

FACCT

FOUNDATION FOR ACCOUNTABILITY

FACCT QUALITY MEASURES

[measurement]

guide

[**adult asthma**
version 2.0]

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FOREWORD

In 1997 the Measures Council for FACCT—The Foundation for Accountability— endorsed measures to assess how effectively health care organizations provide care for individuals with asthma. The endorsement was the result of a multiyear effort that involved a scientific paper, two national roundtable meetings, consumer focus groups, and development and field testing of an adult asthma survey.

In 1998, through a contract with the U.S. Office of Personnel Management, FACCT pilot-tested the survey in a national demonstration project. Data were gathered from patients in five HMOs and two national PPO/fee-for-service plans. The project was designed to test the practicality of the survey across plan types—and to evaluate the usefulness of the data collected. What we learned from this national demonstration is reflected in this revised guide, *Adult Asthma 2.0*.

We would like to thank the FACCT Measures Council whose members provide invaluable input into our measures and their application. We particularly appreciate the outstanding leadership of Alan Peres, who has chaired the Measures Council since its creation in 1996. Members of the FACCT Measures Council are: Abby Block, Office of Personnel Management; Anne Scott Blouin, Ph.D., R.N., Ernst and Young; Steven Clauser, Ph.D., Health Care Financing Administration; Joyce Dubow, American Association of Retired Persons; Barbara Fleming, M.D., HCFA; Mark Hornbrook, Ph.D., Kaiser Center for Health Research; John Lumpkin, M.D.; Illinois Department of Public Health; Carole Makela, Ph.D., Colorado State University; Arnie Milstein, M.D., William M. Mercer & Company; David Nash, M.D., Thomas Jefferson University Hospital; Joel Shalowitz, MD, Kellogg Graduate School of Management; Donald Steinwachs, Ph.D., Johns Hopkins University, Deneen Richmond, M.H.A., R.N., National Committee for Quality Assurance; Tom Weatherup, General Motors Corporation and Albert Wu, M.D., Johns Hopkins University. We also gratefully acknowledge the participation of James Murray, Ph.D., Merck.

During the development of this measurement set, we benefited from the interest and expertise of many scientists, clinicians and consumer advocates. We would like to thank Kevin Weiss, M.D., Rush Presbyterian Medical Center; Alice Brunk, R.N., Arnett Managed Health Plans; Charles Derus, M.D., Dreyer Health Plans; Edward Gergesha, M.D., St. Joseph's Care Group; Paul Greenburger, M.D., Northwestern University Medical School; L. Jill Halmen, Ph.D., M-Care; Sharon Hipkins, R.N., Asthma and Allergy Foundation; Steven Jencks, M.D., HCFA; Carol Jones, R.N., Aaronson Asthma and Allergy Associates; Victor Kelmensan, M.D., Health Partners; John LaTall, M.D., Mercy Hospital and Medical Center; Marla London, CORE, Providence Health System; Colleen Lum Lung, R.N., National Jewish Center for Immunology, Linda Olson, Ph.D., American Academy of Pediatrics; Eileen Peterson, R.N., M.S.P.H. United Health Care; David Radosevich, Ph.D., Health Outcomes Institute; Sue Rutowski, R.N., Asthma and Allergy Foundation; Prentiss Taylor, M.D., Blue Cross of Illinois, Charles Terzian, M.D., Mercy Hospital and Medical Center; William Vollmer, Ph.D., Kaiser Center for Health Research; Sally Wencel, Ph.D., SMS Foundation and Randy Young, M.D., University of Alabama.

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Table 1: FACCT Adult Asthma Measurement Set 2.0—Summary of Measures and Methodology

<i>Measure</i>	<i>Performance Value(s)</i>	<i>Comments</i>	<i>Data Source</i>
Steps to Good Care (5 performance values)			
1) Patient education	A1: <u>Mean score</u> on delivery of patient education scale.	Out of 100 points possible; calculated for all pts.	Five questions in annual patient survey
2) Peak flow meter possession and use	A2: <u>Proportion</u> of moderate/severe patients who have their own peak flow meters. A3: <u>Proportion</u> of moderate/severe patients having their own peak flow meter who report using it regularly.	Denominator for A2 includes moderate/severe pts only. Denominator for A3 includes only those moderate/severe pts who have their own peak flow meter	One question in annual patient survey
3) Using inhalers correctly	A4: <u>Proportion</u> of patients who received instruction in correct inhaler use. A5: <u>Proportion</u> of patients whose inhaler-use technique was observed by a doctor, nurse or other health care professional.	Denominator for A4 and A5 only includes those patients who report using an inhaler for their asthma.	Two questions in annual patient survey
Experience and Satisfaction with Care (3 performance values)			
4) Patient experience and satisfaction with asthma care	B1: <u>Mean score</u> on access to care scale. B2: <u>Mean score</u> on provider communication/skill scale. B3: <u>Mean score</u> on overall rating of asthma care.	Out of 100 points possible for each scale. Calculated for all patients.	Nine questions in annual patient survey
Results (6 performance values)			
5) Patient functional status	C1: <u>Mean score</u> by moderate/severe patients on the SF-36—Physical Component Summary (PCS).	Score calculated for moderate/severe pts only. Direct adjustment for sex, age, (and, when indicated, income) recommended.	SF-36 Health Status Survey completed as part of the annual patient survey
6) Patient-reported symptom level	C2: <u>Proportion</u> of patients experiencing mild to moderate asthma symptoms during the past 4 weeks.	Denominator includes all patients. Direct adjustment for age, sex, intrinsic severity recommended.	Outcomes Management Systems (OMS) Symptom Scale/annual patient survey
7) Patient self-management knowledge and behavior	C3: <u>Proportion</u> of moderate/severe patients scoring in the mid to high range on asthma self-management knowledge and behaviors scale. C4: <u>Mean score</u> by moderate/severe patients on peak flow meter knowledge scale.	Denominator for C3 includes moderate/severe pts only. Out of 100 points possible for C4. Scores calculated only for moderate/severe pts who have their own peak flow meter.	Two questions in annual patient survey

8) Ability to maintain daily activities	C5: <u>Proportion</u> of patients reporting 0 or 1 days lost from regular activities during the past three months due to asthma. C6: <u>Proportion</u> of patients reporting little or no interference in daily activities during the past 3 months due to asthma	Denominator for C5 and C6 includes all patients. Direct adjustment for age, sex, intrinsic severity recommended.	Two questions in annual patient survey
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IDENTIFYING THE ELIGIBLE POPULATION

Inclusion criteria*

- Patients who are continuously enrolled in the health plan throughout the reporting period with no break in enrollment greater than 45 days.
- Patients who are at least 18 years of age and younger than age 65 as of the last day of the reporting period.
- Patients identified as having asthma according to one of the case finding methods.
- Patients who confirm their asthma diagnosis in the survey response.
- Line of business (commercial, Medicare and Medicaid) or product line segmentation will be determined in the specific market area.

Exclusion criteria

- Patients who are no longer health plan enrollees/affiliated with their health care organization as of the most current eligibility period (for patient survey administration purposes).
- Only one member of a family sharing the same household address would be included for the patient survey sample.

*Note: inclusion criteria, especially the definition used for continuous enrollment, likely would need to be adjusted for Medicaid and other disadvantaged populations given enrollment turnover and other factors.

REPORTING PERIOD

These asthma measures are based on a patient survey only—the survey assesses asthma patients' current health and recent experiences. Given that the majority of the survey questions ask about patient experiences ranging from the past four weeks to the past 12 months, the preferred reporting period is the most recent 12-month period. The reporting period designates the member continuous enrollment span. Market areas may wish to standardize this reporting period by using the most recent calendar year Jan. 1 to Dec. 31.

POPULATION CASE FINDING

The two case-finding methods explained here are alternative methods. Method I is the preferred approach, but if useful ambulatory visit information is not available, the asthma prescription-based case finding approach described in Method II can be substituted for the ambulatory visit-based component of Method I. The inpatient/emergency room-based case finding steps are used in both Method I and Method II.

The two case-finding approaches may not yield comparable populations; market areas should be cautious about comparing results from population drawn using one method with populations drawn using the other.

Method I: Patients who have had one or more inpatient or emergency room encounter(s) with a primary or secondary diagnosis of asthma within 24 months. The 24-month period is the 24 months immediately preceding and including the last month of the reporting period. The pertinent ICD-9 diagnostic and CPT service codes are defined in Appendices I and III respectively.

Supplemented by: Patients who have had two or more ambulatory visits with a primary or secondary diagnosis of asthma within 24 months. The 24-month period is the 24 months immediately preceding and including the last month of the reporting period. The place of service is either the provider office or patient's home (Appendix IV). The pertinent ICD-9 diagnostic and CPT service codes are defined in Appendices I and II respectively.

Method II: Patients who have had one or more inpatient or emergency room encounter(s) with a primary or secondary diagnosis of asthma within 24 months. The 24-month period is the 24 months immediately preceding and including the last month of the reporting period. The pertinent ICD-9 diagnostic and CPT services codes are defined in Appendices I and III respectively.

Supplemented by: Patients who have had three or more dispensings (including refills) of medications from the medication groups 1-9 (Appendix V) for asthma care on an ambulatory basis within 24 months. The 24-month period is the 24 months immediately preceding and including the last month of the reporting period. The pertinent therapeutic drug classes are listed in Appendix V.

SAMPLE SIZE

The reporting sample size is 250 patients per accountable health care organization.

Though selected measures are adjusted for severity, age, sex and income conditions, these adjustments do not affect the reporting sample size.

Several measures include only those asthma patients who are classified as having moderate/severe asthma according to the severity algorithm. The overall reporting sample size of 250 should be sufficient to yield the sub-sample needed for these moderate/severe patient-only measures. (See Developing the Study Sample on page 5.)

If users wish to stratify results for other distinct populations, larger sample sizes would be needed. These specifications assume no such stratification.

SEVERITY ADJUSTMENT: MILD AND MODERATE/SEVERE ASTHMA PATIENTS

FACCT has developed a method for identifying a patient's natural or "intrinsic" severity of asthma that enables severity adjustment for several of the measures. The method was carefully developed and validated during two years of work in the field and emerged as superior to other existing methods.

For the purposes of performance measurement in adult asthma care, FACCT recommends a blunt categorization of patients into two groups—"mild" and "moderate/severe." The patient survey gathers data for this categorization (Appendix XI). Two of the measures (ability to maintain daily activities and patient-reported symptom level) are adjusted by severity. Others (peak flow meter possession and use, functional status, and self-management knowledge and behavior) include only moderate/severe asthma patients as the denominator.

To categorize patients by severity, patients are asked:

- if they have experienced a life-threatening asthma attack since age 18
- if they have been intubated because of an asthma exacerbation since age 18
- if they are taking an inhaled steroid asthma medication daily

Additional questions ask patients to rate:

- the severity of their asthma and the ease at which they are able to avoid asthma attacks
- their level of self-care and knowledge to manage their own asthma

The following algorithms classify survey respondents as moderate/severe based on their answers to the preceding questions. All other patients are classified as mild.

Severity algorithm—part A: If, since age 18, a patient has had a life-threatening asthma attack OR has been intubated OR reports taking daily inhaled steroid medication for asthma, the patient is classified as "moderate/severe."

Severity algorithm—part B: If a patient meets none of the criteria in part A but [self-rates the severity of their asthma as moderate or severe and reports that it is moderate to difficult to avoid asthma attacks] AND [reports EITHER high levels of self-efficacy or high levels of knowledge about managing asthma], the patient is classified as "moderate/severe."

These severity algorithms are expected to exclude patients with intermittent mild asthma and many patients with mild persistent asthma from the measures designated for moderate/severe asthma patients only. The bias toward patients with more severe disease supports the goal of performance measurement and accountability and affects all participating health care organizations equally. In the

future, FACCT hopes to refine these algorithms to create three asthma severity classifications: “intermittent mild,” “persistent mild” and “moderate/severe.”

It is important to distinguish between the blunt severity categorization used to stratify patient groups in this measurement set and the severity classifications outlined in the National Asthma Education and Prevention Project’s Guidelines for the Diagnosis and Management of Asthma. Although some of the language is the same (mild, moderate, severe), the goal is different.

The diagnostic classifications used in the NAEPP II guidelines are designed to assess a patient’s current condition and guide treatment protocols. The severity classifications of “intermittent,” “mild persistent,” “moderate persistent” and “severe persistent” are symptom-based and associated in the guidelines with particular therapeutic options. Clinicians use these classifications when assessing individual patients. FACCT’s approach is *not* used for diagnostic classification but rather to guide severity adjustment of performance measures.

DEVELOPING THE STUDY SAMPLE

The study sample, which is drawn from the eligible population, is the group of patients whose experience is targeted for measurement. The final reporting sample is that subset of the study sample for whom completed surveys are obtained and otherwise qualify for inclusion once the data are collected. (Appendix VI suggests sampling methods.)

The study sample must be large enough to yield a final reporting sample of 250 patients. The study sample size will be determined based on the patient survey administration strategy and its associated response and qualifying participant rates. There are a number of factors to consider in constructing the study sample size:

- Health care organizations who use claims data to identify asthma patients typically find that 1.5 percent to 3 percent of members have claims with an asthma diagnosis.
- Health plans have reported false positive rates of 3 percent to 16 percent where people identified as having asthma using claims-based diagnoses reported in their survey response that they didn’t have asthma. The average false positive rate for these past studies is 8 percent.
- About 5 percent of the population has asthma. On a per 1,000 people basis, 51 people per 1,000 over 65 report having asthma; 32 people per 1,000 between 45 and 64 report having asthma; and 57 people per 1,000 under 45 report having asthma. About 80 percent of ambulatory visits for asthma occur in the physician office setting; 20 percent occur in the hospital outpatient and emergency department settings.
- If the most current enrollment data are not available, a small portion of the surveyed population likely has disenrolled from the health plan at the time the survey is mailed. Current enrollment data also improve the likelihood that accurate address and phone numbers are available for the survey administration.

- Response rates for a mailed survey with telephone reminder call follow-up can vary from 40 percent to 90 percent depending on, among other factors, patients' perceptions regarding the link between the survey and their ongoing care and personal provider. The Asthma Outcomes Management Study reported baseline patient survey response rates ranging from 67 percent to 87 percent across 16 health plans, with an average survey response rate of 77 percent.

As shown in Figures 1 and 2, the eligible population is identified using either of the two case finding methods (Method 1 or Method 2) described on page 3.

Once an eligible population of patients has been identified, the next step is to categorize these patients into two sampling bins based on the intensity of their utilization experience. For both the Method 1 and Method 2 approaches to case finding, Category 1 consists of patients with one or more acute encounters in which asthma was the primary diagnosis.

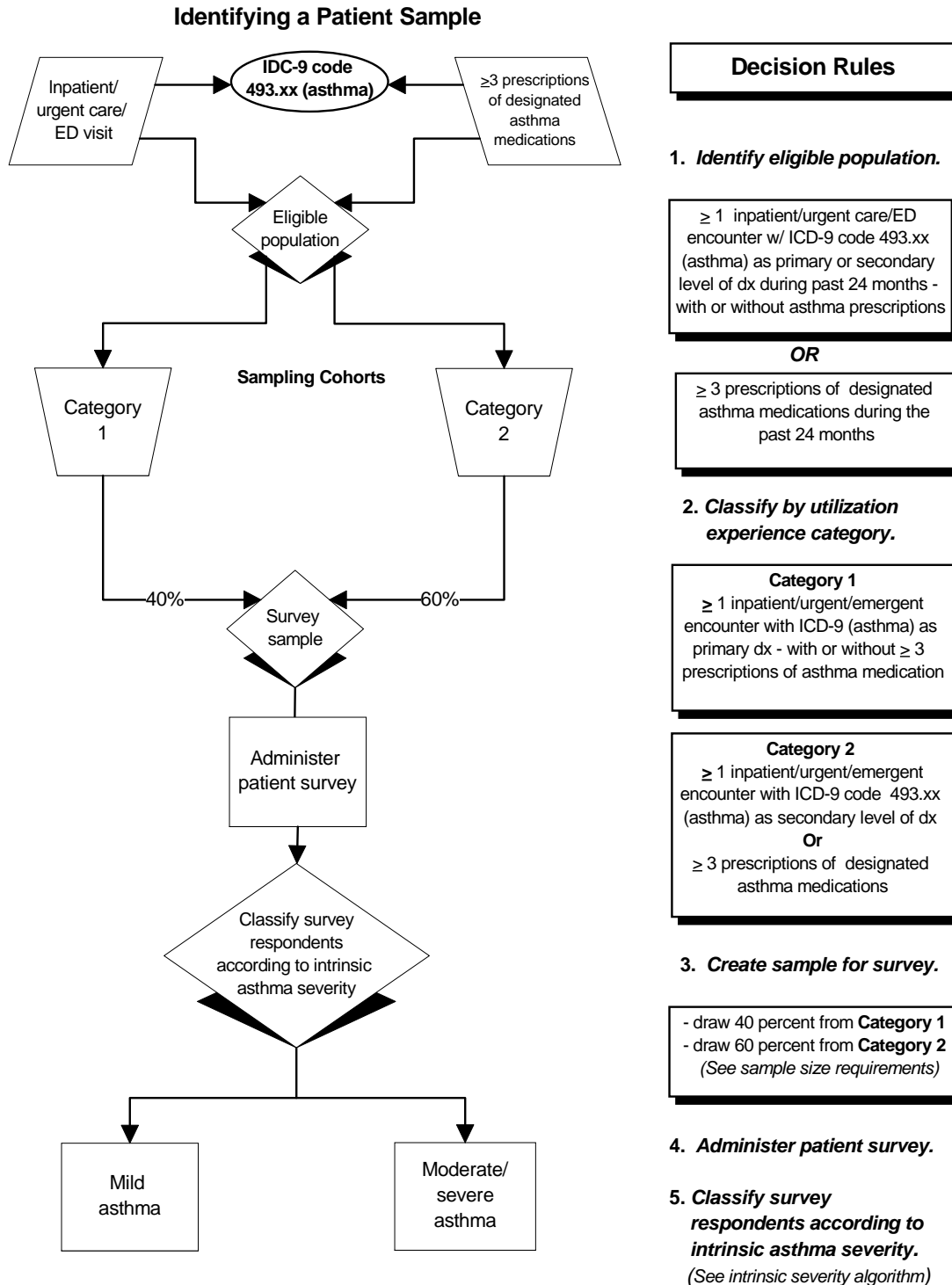
When Method I is the approach used, Category 2 consists of patients with one or more acute encounters in which asthma was the secondary diagnosis and/or patients with two or more ambulatory encounters in which asthma was the primary or secondary diagnosis. In the case of Method II, Category 2 is made up of those patients meeting the medication criteria and/or who have one or more acute encounters in which asthma was the secondary diagnosis.

The patient sample to be surveyed is drawn from these two categories. Select 40 percent of the total number of patients needed at random from Category 1 and 60 percent at random from Category 2. If the number of Category 1 patients is not large enough to supply 40 percent of the survey sample, then use all of the Category 1 patients and complete the survey sample by drawing the remainder from Category 2 (which in this example would exceed 60 percent of the survey sample).

Because data collection relies on a mailed survey, the survey sample size should be about 500 or more, depending on anticipated response, false positive and ineligible respondent rates.

Based on survey responses, the asthma study sample is categorized by severity into two sets of asthma patients—those with mild asthma and those with moderate/severe asthma. The sampling methodology is designed to yield at least 100 moderate/severe patients out of the final 250 survey responses. One hundred moderate/severe asthma patients is a sufficient sample size for the measures that use moderate/severe asthma patients only for the denominators.

Figure 2: Case Finding Method II



DATA COLLECTION

Data Sources

The FACCT adult asthma measures are based on data collected from a patient survey only. Additional data elements are needed to identify the eligible population and to obtain the demographic data to administer the patient survey. Typical sources for these data elements include:

Data Elements

Typical Sources

Case finding data, including diagnosis and/or medications dispensed

Claims record
Prescription record
Patient billing record
Patient medical record

Administrative data, including any provider, plan and product identifiers

Member enrollment record
Patient billing record

Patient demographic data, including patient name, sex, date-of-birth, mailing address, phone number and unique identifier (SSN)

Member enrollment record
Patient billing record

Measures data including patient health status, severity, symptom level, experience of care, satisfaction, functioning self-care and knowledge and socioeconomic data

Patient survey

Data Collection Steps

As shown in Figures 1 or 2, once the eligible population is identified and the study sample is drawn from the utilization experience categories, the patient survey is administered. The patient survey is administered by mail with a telephone call reminder to those who do not respond to the initial mailing.

All eight asthma measures rely on patient-reported data. The information can be collected with a single survey (Appendix XI) which combines these instruments/question categories:

- patient education
- peak flow meter possession and use
- using inhalers correctly
- patient satisfaction/experience of care
- patient functional status
- patient-reported symptom level
- patient self-management knowledge and behavior
- ability to maintain daily activities

Timing of Data Collection

The survey is a cross-sectional sample of the eligible population. It is administered at one time to assess asthma patients' recent experiences and current health.

The patient survey should be administered at the same time for the populations whose experiences are being compared in a market area. Survey work that will be repeated in subsequent years should be administered at the same time each year to reduce the bias attributable to seasonal variations.

Data Collection Tools

A copy of the FACCT Adult Asthma Care survey is found in Appendix XI. In addition, a format is provided to prepare data collection forms for the demographic and case finding data elements (Appendix VII).

CALCULATING THE MEASURES: STEPS TO GOOD CARE

Patient Education

Data Source: Patient Survey

Performance Value

A1: Mean score on delivery of patient education scale

This measure assesses whether or not a patient has received asthma education as part of contact with the health system. Because patient education is an important aspect of good care for all chronic conditions, all patients in the sample, regardless of disease severity, are included in this measure.

A1: Calculation of the Patient Education Performance Value

For each respondent, recode the numerical value that corresponds to their response for each of the five patient education questions as shown in Table A1. Sum each patient's recoded response values for the delivery of patient education scale. Divide each respondent's total by 5 to obtain their score for the delivery of patient education scale. Sum the total of all respondents' scores and divide by the number of respondents for whom scores were calculated to produce a single mean score for the sample on the delivery of patient education scale.

Denominator: The number of respondents for whom delivery of patient education scale scores were calculated.

Numerator: The sum of the delivery of patient education scale scores for all respondents in the denominator.

NOTE: The recodings and calculations described above create mean score based on 100 possible points.

Table A1
Scoring the Delivery of Patient Education Scale

Scoring Steps

- a. Remove respondents who answer fewer than three of the five questions in the delivery of patient education scale.
- b. Recode the question response values as indicated in the table below.
- c. For respondents who answered either 3 or 4 of the five questions, impute a value for the missing responses using the mean of the questions in the scale that were answered by the individual respondent.
- d. Calculate a score for each respondent by summing their recoded responses values for the questions in the delivery of patient education scale and dividing the sum by 5.
- e. Calculate a mean score for the sample by summing all respondents' scores and dividing the total by the number of respondents for whom delivery of patient education scale scores were obtained.

Recoding Responses to Questions in the Delivery of Patient Education Scale

1. Have you been given <u>written directions</u> by a doctor, nurse or other health care provider about how to take your asthma medicine and what to do if you have a severe asthma attack? <u>Has a doctor or nurse explained each of the following to you:</u>	
2. What to do when you have a severe asthma attack?	
3. How to adjust your medication when your asthma gets worse?	
4. What things can make your asthma worse and how to avoid them?	
ASTHMA EDUCATION PATIENT RESPONSE	RECODE TO NEW VALUE
1	100
2	67
3	33
4	0
5	system missing
5. How would you rate the quality of the information given to you about your asthma by your doctor, nurse or other health care provider:	
INFORMATION QUALITY PATIENT RESPONSE	RECODE TO NEW VALUE
1	100
2	80
3	60
4	40
5	20
6	0

Delivery of Patient Education Questions

1. Have you been given written directions by a doctor, nurse or other health care provider about how to take your asthma medicine and what to do if you have a severe asthma attack?
 1. Yes, and I understand completely.
 2. Yes, and I understand pretty well.
 3. Yes, but I am still confused.
 4. No, not at all.
 5. Does not apply.

Has a doctor or nurse explained each of the following to you:

2. What to do when you have a severe asthma attack?
3. How to adjust your medication when your asthma gets worse?
4. What things can make your asthma worse and how to avoid them?
 1. Yes, and I understand completely.
 2. Yes, and I understand pretty well.
 3. Yes, but I am still confused.
 4. No, not at all.
 5. Does not apply.
5. How would you rate the quality of the information given to you about your asthma by your doctor, nurse or other health care provider:
 6. Very good
 7. Good
 8. OK
 9. Bad
 10. Very bad
 11. None

CALCULATING THE MEASURES: STEPS TO GOOD CARE

Peak Flow Meter Possession and Use

Data Source: Patient Survey

Performance Values

A2: Proportion of moderate/severe patients who have their own peak flow meters.

A3: Proportion of moderate/severe patients having peak flow meters who use it regularly.

This measure, which has two separate reportable values, assesses whether patients with moderate/severe asthma have and use a home peak flow meter. Peak flow meters are useful for evaluating therapies, detecting changes in the status of the disease and evaluating a patient's impairment level due to asthma. The assumption is that patients who have received effective education and support from their health care providers will score higher in this area than patients who are less well informed.

A2: Calculation of the Peak Flow Meter *Possession* Performance Value

The number of respondents with moderate/severe asthma who report having a home peak flow meter and using it either rarely or regularly divided by the number of respondents with moderate/severe asthma who answer the “peak flow meter possession and use” question.

Denominator: All respondents with moderate/severe asthma who answer the “peak flow meter possession and use” question. *The denominator for this performance value includes only those patients identified as having intrinsically moderate/severe asthma using the severity algorithm described in Appendix X.*

Numerator: All respondents in the denominator who respond to the “peak flow meter possession and use” question by checking either: 1) Yes, I have a home peak flow meter and use it regularly. **or** 2) Yes, I have a home peak flow meter but almost never use it.

A3: Calculation of the Peak Flow Meter Use Performance Value

The number of respondents with moderate/severe asthma who have a home peak flow meter and report using it regularly divided by the number of respondents with moderate/severe asthma who possess a home peak flow meter.

Denominator: All respondents with moderate/ severe asthma who answer the “peak flow meter possession and use” question and report they possess a home peak flow meter that they use either rarely or regularly. *This performance value includes only those patients identified as having intrinsically moderate/severe asthma using the severity algorithm described in Appendix X.*

Numerator: All respondents in the denominator who respond to the “peak flow meter possession and use” question with the answer: “Yes, I have a home peak flow meter and use it regularly.”

Home Peak Flow Meter Possession and Use Question

1. Which of the following is true for you? (Only check ONE)
 - a. I do not have a home peak flow meter. (Skip to question X).
 - b. I have a home peak flow meter and use it regularly.
 - c. I have a home peak flow meter but ALMOST never use it.

CALCULATING THE MEASURES: STEPS TO GOOD CARE

Using Inhalers Correctly

Data Source: Patient Survey

Performance Values

A4: Proportion of patients who received instruction in correct inhaler use

A5: Proportion of patients whose inhaler use technique was observed by a health provider

This measure assesses if the patient has been educated by health care providers about appropriate inhaler use. The measure has two separate reportable values: 1) initial instruction and 2) observation by a health provider of patients as they use their inhalers in order to check inhaler use technique.

Inhalers must be used correctly in order for the prescribed dosage of medication to be effectively delivered. Correct use of an inhaler requires training and practice. Periodic evaluation after initial instruction provides opportunities for correction and reinforcement of patient inhaler technique. Because inhalers can be difficult for some patients to use, and because effective use requires following several steps in a precise manner, asthma diagnosis and treatment guidelines emphasize regular observation of inhaler technique by health care providers.

A4: Calculation of the Inhaler Instruction Performance Value

The number of respondents who report having received instruction in correct inhaler use from a doctor, nurse or other health care provider divided by the total number of respondents to the question. Patients who indicate that they do not use an inhaler for their asthma are not included in the calculation.

Denominator: All respondents to the inhaler use instruction question **minus** the respondents who indicate they do not use an inhaler.

Numerator: All respondents in the denominator who answer “yes” to the question “Have you been shown the correct way to use your inhaler by your doctor, nurse or other health care provider?”

A5: Calculation of the Observing Inhaler Use Performance Value

The number of respondents who report having had their doctor, nurse or other health care provider observe their use of an inhaler during an office visit divided by the total number of respondents to the observing inhaler use question. Patients who indicate that they do not use an inhaler for their asthma are not included in the calculation.

Denominator: All respondents to the observing inhaler use question **minus** the respondents who indicate they do not use an inhaler.

Numerator: All respondents in the denominator who answer “yes” to the question “During an office visit, has your doctor, nurse or other health care provider ever watched you use your inhaler to check that you use it correctly?”

Instruction in Inhaler Use Question

1. Have you been shown the correct way to use your inhaler by your doctor, nurse or other health care provider?
 - a. I do not use an inhaler for my asthma.
 - b. Yes
 - c. No

Inhaler Use Technique Observed Question

1. During an office visit, has your doctor, nurse or other health care provider ever watched you use your inhaler to check that you use it correctly?
 - a. I do not use an inhaler for my asthma.
 - b. Yes
 - c. No

CALCULATING THE MEASURES: EXPERIENCE AND SATISFACTION WITH CARE

Patient Experience & Satisfaction with Asthma Care

Data Source: Patient Survey

Performance Values

B1: Mean score on access to care scale

B2: Mean score on provider communication and skill scale

B3: Mean score on overall rating of asthma care

This measure, which has three separate reportable values, assesses patient satisfaction with three aspects of asthma care:

1. Access to regular and specialty care, emergency care, medical information and advice
2. Provider communication and skill
3. Overall satisfaction with quality of care received for asthma

B1: Calculation of the Access to Care Performance Value

Total the sum of each respondent's responses to the access to care scale questions. Transform each respondent's raw scale score to a 0–100 point scale (see Table B1). Sum all of the transformed scale scores and divide by the total number of respondents for whom scores were calculated to produce a mean score for the sample on the access to care scale.

Denominator: The number of respondents for whom access to care scale scores were calculated.

Numerator: The sum of the transformed scores for all respondents to the access to care scale.

B2: Calculation of the Provider Communication and Skill Performance Value

Total the sum of each respondent's responses to the provider communication and skill scale questions. Transform each respondent's raw scale score to a 0–100 point scale (see Table B2). Sum all of the transformed scale scores and divide by the total number of respondents for whom scores were calculated to produce a mean score for the sample on the provider communication and skill scale.

Denominator: The number of respondents for whom provider communication and skill scale scores were calculated.

Numerator: The sum of the transformed scores for all respondents to the provider communication and skill scale.

B3: Calculation of the Overall Asthma Care Rating Performance Value

For each respondent, record the value that corresponds to their response to the rating of overall asthma care question. To transform to a 0–10 scale, multiply each respondent's response value by 10.

Sum all respondents' transformed response values and divide by the total number of respondents to the question to produce a mean score for the sample on overall rating of asthma care.

Denominator: The number of respondents who answered the overall rating of asthma care question.

Numerator: The sum of all of the respondents' transformed response values for the overall rating of asthma care question.

Table B1
Scoring the Access to Care Scale

Scoring Steps

- a. Remove respondents who answer fewer than three of the four Access to Care scale questions.
- b. Code the question response values as indicated below.
- c. For respondents who answered at least 3 of the four questions in the scale, impute a value for the missing response using the mean of the questions in the scale that were answered by the individual respondent.
- d. Calculate a raw score for each respondent by summing their response values to the questions in the scale.
- e. Transform each respondent's raw score to a 0-100 scale using the following formula and values:

Transformation of Raw Score to 0–100 scale

$\text{Transformed Score} = \left[\frac{(\text{Actual raw score} - \text{lowest possible raw score})}{\text{Possible raw score range}} \right] \times 100$

For the Access to Care scale, use the following values:

Actual raw score = respondent's total sum of response values to the four questions

Lowest possible raw score = 4 [4 questions X lowest response value: 1]

Possible raw score range = 16 [highest possible score (4 questions X highest response value: 5) minus lowest possible score (4 questions X lowest response value: 1)]

- f. Sum the transformed scores for all respondents.
- g. Calculate the mean score for the sample by dividing the grand total of transformed scores by the number of respondents for whom Access to Care scale scores were obtained.

Access to Care Scale Questions

Please think about the health care you received for your asthma during the past 12 months. For each of the following please rate your satisfaction with your experience:

- a. The time you usually wait to get an appointment to see your doctor.
- b. How easy it is to reach a doctor or nurse in the office by telephone.
- c. How easy it is to get urgent or emergency care for your asthma.
- d. How easy it is to get access to specialty care if you need it.

<p><u>Response set values for questions a-d</u></p>

- | |
|---|
| <ol style="list-style-type: none"> 1. Poor 2. Fair 3. Good 4. Very good 5. Excellent |
|---|

Table B2
Scoring the Provider Communication and Skill Scale

Scoring Steps

- a. Remove respondents who answer fewer than three of the four provider communication and skill scale questions.
- b. Code the question response values as indicated below.
- c. For respondents who answered 3 the four questions in the scale, impute a value for the missing response using the mean of the questions in the scale that were answered by the individual respondent.
- d. Calculate a raw score for each respondent by summing their response values to the questions in the scale.
- e. Transform each respondent's raw score to a 0-100 scale using the following formula and values:

Transformation of Raw Score to 0–100 scale

$\text{Transformed Score} = \left[\frac{(\text{Actual raw score} - \text{lowest possible raw score})}{\text{Possible raw score range}} \right] \times 100$

For the Provider Communication and Skill scale, use the following values:

Actual raw score = respondent's total sum of response values to the four questions

Lowest possible raw score = 4 [4 questions X lowest response value: 1]

Possible raw score range = 16 [highest possible score (4 questions X highest response value: 5) minus lowest possible score (4 questions X lowest response value: 1)]

- f. Sum the transformed scores for all respondents.
- g. Calculate the mean score for the sample by dividing the grand total of transformed scores by the number of respondents for whom provider communication and skill scale scores were obtained.

Patient Satisfaction with Provider Communication and Skill Questions

Please think about the health care you received for your asthma during the past 12 months. For each of the following, please rate your satisfaction with your experience:

- a. How easy it is to talk with your doctors and nurses about your asthma.
- b. The skill of the doctor you see most often for your asthma.
- c. Quality of the education you have been given to help you manage your asthma day to day.
- a. How well you feel your doctors and nurses have listened to your concerns about asthma.

<p><u>Response set values for questions a-d:</u></p>
--

- | |
|---|
| <ol style="list-style-type: none">1. Poor2. Fair3. Good4. Very good5. Excellent |
|---|

Table B3
Scoring the Overall Rating of Asthma Care Question

Scoring Steps

- a. Remove respondents who did not answer the Overall Rating of Asthma Care question.
- b. For each respondent, record the value between 0 and 10 that corresponds to their response for the rating of overall asthma care question.
- c. Multiply each respondent's response value by 10 to transform to a 0–10 scale.
- d. Sum all respondents' transformed response values and divide by the total number of respondents to the question to produce a mean score for the sample on overall rating of asthma care.

Patient Satisfaction with Overall Asthma Care Question

Overall, how would you rate the quality of health care you received for your asthma during the past 12 months?

- 0 As bad as health care can be
- 1
- 2
- 3
- 4
- 5 Average
- 6
- 7
- 8
- 9
- 10 As good as health care can be

CALCULATING THE MEASURE: RESULTS OF CARE

Patient Functional Status

Data Source: Patient Survey

Performance Value

C1: Mean score by moderate/severe patients on the SF-36 Physical Component Summary (PCS) scale.

This measure uses the Physical Component Summary of the SF-36 to assess the overall physical health status of asthma patients. The eight scales making up the SF-36 instrument address different dimensions a patient's health status and functioning. While all SF-36 scales have been found to be highly correlated with severity of asthma symptoms, the physical functioning, bodily pain and general health perception scales have been shown to correlate the best with level of asthma control. All eight scales are used in the calculation of the Physical Component Summary score.

C1: Calculation of the Patient Functional Status Performance Value

Score the eight scales of the SF-36 using the standard SF-36 scoring algorithms. Next, use the scoring steps found in the *SF-36 Physical and Mental Health Summary Scales: A User's Manual* to compute a the Physical Component Summary (PCS) score for each respondent identified as having moderate/severe asthma. Sum PCS scores for all respondents with moderate/severe asthma. Divide by number of moderate/severe respondents for whom scores were obtained to produce a single mean score for moderate/severe patients in the sample on the SF-36 Physical Component Summary.

Manuals for scoring SF-36 and the Physical Component Summary scale can be ordered from:

The Medical Outcomes Trust
Box 1917
Boston, MA 02205
Telephone: (617) 426-4046

Denominator: The number of respondents in the sample with moderate/severe asthma for whom Physical Component Summary scores were obtained. *The denominator for this performance value includes only those patients identified as having intrinsically moderate/severe asthma using the severity algorithm described in Appendix X.*

Numerator: The sum of the Physical Component Summary scores for all respondents in the denominator.

Risk Adjustment: When the performance value for the Patient Functional Status measure is used for reporting and comparing performance among units of analysis or against risk-adjusted norms, direct adjustment of the mean PCS score for age, sex and income (above and below \$10,000/year) is recommended. Separate mean scores for each age/sex/income group represented in the sample will need to be calculated. Standard values can be obtained from frequently used sources such as the National Health Interview Survey or derived from measurement project-specific populations.

The purpose of risk adjustment is to control for confounding factors in order that valid comparisons among units of analysis can be made. A single approach to risk adjustment does not exist. The measurement project goals and uses planned for the data determine the need for risk adjustment and the selection of reference populations. Which variables are relevant for the adjustment (such as age or income) depends upon a number of factors including the differences observed, if any, of their distribution in the study populations. Some of this information cannot be determined prior to the collection of data.

CALCULATING THE MEASURES: RESULTS OF CARE

Patient-Reported Symptom Level

Data Source: Patient Survey

Performance Value

C2: Proportion of patients experiencing mild to moderate asthma symptoms during the past 4 weeks.

This measure uses the Managed Health Care Association/Outcomes Management Systems (MHCA/OMS) Asthma Symptom Scale to assess what proportion of patients who experienced mild or moderate asthma symptoms during the past 4 weeks. The overarching goal of asthma treatment is to maximize the functional capacity of patients through effective and adequate management of asthma symptoms. The assumption is that variations in self-reported frequency, duration and intensity of clinical asthma symptoms in large part reflect the quality of care and education delivered to asthma patients.

C2: Calculation of the Patient-reported Symptom Level Performance Value

Use the scoring algorithm described in Table C2 to classify survey respondents into 1) **mild or moderate symptoms patients** or 2) **severe symptoms patients** based on their responses to the Managed Health Care Association/Outcomes Management Systems (MHCA/OMS) Asthma Symptoms scale questions (see Table C2). Divide the number of patients reporting mild or moderate symptom by the total number of respondents for whom MHCA/OMS symptom scale scores were calculated.

Denominator: The total number of respondents to the MHCA/OMS Asthma Symptom scale questions for whom symptom severity scores were calculated.

Numerator: The number of respondents classified as experiencing either mild or moderate symptoms based on their MHCA/OMS Asthma Symptom scale results.

Risk Adjustment: When the performance value for the Patient-Reported Symptom Level measure is used for reporting and comparing performance among units of analysis or against risk-adjusted norms, direct adjustment for age, sex, and intrinsic asthma severity (based on the severity algorithm described in Appedix X of the proportion of patients reporting mild or moderate symptoms is recommended. Separate proportions for each age/sex/severity group represented in the sample will need to be calculated. Standard values can be obtained from frequently used sources such as the National Health Interview Survey or derived from measurement project-specific populations.

The purpose of risk adjustment is to control for confounding factors in order that valid comparisons among units of analysis can be made. A single approach to risk adjustment does not exist. The measurement project goals and uses planned for the data determine the need for risk adjustment and the selection of reference populations. Which variables are relevant for the adjustment (such as age or

income) depends upon a number of factors including the differences observed , if any, of their distribution in the study populations. Some of this information cannot be determined prior to the collection of data.

Table C2
Scoring the MHCA/OMS Asthma Symptoms Scale

Scoring Algorithm

- a. A respondent’s symptom severity classification score is derived from the HIGHEST LEVEL of occurrence reported in any one of the following categories:
- a. Frequency of Symptoms (chest tightness, wheezing or shortness of breath)
 - b. Nocturnal Symptoms (awakened by asthma at night)
 - c. Symptom Chronicity (persistence of symptoms between asthma attacks)

For example, a person who reported experiencing shortness of breath more than five times a week but other symptoms less often or not at all would be scored as having severe asthma.

- b. The response values to the three questions in the MHCA/OMS Asthma Symptoms scale are mapped to the MHCA/OMS asthma symptoms classification table as follows:
- Question 1 maps to symptom frequency column
 - Question 2 maps to nocturnal symptoms column
 - Question 3 maps to symptom chronicity column

The responses to the cough and sputum choices (a and b) in Question 1 are not used in the scoring algorithm. In mapping question response values to the MHCA/OMS Scale, the term “exacerbations” is used interchangeably with the phrase “chest tightness, wheezing or shortness of breath”.

MHCA/OMS Asthma Symptoms Classification Table			
Severity Level	Symptom Frequency (question 1)	Nocturnal Symptoms (question 2)	Symptom Chronicity (question 3)
MILD	Chest tightness, wheezing or shortness of breath occurring not more than once a week (response 1 or 2)	Less than once a week (response 1 or 2)	Asymptomatic between exacerbations (response 1 or 2)
MODERATE	Exacerbations 2-5 times a week (response 3 or 4)	Once or twice a week (response 3)	Some symptoms on most days, requiring inhaler for relief (response 3)
SEVERE	Frequent exacerbations, more than 5 times a week (response 5)	Three or more times a week (response 4)	Symptoms most of the time (response 4)

The response value number in the table refers to the response value options for the pertinent question.

MHCA/OMS Asthma Symptom Scale Questions

1. In the past 4 weeks, how often have you been bothered by the following symptoms:

- a. Cough
- b. Sputum (phlegm or mucus when coughing)
- c. Chest tightness (difficulty taking a deep breath)
- d. Wheezy or whistling sound in the chest
- e. Shortness of breath

Response set values for question 1 (a-e):

1. Never
2. Once a week or less
3. Up to 3 times a week
4. Up to 5 times a week
5. Daily

2. In the past 4 weeks, on average, how often did your asthma awaken you at night?

1. Not at all
2. Less than once a week
3. Once or twice a week
4. Three or more times a week

3. In between the times you have asthma attacks, how is your breathing?

1. No problems
2. Some symptoms on some days
3. Some symptoms on most days, requiring inhaler for relief
4. Symptoms most of the time

CALCULATING THE MEASURES: RESULTS OF CARE

Patient Self-Management Knowledge and Behavior

Data Source: Patient Survey

Performance Values

C3: Proportion of moderate/severe patients scoring in the mid to high range on asthma self-management knowledge and behaviors scale.

C4: Mean score by moderate/severe patients on the peak flow meter knowledge scale.

This measure assesses patient knowledge and behavior associated with effective asthma self-management. For the self-management knowledge and behaviors performance value respondents check all the behaviors they practice on an eight-item scale. Overall level of knowledge about managing a severe asthma attack is rated by patients as well.

The asthma self-management knowledge and behaviors assessed by the scale are based on patient education objectives outlined in the Asthma Diagnosis and Treatment Guidelines of the National Asthma Education and Prevention Project and on other expert input. Because of patients' higher risk for adverse health outcomes due to low levels of self-management knowledge or compliance, this list is judged to be particularly relevant for patients with moderate/severe asthma.

Peak flow meter knowledge performance value asks patients who have home peak flow meters to check those areas on a five item scale that apply to them regarding peak flow meter knowledge and use. Scale scores are only calculated for those moderate/severe patients who report having their own peak flow meters, the group for whom such knowledge is most relevant.

C3: Calculation of the Self-Management Knowledge and Behavior Performance Value:

For the respondents in the sample classified as having moderate/severe asthma, recode their question response values to the patient self-management knowledge and behavior scale questions as shown in Table C3. Sum each respondent's recoded response values to obtain their raw score on the patient self-management knowledge and behavior scale. Transform each respondent's raw score to a 0-100 point scale.

A transformed score of 80 or higher is categorized as being in the medium to high range for self-management knowledge and behavior. Divide the number of moderate/severe respondents with patient self-management knowledge and behavior scale scores that equal or exceed 80 points by the number of moderate/severe respondents for whom scale scores were calculated.

Denominator: All respondents with moderate/severe asthma for whom self-management knowledge and behavior scale scores were calculated. *The denominator for this performance value includes only those patients identified as having intrinsically moderate/severe asthma using the severity algorithm described in Appendix X.*

Numerator: The number of respondents in the denominator whose transformed scores equal or exceed 80 points.

C4: Calculation of Peak Flow Meter Knowledge Performance Value

For each respondent identified as having BOTH moderate/severe asthma AND a home peak flow meter, calculate a peak flow meter knowledge scale raw score by summing the number of answers checked YES on the scale. Transform each respondent's raw score to a 0–100 scale. Sum the transformed peak flow meter knowledge scale scores for those respondents having BOTH moderate/severe asthma AND a home peak flow meter. Divide the total by the number of respondents for whom scale scores were obtained to produce a mean score on the peak flow knowledge scale for those respondents the sample who have moderate/severe asthma and possess a home peak flow meter.

Denominator: All respondents to the “peak flow meter possession and use” question who have moderate/severe asthma and report that they have a home peak flow meter that they use either rarely or regularly. The denominator for the peak flow meter knowledge performance value is the same as the denominator used for A3 on page 15.

Numerator: The sum of the transformed scores on the peak flow meter knowledge scale by the respondents the sample with moderate/severe asthma who possess a home peak flow meter.

Table C3
Scoring the Patient Self-Management Knowledge and Behavior Scale

Scoring Steps

- a. Remove all respondents who do not answer both of the two patient self-management and knowledge scale questions.
- b. Group and recode the question response values as indicated below.
- c. Calculate a raw score for each respondent by summing their recoded response values to the two questions in the scale.
- d. Transform each respondent's raw score to a 0-100 scale using the following formula and values:

Transformation of Raw Score to 0–100 scale

$\text{Transformed Score} = \left[\frac{(\text{Actual raw score} - \text{lowest possible raw score})}{\text{Possible raw score range}} \right] \times 100$

For the Patient Self-Management Knowledge and Behavior scale, use the following values:

Actual raw score = respondent's total sum for recoded response values to the questions

Lowest possible raw score = 2 [2 questions X lowest response value: 1]

Possible raw score range = 6 [highest possible score (1 question X highest response value: 3 plus 1 question X highest response value: 5) minus lowest possible score (2 questions X lowest response value: 1)]

- e. Calculate the proportion of moderate/severe patients in the sample reporting mid to high self-management knowledge and behavior by dividing the number of moderate/severe respondents whose transformed scores for the scale equal or exceed 80 points by the number of moderate/severe respondents for whom patient self-management knowledge and behavior scale scores were calculated.

Recoding Responses to Patient Self-Management Knowledge and Behavior Scale

Question 1: SELF MANAGEMENT Number of Responses Checked 'YES'	RECODE TO NEW VALUE
0-2	1
3-5	2
6-8	3
Question 2: RATING OF KNOWLEDGE Patient's Self-Rating Value	RECODE TO NEW VALUE
1-2	1
3-4	2
5-6	3
7-8	4
9-10	5

Patient Self-Management Knowledge and Behavior Scale Questions

1. Which of the following are true for you:

(Please mark one box in each row.)

	YES	NO
a. I usually use a spacer when I use an inhaler for my asthma.	<input type="checkbox"/>	<input type="checkbox"/>
b. I use a peak flow meter to monitor my asthma.	<input type="checkbox"/>	<input type="checkbox"/>
c. I am able to manage changes in my asthma myself most of the time.	<input type="checkbox"/>	<input type="checkbox"/>
d. I follow the care plan given to me by my current doctor or nurse.	<input type="checkbox"/>	<input type="checkbox"/>
e. I recognize things that make my asthma worse.	<input type="checkbox"/>	<input type="checkbox"/>
f. I know what to do during an asthma attack.	<input type="checkbox"/>	<input type="checkbox"/>
g. I take asthma medicines when they are appropriate.	<input type="checkbox"/>	<input type="checkbox"/>
h. I know the early warning signs of an asthma attack.	<input type="checkbox"/>	<input type="checkbox"/>

2. Overall, how would you rate your knowledge about what to do if you had a severe asthma attack?

0 Very poor, as little a person could know

1

2

3

4

5 Average

6

7

8

9

10 Excellent, as much as a person needs to know

Table C4
Scoring the Peak Flow Meter Knowledge Scale

Scoring Steps

- a. Remove all respondents who do not have moderate/severe asthma and who do not have a peak flow meter.
- b. Calculate a raw score for each respondent by summing the number of answers checked YES on the scale.
- c. Transform each respondent's raw score to a 0-100 scale using the following formula and values:

Transformation of Raw Score to 0–100 scale

$\text{Transformed Score} = \left[\frac{(\text{Actual raw score} - \text{lowest possible raw score})}{\text{Possible raw score range}} \right] \times 100$

For the Patient Self-Management Knowledge and Behavior scale, use the following values:

Actual raw score = respondent's total for answers checked YES on the scale

Lowest possible raw score = 0 [5 questions X lowest response value: NO=0]

Possible raw score range = 5 [highest possible score (5 questions X highest response value: YES=1) minus lowest possible score (5 questions X lowest response value: NO=0)]

- d. Calculate a mean score for the sample by summing the transformed scores for all respondents with moderate/severe asthma who possess a home peak flow meter and dividing by the number of respondents who have moderate/severe asthma and possess a home peak flow meter for whom scale scores were obtained.

Peak Flow Meter Knowledge Scale Questions

1. Which of the following are true for you?
(Please mark one box in each row.)
- | | YES | NO |
|--|--------------------------|--------------------------|
| a. I have been taught how to use a peak flow meter by my doctor or nurse. | <input type="checkbox"/> | <input type="checkbox"/> |
| b. I know my personal best reading on my home peak flow meter. | <input type="checkbox"/> | <input type="checkbox"/> |
| c. I keep a peak flow meter diary. | <input type="checkbox"/> | <input type="checkbox"/> |
| d. I alter my medications based on my home peak flow meter reading. | <input type="checkbox"/> | <input type="checkbox"/> |
| e. I notify my doctor if my peak flow meter reading drops below a certain point. | <input type="checkbox"/> | <input type="checkbox"/> |

CALCULATING THE MEASURES: RESULTS OF CARE

Ability to Maintain Daily Activities

Data Source: Patient Survey

Performance Values

C5: Proportion of patients reporting 0 or 1 days lost from regular activities during the past 3 months due to asthma

C6: Proportion of patients reporting little or no interference in daily activities during the past 3 months due to asthma.

This measure has two separate reportable values. The first question assesses the number of days for which patients have missed their regular activities over the past three months because of asthma. The second question asks patients to rate the degree to which asthma has interfered with their regular activities during the past three months. The assumption is that patients who have received effective education and clinical care from their health care providers will report less interference and days lost due to asthma than who are less well informed or less well medically managed.

C5: Calculation of the Days Lost Performance Value

Based on their answers to the “days lost due to asthma” question, categorize respondents into two groups: those that report 1) **0 or 1 days lost due to asthma**, and those that report 2) **two or more days lost due to asthma**. Divide the number of respondents reporting 0 or 1 day lost due to asthma by the number of respondents answering the “days lost due to asthma” question.

Denominator: The number of the respondents who answer the “days lost due to asthma” question.

Numerator: The number of respondents to the “days lost due to asthma” question who report 0 or 1 days lost due to asthma during the past three months.

C6: Calculation of the Interference with Daily Activities Performance Value

Based on their answers to the “interference due to asthma” question, categorize respondents into two groups: those that report 1) **a little bit of interference or none at all due to asthma**, and those that report 2) **moderate, quite a bit or complete interference with daily activities due to asthma**. Divide the number of respondents reporting either a little bit of interference or none at all by the number of respondents answering the “interference due to asthma” question.

Denominator: The number of the respondents who answer the “interference due to asthma” question.

Numerator: The number of respondents to the “interference due to asthma” question who report either a little bit or no interference in daily activities due to asthma during the past three months.

Risk Adjustment: When the performance value for the Ability to Maintain Daily Activities measure is used for reporting and comparing performance among units of analysis or against risk-adjusted norms, direct adjustment for age, sex, and intrinsic asthma severity (based on the severity algorithm described in Appendix X) of the proportions of patients who report 0 or 1 day lost due to asthma or who report little or no interference in daily activities due to asthma is recommended. Separate

proportions for each age/sex/severity group represented in the sample will need to be calculated. Standard values can be obtained from frequently used sources such as the National Health Interview Survey or derived from measurement project-specific populations.

The purpose of risk adjustment is to control for confounding factors in order that valid comparisons among units of analysis can be made. A single approach to risk adjustment does not exist. The measurement project goals and uses planned for the data determine the need for risk adjustment and the selection of reference populations. Which variables are relevant for the adjustment (such as age or income) depends upon a number of factors including the differences observed, if any, of their distribution in the study populations. Some of this information cannot be determined prior to the collection of data.

Days Lost Due to Asthma Question

1. During the *past three months*, how much time from work, school or your other usual activities did you miss because of *your asthma*? (enter 0 if you did not miss any days)
Number of days _____

Interference with Daily Activities Due to Asthma Question

During the *past three months*, how much difficulty did *your asthma* cause for you in doing your regular daily activities? (for example: your job, participation in social activities both inside and outside the house, school or other duties and obligations).

1. None at all
2. A little bit
3. Moderately
4. Quite a bit
5. Could not do regular daily activities

TRANSMITTING DATA TO A MEASUREMENT VENDOR OR OTHER THIRD PARTY

This section on transmitting data to a measurement vendor or other third party provides guidance to health care organizations that administer the adult asthma patient survey and may be asked to provide the survey data to an independent entity—typically a measurement vendor—whose role is to produce performance results data for multiple accountable health care organizations in a given market area.

In a number of situations, the accountable health care organization's data collection role may be limited to identifying an eligible population and transmitting that eligible population information to a measurement vendor. In this case, the health care organization would have no other obligation regarding data transmission to the vendor. The measurement vendor, in turn, would administer the adult asthma patient survey, calculate the performance values and create the performance scores.

In other situations, the accountable health care organization may administer the adult asthma patient survey itself and transmit the survey data to a measurement vendor. Two options exist for transmitting survey data to a third-party vendor:

- raw individual patient-level survey data is submitted to the vendor who calculates the performance values and creates the performance scores
- the accountable health care organization calculates the performance values and submits them to the vendor who does the performance scoring. Under this scenario, it may be necessary for the accountable health care organization to submit additional data, such as performance value mean scores or proportions for each age/sex/severity or income group in the sample, in order that appropriate risk adjustments can be carried out.

Scoring

The scoring specifications provided in this document calculate 14 performance values from data collected using the FACCT Adult Asthma Care Survey. The metrics for these performance values are either means or proportions. All mean scores are transformed in the scoring steps to a 0–100 scale. This transformation is done so that performance values can be standardized and combined in preparation for creating summary scores which compare performance with external norms or benchmarks.

The performance value calculations specified by this document represent one of the four tiers of scoring possible. The four tiers are:

Scoring Tiers	Description
<i>I. Calculate a performance value</i>	Calculate performance values as outlined in the specifications. These values can be a mean, proportion, distribution or number.
<i>II. Calculate adjusted performance value</i>	When comparison among accountable entities or with external norms is desired, derive an adjusted performance value through application of risk adjustment methods.
<i>III. Standardize the performance value using best practice or normative criteria</i>	A standardized performance value yields a score that compares the accountable entity's performance relative to an external benchmark or norm.
<i>IV. Develop summary scores of performance</i>	In some cases, multiple performance values can be combined and weighted to create summary scores of performance.

The specifications in this document detail the steps to calculate the performance values only (Tier I). Typically, the calculations performed in Tiers II, III and IV would be done by a measurement vendor to produce performance results across multiple accountable health care organizations.

**APPENDIX I
DIAGNOSES CODES**

Diagnoses Codes		
Code Type	Code Number	Description
ICD-9	493.00 - 493.91	Asthma

APPENDIX II
EVALUATION AND MANAGEMENT SERVICE CODES FOR
OFFICE/OUTPATIENT
CASE FINDING

Evaluation and Management Service Codes Outpatient/Office Setting		
Code Type	Code Number	Description
CPT	99201-99205	New patient office/outpatient visit
CPT	99211-99215	Established patient office/outpatient visit
CPT	99241-99245	Consultation: office/outpatient
CPT	99381-99429	Preventive medicine services
CPT	99354-99357	Prolonged physician services
CPT	99499	Other evaluation & management services

APPENDIX III
EVALUATION AND MANAGEMENT SERVICE CODES FOR
INPATIENT/EMERGENCY/URGENT
CASE FINDING

Evaluation and Management Service Codes Inpatient/Emergency Facility Settings		
Code Type	Code Number	Description
CPT	99217-99220	Hospital observation status encounter
CPT	99238-99239	Hospital discharge services
CPT	99251-99263	Inpatient consultant
CPT	99281-99288	Emergency services
CPT	99291-99292	Critical care services
CPT	99301-99313	Nursing facility
CPT	99321-99333	Domiciliary, rest home, custodial care
CPT	99341-99353	Home services

APPENDIX IV
PLACE OF SERVICE CODES
HCFA 1500 BILLING FORM

HCFA 1500 Place of Service Codes		
Code Type	Code Number	Description
POS	11	Office
POS	12	Patient's Home
POS	21	Inpatient Hospital
POS	22	Outpatient Hospital
POS	23	Emergency Room
POS	24	Ambulatory Surgical Center

**APPENDIX V
ASTHMA MEDICATIONS FOR CASE FINDING**

Therapeutic Drug Class		
Code Type	Drug Class	Group
NDC	Theophylline	1
NDC	Beta agonists/Inhalers	2
NDC	Beta agonists/Injections	3
NDC	Beta agonists/Nebulizers	4
NDC	Beta agonists/Oral	5
NDC	Beta agonists/Sublingual	6
NDC	Ipratropium	7
NDC	Cromolyn	8
NDC	Inhaled corticosteroid	9

Note: Antileukotrienes and oral steroids are not included; the use of antileukotrienes is being assessed.

APPENDIX VI
SUGGESTED SAMPLING METHODS

Options to draw a study sample from the eligible population sample:

Random Sample. The simplest method is to assign a random number to each adult asthma patient identified and sort by ascending order to determine the population. Once the number of patients needed for the sample is determined, the sample should be selected beginning at the top of the sort.

Systematic Sampling Method for Medical Record Review. This method requires that you sort the data by some unique number or identifier (e.g., patient's medical record number, or patient ID number) and select every "nth" record for review. The "nth" record will be defined as the ratio of the sample size needed to the eligible population. (e.g., if the sample size needed is 100 and the eligible population is 1000 the "nth" record is $100/100 = 10$, so every "10th" medical record should be reviewed.

**APPENDIX VII
DATA COLLECTION FORMATS**

Administrative Data					
Data Elements	ASTM Field Name	Data Source	ASTM Field	ASTM Type	ASTM Length
Practice assigned patient ID	Unique # assigned to each patient by clinic, such as a medical record number, Social Security number, billing number		P-3	CK	16
Alternate patient ID	Unique # assigned to each patient by provider institution specifically for outcomes research (not SSN or MRN). Used to permit data center to feedback with IDs that are recognizable by the provider institution without compromise of patient confidentiality		P-5	ST	16
Clinic Name or ID	Code to identify sending clinic/or site of service		H-5	ST	40
Provider ID	Universal Physician ID #, Health Plan ID#		P-14	CNA	60

Patient Demographic Data					
Data Elements	ASTM Field Name	Data Source	ASTM Field	ASTM Type	ASTM Length
Patient name	Patient name, needed for sending out survey questions		P -6	PN	48
Birth date	Birth date and time, in format YYYYMMDD		P-8	TS	26
Patient ID	Unique patient ID (Social Security number) in format NNN-NN-NNNN				
Patient sex	Patient sex, as M or F		P-9	ID	1
Patient address	Patient address, including the city, state, country and zip code, needed for sending out survey questions		P-11	AD	200
Patient telephone #	Patient's day telephone number, in format NNN-NNN-NNNN		P-13	TN	40

APPENDIX VIII
PATIENT SURVEY QUESTIONS FOR RISK ADJUSTMENT

Questions for Risk Adjustment

1. Sex:
 1. Female
 2. Male

2. Date of birth:
Month _____
Day _____
Year _____

3. Are you of Hispanic origin, such as Mexican American, Latin American, Puerto Rican or Cuban?
 1. Yes
 2. No
 3. Don't know
 4. Decline

4. Race
 1. White
 2. Black
 3. Asian, Pacific Islander
 4. Native American, Aleutian or Eskimo
 5. Other (please specify):
 6. Don't know
 7. Decline

5. What is the highest grade or year of school you completed?
 1. Eighth grade or less
 2. Some high school
 3. High school graduate or GED certificate
 4. Some technical school
 5. Technical school graduate
 6. Some college
 7. College graduate
 8. Post-graduate or professional degree
 9. Decline

6. Which of the following categories best describes your annual household income from all sources?
 1. Less than \$10,000
 2. \$10,000 to \$14,999
 3. \$15,000 to \$19,999
 4. \$20,000 to \$24,999
 5. \$25,000 to \$34,999
 6. \$35,000 to \$49,999
 7. \$50,000 or more
 8. Don't know/not sure
 9. Decline

**APPENDIX IX
COMORBIDITIES CHECKLIST**

1. In addition to asthma, has a doctor ever told that you now have any of the following health conditions?

- | | YES | NO |
|---|--------------------------|--------------------------|
| a. Hypertension (high blood pressure) | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Heart attack in the last year (myocardial infarction) | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Congestive heart failure (heart failure or enlarged heart) | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Diabetes (high blood sugar) | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Angina | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Cancer (except skin cancer) | <input type="checkbox"/> | <input type="checkbox"/> |

2. In addition to asthma, do you now have any of the following conditions?

- | | YES | NO |
|---|--------------------------|--------------------------|
| a. Chronic allergies or sinus trouble | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Arthritis of any kind (rheumatism) | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Sciatica or chronic back problems | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Blindness or other trouble seeing even while wearing glasses | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Chronic bronchitis | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Emphysema or COPD | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Other lung disease | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Dermatitis or other chronic skin condition | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Deafness or other trouble hearing with one or both ears | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Depression | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Ulcers in the stomach, duodenum, or heartburn | <input type="checkbox"/> | <input type="checkbox"/> |
| l. Limitations in the use of arms or legs (missing, paralyzed, or weakness) | <input type="checkbox"/> | <input type="checkbox"/> |
| m. Any other chronic medical condition that affects and/or limits what you do and/or how you feel | <input type="checkbox"/> | <input type="checkbox"/> |

APPENDIX X
SEVERITY ADJUSTMENT ALGORITHMS

Severity algorithm—part A: If, since age 18, a patient has had a life-threatening asthma attack OR has been intubated OR reports taking daily inhaled steroid medication for asthma, the patient is classified as “moderate/severe.”

Questions for severity algorithm—part A

1. Since you were 18 years old, have you had an asthma attack that was so serious that your life was in danger?
 1. I thought so at the time, but it turned out to not be that serious.
 2. Yes, I was told by a doctor or nurse that I could have died if I had not received prompt medical treatment.
 3. No
 4. Don't know

2. Since you were 18 years old, have you had a tube put down your throat to help you breathe during an asthma attack?
 1. Yes
 2. No

- 3a. Do you use *inhaled* steroids (such as Azmacort, Flovent, Vanceril, Beclovent, Aerobid, Decadron or others) for your asthma?
 1. Yes (answer 3b)
 2. No (skip to the next question)
 3. Don't know (skip to the next question)

- 3b. If you answered “yes” to the question above, which of the following *best describes* how you use your inhaled steroid medication? (only check ONE)
 1. I use inhaled steroids *every day*, whether or not I have asthma symptoms.
 2. Even though my doctor wants me to use inhaled steroids every day, I use them *less often*.
 3. I use inhaled steroids several times a week.
 4. I use inhaled steroids only when I have asthma symptoms.

Using the answer coding above, algorithm—part A is as follows: IF

Question 1 (life threatening attack) = 2 OR
Question 2 (intubation) = 1 OR
Question 3b (frequency of steroid use) = 1 or 2,
then the patient is classified as “moderate/severe.”

Severity algorithm—part B: If a patient meets none of the criteria in part A but [self-rates the severity of asthma as moderate or severe and reports that it is moderate to difficult to avoid asthma attacks] AND [reports EITHER high levels of self-efficacy or high levels of knowledge about managing asthma], the patient is classified as “moderate/severe.”

Questions for severity algorithm—part B

1. How easy is it for you to avoid having severe asthma attacks (flare-ups worse than your usual asthma symptoms)?
 1. Very easy
 2. Easy
 3. Moderate
 4. Difficult
 5. Very difficult

2. In general, would you say your asthma is:
 1. Very mild
 2. Mild
 3. Moderate
 4. Severe
 5. Very severe

3. Which of the following are true statements for you: *(please check all that apply)*
 1. I usually use a spacer when I use an inhaler for my asthma.
 2. I use a peak flow meter to monitor my asthma.
 3. I am able to manage changes in my asthma myself most of the time.
 4. I follow the care plan given to me by my current doctor or nurse.
 5. I recognize things that make my asthma worse.
 6. I know what to do during an asthma attack.
 7. I take asthma medicines when they are appropriate.
 8. I know the early warning signs of an asthma attack.

4. Overall, how would you rate your knowledge about what to do if you had a severe asthma attack?
1. Very poor, as little a person could know
 - 2.
 - 3.
 - 4.
 5. Average
 - 6.
 - 7.
 - 8.
 - 9.
 10. Excellent, as much as a person needs to know

Recoding Patient Responses for Algorithm—Part B

Recoding Patient Responses for Scoring Algorithm—Part B	
1. How easy is it for you to avoid having severe asthma attacks (a flare-up worse than your usual asthma symptoms)?	
PATIENT RESPONSE	RECODE TO NEW VALUE
1 or 2	1
3	2
4 or 5	3
2. In general, would you say your asthma is: very mild, mild, moderate, severe or very severe?	
PATIENT RESPONSE	RECODE TO NEW VALUE
1 or 2	1
3, 4, or 5	2
3. Which of the following are true statements for you: <i>(please check all that apply)</i> .	
NUMBER OF RESPONSES PATIENT CHECKED	RECODE TO NEW VALUE
0-2	1
3-5	2
6-8	3

Note: Data from questions 3 and 4 are also used to construct the Patient Self-Management Knowledge and Behavior performance value.

Using the above coding, algorithm—part B is as follows:

If a patient meets none of the criteria in algorithm—part A, BUT

[Question 1 (ease of avoiding attacks) = 3 and Question 2 (patient-reported severity)= 2]

AND

[Question 3 (self-management knowledge/behaviors) = 3 or Question 4 (level of knowledge for dealing with severe asthma attack) is ≥ 7]

then the patient is also classified as “moderate/severe.”

APPENDIX XI
PATIENT SURVEY

FACCT ADULT ASTHMA MEASUREMENT SET SURVEY

(This survey instrument brings together all of the questions required for the eight measures in the FACCT Adult Asthma Measurement Set. The survey requires final formatting before use. If additional questions are added, the order of questions should be reevaluated.)

ADULT ASTHMA CARE SURVEY

Thank you for your help with this survey on adult asthma care! Before you start, please answer this first question to be sure the rest of the questions apply to you.

Have you ever been told by a doctor that you have asthma?

Yes *(Please proceed to question 1.)*

No *(Please STOP and return this survey.)*

Section I: (Insert SF-36 health survey questions here in final document.)

Section II: In this section, we would like to find out how often your asthma has bothered you ***DURING THE PAST 4 WEEKS.***

1. Over the ***past 4 weeks***, how often have you been bothered by the following symptoms:

a. Cough

1. Never
2. Once a week or less
3. 2 to 3 times a week
4. 4 to 5 times a week
5. Daily

b. Sputum (phlegm or mucus when coughing)

1. Never
2. Once a week or less
3. 2 to 3 times a week
4. 4 to 5 times a week
5. Daily

c. Chest tightness (difficulty taking a deep breath)

1. Never
2. Once a week or less
3. 2 to 3 times a week
4. 4 to 5 times a week
5. Daily

d. Wheezy or whistling sound in the chest

1. Never
2. Once a week or less
3. 2 to 3 times a week
4. 4 to 5 times a week
5. Daily

e. Shortness of breath

1. Never
2. Once a week or less
3. 2 to 3 times a week
4. 4 to 5 times a week
5. Daily

2. In the ***past 4 weeks***, on average, how often did your asthma awaken you at night?
 1. Not at all
 2. Less than once a week
 3. Once or twice a week
 4. Three or more times a week

3. In the ***past 4 weeks***, on average, how often did you have asthma attacks? (“**Asthma attack**” means increased difficulty breathing that may be accompanied by increased coughing, wheezing, chest tightness or other symptoms).
 1. Not at all
 2. Less than once a week
 3. Once or twice a week
 4. Three or more times a week

4. In between the times you have asthma attacks, how is your breathing?
 1. No problems
 2. Some symptoms on some days
 3. Some symptoms on most days, requiring inhaler for relief
 4. Symptoms most of the time

The next two questions ask you to think about your asthma over the past ***THREE MONTHS***.

5. In the ***past three months***, how many days have you missed from work, school or other daily activities because of your asthma?

Number of days_____

6. During the ***past three months***, how much difficulty did your asthma cause for you in doing your regular daily activities? (for example: your job, participation in social activities both inside and outside the house, school, or other duties and obligations).
 1. Not at all
 2. A little bit
 3. Moderately
 4. Quite a bit
 5. Could not do regular daily activities

Section III: The next questions ask about various experiences you may have had with asthma.

1. In general, would you say your asthma is:

Very mild	Mild	Moderate	Severe	Very severe
1	2	3	4	5

2. Since you were 18 years old, have you had an asthma attack that was so serious that your life was in danger?

1. I thought so at the time, but it turned out to not be that serious.
2. Yes, I was told by a doctor or nurse that I could have died if I had not received prompt medical treatment.
3. No
4. Don't know

3. Since you were 18 years old, have you had to have a tube put down your throat to help you breathe during an asthma attack?

1. Yes
2. No
3. Don't know

4. How easy is it for you to avoid having severe asthma attacks (flare-ups worse than your usual asthma symptoms)?

Very easy	Easy	Moderate	Difficult	Very difficult
1	2 3	4	5	

5a. Do you use *inhaled* steroids (such as Azmacort, Flovent, Vanceril, Beclovent, Aerobid, Decadron or others) for your asthma?

1. Yes \longrightarrow IF YES, please answer question 5b below.
2. No \longrightarrow Please go on to Section IV, question 1.
3. Don't know \longrightarrow Please go on to Section IV, question 1.

5b. If you answered "yes" to the question 5a above, which of the following *best describes* how you use your inhaled steroid medication? (*please check only ONE*)

1. I use inhaled steroids *every day*, whether or not I have asthma symptoms.
2. Even though my doctor wants me to use inhaled steroids every day, I use them *less often*.
3. I use inhaled steroids several times a week.
4. I use inhaled steroids only when I have asthma symptoms.

Section IV: Good going! You're almost finished. In this section, we ask about the medical and self-care management of your asthma.

The next two questions ask about peak flow meters. A peak flow meter is a hand-held device that measures how much air you can blow out of your lungs.

1. Which of the following is true for you? (please check only ONE)

1. I do not have a home peak flow meter. —————▶Please skip to question 3.
2. I have a home peak flow meter and use it regularly. —————▶Please answer question 2 below
3. I have a home peak flow meter,
but ALMOST never use it. —————▶Please answer question 2 below

If you checked 2 or 3 above, please answer question 2 below.

2. Which of the following are true for you?

(Please mark one box in each row.)

- | | YES | NO |
|--|--------------------------|--------------------------|
| 1. I have been taught how to use a peak flow meter by my doctor or nurse. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I know my personal best reading on my home peak flow meter. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I keep a peak flow meter diary. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. I alter my medications based on my home peak flow meter reading. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I notify my doctor if my peak flow meter reading drops below a certain point. | <input type="checkbox"/> | <input type="checkbox"/> |

3. Have you been shown the correct way to use your inhaler by your doctor, nurse or other health care provider?

1. I do not use an inhaler for my asthma.
2. Yes
3. No

4. During an office visit, has your doctor, nurse or other health care provider watched you use your inhaler to check that you use it correctly?

1. I do not use an inhaler for my asthma.
2. Yes
3. No

5. Have you been given written directions by a doctor, nurse or other health care provider about how to take your asthma medicine and what to do if you have a severe asthma attack?

1. Yes, and I understand completely.
2. Yes, and I understand pretty well.
3. Yes, but I am still confused.
4. No, not at all.
5. Does not apply

Has a doctor or nurse explained each of the following to you:

6. What to do when you have a severe asthma attack?

1. Yes, and I understand completely.
2. Yes, and I understand pretty well.
3. Yes, but I am still confused.

- 4. No, not at all.
- 5. Does not apply

7. How to adjust your medication when your asthma gets worse?

- 1. Yes, and I understand completely.
- 2. Yes, and I understand pretty well.
- 3. Yes, but I am still confused.
- 4. No, not at all.
- 5. Does not apply

8. What things can make your asthma worse and how to avoid them?

- 1. Yes, and I understand completely.
- 2. Yes, and I understand pretty well.
- 3. Yes, but I am still confused.
- 4. No, not at all.
- 5. Does not apply

9. How would you rate the quality of the information given to you about your asthma by your doctor, nurse or other health care provider:

- 1. Very good
- 2. Good
- 3. OK
- 4. Bad
- 5. Very bad
- 6. None

10. Which of the following are true for you:

(Please mark one box in each row.)

	YES	NO
1. I usually use a spacer when I use an inhaler for my asthma.	<input type="checkbox"/>	<input type="checkbox"/>
2. I use a peak flow meter to monitor my asthma.	<input type="checkbox"/>	<input type="checkbox"/>
3. I am able to manage changes in my asthma myself most of the time.	<input type="checkbox"/>	<input type="checkbox"/>
4. I follow the care plan given to me by my current doctor or nurse.	<input type="checkbox"/>	<input type="checkbox"/>
5. I recognize things that make my asthma worse.	<input type="checkbox"/>	<input type="checkbox"/>
6. I know what to do during an asthma attack.	<input type="checkbox"/>	<input type="checkbox"/>
7. I take asthma medicines when they are appropriate.	<input type="checkbox"/>	<input type="checkbox"/>
8. I know the early warning signs of an asthma attack.	<input type="checkbox"/>	<input type="checkbox"/>

11. Overall, how would you rate your knowledge about what to do if you had a severe asthma attack?

- 0 Very poor, as little as a person could know
- 1
- 2
- 3
- 4
- 5 Average
- 6

- 7
- 8
- 9
- 10 Excellent, as much as a person needs to know

Section V: In this section, we ask you to rate your satisfaction with the health care you have received for your asthma.

1. Have you received any health care for your asthma during the *past 12 months*?

1. No → IF NO, please go on to Section VI, question 1.
2. Yes IF YES, please answer questions 2-10 below.



Please think about the health care you have received for your asthma during the *past 12 months*. For each of the following please rate your level of satisfaction with:

2. How long you usually wait to get an appointment to see your doctor.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

3. How easy it is to reach a doctor or nurse in the office by telephone.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

4. How easy it is to get urgent or emergency care for your asthma.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

5. How easy it is to get access to specialty care if you need it.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

6. How easy it is to talk with your doctors and nurses about your asthma.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

7. The skill of the doctor you see most often for your asthma.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

8. The quality of the education you have been given to help you manage your asthma day to day.

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

9. How well your doctors and nurses have listened to your concerns about your asthma

1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

10. Overall, how would you rate the quality of health care you have received for your asthma during the *past 12 months?*

0 Very poor, as bad as health care can be

- 1
- 2
- 3
- 4
- 5 Average
- 6
- 7
- 8
- 9
- 10 Excellent, as good as health care can be

Section VI: You made it! This is the home stretch. All that remains are a few questions that will help us understand more about you and the other people who respond to this survey.

1. Sex:

- 1. Male
- 2. Female

2. Date of birth:

Month_____ / Day_____ / Year_____

3. Are you of Hispanic origin, such as Mexican American, Latin American, Puerto Rican or Cuban?

- 1. Yes
- 2. No
- 3. Don't know
- 4. Decline

4. Race

- 1. White
- 2. Black
- 3. Asian, Pacific Islander
- 4. Native American, Aleutian, or Eskimo
- 5. Other (please specify):
- 6. Don't know
- 7. Decline

5. What is the highest grade or year of school you completed?

1. Eighth grade or less
2. Some high school
3. High school graduate or GED certificate
4. Some technical school
5. Technical school graduate
6. Some college
7. College graduate
8. Post-graduate or professional degree
9. Decline

6. Which of the following categories best describes your annual household income from all sources?

1. Less than \$10,000
2. \$10,000 to \$14,999
3. \$15,000 to \$19,999
4. \$20,000 to \$24,999
5. \$25,000 to \$34,999
6. \$35,000 to \$49,999
7. \$50,000 or more
8. Don't know/not sure
9. Decline

7. Has a doctor *ever told you* that you had any of the following health conditions?

- | | YES | NO |
|---|--------------------------|--------------------------|
| 1. Hypertension (high blood pressure) | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Heart attack in the last year (myocardial infarction) | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Congestive heart failure (heart failure or enlarged heart) | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Diabetes (high blood sugar) | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Angina | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Cancer (except skin cancer) | <input type="checkbox"/> | <input type="checkbox"/> |

8. In addition to asthma, has a doctor ever told that you *now have* any of the following health conditions? (Please check all that apply.)

	YES	NO
1. Chronic allergies or sinus trouble	<input type="checkbox"/>	<input type="checkbox"/>
2. Arthritis of any kind (rheumatism)	<input type="checkbox"/>	<input type="checkbox"/>
3. Sciatica or chronic back problems	<input type="checkbox"/>	<input type="checkbox"/>
4. Blindness or other trouble seeing even while wearing glasses	<input type="checkbox"/>	<input type="checkbox"/>
5. Chronic bronchitis	<input type="checkbox"/>	<input type="checkbox"/>
6. Emphysema or COPD	<input type="checkbox"/>	<input type="checkbox"/>
7. Other lung disease	<input type="checkbox"/>	<input type="checkbox"/>
8. Dermatitis or other chronic skin conditions	<input type="checkbox"/>	<input type="checkbox"/>
9. Deafness or other trouble hearing with one or both ears	<input type="checkbox"/>	<input type="checkbox"/>
10. Depression	<input type="checkbox"/>	<input type="checkbox"/>
11. Ulcers in the stomach, duodenum, or heartburn	<input type="checkbox"/>	<input type="checkbox"/>
12. Limitations in use of arms or legs (missing, paralyzed or weakness)	<input type="checkbox"/>	<input type="checkbox"/>
13. Any other chronic medical condition that affects and/or limits what you do and/or how you feel	<input type="checkbox"/>	<input type="checkbox"/>

Again, thank you for sharing your time and expertise!