™ Test Score _____ **Severity level at diagnosis:** ❒ Intermittent ❒ Mild Persistent ❒ Moderate Persistent ❒ Severe Persistent

HIGHEST LEVEL OF CHECKED BOX = CONTROL LEVEL / FOLLOW CONTROL LEVEL DOWN TO FIND TREATMENT STEP → SEE TREATMENT STEPWISE APPROACH

	WELL CONTROLLED	NOT WELL CONTROLLED	VERY POORLY CONTROLLED
IMPAIRMENT	**SYMPTOMS:** ❒ 2 day/week or less, not more than once per day **NIGHTTIME AWAKENINGS:** ❒ No more than once/month **INTERFERENCE W/NORMAL ACTIVITY:** ❒ None **SHORT-ACTING B_2-AGONIST USE:** ❒ 2 days/week or less **FEV_1 OR PEAK FLOW:** ❒ Age 5 & over: More than 80% predicted/personal best **FEV_1/FVC:** ❒ Age 5 & over: more than 80% **ACT SCORE:** ❒ 20 or more	**SYMPTOMS:** ❒ More than 2 days/week or multiple times on 2 days/week or less **NIGHTTIME AWAKENINGS:** ❒ Ages 0-4: More than once/month ❒ Ages 5-11: 2 times/month or more ❒ Age 12 & over: 1-3 times/week **INTERFERENCE W/NORMAL ACTIVITY:** ❒ Some limitation **SHORT-ACTING B_2-AGONIST USE:** ❒ More than 2 days/week **FEV_1 OR PEAK FLOW:** ❒ Age 5 & over: 60-80% pred./personal best **FEV_1/FVC:** ❒ Age 5 & over: 75-80% **ACT SCORE:** ❒ 16-19	**SYMPTOMS:** ❒ Throughout the day **NIGHTTIME AWAKENINGS:** ❒ Ages 0-4: More than once/week ❒ Ages 5-11: 2 times/week or more ❒ Age 12 & over: 4 times/week or more **INTERFERENCE W/NORMAL ACTIVITY:** ❒ Extremely limited **SHORT-ACTING B_2-AGONIST USE:** ❒ Several times/day **FEV_1 OR PEAK FLOW:** ❒ Age 5 & over: Less than 60% pred./personal best **FEV_1/FVC:** ❒ Age 5 & over: less than 75% **ACT SCORE:** ❒ 15 or less
RISK	**EXACERBATIONS REQUIRING ORAL STEROIDS** ❒ All ages: 0-1/year	**EXACERBATIONS REQUIRING ORAL STEROIDS** ❒ Age 0-4: 2-3/year ❒ Age 5 & over: 2/year or more; consider severity	**EXACERBATIONS REQUIRING ORAL STEROIDS** ❒ Age 0-4: More than 3/year ❒ Age 5 & over: 2/year or more; consider severity
TREATMENT STEP	❒ Maintain current step ❒ Consider step down if well controlled for at least 3 months	✓ Check adherence & environmental control ❒ Step up 1 step and assess response in 2-6 weeks	✓ Check adherence & environmental control ❒ Consider short course of oral corticosteroids ❒ Consider co-morbid conditions ❒ Step up 1-2 steps and assess response in 2 weeks
		❒ For side effects, consider alternative treatment options	

❒ Rescue medication for all ages, all severity/control levels: Short-acting B_2-agonist PRN. Treatment intensity depends on symptom severity.
❒ Provide written Asthma Action Plan; review/update
❒ Spirometry annually for age 5 & over
❒ Flu vaccine recommended annually, pneumooccal vaccine for adults
❒ Consider referral to a specialist if not well controlled within 3-6 months using stepwise approach **OR** 2 or more ED visits or hospitalizations for asthma in a year.

Reference: National Heart, Lung, and Blood Institute's Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma 2007, NIH Publication 07-4051. This tool was adapted from Washington Asthma Initiative materials.

Enter Name

Enter Address

Enter City/State/Zip

Today's Date: _____

Patient's Name: _____

FOR PATIENTS:

Take the Asthma Control Test™ (ACT) for people 12 yrs and older.

Know your score. Share your results with your doctor.

Step 1 Write the number of each answer in the score box provided.

Step 2 Add the score boxes for your total.

Step 3 Take the test to the doctor to talk about your score.

1. In the past **4 weeks**, how much of the time did your **asthma** keep you from getting as much done at work, school or at home?

All of the time	1	Most of the time	2	Some of the time	3	A little of the time	4	None of the time	5

2. During the past **4 weeks**, how often have you had shortness of breath?

More than once a day	1	Once a day	2	3 to 6 times a week	3	Once or twice a week	4	Not at all	5

3. During the past **4 weeks**, how often did your **asthma** symptoms (wheezing, coughing, shortness of breath, chest tightness or pain) wake you up at night or earlier than usual in the morning?

4 or more nights a week	1	2 or 3 nights a week	2	Once a week	3	Once or twice	4	Not at all	5

4. During the past **4 weeks**, how often have you used your rescue inhaler or nebulizer medication (such as albuterol)?

3 or more times per day	1	1 or 2 times per day	2	2 or 3 times per week	3	Once a week or less	4	Not at all	5

5. How would you rate your **asthma** control during the **past 4 weeks**?

Not controlled at all	1	Poorly controlled	2	Somewhat controlled	3	Well controlled	4	Completely controlled	5

SCORE
TOTAL

If your score is 19 or less, your asthma may not be controlled as well as it could be. Talk to your doctor.

FOR PHYSICIANS:

The ACT is:

- A simple, 5-question tool that is self-administered by the patient
- Clinically validated by specialist assessment and spirometry[1]
- Recognized by the National Institutes of Health

Reference: 1. Nathan RA et al. *J Allergy Clin Immunol.* 2004;113:59-65.

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QUESTIONS ABOUT YOUR BREATHING

Please answer the questions below for ONLY THE PATIENT seeing the doctor today, you OR your child.

Name:_____

Date of Birth:_____

Today's Date:_____

1. Have you/has your child had shortness of breath, coughing, wheezing (whistling in the chest) during the day?
❒ Yes ❒ No

2. Have you/has your child had breathing trouble at night or early in the morning ❒ Yes ❒ No

3. Has breathing trouble kept you/kept your child from school/work/normal activities? ❒ Yes ❒ No

4. Have you/has your child ever been to a doctor, urgent care, emergency room or a hospital for breathing trouble? ❒ Yes ❒ No

5. Do you/does your child get colds that settle in the chest, or coughing that lasts 10 days or more after a cold is gone?
❒ Yes ❒ No

6. Have you/has your child ever needed steroid pills or syrup (prednisone, prednisolone, prelone) for breathing trouble?
❒ Yes ❒ No

If yes, how many times has this happened? _____

7. Have you/has your child ever taken any other medicine (pills, inhalers, puffers, syrup) for breathing trouble? ❒ Yes ❒ No

If yes, please list: _____

8. Do you/does your child have a history of eczema, hay fever or other allergies, including foods? ❒ Yes ❒ No
If yes, please tell us about them: _____

_____

9. At what age did you/did your child start having breathing trouble?_____

10. Do any blood relatives (parent, brother, sister, child) have:
❒ Asthma ❒ Allergies

11. Do you or anyone in the family smoke? ❒ Yes ❒ No

12. Are you/is your child ever in smoky places? ❒ Yes ❒ No

13. Check any of the things that make your/your child's breathing worse, or tell us about others.

❒ Breathing in chemicals, dusts, fumes at work
❒ Colds or flu
❒ Animals
❒ Dust
❒ Pollen and mold
❒ Strong odors, like cleaners or perfumes
❒ Weather
❒ Exercise
❒ Cigarette and other smoke
❒ Medicines:_____

_____

❒ Other things:

_____

_____

Please list any medicine that you/that your child takes:

_____

_____

Thank you for your help! Please give this form to the doctor who sees you/your child today.

Reference: National Heart, Lung, and Blood Institute's Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma 2007, NIH Publication 07-4051.