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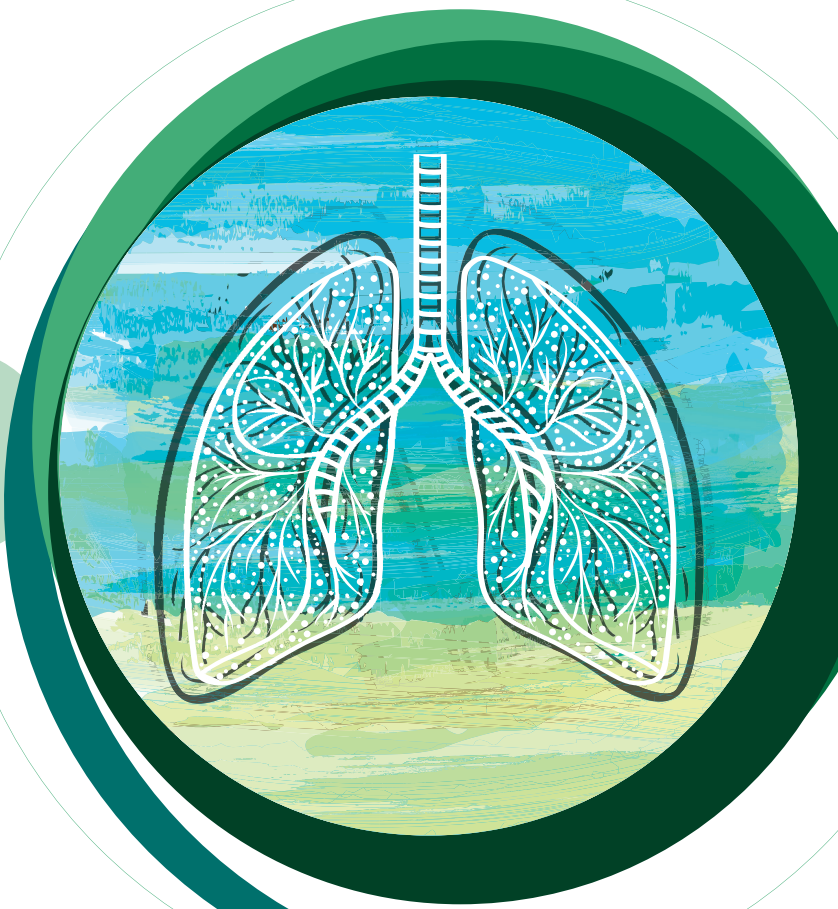
Ministry of Health

Asthma Pocket Guide for Health Care Professionals



SAUDI ALLERGY ASTHMA & IMMUNOLOGY SOCIETY
الجمعية السعودية للحساسية والربو والمناعة

2020


بسم الله الرحمن الرحيم

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Contents

Preface

Asthma is one of the most common chronic diseases in children and adults. It is also a common cause of visits to the emergency department as well as admission to the hospital. The disease is a globally significant non-communicable disease with major public health consequences for both children and adults, including high morbidity and mortality in severe cases. According to The Global Asthma Report, around 300 million people have asthma worldwide, and it is likely that by 2025 a further 100 million may be affected. Among its plan for control of non-communicable diseases (NCDs), the Ministry of Health in the Kingdom of Saudi Arabia has long recognized that good control of asthma symptoms and prevention of acute asthma exacerbations have tremendous effect on the well-being of asthmatic patients and on saving the rising cost of medical care.

This pocket guide aims to improve the health care of asthmatic patients, and serve physicians with a quick and easily accessible guide. The specialized physician including ED physician, should consult a detailed guideline for further management of acute asthma.

An asthma action plan was prepared in Arabic and shall be provided as a supplement to this guide. The material helps in the assessment of the patient's condition, explains the proper use of medications, and guides their treatment at home. We hope that this guide is fully utilized in day-to-day asthmatic patients' care.

Asthma Pocket Guide Scientific Committee

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Asthma Pocket Guide Scientific Committee

Dr. Abdullah A. Alangari	Dr. Izzeldin F. Adam
Dr. Ahmed J. Almadani	Dr. Kheder A. Al-Zahrani
Ms. Aljoharah A. Alabdullah	Dr. Omneya E. Elsherif
Dr. Bandar K. Al Saud	Dr. Saeed H. Alqhtani
Dr. Fairuz A. Aljori	Dr. Shaker A. Alomary
Dr. Faisal M. Alanazi	Dr. Suzan A. Alkhater
Dr. Hamdan H. Al Jahdali	Dr. Wael A. Althagafi

Acknowledgment

The National Bronchial Asthma Control Program at the Ministry of Health is pleased to publish the Asthma Pocket Guide for health care professionals. We hope that this guide will improve the performance of the practitioners who work in field through updating their knowledge and enhancing their skills as well as raising their job satisfaction.

We are thankful to the contribution of all the coordinators and physicians across the different regions of the Kingdom; who participated in the review workshops and spent ample time to improve the quality of medical care for asthmatic patients.

Finally, we owe an enormous debt of gratitude to those who provided detailed and constructive comments on meaningful and actionable points that helped us in improving the final draft for this asthma pocket guide.

Abbreviations Index:

ACEI: Angiotensin-converting enzyme inhibitors
ACT: Asthma control test
Anti-IgE: Anti-immunoglobulin E
BMI: Body mass index
DPI: Dry Powder Inhaler
ED: Emergency department
FEV1: Forced expiratory volume in the first second
FVC: Forced vital capacity
GERD: Gastroesophageal reflux disease
GINA: Global Initiative for Asthma
HFA: Hydrofluoroalkane
ICS: Inhaled corticosteroids
ICU: Intensive care unit
IM: Intramuscular
IV: Intravenous
LABA: Long acting $beta_2$-agonists
LTRA: Leukotriene receptor antagonist
MDI: Metered dose inhaler
NSAIDS: Nonsteroidal anti-inflammatory drugs
OPD: Outpatient department
PEF: Peak expiratory flow
PEFR: Peak expiratory flow rate
PFT: Pulmonary function tests
PHCC: Primary health care clinic
PO: Per oral
RR: Respiratory Rate
SABA: Short acting $beta_2$-agonists
SINA: Saudi Initiative for Asthma

Approach to Suspected Asthma Patient

What is Asthma?

Asthma is a chronic inflammatory disease of the lung associated with reversible hyper-responsive airways. Asthma causes symptoms such as wheezing, shortness of breath, chest tightness and cough that vary over time in their occurrence, frequency and intensity (Table 1 section A).

Primary care physicians who care for asthmatic patients, need to have adequate knowledge of Asthma diagnosis, treatment and follow-up. When patients already diagnosed with asthma or presenting for the first time with symptoms suggestive of asthma, such as cough, wheeze and shortness of breath; certain steps should be followed in the approach of such patients.

Assessment

1	Ascertain diagnosis of Asthma	
2	Assessment of Asthma Control	
3	Set up a management plan	
4	Prescribe appropriate medication	
5	Conduct patient /parents education	
6	Give a follow up appointment	

Step 1 Ascertain Diagnosis of Asthma:

Comprehensive assessment of each patient should always be completed by primary care physician particularly during the first visit. The physicians are encouraged to use the initial assessment form (Table 1) which covers the essential aspects required to ascertain diagnosis of asthma, assess degree of asthma control, future risk for poor outcome, identifying trigger, and suggest alternative diagnosis.

Table 1. Asthma patient assessment form:

A	Asthma features	Symptoms	Shortness of breath Chest tightness Cough Wheezing	◻ Yes ◻ No ◻ Yes ◻ No ◻ Yes ◻ No ◻ Yes ◻ No
		Variability of Symptoms	Exacerbation after exposure to triggers	◻ Yes ◻ No
			Relieved after SABA use	◻ Yes ◻ No
			More at night or early morning	◻ Yes ◻ No
		Severity of Symptoms	Frequency / Week	_____/ week
			Causing waking at night	◻ Yes ◻ No
			Recent visit to OPD , ED	_____/ Month
			Hospitalization Frequency	____/ Year
			Frequency of SABA use	_____/ week
			Interruption of daily activities	◻ Yes ◻ No
B	Future Risk	Frequency of admission to (ED) or hospitalization		____/ Year
		Admission to Critical Care		____/ Year
		Current or recent use of systemic corticosteroids If yes, Number of oral corticosteroids comes over the last year		◻ Yes ◻ No ____/ Year
C	Other Symptoms	Allergic rhinoconjunctivitis		◻ Yes ◻ No
		Food allergy		◻ Yes ◻ No
		Eczema		◻ Yes ◻ No
D	Asthma Medications	◻ SABA ◻ LABA ◻ ICS ◻ LTRA ◻ Anticholinergic ◻ Methylxanthines ◻ Anti-IgE ◻ Others		
E	List of Possible Triggers			Presence
	Viral respiratory infections			◻ Yes ◻ No
	Pollens			◻ Yes ◻ No
	Dust mite, Molds			◻ Yes ◻ No
	Animal dander, Secretions			◻ Yes ◻ No
	Cold weather, Raining			◻ Yes ◻ No
	Food (egg, peanut, sea food, others:.....)			◻ Yes ◻ No
	Smoking			◻ Yes ◻ No
F	Asthma symptoms related to exercise			◻ Yes ◻ No
G	Asthma symptoms related to exposure to work environment			◻ Yes ◻ No
H	Other medication List:	◻ NSAIDS ◻ Aspirin ◻ ACEI ◻ Beta Blocker		
I	co-morbid conditions:	◻ Heart failure ◻ Depression ◻ Pregnancy ◻ Smoking ◻ BMI > 30 ◻ GERD		
J	Family history of Asthma or Atopy (skin, eye, nose)			◻ Yes ◻ No
K	Examination			
	Vital Signs / Pulse:	RR:	O_2 sat: / BP: / Temp:	Height:
		Use of Accessory Respiratory Muscles		◻ Yes ◻ No
	Chest	Vesicular breathing		◻ Yes ◻ No
		Wheezes		◻ Yes ◻ No
L	Initial Work up			
	Chest X-ray: if alternative diagnosis is considered.			
	Spirometer (FEV1, FVC, FEV1/FVC) if not available do PEFR			

Section A: Ascertain degree of asthma control based on criteria in Table 2,3
Section B: Assess the further risk
Section C: Associated factors that might prevent asthma control: allergic rhinitis, GERD
Section D: History of asthma medication
Section E: Identify possible environmental triggers that need to be avoided
Section F: Clues towards exercise induced asthma
Section G: Clues towards occupational asthma or asthma worsening at work
Section H: List of medication that can worsen asthma symptoms or mimic asthma symptoms
Section I: Co-morbidities that need to be treated or ruled out besides asthma
Section K: Examination section should include signs of allergic rhinitis, eczema

The diagnosis of asthma can be suggested by using the following probability features:

Table 2. Probability of Asthma Criteria:

High Probability	Low Probability	Intermediate Features
- More than 1 of asthma symptoms (Table.1section A) - Symptoms are provoked by triggers (Table.1section.E) - Personal history of atopic disorder (Table.1section.C) - Family history of atopic disorder and/or asthma (Table.1section.J) - Wheeze heard on auscultation (Table.1section.K) - History of improvement in (symptoms/lung function) in response to adequate therapy (Table.1section.A)	- Isolated cough in the absence of wheeze or difficulty breathing - Normal findings (physically and on PFT) while symptomatic - No response to a trial of asthma therapy - Clinical features pointing to alternative diagnosis	- Contains features of both high and low probability
Start management	Refer to a specialist, within the primary health care center (PHCC) or to the hospital if no alternative diagnosis, or not sure about the cause of patients' symptoms	Trial of asthma therapy for (4-8 weeks) AND if no response or diagnosis is uncertain, THEN Refer to a specialist, within the PHCC or to the hospital

Once, the diagnosis of asthma becomes high probability, proceed to the next steps of the guideline.

Step 2 Assess Degree of Asthma Control:

The primary care physician should apply the outcome of the 4 weeks symptom control items or the score of Asthma Control Test (ACT) questionnaire to classify degree of asthma control. ACT can be answered by the patient and/or parents while waiting to be seen by the doctor. This will be helpful in the evaluation (see appendix 1). The outcome of this step is to classify patiens into controlled, partly controlled or uncontrolled Asthma.

Table 3. Assessment of asthma control in adult and children:

Asthma symptoms control	Asthma control level based on symptoms		
In the past 4 weeks has the patient had: • Daytime symptoms more than twice/ week? ☐ Yes ☐ No • Any night waking due to asthma? ☐ Yes ☐ No • Reliever used for symptoms more than twice /week? ☐ Yes ☐ No • Any limitation in activities due to Asthma? ☐ Yes ☐ No	Controlled	Partly controlled	Uncontrolled
	Number of questions answered «Yes»		
	None	1-2	3-4
ACT Score (for adults and children >5y)	≥ 20	16-19	≤15
Action based on control (refer to the steps Page 13)*	Continue the same or one step down	One step up	One or two steps up

Risk for exacerbation: (Having any of these risk factors increases the risk of exacerbation even if the patient has mild symptoms)

- Comorbid condition (chronic sinusitis, rhinitis, GERD, obesity).
- Medication: High SABA use (Dispensing ≥3x 200-dose canisters per year); inadequate ICS or no ICS use.
- Poor adherence or incorrect inhaler technique.
- Ongoing exposure to triggers (smoking, allergens if sensitized, air pollution).
- Major psychosocial problems.
- FEV1 <60%.
- On or more hospitalizations due to acute asthma in the past 12 months or two or more ED visits or systemic corticosteroid courses in the past 12 months.

* Make sure of medication adherence and proper technique before upgrading

Step 3 Set up a Management Plan:

Once diagnosis and the degree of control are ascertained, management plan should be initiated and must aim at:

a. Control asthma symptoms by achieving Asthma Control Test (ACT) score ≥ 20.

b. Maintain normal daily and exercise activities on minimal medications.

c. Minimize or prevent ED visit.

The management plan should cover the following aspects:

1. Inform patient /parents about the diagnosis.
2. Education about asthma possible triggers. (Table 1 section.E).
3. Available options of medications.
4. Proper technique of using inhaler devise, please see the link (https://www.moh.gov.sa/awarenessplateform/EducationalSeries/Pages/Howtouseseries.aspx).
5. How can the patient/parent minimize exacerbations?
6. How do patient/parent deal with worsening symptoms (action plan)?
7. How would the patient/parent communicate with the treating physician?
8. How frequent is the patient going to be seen in the clinic?

The last part in the management plan is to give the patient/ parent a chance to ask further questions.

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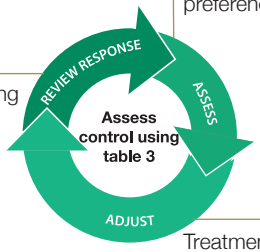
Step 4 Prescribe Appropriate Asthma Medications:

Adults & Children ≥ 6 years

Confirmation of diagnosis if necessary, symptom control & modifiable risk factors, comorbidities, inhaler technique & adherence, Patient preference & goals

Symptoms, Exacerbations, Side-effects, Lung function, Patient satisfaction



Treatment of modifiable risk factors & comorbidities, Non-pharmacological strategies, Education & skills training, Asthma medications adjustment

Asthma severity steps	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
PREFERED CONTROLLER To prevent exacerbations and control symptoms	As-needed low dose ICS-formoterol (for Adults & Adolescents ≥12 years)	Daily low dose ICS, or as-needed low dose ICS-formoterol (for Adults & Adolescents ≥12 years)	Low dose ICS-LABA	Medium dose ICS-LABA	• High dose ICS-LABA, or • Medium dose ICS-LABA + tiotropium, or • Medium dose ICS-LABA + LTRA and Refer to a Specialist
OTHER CONTROLLER OPTIONS	As-needed SABA with low dose ICS taken whenever is SABA taken	Leukotriene receptor antagonist (LTRA)	• Medium dose ICS, or • Low dose ICS+LTRA	• High dose ICS • Medium dose ICS+tiotropium • Medium dose ICS+LTRA	
Releiver Options	As-needed low dose ICS-formoterol* only if ICS-formoterol is used as maintenance therapy				
	As-needed short-acting B_2 - agonist (SABA)				

*The maximum recommended dose of formoterol is 72 mcg per day
ICS: inhaled corticosteroids, LABA: long acting beta-agonist. Modified from GINA 2020

Asthma management in Children ≤ 5 years

A. Assess control using asthma symptoms control questions in Table 3.

B. Treatment:

1. If asthma is uncontrolled or partly controlled start with low dose ICS such as fluticasone propionate 50-100 mcg/day or budesonide nebuliziation 250-500 mcg/day. Alternatively, LTRA 4 mg/day (granules in ≥6 months or chewable tablets in ≥2 years) may be used in partly controlled children.

2. If still not well controlled after 3 months, double the ICS dose or add LTRA.

3. If still not well controlled after 3 months refer to a specialist, or earlier if necessary.

There is not enough data on most ICS in this age group. Also, LABAs are not approved for this age group.

Table 4. Low, medium and high dose of inhaled corticosteroic

Adults and adolescents inhaled corticosteroid	Total daily ICS dose (mcg)		
	Low	Medium	High
Beclomethasone dipropionate (MDI, standard particles, HFA)	200-500	>500-1000	>1000
Beclomethasone dipropionate (MDI, extrafine particle, HFA)	100-200	>200-400	>400
Budesonide (DPI)	200-400	>400-800	>800
Ciclesonide (MDI, HFA)	80-160	>160-320	>320
Fluticasone furoate (DPI)	100		200
Fluticasone propionate (MDI, HFA) and (DPI)	100-250	>250-500	>500
Mometasone furoate (DPI)	200		400
Mometasone furoate (MDI,HFA)	200-400		400

Children 6-11 years inhaled corticosteroid	Total daily ICS dose (mcg)		
	Low	Medium	High
Beclomethasone dipropionate (pMDI, standard particles HFA)	100-200	>200-400	>400
Beclomethasone dipropionate (pMDI, extrafine particle, HFA)	50-100	>100-200	>200
Budesonide (DPI)	100-200	>200-400	>400
Budesonide (Nebules)	250-500	>500-1000	>1000
Ciclesonide (MDI, HFA)	80	>80-160	>160
Fluticasone furoate (DPI)	50		Not Applicable
Fluticasone propionate (MDI, HFA) and (DPI)	50-100	>100-200	>200
Mometasone furoate (MDI,HFA)	100		200

Low dose ICS provides most of the clinical benefit for most patients. However, ICS responsiveness varies between patients, so some patients may need **medium dose ICS** if asthma is uncontrolled despite good adherence and correct inhaler technique with low dose ICS.
High dose ICS is needed by very few patients, and its long-term use is associated with an increased risk of local and systemic side-effects.
This is not a table of equivalence, but of estimated clinical comparability, based on available studies and product information.

Step 5 Perform Patient/Parent Education:

- The patient or parents should understand the nature of asthma as a chronic disease that requires close monitoring, and great degree of compliance with medical instructions.
- The patient or parents have to be instructed clearly on how to use his/her asthma medications,importance of adherence and appropriate technique.
- It is necessary that the patient or parents demonstrate appropriate technique of using his inhalers prior to leaving the clinic.
- The patient or parents should be educated in how to use self-management plan (see Appendix 4).
- The patient or parents should be encouraged to avoid exposure to triggers. Complete avoidance of environmental tobacco smoke is strongly recommended (Box 1).

(Box 1)

1. Environmental allergens, indoor: e.g., mold, house-dust mite, cockroach, animal dander should be avoided if patient is sensitized.
2. For dust mite sensitizations (in humid climate): Wash bed linen and blankets weekly with hot water (≥ 60 C). for cockroach sensitization use insecticides and avoid leaving food exposed overnight.
3. Exercise: Take bronchodilator inhaler before exercise.
4. Irritants: tobacco smoke. Avoid both active and passive smoking.
5. Drugs e.g., Aspirin and other NSAIDs (in patients with aspirin exacerbated respiratory disease), beta-blockers including eye drops...etc. Caution with these medication (weigh risks and benefits).
6. Food, food additives. Avoid if known to cause asthma in the patient.
7. Changes in weather, exposure to cold air or rain.

- There was an FDA boxed warning about montelukast in March 2020 regarding the risk of serious neuropsychiatric events, including suicidality in adults and children. Please discuss with patient / parent before prescribing the medication and monitor for symptoms afterwards.

Step 6 Give a Follow Up Visit:

A. The follow up frequency depends on the degree of asthma control. After starting treatment we need to see patient earlier (1-3 months) and once the patient is controlled then clinic visit every 3-6 months, pregnant women should be followed every 4-6 weeks.

B. After acute exacerbation the patient needs to be seen within one week.

C. At each follow up visit conduct the following:

1. Review ACT score and assess degree of Asthma control.
2. Adjust asthma medications if necessary.
3. Check the proper technique of how the patient is using his medication device (inhaler).
4. Assess adherence: Check the frequency of asthma therapy use in the past 2 weeks and check inhaler's counter if available.
5. Review the avoidance of exposure to triggers (Environmental control measure).
6. Check for co-morbid conditions e.g: chronic rhinosinusitis, obesity, anxiety and depression.
7. Refer whenever indicated.

Referral criteria to an asthma specialist:

Children and adults with asthma or suspected asthma should be referred to the asthma clinic for the following indications:

1. Exercise induced symptoms that are atypical or not responding to pre-treatment with bronchodilators.
2. Persistent uncontrolled asthma (Asthma severity step 5, see page 13).
3. Any risk factors for asthma related death (e.g.: ICU admission or mechanical ventilation for asthma).
4. Suspected asthma is not confirmed especially with normal pulmonary function tests.
5. Evaluation of inhalant (e.g. pollens or animal dander) sensitization to confirm the triggers and provide education regarding avoidance measures or possible immunotherapy.
6. Patient with major co-morbidity that need management by specialist.

Acute Asthma

- Asthma patient should be evaluated based on combining clinical examination and measuring flow rates (FEV1 or PEFR) as appropriate. The following table (Table 5) is used to guide the therapy in ED.

- Any Patient who has severe or life-threatening exacerbation should be immediately given the recommended medications and urgently transferred to tertiary hospital.

- Patients with anaphylaxis as the cause of acute asthma (with urticarial/ angioedema or hypotension/syncope) should receive epinephrine (1:1000) IM (0.3 mg for ≥ 30 kg or 0.15 mg for 10-30 kg) immediately.

- Thunder storms during the heavy pollination seasons (i.e. transition from winter to summer and vice versa) could lead to a significant rise in the rate of severe asthma exacerbations. On the other hand, sand storms alone usually lead to worsening of symptoms, but not severe exacerbations.

Table.5. Classification of Acute Asthma severity

	Symptoms and Signs	Initial PEF (or FEV1)	Clinical Course
Mild	- Dyspnea only with activity (assess tachypnea in young children) - No accessory muscle use - End expiratory wheezing - O_2 sat>95%	- PEF≥ 75% predicted or personal best	- Administer inhaled or nebulized SABA. Repeat if necessary
Moderate	- Dyspnea interferes with or limits usual activity - Accessory muscle use - Expiratory wheezing - O_2 sat 90%-95%	- PEF 50-74% predicted or personal best	- May require ED referral - Administer inhaled or nebulized SABA, repeat every 20 min for 1 hour - Oral systemic corticosteroids
Severe	- Dyspnea at rest; interferes with conversation - Accessory muscle use - Inspiratory/Expiratory Wheezing - O_2 sat<90%	- PEF <50% predicted or personal best	- Requires ED referral and likely hospitalization - Please refer to next section for management
Life-threatening	- Too dyspneic to speak: perspiring - Drowsy or confused - Silent chest	- PEF < 25% predicted or personal best	- Requires ED/ hospitalization and likely ICU - Please refer to next section for management

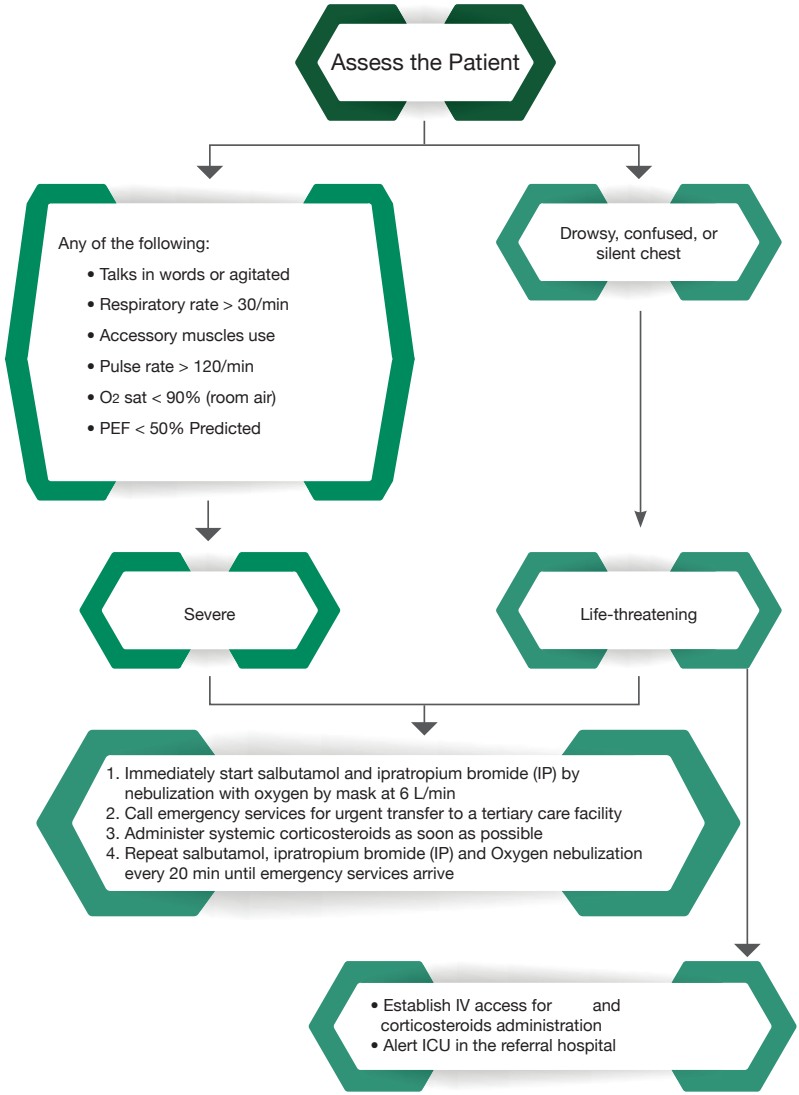
Table.6. Medication Doses in Acute Asthma

Medication	Child dose	Adult dose
Oxygen	Low-flow oxygen is recommended to maintain saturation ≥94%	Low-flow oxygen is recommended to maintain saturation ≥93% Providing 28% oxygen is better than 100% oxygen
Salbutamol Nebulizer solution	2.5 mg/dose if ≤20 kg body weight 5 mg/dose if >20 kg body weight	5 mg/dose
- MDI (100 mcg/Puff)	4 Puffs/dose ≤20 kg 8 Puffs/dose >20 kg	8 Puffs/dose
Ipratropium bromide		
- Nebulizer solution	0.25 mg/dose	0.5 mg/dose
- MDI (18 mcg/Puff)	4 Puffs/dose	8 Puffs/dose
- Prednisone (PO) - Prednisolone (PO) - Methylprednisolone (IV)	1- 2 mg/kg (max. 40 mg/ day) for 5 days	50 mg /day for 5 days It is recommended to be started as soon as possible, preferably within 1 hour of presentation in moderate or severe asthma exacerbation It is usually not necessary to taper the dose unless the duration exceeded 2 weeks

Acute Asthma patients with the following history are at increased risk of death:

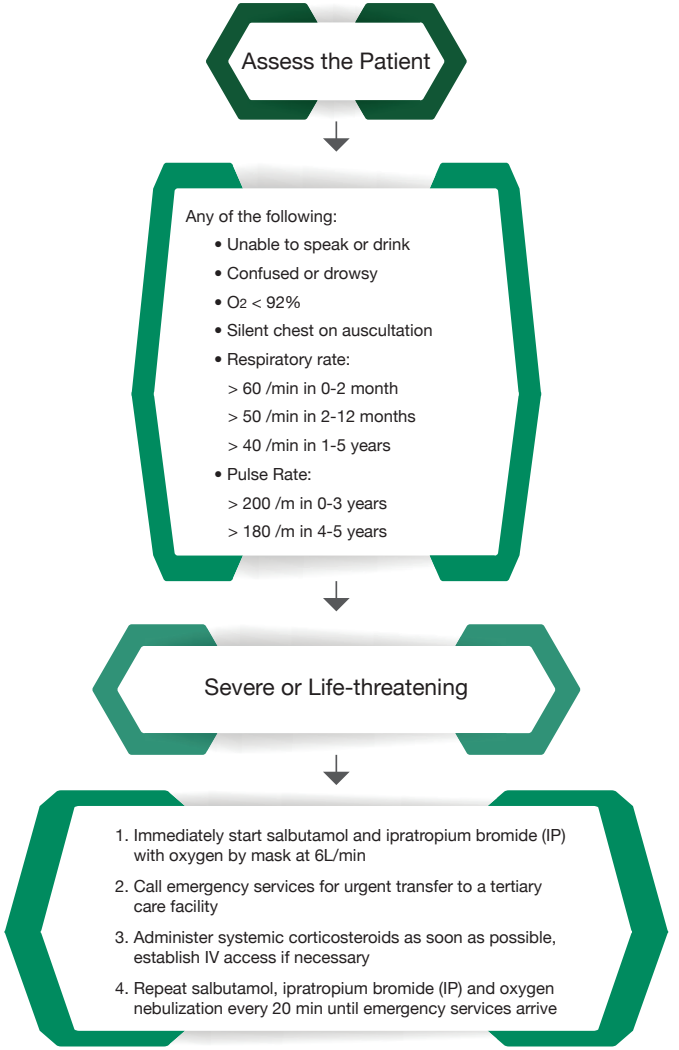
- Previous intubation or ICU admission.
- Two or more hospitalizations or more than 3 ED visits in the past year.
- Use of > 1 canister of SABA/month.
- Current use or recent stopping of chronic oral glucocorticoids.
- Major psychosocial problems or psychiatric disease.

1 Management of Severe and Life-Threatening Acute Asthma in the Primary Care Setting (Adults and Children ≥6 years)



• For medication doses please refer to Table 6 in the previous section

2 Management of Severe and Life-Threatening Acute Asthma in the Primary Care Setting (Children ≤5 years)



• For medication doses please refer to Table 6 in the previous section

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1. Global Initiative for Asthma (GINA): global strategy for asthma management and prevention. 2020 update.
2. Global Initiative for Asthma (GINA): pocket guidelines. 2020 update.
3. Saudi Initiative for Asthma (SINA): Saudi Thoracic Society (STS). 2019.
4. Expert panel report 3: guidelines for the diagnosis and management of asthma. Bethesda, MD: National Heart, Lung, and Blood Institute; 2007. Aug, (NIH publication no 07-4051).

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Date _____ Patient Name _____ DOB _____ MRN _____

Appendix

Asthma Control Test (ACT) for children over 12 years and adults

1. Answer each question and write the answer number in the box to the right of each question.
2. Add your answers and write your total score in the box shown below.
3. Discuss the score with your healthcare provider.

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

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

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

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

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

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

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

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

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

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

TOTAL

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Asthma Control Test (ACT) for children 5-12 years

Have your child complete these questions.

SCORE

1. How is your asthma today?

2. How much of a problem is your asthma when you run, exercise or play sports?

3. Do you cough because of your asthma?

4. Do you wake up during the night because of your asthma?

Parent: Please complete the following questions on your own

5. During the last 4 weeks, how many days did your child have any daytime asthma symptoms?

5	4	3	2	1	0	
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

6. During the last 4 weeks, how many days did your child wheeze during the day because of asthma?

5	4	3	2	1	0	
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

7. During the last 4 weeks, how many days did your child wake up during the night because of asthma?

5	4	3	2	1	0	
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

TOTAL

How to take the Childhood Asthma Control Test

Step 1: Let your child respond to the first four questions (1 to 4). If your child needs help reading or understanding the question, you may help, but let your child select the response.

Complete the remaining three questions (5 to 7) on your own and without letting your child's response influence your answers. There are no right or wrong answers.

Step 2: Write the number of each answer in the score box provided.

Step 3: Add up each score box for the total.

Step 4: Take the test to the doctor to talk about your child's total score.

What does my child's score mean?

15 or less	16 to 19	20 or more
Poorly-controlled asthma	Partly controlled	Well-controlled asthma

اختبار التحكم بالربو (ACT) في مرحلة الطفولة للأطفال بعمر (5-12) سنة

الهدف من الاختبار: معرفة إذا كانت خطة علاج الربو عند طفلك تسير على ما يرام، أم أن هناك حاجة للتغيير.

كيفية إجراء اختبار التحكم بالربو في مرحلة الطفولة:

1. دع طفلك يجيب عن الأسئلة الأربعة الأولى (1-4). إذا احتاج طفلك مساعدة في قراءة السؤال أو فهمه، يمكنك مساعدته، لكن أترك له فرصة اختيار الإجابة ثم أكمل الأسئلة الثلاثة الباقية (5-7) بنفسك، ولا تدع إجابات طفلك تؤثر على إجاباتك. ليس هناك إجابات صحيحة أو خاطئة.
2. دون رقم كل إجابة في المربع المخصص للدرجة.
3. أضف النقاط في كل مربع إلى المجموع الكلي.
4. خذ الاختبار إلى الطبيب ليحدثك عن سجل النقاط الإجمالي للطفل.

على الطفل الإجابة على الأسئلة التالية:

اختبار التحكم بالربو				الدرجة
١- كيف هي حالة الربو لديك اليوم؟				
				
جيدة جداً	جيدة	سيئة	سيئة جداً	
3	2	1	0	
٢- ما هو حجم المشكلة التي يسببها لك الربو عندما تجري أو تمارس الرياضة؟				
				
ليست مشكلة	مشكلة بسيطة، ولكن لا بأس	إنها مشكلة، ولا أحب ممارستها	مشكلة كبيرة، لا أستطيع القيام بما أريد	
3	2	1	0	
٣- هل تسعل (تكح) بسبب الربو؟				
				
لا، أبداً	نعم، أحياناً	نعم، معظم الوقت	نعم، طيلة الوقت	
3	2	1	0	
٤- هل تستيقظ أثناء الليل بسبب الربو؟				
				
لا، أبداً	نعم، أحياناً	نعم، معظم الوقت	نعم، دائماً	
3	2	1	0	

للوالدين: من فضلك ، أكمل بنفسك الأسئلة الآتية:

اختبار التحكم بالربو						الدرجة
1- خلال الأسابيع الأربعة الأخيرة، بالمتوسط، كم يوم في الشهر ظهرت أعراض الربو لدى طفلك في وقت النهار؟						
كل يوم	(19-24) يوماً في الشهر	(11-18) يوماً في الشهر	(4-10) أيام في الشهر	(1-3) أيام في الشهر	لم تظهر أعراض مطلقاً	
0	1	2	3	4	5	
2- خلال الأسابيع الأربعة الماضية، بالمتوسط، كم يوم في الشهر ظهر لدى طفلك صفير (وزيز) بسبب الربو في وقت النهار؟						
كل يوم	(19-24) يوماً في الشهر	(11-18) يوماً في الشهر	(4-10) أيام في الشهر	(1-3) أيام في الشهر	لم تظهر أعراض مطلقاً	
0	1	2	3	4	5	
3- خلال الأسابيع الأربعة الماضية، بالمتوسط، كم يوم في الشهر استيقظ طفلك أثناء الليل بسبب الربو؟						
كل يوم	(19-24) يوماً في الشهر	(11-18) يوماً في الشهر	(4-10) أيام في الشهر	(1-3) أيام في الشهر	لم تظهر أعراض مطلقاً	
0	1	2	3	4	5	
المجموع						

إذا كانت النتيجة (19 أو أقل) ، فماذا تعني؟

- إذا كانت نتيجة طفلك (19 أو أقل) ، فقد تكون علامة على عدم التحكم بالربو.
- احجز موعداً لمقابلة الطبيب ومناقشة النتيجة.
- اسأل فيما إذا كان من الواجب تغيير خطة العلاج.
- اسأل الطبيب عن الأدوية اليومية مديدة المفعول، التي يمكن أن تساعد في التحكم بحالة الالتهاب والتضيق في الشعب الهوائية، وهما السببان الأساسيان في حدوث أعراض الربو.
- يحتاج معظم الأطفال علاجاً يومياً لهذين السببين للتحكم بالربو بصورة أفضل.

كيفية إجراء اختبار التحكم بالربو للبالغين والأطفال أكبر من 12 سنة:

1. اكتب رقم كل إجابة في المربع المخصص للدرجة.
2. اجمع النقاط في كل مربع إلى المجموع الكلي.
3. خذ الاختبار إلى الطبيب ليحدثك عن سجل النقاط الإجمالي ووضعك الصحي.

اختبار التحكم بالربو					الدرجة
1- خلال الأسابيع الأربعة الأخيرة، كم من الوقت منعك الربو من أداء العمل المطلوب، في مكان العمل / المدرسة والبيت؟					
طوال الوقت	معظم الوقت	بعض الوقت	قليلاً من الوقت	لم يحصل مطلقاً	
1	2	3	4	5	
2- خلال الأسابيع الأربعة الأخيرة، كم تكررت لديك صعوبة التنفس ؟					
أكثر من مرة في اليوم	مرة واحدة في اليوم	(3-6) مرات في الأسبوع	مرة أو مرتين في الأسبوع	لم يحصل مطلقاً	
1	2	3	4	5	
3- خلال الأسابيع الأربعة الأخيرة، كم مرة كانت أعراض الربو (الصفير، السعال، صعوبة النفس، ضيق الصدر، أو الألم) سبباً في استيقاظك في الليل أو أبكر من المعتاد صباحاً؟					
4 ليالي أو أكثر في الأسبوع	(2-3) ليالي في الأسبوع	مرة واحدة في الأسبوع	مرة أو مرتين في الشهر	لم يحصل مطلقاً	
1	2	3	4	5	
4- خلال الأسابيع الأربعة الأخيرة كم من مرة استعملت البخاخ الاسعافي أو جلسات البخار (مثل: فينتولين أو سيمبيكورت)؟					
3 مرات أو أكثر في اليوم	من مرة إلى مرتان في اليوم	من (2-3) مرات في الأسبوع	مرة في الأسبوع أو أقل	لم استخدمه مطلقا	
1	2	3	4	5	
5- كيف تقيم مدى تحكمك في الربو خلال الأسابيع الأربعة الأخيرة؟					
لا يوجد تحكم مطلقاً	تحكم ضعيف	تحكم إلى حد ما	تحكم جيد	تحكم تام	
1	2	3	4	5	
المجموع					

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الخطة العلاجية للربو

الحالة المستقرة:

- ممارسة الحياة بشكل طبيعي (لعب، نوم، دراسة).
- اختفاء أعراض الربو في الليل.
- استخدام البخاخ الموسع للشعب الهوائية أقل من 3 مرات في الأسبوع.
- سرعة تدفق الهواء أكثر من (80%) من المعدل الطبيعي.

الإجراء الواجب اتخاذه:

- الاستمرار على الأدوية المعطاة.
- استخدم البخاخ الواقي ..... بمعدل ..... بخة ..... مرة يوميا بشكل متنظم.
- قبل التمارين الرياضية (5-10) دقائق استخدام موسع الشعب الهوائية ..... بمعدل 2 بخة عند الحاجة.

أدوية أخرى: .....

.....

التأزم الخفيف:

- الاستيقاظ في الليل بسبب (كحة، كتمة، صفير بالصدر).
- وجود أعراض نزلة برد فيروسية.
- سرعة تدفق الهواء بين (50 - 80%) من المعدل الطبيعي.

الإجراء الواجب اتخاذه:

- استخدم البخاخ الموسع للشعب الهوائية ..... بمعدل ..... بخة كل ..... ساعات حتى تتحسن حالتك وتعود للحالة المستقرة.
- اذا لم تتحسن حالتك بعد 24 ساعة او اذا إزدادت الحالة سوء فبادر بالتواصل مع طبيبك او الذهاب للطوارىء عاجلاً.

التأزم الشديد

- عدم الاستجابة لموسع الشعب الهوائية كما سبق.
- صعوبة في الكلام او المشي.
- سرعة تدفق الهواء اقل من (50%) من المعدل الطبيعي.

الإجراء الواجب اتخاذه:

- التوجه للطوارىء أو طلب الإسعاف فورا مع أخذ جرعة إضافية من موسع الشعب الهوائية ..... بمعدل ..... بخة.


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