Encouraging the use of asthma control questionnaires ATAQ and TRACK to improve asthma management and outcomes

Popularizing the ATAQ and TRACK for asthmatic youth in Hinesberg Family Practice

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Burden of Asthma in the U.S.

General

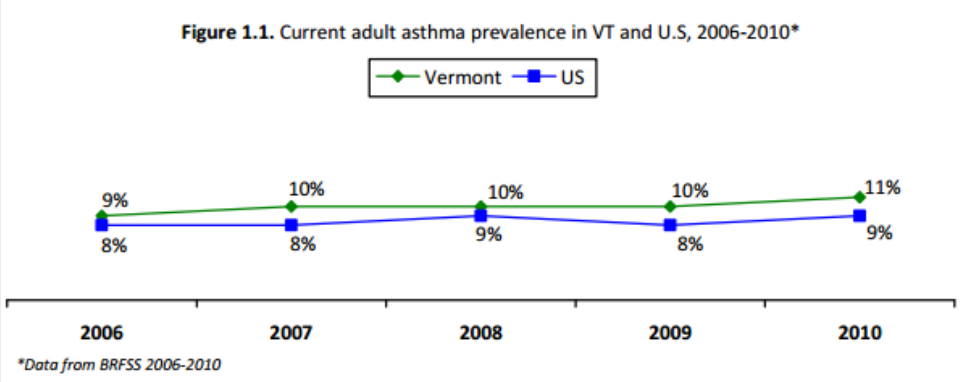
- Worldwide: 300 million people suffer from asthma
- United States: 1 in 12 adults and 1 in 11 children
- Chronic symptoms
  - Sleep disruption
  - Physical activity restriction

Youth

- Healthcare + productivity costs
  - 3rd highest reason for hospital stay
  - Most frequent cause of school absenteeism

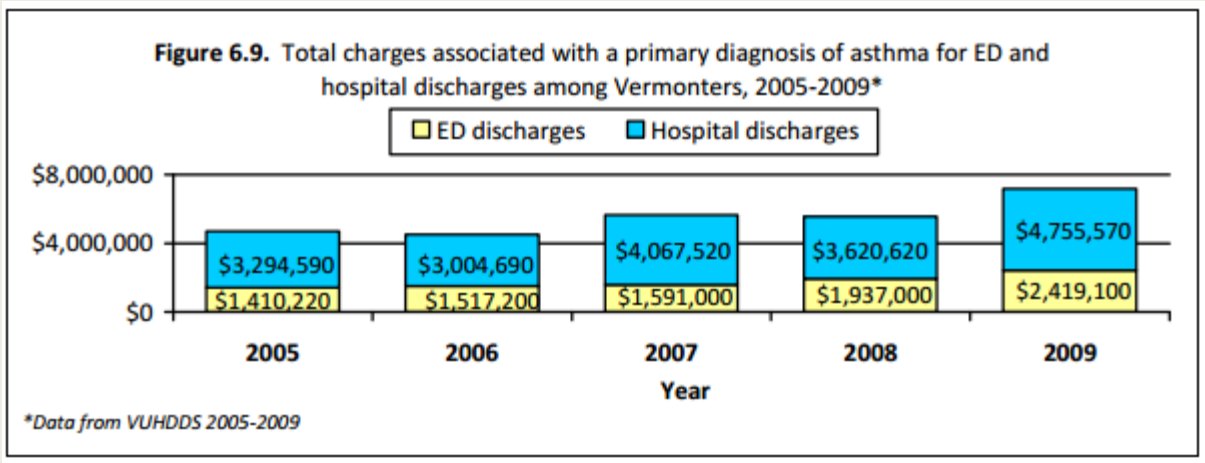
GINA guideline goal	AIR result, % (range)	United States (n = 2509)
Minimal chronic symptoms, including nocturnal symptoms	Symptoms in past 4 weeks	
	During the day	61.0
	Night wakening	41.0
	Exercise induced	53.0
	Sleep disruptions ≥1/wk	30.0
Minimal exacerbations/no emergency visits for asthma	Need for emergency health care in he past 12 mo	
	Hospital admission	9.0
	Hospital emergency department visit	23.0
	Unscheduled emergency visit to other health care facility	29.0
Minimal need for SABA	Current use of bronchodilator	61.0
No limitation on physical activity	Asthma restricts normal physical activity	36.0

Burden in Vermont



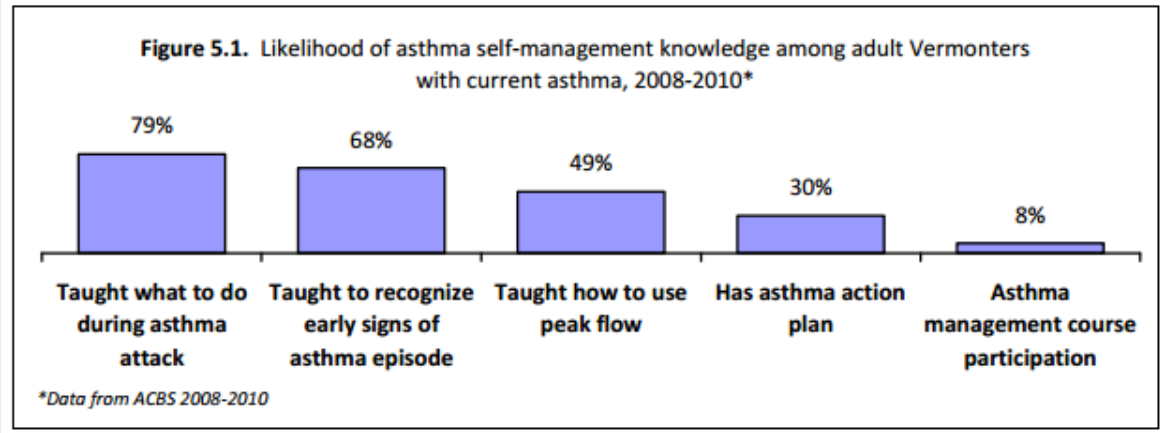
General

- Higher adult prevalence and rising
- Hospital admissions for asthma are rising



Youth in Vermont

- Average 1 annual emergency room visit for asthma symptoms
- ~ 1 of 5 have difficulty sleeping at least once a month
- 70% have no asthma action plan

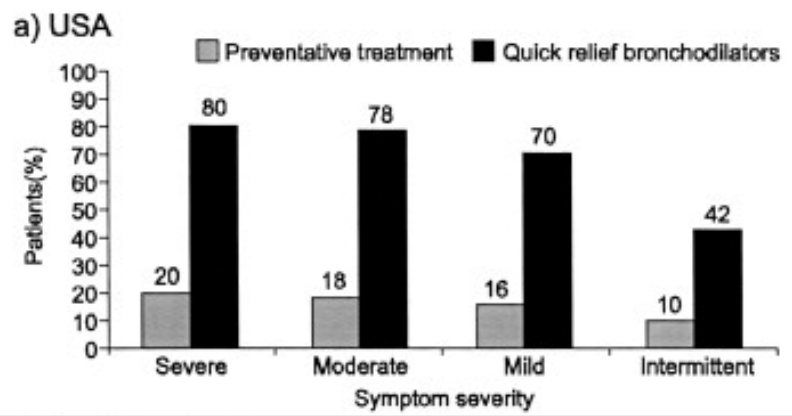


Spirometry + ICS may be underutilized

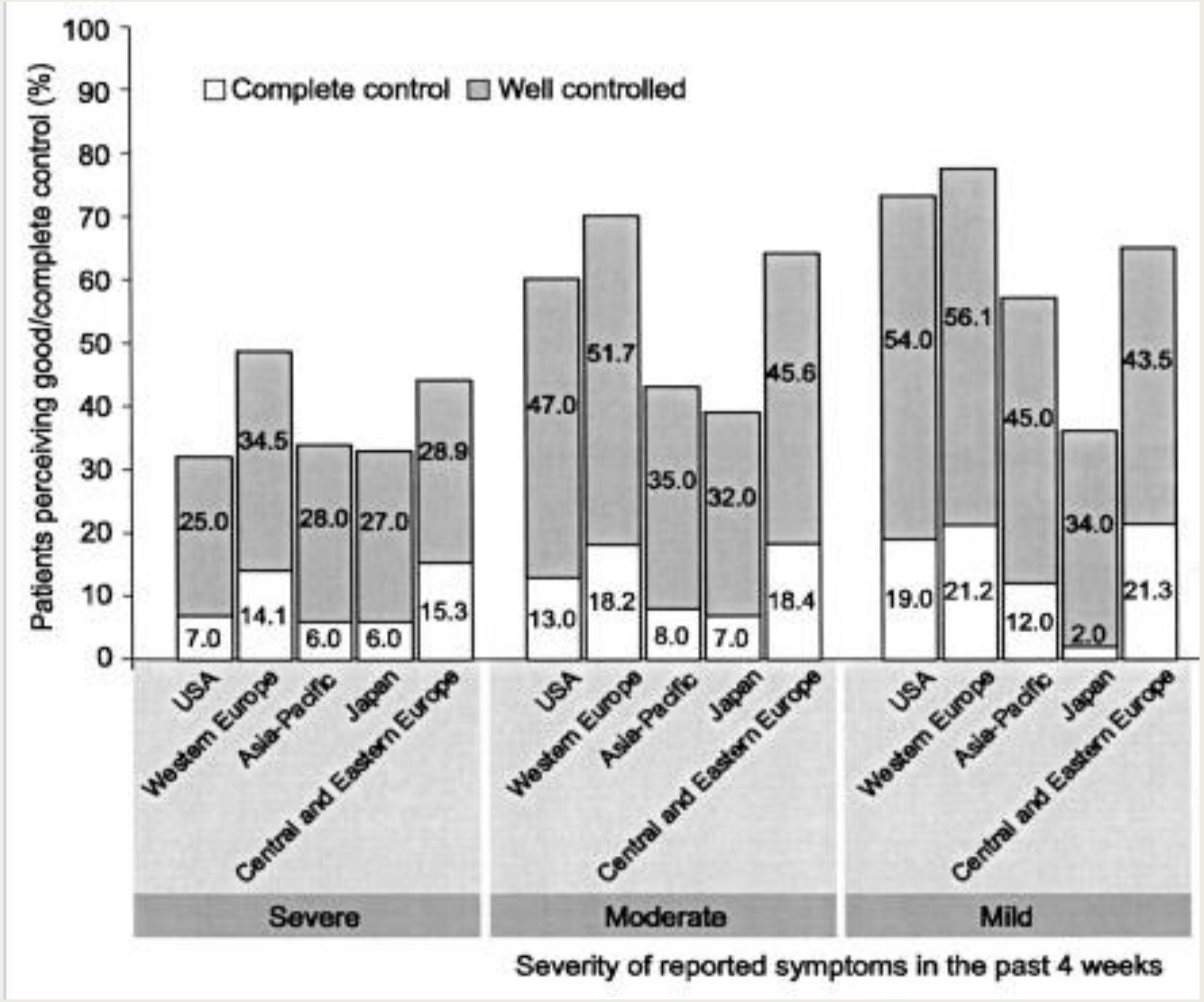
- 2004 survey of 2500 US asthmatics
  - 57% mild to severe
  - Two thirds didn't have spirometry in past year
  - Half never had spirometry
  - 1 of 5 on ICS

	Persistent			
Country-region, % patients (range)	Severe	Moderate	Mild	Intermittent
United States	19	22	16	43

GINA guideline goal	AIR result, % (range)	United States (n = 2509)
Normal or near-normal lung function	Lung function test never performed	53.2
	Lung function test performed in past year	35.0
	Peak flowmeter owner	28.0
	Regular user of peak flowmeter	8.4



Self-assessment of asthma control is poor



Questionnaires

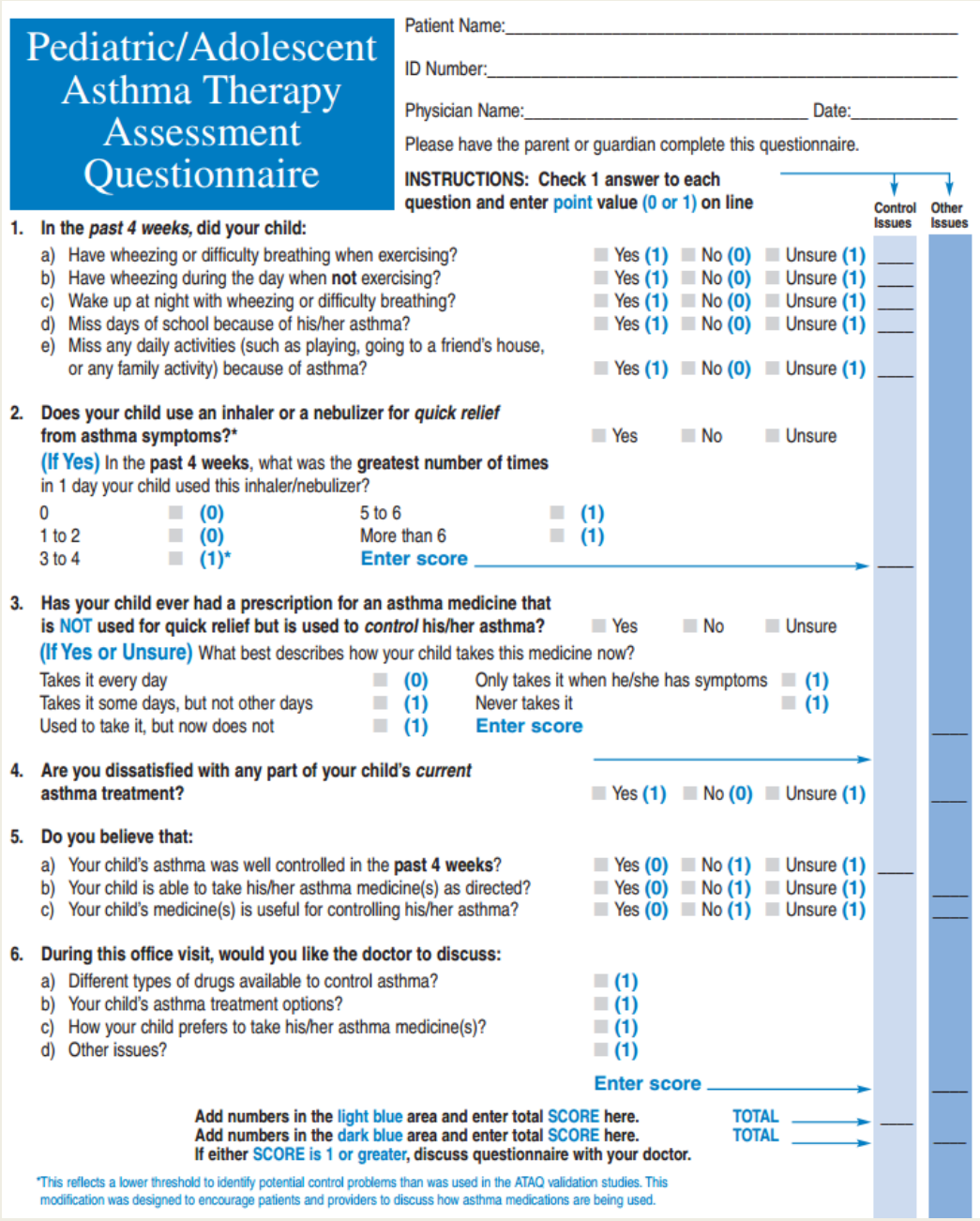
TABLE 1—Questionnaires for Measuring Asthma Control in Children

Name of test	Age	Number of items	Scoring	Recall period	MID[a]
Asthma Control Test (ACT)	adults child ≥12 years	5 items	≤19: uncontrolled asthma Range: 5–25	4 weeks	3 (adults) 2 (children)
Childhood Asthma Control Test (C-ACT)	child: 4–12 years	7 items: 4 child 3 parent	≤19: uncontrolled asthma Range: 5–27	4 weeks	2
Asthma Control Questionnaire (ACQ)	adults	7 items, including FEV1	≤0.75 controlled asthma	1 week	0.5
	child 6–16 years		≥1.5 uncontrolled asthma Range: 0–6		
Asthma Therapy Assessment Questionnaire (ATAQ)	adults child 5–17 years	4 items	0: controlled asthma ≥1: uncontrolled asthma (1–2: not well controlled; 3–4 very poorly controlled) Range: 0–4	4 weeks	No MID
Test for Respiratory and Asthma Control in Kids (TRACK)	child <5 years	5 items	<80: uncontrolled asthma	4 weeks (oral steroid courses 12 months)	10
			≥80: controlled asthma		

[a]MID: minimal important difference.

ATAQ

- Parent fills out for 5-17 y.o. pts
- 4 domains
  1. Asthma control
  2. Attitude and behavior
  3. Self-efficacy
  4. Patient-provider communication
- Simple yes or no questions
- Scores are consistent with:
  - Asthma-related hospitalizations
  - ER or urgent care visits
  - Primary care visits



Pediatric/Adolescent Asthma Therapy Assessment Questionnaire

Patient Name:_____

ID Number:_____

Physician Name:_____ Date:_____

Please have the parent or guardian complete this questionnaire.

INSTRUCTIONS: Check 1 answer to each question and enter point value (0 or 1) on line

Control Issues | Other Issues

1. In the *past 4 weeks*, did your child:

a) Have wheezing or difficulty breathing when exercising? ☐ Yes (1) ☐ No (0) ☐ Unsure (1) ___
b) Have wheezing during the day when **not** exercising? ☐ Yes (1) ☐ No (0) ☐ Unsure (1) ___
c) Wake up at night with wheezing or difficulty breathing? ☐ Yes (1) ☐ No (0) ☐ Unsure (1) ___
d) Miss days of school because of his/her asthma? ☐ Yes (1) ☐ No (0) ☐ Unsure (1) ___
e) Miss any daily activities (such as playing, going to a friend's house, or any family activity) because of asthma? ☐ Yes (1) ☐ No (0) ☐ Unsure (1) ___

2. Does your child use an inhaler or a nebulizer for *quick relief* from asthma symptoms?* ☐ Yes ☐ No ☐ Unsure

(If Yes) In the **past 4 weeks**, what was the **greatest number of times** in 1 day your child used this inhaler/nebulizer?

0	☐ (0)	5 to 6	☐ (1)
1 to 2	☐ (0)	More than 6	☐ (1)
3 to 4	☐ (1)*	Enter score →	___

3. Has your child ever had a prescription for an asthma medicine that is NOT used for quick relief but is used to *control* his/her asthma? ☐ Yes ☐ No ☐ Unsure

(If Yes or Unsure) What best describes how your child takes this medicine now?

Takes it every day	☐ (0)	Only takes it when he/she has symptoms	☐ (1)
Takes it some days, but not other days	☐ (1)	Never takes it	☐ (1)
Used to take it, but now does not	☐ (1)	Enter score →	___

4. Are you dissatisfied with any part of your child's *current* asthma treatment? ☐ Yes (1) ☐ No (0) ☐ Unsure (1) ___

5. Do you believe that:

a) Your child's asthma was well controlled in the **past 4 weeks**? ☐ Yes (0) ☐ No (1) ☐ Unsure (1) ___
b) Your child is able to take his/her asthma medicine(s) as directed? ☐ Yes (0) ☐ No (1) ☐ Unsure (1) ___
c) Your child's medicine(s) is useful for controlling his/her asthma? ☐ Yes (0) ☐ No (1) ☐ Unsure (1) ___

6. During this office visit, would you like the doctor to discuss:

a) Different types of drugs available to control asthma? ☐ (1) ___
b) Your child's asthma treatment options? ☐ (1) ___
c) How your child prefers to take his/her asthma medicine(s)? ☐ (1) ___
d) Other issues? ☐ (1) ___

Enter score → ___

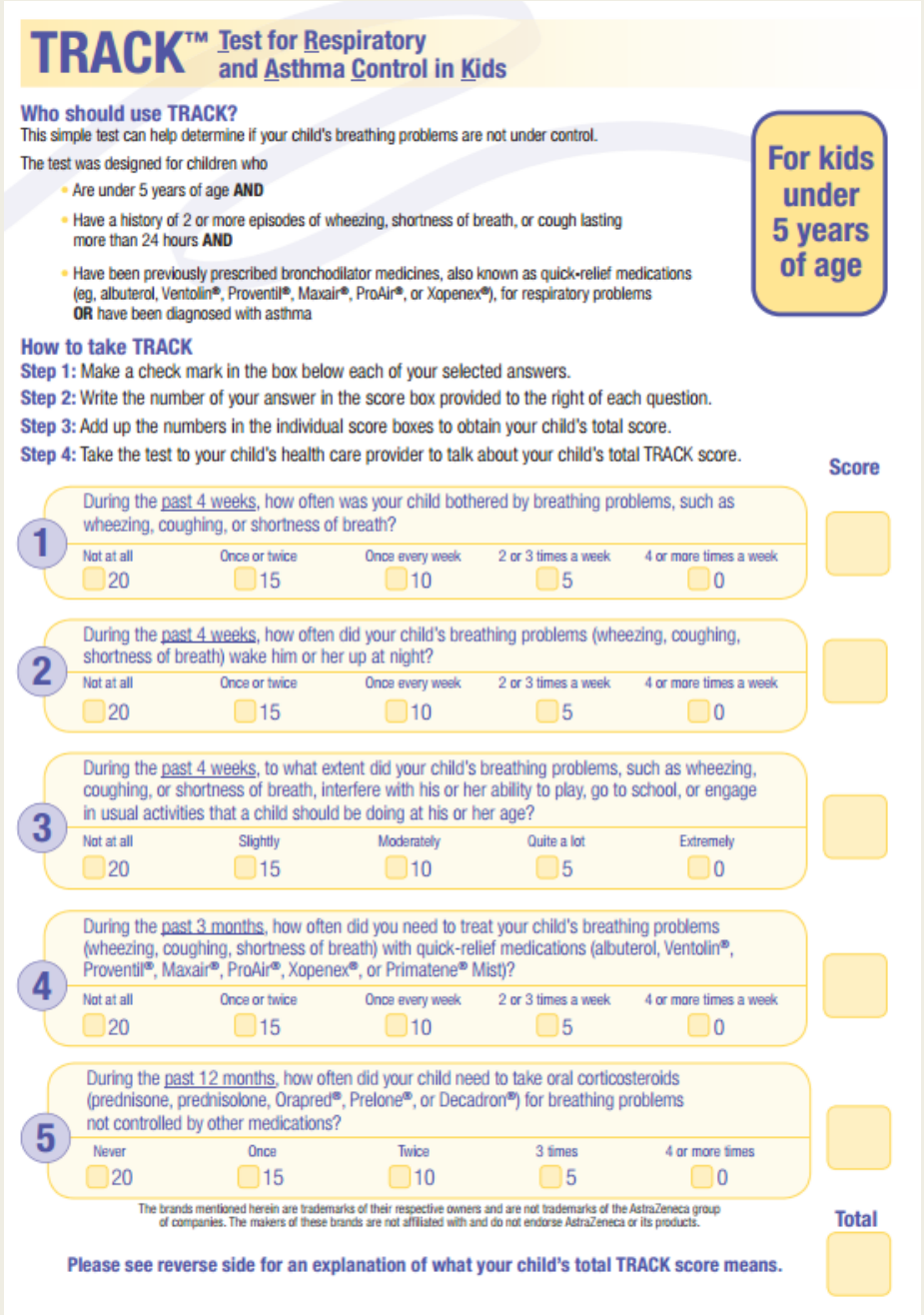
Add numbers in the light blue area and enter total SCORE here. TOTAL → ___
Add numbers in the dark blue area and enter total SCORE here. TOTAL → ___
If either SCORE is 1 or greater, discuss questionnaire with your doctor.

*This reflects a lower threshold to identify potential control problems than was used in the ATAQ validation studies. This modification was designed to encourage patients and providers to discuss how asthma medications are being used.

TRACK

- Parent completes for child under age 5
- 5 questions/domains
  - Perception
  - Activity limitation
  - Night awakening
  - Use of reliever
  - Use of oral corticosteroids*
- Conforms with latest EPR-3 by NIH

* Previous exacerbations predict future ex.



TRACK™ Test for Respiratory and Asthma Control in Kids

Who should use TRACK?

This simple test can help determine if your child's breathing problems are not under control.

The test was designed for children who

- Are under 5 years of age **AND**
- Have a history of 2 or more episodes of wheezing, shortness of breath, or cough lasting more than 24 hours **AND**
- Have been previously prescribed bronchodilator medicines, also known as quick-relief medications (eg, albuterol, Ventolin®, Proventil®, Maxair®, ProAir®, or Xopenex®), for respiratory problems **OR** have been diagnosed with asthma

For kids under 5 years of age

How to take TRACK

Step 1: Make a check mark in the box below each of your selected answers.
Step 2: Write the number of your answer in the score box provided to the right of each question.
Step 3: Add up the numbers in the individual score boxes to obtain your child's total score.
Step 4: Take the test to your child's health care provider to talk about your child's total TRACK score.

Score

1. During the past 4 weeks, how often was your child bothered by breathing problems, such as wheezing, coughing, or shortness of breath?
   Not at all 20 | Once or twice 15 | Once every week 10 | 2 or 3 times a week 5 | 4 or more times a week 0

2. During the past 4 weeks, how often did your child's breathing problems (wheezing, coughing, shortness of breath) wake him or her up at night?
   Not at all 20 | Once or twice 15 | Once every week 10 | 2 or 3 times a week 5 | 4 or more times a week 0

3. During the past 4 weeks, to what extent did your child's breathing problems, such as wheezing, coughing, or shortness of breath, interfere with his or her ability to play, go to school, or engage in usual activities that a child should be doing at his or her age?
   Not at all 20 | Slightly 15 | Moderately 10 | Quite a lot 5 | Extremely 0

4. During the past 3 months, how often did you need to treat your child's breathing problems (wheezing, coughing, shortness of breath) with quick-relief medications (albuterol, Ventolin®, Proventil®, Maxair®, ProAir®, Xopenex®, or Primatene® Mist)?
   Not at all 20 | Once or twice 15 | Once every week 10 | 2 or 3 times a week 5 | 4 or more times a week 0

5. During the past 12 months, how often did your child need to take oral corticosteroids (prednisone, prednisolone, Orapred®, Prelone®, or Decadron®) for breathing problems not controlled by other medications?
   Never 20 | Once 15 | Twice 10 | 3 times 5 | 4 or more times 0

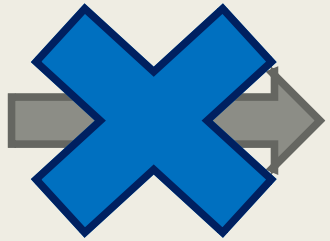
Total

Please see reverse side for an explanation of what your child's total TRACK score means.

Summary

- High prevalence
- High $ cost
- High quality of life cost

- Inadequate assessment
- Underestimated severity



Compromised follow-up and treatment

Thank you for your attention

- Please take 60 seconds to complete a questionnaire

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