The Primary Care Management of Asthma

MODULE A: Assessment and Diagnosis of Asthma

1 Person with chief complaint suggestive of asthma (see **Sidebar A**)

2 Obtain history and physical examination (see **Sidebar B**)

3 Is there a confident clinical diagnosis of asthma? (see **Sidebar A**, **Sidebar B**, and **Appendix B** in full CPG)
- Yes → 4
- No

6 Is a non-asthma cause of symptoms identified?
- Yes → 7
- No (still suspect asthma)

8 Is the patient capable of spirometry and is it readily available?
- Yes → 9
- No

15 Consider trial of therapy (and/or consider specialist referral)

16 Is trial therapy effective?
- Yes → 11
- No

14 Refer to specialist

4 Is patient presenting with acute exacerbation?
- Yes → 5
- No

5 Treat or refer as clinically indicated; return to beginning of algorithm when clinically stable

7 Treat or refer as clinically indicated

9 Obtain spirometry (see **Recommendation 1**)

10 Is spirometry compatible with asthma (consistent with obstruction)?
- Yes → 11
- No

12 Consider the following options based on site availability and patient characteristics:
- Referring for bronchoprovocation testing (see **Sidebar C** and **Recommendations 3 and 4**)
- Trial of therapy
- Specialist referral

13 Is bronchoprovocation testing compatible with asthma?
- Yes → 11
- No (still suspect asthma) → 14

11 Diagnose asthma; continue to **Module B: Initiation of Therapy** for initial treatment (see **Appendix B** in full CPG)

MODULE B: Initiation of Therapy

17 Person with diagnosed asthma (see **Sidebar D** and **Sidebar E**)

18 Is patient already on controller therapy?
- Yes → 19
- No

19 Go to **Module C: Follow-up**

20 Assess severity (see **Appendix B** in full CPG) and initiate SABA as needed for symptom relief and prevention of exercise-induced symptoms

21 Is the patient's asthma persistent?
- Yes → 22
- No

22 Does patient have moderate persistent or severe persistent asthma and significant symptom burden? (see **Appendix B** in full CPG)
- Yes → 23
- No

23 Initiate ICS with LABA as initial controller medications (see **Recommendation 13**)

27 Initiate ICS as initial controller medication (see **Recommendation 12**)

24 Is asthma induced only by exercise?
- Yes → 25
- No

25 Continue SABA as needed and consider initiating LTRA for prevention of exercise-induced asthma symptoms (see **Recommendation 16**)

26 Continue SABA as needed

28 Go to **Module C: Follow-up**

MODULE C: Follow-up

29 Patient with asthma on therapy (needs follow-up) (see **Sidebar I**)

30 Is patient's asthma (impairment and risk) controlled? (see **Appendix B** in full CPG)
- Yes → 31
- No → 33

31 Has patient been on current therapy for more than 3 months?
- No → 33

33 Maintain current therapy; reassess once on treatment regimen for 3 months

34 Is there a problem with patient adherence or technique?
- Yes → 35
- No

35 Address adherence and technique

36 Is there a problem with comorbidity?
- Yes → 37
- No

37 Address comorbidity

38 Is there a problem with triggers?
- Yes → 39
- No

39 Address triggers

40
- Add (see **Recommendation 14**) or increase medication as indicated (see **Sidebar G**)
- Reassess diagnosis
- Consider consultation or referral (see **Appendix B** in full CPG and **Sidebar I**)

41 Revisit need for non-pharmacological interventions (see **Module B: Initiation of Therapy**, **Sidebar D**, **Sidebar E**, and **Sidebar F**)

32 Consider stepping down by: Decreasing dose of ICS (do not discontinue), or Discontinue LABA or other alternate therapies (see **Sidebar F**)

42 Follow-up (see **Sidebar H**)

VA/DoD CLINICAL PRACTICE GUIDELINES

Sidebar A. Asthma Symptoms

- **Adult:** More than 6 weeks of symptoms or recurrent episodes of cough, wheeze, shortness of breath
- **Child:** Cough or wheeze for more than 2 weeks or recurrent episodes of wheeze/significant cough

Sidebar B. Assessment

- Symptoms (**Sidebar A**)
- Pattern (exercise, nocturnal symptoms)
- Precipitating triggers
- Aggravating factors/risk factors (see **Recommendations 6 and 7**)
  - Adults and children: Overweight/obesity, atopy, secondhand smoke exposure in children, history of lower respiratory infection
  - Adults: Depression, current smokers, OIF/OEF combat deployment
- Comorbidities
- Response to treatment
- If not previously done, consider X-ray if other diagnoses are being considered.

Sidebar C. Considerations for Bronchoprovocation Testing

- Bronchoprovocation should be done using methacholine challenge.
- In some situations in the DoD, patients will need to have bronchoprovocation testing
- Bronchoprovocation should not be ordered for children; refer to specialist only
- See **Recommendations 3 and 4**

Abbreviations: CBT: cognitive behavioral therapy; CPG: clinical practice guideline; DoD: Department of Defense; ED: emergency department; ICS: inhaled corticosteroid; LABA: long-acting beta agonist; LTRA: leukotriene receptor antagonist; OIF/OEF: Operation Iraqi Freedom/Operation Enduing Freedom; SABA: short-acting beta agonist; VA: Department of Veterans Affairs

Access to the full guideline and additional resources is available at the following link: https://www.healthquality.va.gov/guidelines/cd/asthma/index.asp

Sidebar D. Asthma Education

Patients and caregivers should be informed of the diagnosis of asthma. Their understanding should be assessed, and they should be given the opportunity to ask questions in order to take an active role in their medical care. More robust follow-up must be provided for those with asthma in order to provide "cornerstone" treatment which may consist of the following (see **Recommendations 9 and 10**):

- Symptoms (see **Sidebar A**)
- Pattern (exercise, nocturnal symptoms)
- Precipitating triggers
- Aggravating factors/risk factors (see **Recommendations 6 & 7**)
- Nature of asthma
- Goals of treatment
- Medication use (e.g., what it does, how to use it, potential side effects)
- How to recognize loss of asthma control and what steps to take to regain control of symptoms
- When and how to seek emergency care for asthma exacerbations
- Consider a personalized written asthma action plan (see **Recommendation 8**)
- Consider a care management team approach (may consist of dietary changes, emergent responses, updated medications, monthly follow-up for those with more severe symptoms, etc.)

Sidebar E. Care Management

Multidisciplinary care management:

- Multidisciplinary care management (see **Recommendation 17**)
- CBT (see **Recommendation 19**)
- Triggers for worsening control should be identified and if possible steps taken to reduce exposure
- Comorbidities

Lifestyle changes:

- Smoking cessation
- Regular exercise (see **Recommendation 18**)
- Weight management
- Avoidance of triggers

Psychosocial considerations and impact of asthma:

- Patient ability to absorb financial burden of medication cost
- Time away from work responsibilities for follow-up (e.g., office visits, testing)

Sidebar F. Considerations for Stepping Down Therapy

- Do not step down in patients that cannot be closely monitored (e.g., planned travel) or at risk of severe exacerbations (e.g., pregnancy, acute illness)
- Step down (not discontinue) ICS dose
- Discontinue LABA
- In low risk patients who are still well-controlled on low-dose ICS for at least three months, consider discontinuing ICS using caution
- Refer to **Appendix F, Tables F-1 and F-2** in full CPG for discussion of specific medications

Sidebar G. Considerations for Stepping Up Therapy

Preferred therapy

- **Initial therapy:**
  - ICS (see **Recommendation 12**)
  - Combination of ICS and LABA as initial controller treatment for patients with moderate-to-severe persistent asthma and significant symptom burden (see **Recommendation 13**)
- **Step-up therapy:**
  - If on low-medium ICS mono-therapy, add LABA (see **Recommendation 14**)
  - If considering 3-drug therapy or high-dose ICS, specialty referral is recommended (see **Sidebar I**)

In the case of contraindication/intolerance to preferred treatment, refer to **Appendix F, Table F-1** in full CPG for options.

Refer to **Appendix F, Table F-2** in full CPG for relative ICS dose ranges.

Sidebar H. Considerations for Short Follow-up

- Recent hospitalization
- ED visit
- Step medication change
- Recent exacerbation
- Increasing use of rescue inhalers
- Inability to use inhaler correctly

Sidebar I. Considerations for Specialty Referral

- Desensitization
  - In selected children
  - Atopy
  - Anaphylaxis
- Patients who may benefit from biological agents
- Consider adding a third drug
- Life-threatening exacerbation/intubation
- Multiple hospitalizations