**Table E1. Categorization of questionnaire items about adherence with 4 key components of the EPR-3 guidelines**

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| **1. Assessment and monitoring of asthma severity and control** |
| **Assessment of impairment frequency**1. For what percentage of asthma visits do you document overall asthma control?
2. For what percentage of asthma visits do you ask about patient’s ability to engage in daily activities?
3. For what percentage of asthma visits do you ask about frequency of daytime symptoms?
4. For what percentage of asthma visits do you ask about frequency of nighttime awakening?
5. For what percentage of asthma visits do you ask about patient’s perception of symptom control?
6. For what percentage of asthma visits do you use a control assessment tool (e.g., Asthma Control Test, Asthma Control Questionnaire, Asthma Therapy Assessment Questionnaire, etc.)
7. For what percentage of asthma visits do you ask about frequency of rescue inhaler use (e.g., Albuterol)?
 |
| **Assessment of risk frequency**1. For what percentage of asthma visits do you ask about frequency of emergency department visits or urgent care visits for asthma?
2. For what percentage of asthma visits do you ask about frequency of exacerbations requiring oral steroids?
 |
| **Objective assessment and monitoring**1. For what percentage of asthma visits do you ask about patient’s peak flow results from home?
2. For what percentage of asthma visits do you perform spirometry (among those who can perform spirometry)?
 |
| **Ongoing monitoring frequency**1. For what percentage of asthma visits do you assess daily use of controller medication (e.g., ICS) for patients with severe asthma?
2. For what percentage of asthma visits do you perform repeated assessment of inhaler technique?
 |
| **2. Patient education** |
| **Asthma action plans**1. For what percentage of asthma visits do you provide a new or review an existing written asthma action plan outlining medications, triggers, and when to seek emergency care?
 |
| **Asthma therapies**1. How often do you encounter patient misunderstandings about medication risks or side effects or belief in myths (e.g., muscle development, addiction)?
2. How often do you encounter patient concerns about short-term side effects of inhaled corticosteroids (e.g., thrush)?
3. How often do you encounter patient concerns about long-term side effects of inhaled corticosteroids (e.g., delayed growth in children)?
4. How often do you encounter confusion between symptom relief medications and daily controller medications?
 |
| **3. Control of environmental factors** |
| 1. For what percentage of asthma visits do you assess triggers at home (e.g., pets, mold, tobacco smoke)?
2. For what percentage of asthma visits do you assess triggers at school or workplace (e.g., mold, dust, exhaust, fumes, chemicals)?
3. For what percentage of asthma visits do you test allergic sensitivity via skin or allergen-specific IgE (e.g., RAST) testing?
4. For the following 7 questions, do you make recommendations for 1) Most asthma patients, 2) Only patients with sensitivity to this trigger, or 3) Rarely or never recommend
5. Do you recommend using dust mite control measures (e.g., mattress covers)?
6. Do you recommend controlling household mold and pests (e.g., cockroaches)?
7. Do you recommend removing pets from home?
8. Do you recommend avoiding pollen (e.g., limit outdoor time, close windows)?
9. Do you recommend avoiding air pollution (e.g., ozone warnings)?
10. Do you recommend making changes to cooking appliances (e.g., exhaust vents)?
11. Do you recommend avoiding second-hand smoke?
 |
| **4. Pharmacologic treatment**  |
| Do you use the following medications (Short acting beta agonists, Inhaled corticosteroids (ICS), Long acting beta agonists (LABA), Combination medication that includes both LABA and ICS, Leukotriene modifiers, Anticholinergics, Methylxanthines, Omalizumab, Short course of oral/injectable corticosteroids, and Long course of oral corticosteroids (> 10 days) for (choose all that apply for each medication): 1) Symptom relief/acute exacerbation? 2) Daily long-term control? 3) Add on daily control therapy? 4) Difficult to control asthma? 5) Never use this medication? |

NOTE: A) Adherence categories: Almost always (75%-100%), Often (25%-75%), Sometimes (1%-24%), Never (0%)

2012 Asthma Supplement Questionnaire is available at: <https://www.cdc.gov/nchs/data/ahcd/2012_NAMCS_Asthma_Supplement.pdf>

**Table E2. Agreement and self-efficacy with the EPR-3 guidelines**

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| --- |
| **A. Assessment of agreement with selected guideline recommendation** |
| 1. Spirometry is an essential component of a clinical evaluation for asthma diagnosis in patients able to perform it (please do not include peak flow monitoring as spirometry).2. Inhaled corticosteroids are the most effective medications to control persistent asthma.3. Asthma action plans are an effective tool to guide patient self-management efforts.4. Patients with persistent asthma should have follow-up visits at least every 6 months to assess control.5. Assessing asthma severity is necessary to determine initial therapy. |
| **B. Assessment of self-efficacy with implementing selected guideline recommendations** |
| 1. Using spirometry data as a component of a clinical evaluation for an asthma diagnosis in patients2. Assessing underlying asthma severity using standard criteria3. Prescribing the appropriate dose of inhaled corticosteroids4. Evaluating the need to step up controller therapy5. Evaluating the need to step down controller therapy |

NOTE: A) Agreement categories: Strongly agree, agree, neutral, disagree, strongly disagree; B) Competency categories: Very confident, somewhat confident, not at all confident, do not perform

2012 Asthma Supplement Questionnaire is available at: <https://www.cdc.gov/nchs/data/ahcd/2012_NAMCS_Asthma_Supplement.pdf>

Table E3. Crude and adjusted odds ratio for association between allergy specialty versus pulmonology (reference) and “almost always” using selected guideline recommendations, odds ratio (95% confidence interval), 2012 National Asthma Survey of Physicians

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Document Asthma Control** | **Ask about nighttime awakening** | **Ask About ED/****Urgent Care Visits** | **Perform Spirometry** | **Assess triggers at home and/or school** | **Perform Allergy Testing** |
| Model 1: crude | **2.1 (1.0, 4.6)** | **3.7 (1.6, 8.5)** | **3.5 (1.4, 8.7)** | **2.0 (1.1, 5.9)** | **2.3 (1.2, 4.4)** | **6.3 (3.2, 12.2)** |
| Model 2: model 1+ agreement, self-efficacy | 2.1 (1.0, 4.5) | **3.4 (1.5, 7.8)** | **3.3 (1.3. 8.3)** | 1.9 (1.0, 3.8) | **2.2 (1.2, 4.2)** | **6.5 (3.3, 12.8)** |
| Model 3: model 2+ physician characteristicsa  | 1.9 (1.7, 0.7) | **5.1 (1.9, 14.1)** | **4.2 (1.3, 13.4)** | 2.0 (1.0, 4.2) | 1.9 (1.0, 3.8) | **5.8 (2.9, 11.8)** |
| Model 4: model 3+ practice locationb | 1.7 (0.7, 4.0) | **5.2 (1.9, 14.1)** | **4.4 (1.3, 14.6)** | **2.1 (1.0, 4.4)** | 1.8 (0.9, 3.6) | **5.9 (2.8, 12.4)** |
| Model 5: model 4+ practice characteristicsc | 1.0 (0.4, 2.9) | 2.6 (0.8, 8.2) | 3.2 (0.7, 13.9) | 1.4 (0.5, 3.9) | 1.5 (0.7, 3.6) | **5.9 (2.3, 15.4)** |

Bold text denotes odds ratio for which 95% CI excludes the value of 1.0 (note some values above or below 1.0 may be rounded to 1.0)

a Physician characteristics: age group, sex

b Practice location: Census region, urbanicity

c Practice characteristics: practice ownership, percent revenue from Medicare

Note: AOR for all covariates for Model 5 shown in main text.