

تدبير الربو عند الأطفال

د. فاطمة الضمير اوي – استشارية أمراض الصدر عند الأطفال
نقابة أطباء دمشق – 21 تشرين الثاني 2024



ISAAC: phase 3 in the Syrian Arab Republic
East Mediterr Health J, 2010 Jul;16(7):710-6

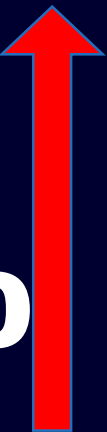
Country	Age	prevalence of asthma
Syria	6–7	5%
	13–14	5%

Prevalence of asthma indicators among adolescents in the Global Asthma Network Phase I (GAN Phase I) in Syria (2019–2020)

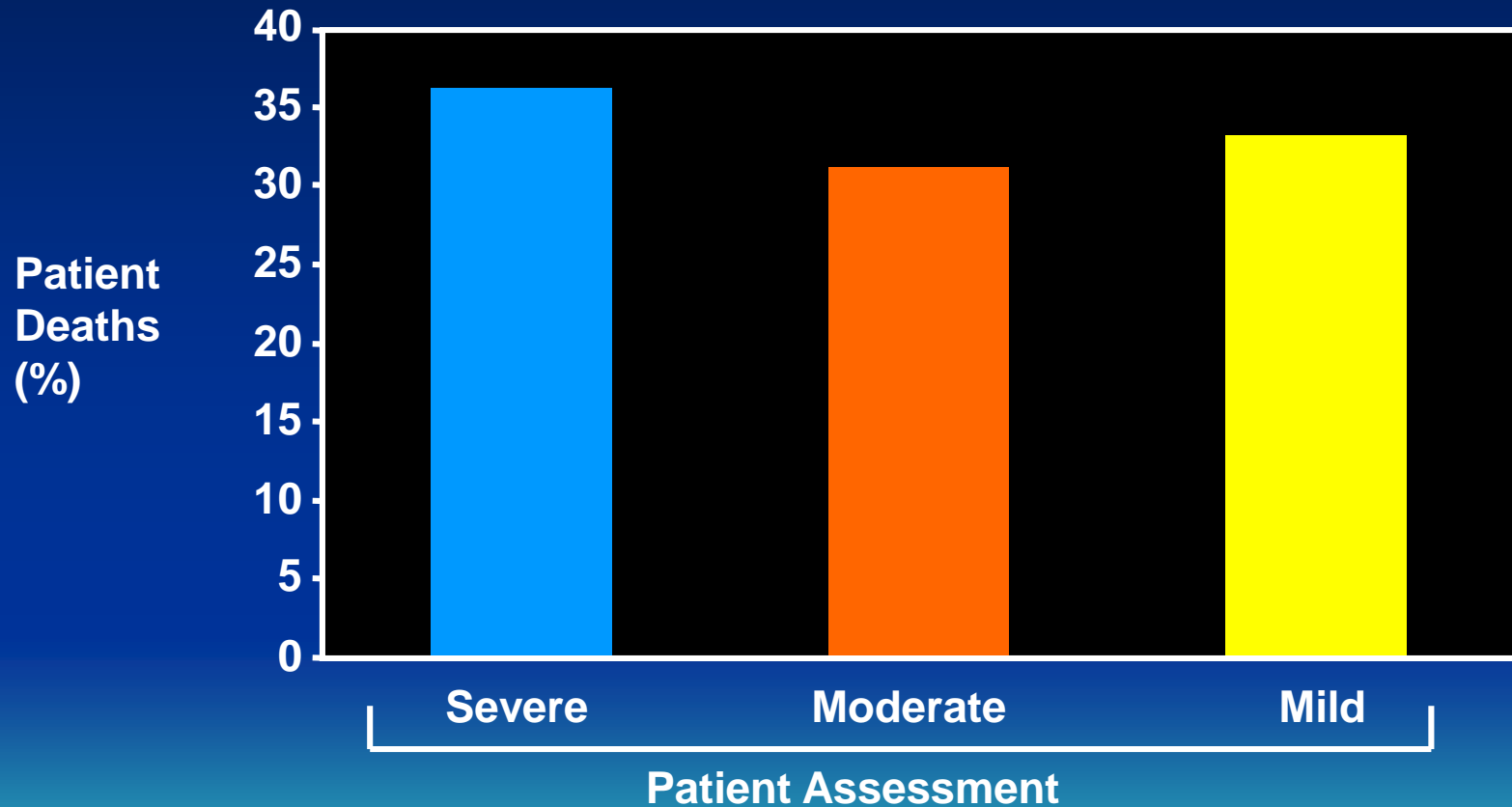
Revue des Maladies Respiratoires Volume, February 2022,



Comparison of prevalence of asthma in 2 surveys

Age year	ISAAC III Survey 2005	GAN phase I Survey 2019–2020
13–14	5%	19% 

Pediatric Asthma Deaths: Mild Patients Are Also at Risk



Findings from a cohort study reviewing all pediatric asthma-related deaths (n=51) in the Australian state of Victoria from 1986 to 1989.

Robertson et al. Pediatr Pulmonol. 1992;13:95-100.

يعتمد تدبير الربو على أربعة ركائز أساسية



تدبير الربو عند الأطفال

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graph TD; A[تدبير الربو عند الأطفال] --> B[تدبير النوبة الربوية الحادة]; A --> C[تدبير الربو كمرض مزمن];
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تدبير النوبة
الربوية
الحادة

تدبير الربو
كمرض مزمن

Categories of asthma medications

تدبير الربو بالأدوية

**Airway
Obstruction**

معالجة الانسداد

**Airway
Inflammation**

معالجة الالتهاب

**Quick relief
medication**

أدوية سريعة التأثير

**Controller &
maintenance
medication**

أدوية الضبط

أدوية سريعة التأثير

**Short-Acting inhaled
 β 2-Agonists (SABA)**

Salbutamol

Terbutaline

**Anticholinergics
(SAMA)**

**Ipratropium
bromide**

**Early short course of
oral glucocorticoids**

**Moderate or Severe
asthma
exacerbation**



Controller Medications أدوية الضبط

Inhaled glucocorticosteroids (ICS :

**Long-Acting inhaled β 2-Agonists
(LABA :Formetrol.Salmeterol.)**

ICS + LABA

Leukotrienes Modifiers

Sustained release Theophylline

Systemic Glucocorticoids

Na cromoglycate

Anti -IgE Therapy

العلاج الذكي SMART

**Maintenance-and reliever
therapy (MART)**

**ICS-formoterol inhaler every day
(maintenance dose), and also uses
the same medication as needed for
relief of asthma symptoms (reliever
doses)**

نقاط أساسية

- تأكيد التشخيص
- تحديد درجة الربو وشدته
- درجة السيطرة على الربو
- الحاجة للمعالجة المديدة
- ماهي المعالجة
- ايقاف المعالجة

ASSESSMENT OF ASTHMA Sevirety



تصنيف الربو حسب الشدة: متقطع أو مستمر

شديد مستمر	متوسط مستمر	خفيف مستمر	ربو خفيف متقطع	
طوال اليوم	كل يوم	< مرتين بالشهر لكن لاتستمر ليوم	> مرتين بالشهر	الأعراض اليومية
< مرة بالأسبوع	2-4 مرات بالشهر	1-2 مرة بالشهر	لا يوجد	أعراض ليلية
2-4 مرات باليوم	يومي, مرة باليوم	< مرتين بالأسبوع	> مرتين بالأسبوع	استخدام منبهات بيتا 2
تحديد واضح	معتدل	خفيف	لا يوجد	تأثيره على النشاط اليومي
< هجمتين احتاجت الستيرويدات خلال ال 6 أشهر الماضية أو 4 نوب وزيز خلال السنة الماضية ,يكونالربو مستمر.			0-1 مرة بالسنة	الهجمات واستخدام الستيرويدات فمويا

Global Strategy for Asthma Management and Prevention GINA(2024 update)

Stepwise management - pharmacotherapy

CONTROLLER and PREFERRED RELIEVER

(Track 1). Using ICS-formoterol as reliever reduces the risk of exacerbations compared with using a SABA reliever

STEPS 1 – 2

As-needed low dose ICS-formoterol

STEP 3

Low dose maintenance ICS-formoterol

STEP 4

Medium dose maintenance ICS-formoterol

STEP 5

Add-on LAMA
Refer for phenotypic assessment ± anti-IgE, anti-IL5/5R, anti-IL4R
Consider high dose ICS-formoterol

RELIEVER: As-needed low-dose ICS-formoterol

CONTROLLER and ALTERNATIVE RELIEVER

(Track 2). Before considering a regimen with SABA reliever, check if the patient is likely to be adherent with daily controller

STEP 1

Take ICS whenever SABA taken

STEP 2

Low dose maintenance ICS

STEP 3

Low dose maintenance ICS-LABA

STEP 4

Medium/high dose maintenance ICS-LABA

STEP 5

Add-on LAMA
Refer for phenotypic assessment ± anti-IgE, anti-IL5/5R, anti-IL4R
Consider high dose ICS-LABA

RELIEVER: As-needed short-acting β₂-agonist

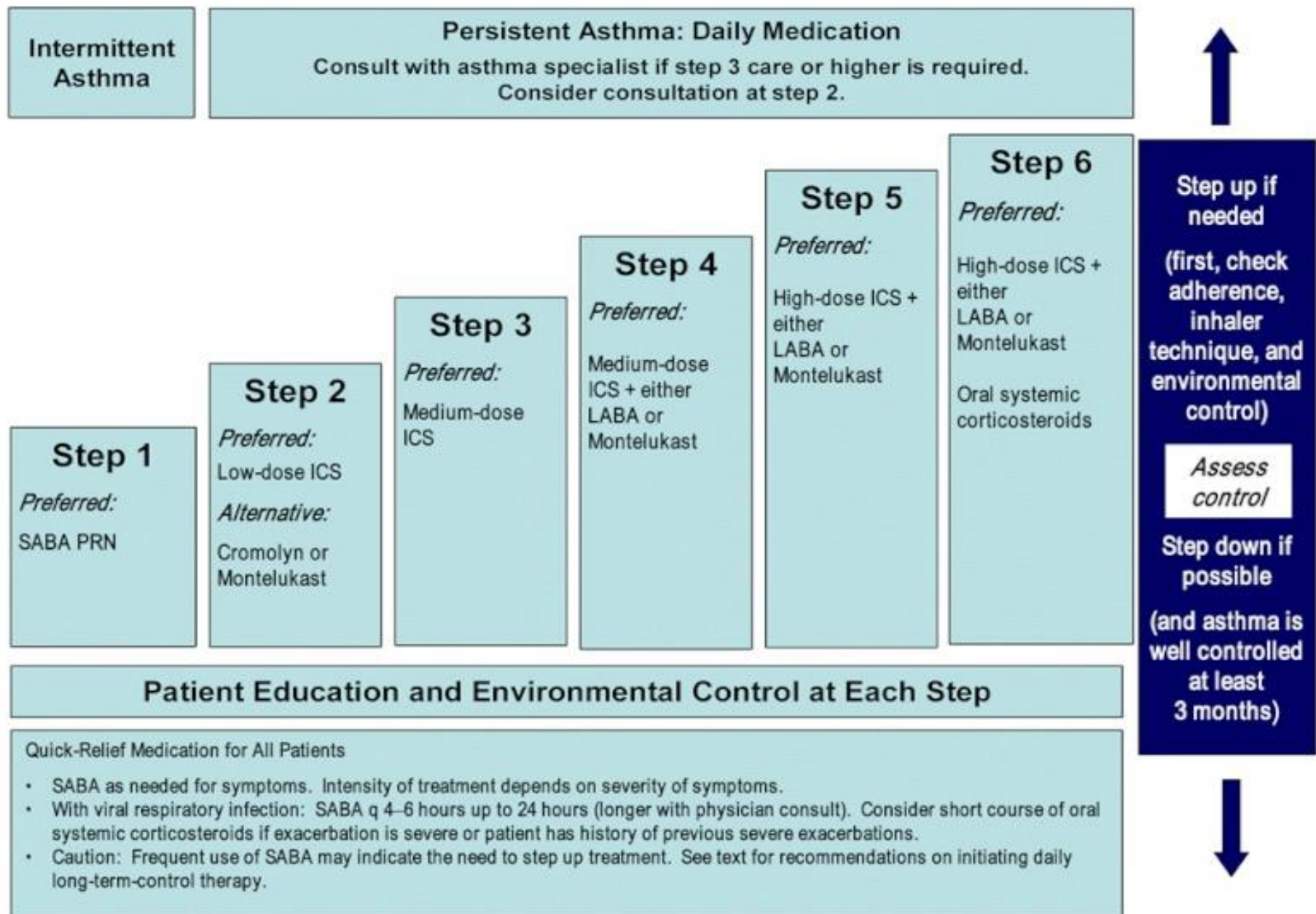
Other controller options for either track

Low dose ICS whenever SABA taken, or daily LTRA, or add HDM SLIT

Medium dose ICS, or add LTRA, or add HDM SLIT

Add LAMA or LTRA or HDM SLIT, or switch to high dose ICS

Add azithromycin (adults) or LTRA; add low dose OCS but consider side-effects

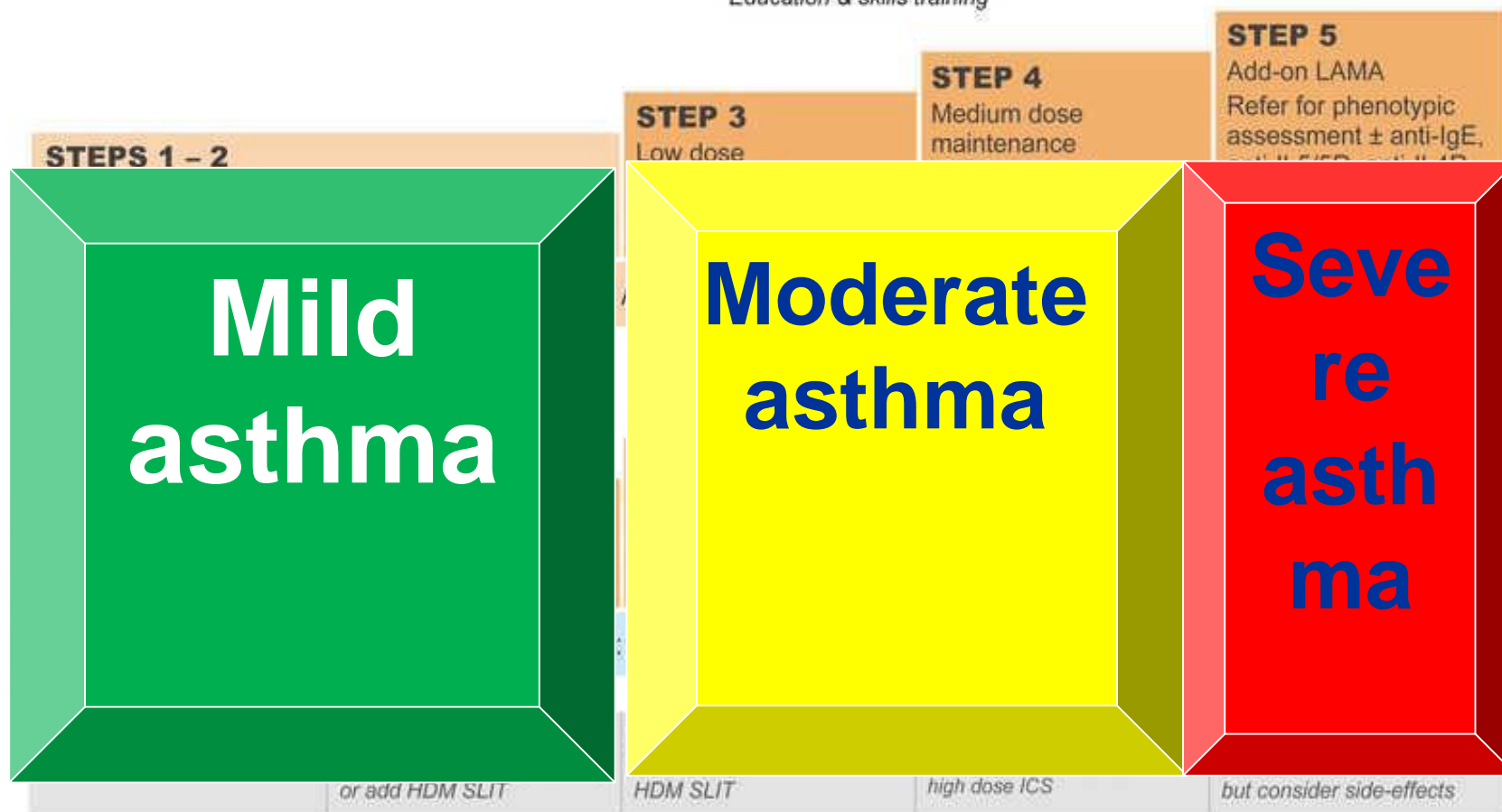


Key: Alphabetical order is used when more than one treatment option is listed within either preferred or alternative therapy. ICS, inhaled corticosteroid; LABA, inhaled long-acting beta₂-agonist; SABA, inhaled short-acting beta₂-agonist

ASSESSING ASTHMA SEVERITY

تحديد شدة الربو حسب درجة
السيطرة على المرض
ومستوى المعالجة التي تضبط
الأعراض

ASSESSMENT OF ASTHMA Severity



difficult to treat asthma

ربو لم نسيطر عليه بسبب
نقص المطاوعة وعدم الالتزام
بالعلاج أو وجود أمراض أخرى
بحاجة لتدبير



في الدول النامية محدودة الدخل

World Health Organization

**‘untreated
severe asthma’.**

هدف المعالجة

- تجنب الأعراض المزعجة ليلاً ونهاراً
- منع النوبات الخطيرة
- تقليل الحاجة لاستخدام الأدوية أو حتى بدونها
- التمتع بحياة منتجة ونشاط فيزيائي جيد
- الحصول على وظيفة رئية طبيعية أو قريبة من الطبيعي



**Initial asthma treatment -
recommended options for adults and
adolescents > 12 years**



**Initial asthma treatment for
children 6-11 years old**

symptoms/step1

الأعراض غير متواترة أقل من مرتين بالشهر
لا يوجد لدى الطقل عوامل خطورة
لم يحصل هجمات حادة خلال السنة الماضية

CONTROLLER and PREFERRED RELIEVER
(Track 1). Using ICS-formoterol as reliever reduces the risk of exacerbations compared with using a SABA reliever

CONTROLLER and ALTERNATIVE RELIEVER
(Track 2). Before considering a regimen with SABA reliever, check if the patient is likely to be adherent with daily controller

Other controller options for either track

STEPS 1 – 2

As-needed low dose ICS-formoterol

STEP 1

Take ICS whenever SABA taken

STEP 2

Low dose maintenance ICS

STEP 3

Low dose maintenance ICS-formoterol

STEP 3

Low dose maintenance ICS-LABA

STEP 4

Medium dose maintenance ICS-formoterol

STEP 4

Medium/high dose maintenance ICS-LABA

STEP 5

Add-on LAMA
Refer for phenotypic assessment ± anti-IgE, anti-IL5/5R, anti-IL4R
Consider high dose ICS-formoterol

STEP 5

Add-on LAMA
Refer for phenotypic assessment ± anti-IgE, anti-IL5/5R, anti-IL4R
Consider high dose ICS-LABA

RELIEVER: As-needed low-dose ICS-formoterol

RELIEVER: As-needed short-acting β_2 -agonist

Low dose ICS whenever SABA taken, or daily LTRA, or add HDM SLIT

Medium dose ICS, or add LTRA, or add HDM SLIT

Add LAMA or LTRA or HDM SLIT, or switch to high dose ICS

Add azithromycin (adults) or LTRA; add low dose OCS but consider side-effects

step 1- > 12years

Preferred INITIAL treatment

جرعات خفيفة من الستيروئيدات الانشاقية
مع الفورموتيرول عند اللزوم فقط
(B)

Alternative INITIAL treatment

جرعات خفيفة من الستيروئيدات الانشاقية
مع السالبيوتامول عند اللزوم فقط
(B)

step 1- children 6–11 years

Preferred INITIAL treatment

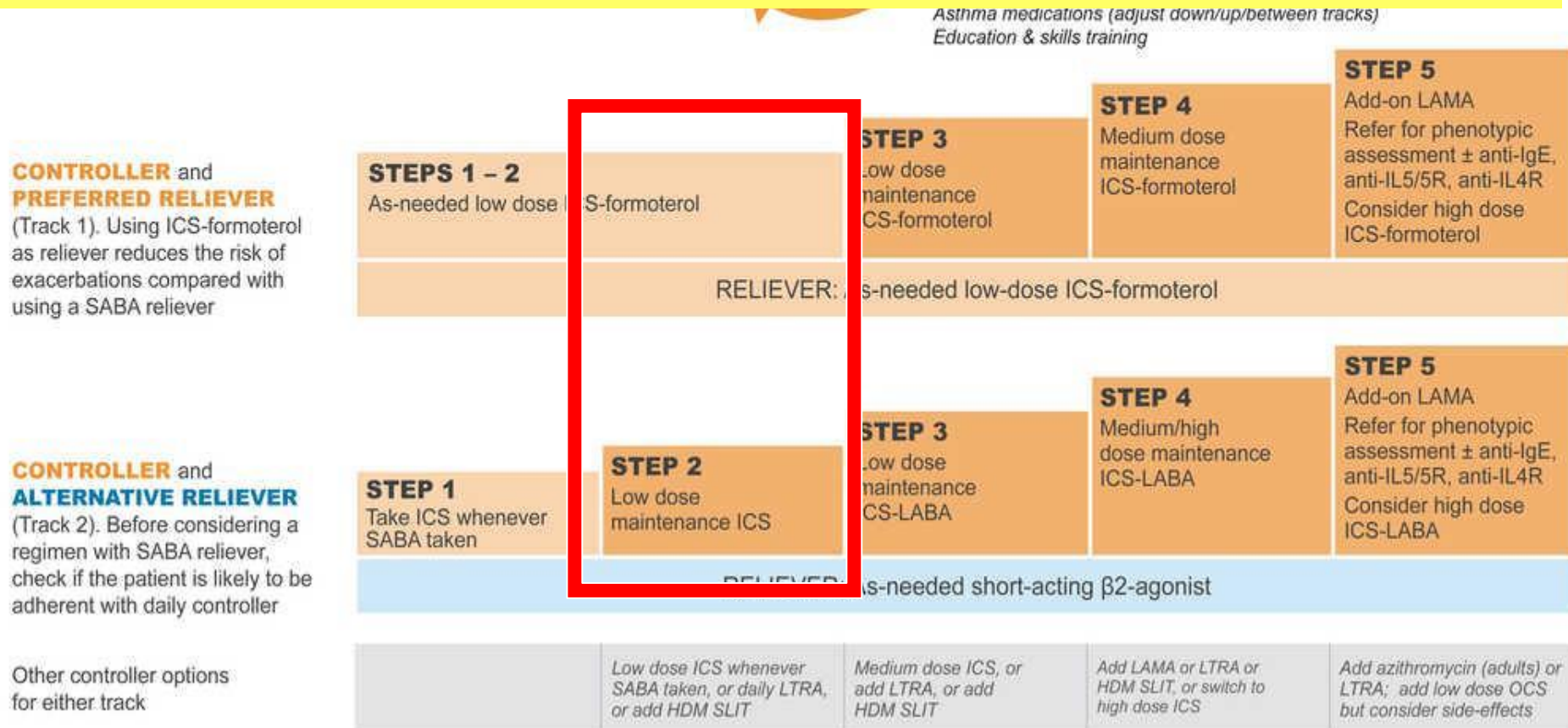
جرعات صغيرة من الستيرويدات الانشاقية
مع السالبيوتامول عند اللزوم فقط

جرعات صغيرة من الستيرويدات الانشاقية يوميا
للصيانة واستخدام السالبيوتامول عند اللزوم فقط
(Evidence B)



symptoms /step 2

الأعراض متواترة ويحتاج لاستخدام
الموسعات مرتين أو أكثر في الشهر.



step 2- > 12years

Preferred INITIAL treatment

جرعات صغيرة من الستيروئيدات الانشاقية يوميا
للصيانة واستخدام السالبيوتامول عند اللزوم فقط
(A)

أو المونتيلوكات يوميا للصيانة مع
جرعات خفيفة من الستيروئيدات الانشاقية
مع السالبيوتامول عند اللزوم فقط

step 2/ 6-12years

Preferred INITIAL treatment

ستيروئيدات انشاقية يوميا بجرعات صغيرة
واستخدام السالبيوتامول عند اللزوم
(A)

أو استخدام المونتيلوكاست يوميا للصيانة
مع استعمال الستيروئيدات الانشاقية
والسالبيوتامول عند اللزوم فقط

Moderate Asthma/step 3

أعراض متكررة 4-5 مرات بالاسبوع نهارا
أو أعراض ليلية مرة أو أكثر بالاسبوع

<p>Asthma medication options: Adjust treatment up and down for individual child's needs</p>			<p>Non-pharmacological strategies Asthma medications (adjust down or up) Education & skills training</p>		<p>STEP 5 Refer for phenotypic assessment ± higher dose ICS-LABA or add-on therapy, e.g. anti-IgE</p>
<p>PREFERRED CONTROLLER to prevent exacerbations and control symptoms</p>	<p>STEP 1 Low dose ICS taken whenever SABA taken</p>	<p>STEP 2 Daily low dose inhaled corticosteroid (ICS) (see table of ICS dose ranges for children)</p>	<p>STEP 3 Low dose ICS-LABA, OR medium dose ICS, OR very low dose* ICS-formoterol maintenance and reliever (MART)</p>	<p>STEP 4 medium dose ICS-LABA, OR low dose* ICS-formoterol maintenance and reliever therapy (MART). Refer for expert advice</p>	
<p>Other controller options</p>	<p>Consider daily low dose ICS</p>	<p>Daily leukotriene receptor antagonist (LTRA), or low dose ICS taken whenever SABA taken</p>	<p>Low dose ICS + LTRA</p>	<p>Add tiotropium or add LTRA</p>	<p>Add-on anti-IL5, or add-on low dose OCS, but consider side-effects</p>
<p>RELIEVER</p>	<p>As-needed short-acting beta2-agonist (or ICS-formoterol reliever for MART as above)</p>				

step 3- > 12years

Preferred INITIAL treatment

جرعات صغيرة من الستيرويدات الانشاقية مع
الفورموتيرول يوميا للصيانة وعند اللزوم
(MART) (Evidence A)

- Alternative INITIAL treatment
- و جرعات متوسطة من الستيرويدات القشرية يوميا
للصيانة مع استخدام السالبيوتامول عند اللزوم
 - (Evidence A)

step 3 / 6-12 years

Preferred INITIAL treatment

- جرعات متوسطة من الستيروئيدات القشرية يوميا للصيانة مع استخدام السالبوتامول عند اللزوم (Evidence A)

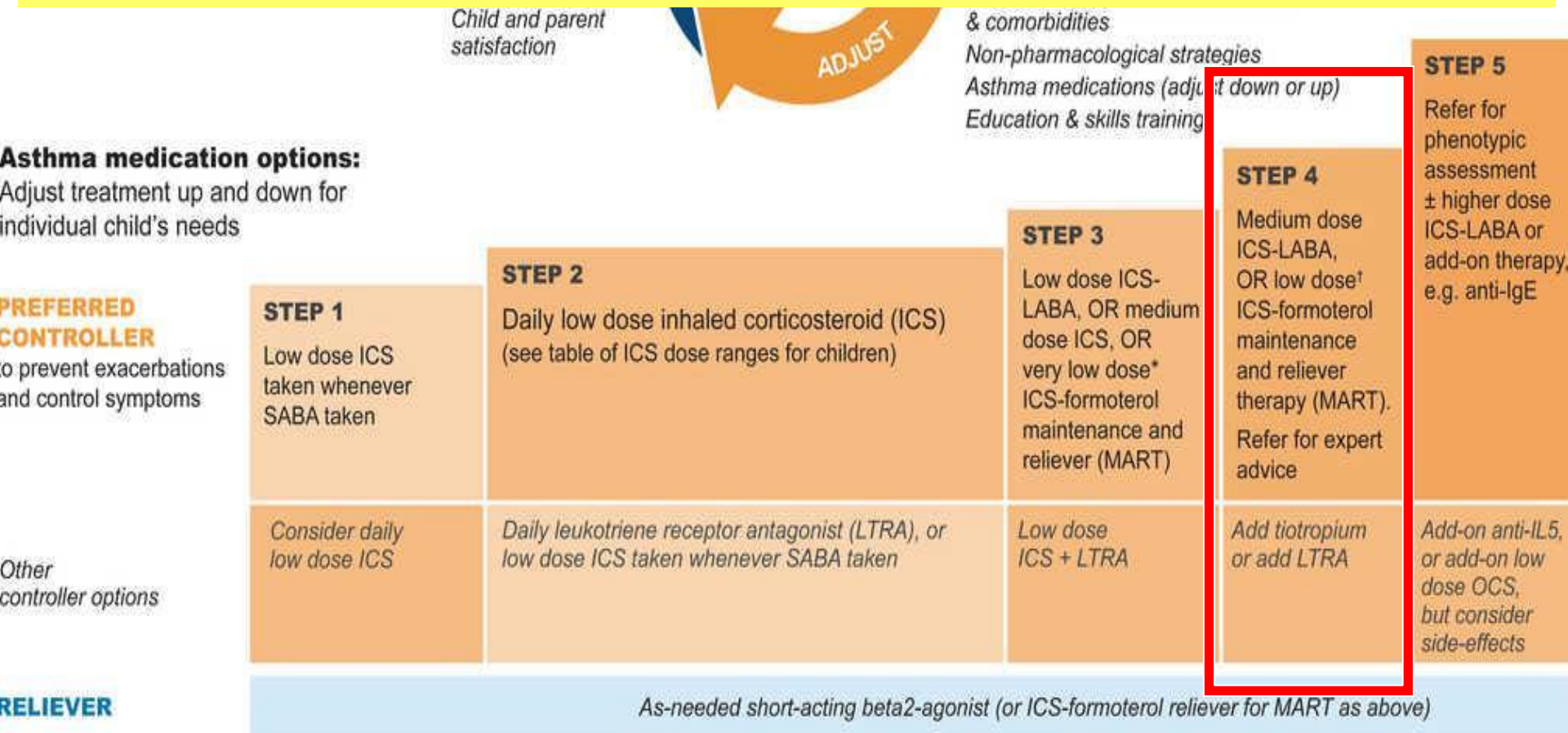
Alternative INITIAL treatment

low-dose ICS-LABA+ as-needed SABA
(Evidence A)

جرعات صغيرة من الستيروئيدات الانشافية مع الفورموتيرول يوميا للصيانة عند اللزوم (MART) (Evidence B)

symptoms/step4

أعراض شديدة غير مسيطر عليها بالجرعات الصغيرة مع هجمات متكررة



step 4- > 12years

Preferred INITIAL treatment

جرعات متوسطة من الستيروئيدات الانشاقية مع
الفورموتيرول يوميا للصيانة وعند اللزوم
(MART) (EvidenceD)

Alternative INITIAL treatment

جرعات كبيرة من الستيروئيدات الانشاقية يوميا للصيانة
(Evidence A) واستخدام السالبيوتامول عند اللزوم

adding LAMA to ICS-LABA modestly
reduced exacerbations

step 4 / 6-11years

Preferred INITIAL treatment

جرعات متوسطة من الستيروئيدات الانشاقية مع
الفورموتيرول يوميا للصيانة وعند اللزوم
(MART) (EvidenceB)

Alternative INITIAL treatment

جرعات عالي من الستيروئيدات الانشاقية مع الفورموتيرول
يومية للصيانة واستخدام السالبيوتامول عند اللزوم

Add on therapy **LAMA Tiotropium or LTRA**

add-on therapy

إضافة LAMA

ICS-LABA

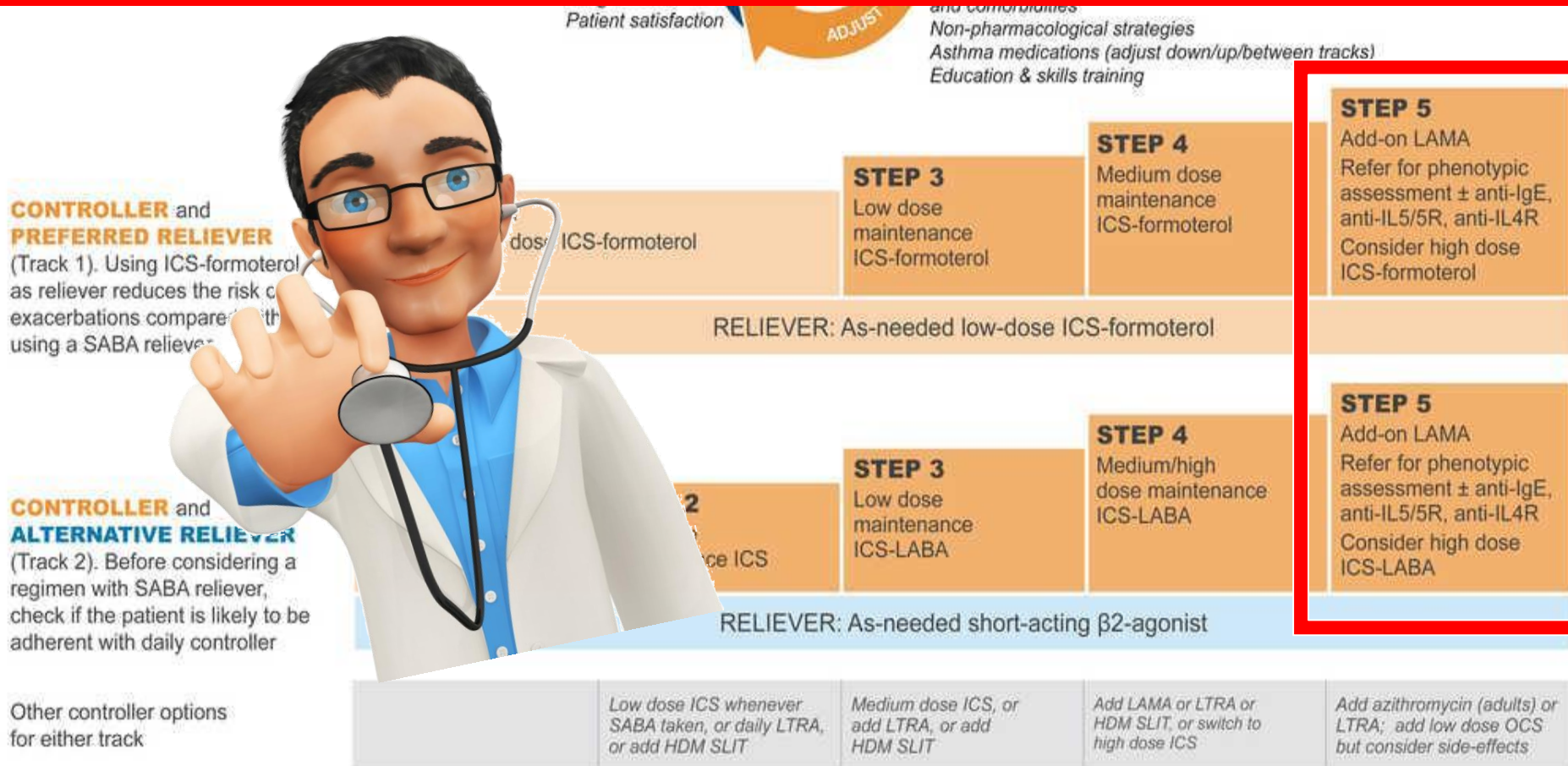
تخفف من الهجمات وتحسن
الوظيفة الرئوية

comparators

STEP 5/Severe Asthma

• لا نستطيع السيطرة على الأعراض رغم استخدام الجرعات العالية من الأدوية وضرورة الانتقال الى مستويات عالية من التشخيص والتدبير

phenotyping,



Class	Name	Age*	Asthma indication*	Other indications*
Anti-IgE	Omalizumab (SC)	≥6 years	Severe allergic asthma	Nasal polyposis, chronic spontaneous urticaria
Anti-IL5 Anti-IL5R	Mepolizumab (SC) Reslizumab (IV) Benralizumab (SC)	≥6 years ≥18 years ≥12 years	Severe eosinophilic/Type 2 asthma	Mepolizumab: EGPA, CRSwNP, hypereosinophilic syndrome
Anti-IL4R	Dupilumab (SC)	≥6 years	Severe eosinophilic/Type 2 asthma, or maintenance OCS	Moderate-severe atopic dermatitis, CRSwNP
Anti-TSLP	Tezepelumab (SC)	≥12 years	Severe asthma	

Practice points

Be attention



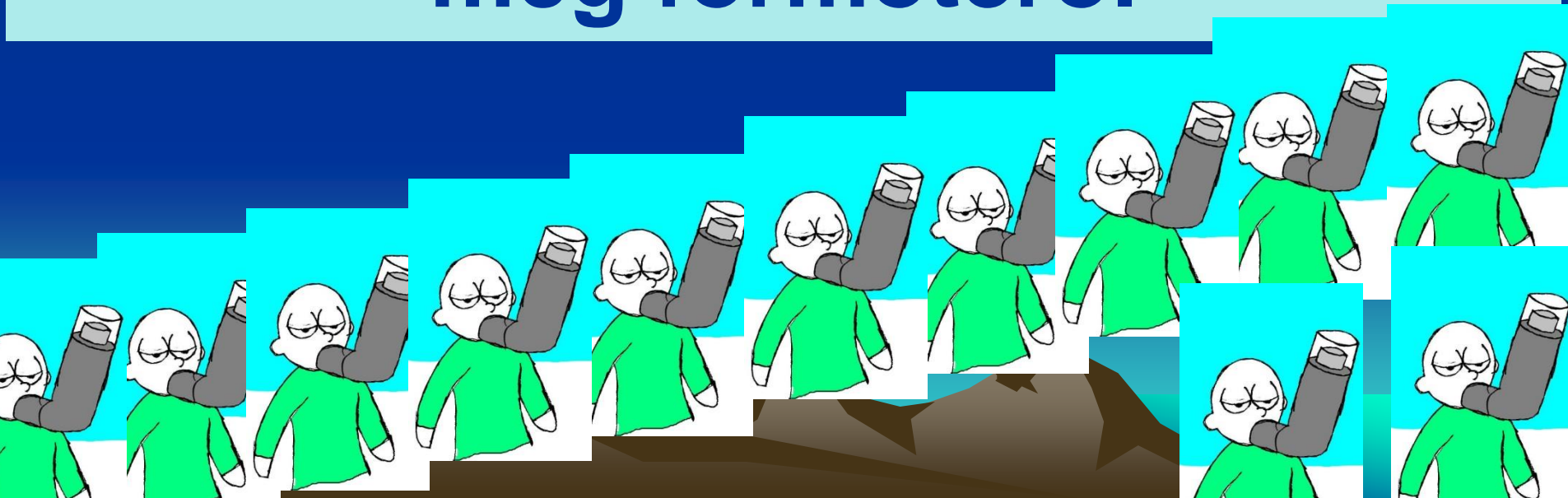
**Individual children's responses vary,
so try the other controller options
above before considering Step 4
treatment**

Practice points

The usual dose of as-needed budesonide-formoterol in mild asthma is a single inhalation of 200/6 mcg taken whenever needed for symptom relief

Practice points

the maximum recommended dose of budesonide-formoterol in a single day is a total of 72 mcg formoterol



Practice points

A maximum number of 6 as-needed doses
(each 2 puffs of 100/100 mcg budesonide-salbutamol)
can be taken





**GINA assessment of asthma control in
children 5 years and younger**

بالنسبة للأطفال دون الـ 5 سنوات
هناك اقتراح بعدم استخدام
تشخيص الربو والاستعاضة عنه بـ

Wheezing illness



Asthma Predicting Indices API

أكثر من 3 نوب وزيز/ السنة خلال ال 3 سنوات من العمر الأولى



اثنان من عوامل
الخطورة الصغرى:

- 1- التحسس الغذائي
- 2- ارتفاع الحامضات $< 4\%$
- 3- وزيز بدون انتان تنفسي

أو

واحد من عوامل
الخطورة الكبرى:

- 1- ربو عند الأهل
- 2- التهاب جلد تأتبي عند الطفل
- 3- تحسس للمؤرجات الاستشاقية

باستخدام هذا المشعر:
77% من الأطفال الذين كان المشعر ايجابيا
لديهم بعمر ال 3 سنوات استمر الربو لديهم بعمر
6-13 سنة .

بينما استمر الربو عند 3% فقط عند
المجموعة التي كان المشعر لديهم سلبيا بعمر
ال 3 سنوات .

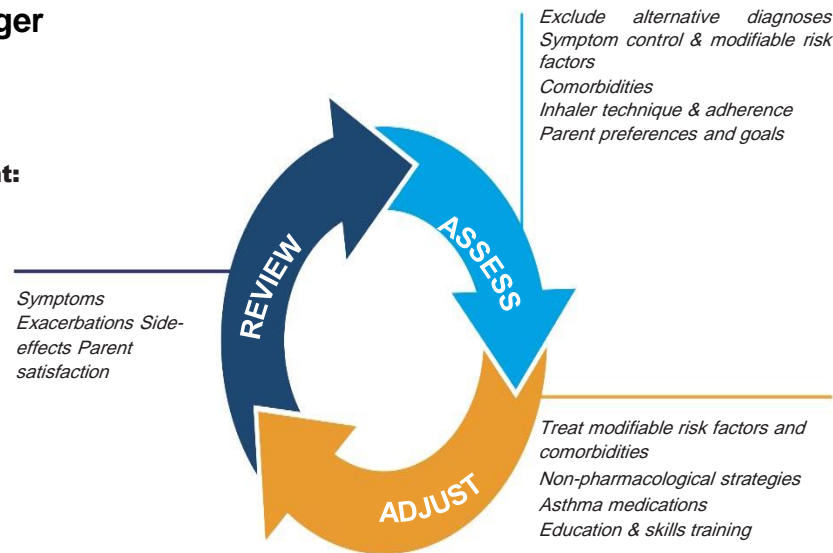
In 2003, Kurukulaaratchy *et al.* ^[17] used data from 1456 children in the Isle of Wight birth cohort to devise a scoring system based on four factors

in 2009, Caudri *et al.* ^[18] developed a clinical scoring system using data from 3963 children the Prevention and Incidence of Asthma and Mite Allergy (PIAMA) birth cohort in the Netherlands,

Children 5 years and younger

Personalized asthma management:

Assess, Adjust, Review response



Asthma medication options:

Adjust treatment up and down for individual child's needs

PREFERRED CONTROLLER CHOICE

Other controller options (limited indications, or less evidence for efficacy or safety)

RELIEVER

CONSIDER THIS STEP FOR CHILDREN WITH:

	As-needed short-acting beta ₂ -agonist			
	STEP 1	STEP 2	STEP 3	STEP 4
		Daily low dose inhaled corticosteroid (ICS) (see table of ICS dose ranges for pre-school children)	Double 'low dose' ICS	Continue controller & refer for specialist assessment
	Consider intermittent short course ICS at onset of viral illness	Daily leukotriene receptor antagonist (LTRA), or intermittent short course of ICS at onset of respiratory illness	Low dose ICS + LTRA Consider specialist referral	Add LTRA, or increase ICS frequency, or add intermittent ICS
Infrequent viral wheezing and no or few interval symptoms		Symptom pattern not consistent with asthma but wheezing episodes requiring SABA occur frequently, e.g. ≥3 per year. Give diagnostic trial for 3 months. Consider specialist referral. Symptom pattern consistent with asthma, and asthma symptoms not well-controlled or ≥3 exacerbations per year.	Asthma diagnosis, and asthma not well-controlled on low dose ICS Before stepping up, check for alternative diagnosis, check inhaler skills, review adherence and exposures	Asthma not well-controlled on double ICS

symptoms

وزيز مترافق مع الانتانات التنفسية كل شهرين تقريبا بدون هجمات حادة

Children 5 years and younger

Personalized asthma management:

Assess, Adjust, Review response

Symptom control & modifiable risk factors

Comorbidities

Inhaler technique & adherence

Parent preferences and goals

Asthma medication options:

Adjust treatment up and down for individual child's needs

PREFERRED CONTROLLER CHOICE

Other controller options (limited indications, or less evidence for efficacy or safety)

RELIEVER

CONSIDER THIS STEP FOR CHILDREN WITH:

STEP 1

Consider intermittent short course ICS at onset of viral illness

Infrequent viral wheezing and no or few interval symptoms

STEP 2

STEP 3

STEP 4

As-needed short-acting beta₂-agonist

symptoms

Symptom pattern consistent with asthma, and asthma symptoms not well-controlled or ≥ 3 exacerbations per year.

Before stepping up, check for alternative diagnosis, check inhaler skills, review adherence and exposures

symptoms

وزيز مترافق مع الانتانات التنفسية

STEP 1:

اعطاء السالبيوتامول انشاقا عند اللزوم فقط



- إذا استخدم الطفل السالبيوتامول انشاقا أكثر من مرتين بالأسبوع خلال الشهر أو حدثت لديه أكثر من 3 هجمات وزيز بالسنة دون انتان تنفسي

Asthma medication options:

Adjust treatment up and down for individual child's needs

PREFERRED CONTROLLER CHOICE

Other controller options (limited indications, or less evidence for efficacy or safety)

RELIEVER

CONSIDER THIS STEP FOR CHILDREN WITH:

STEP 1

STEP 2

Daily low dose inhaled corticosteroid (ICS)

Daily leukotriene receptor antagonist (LTRA), or (see table of ICS dose ranges for pre-school children) intermittent short course of ICS at onset of respiratory illness

As-needed SABA

Symptom pattern not consistent with asthma but wheezing episodes requiring SABA occur frequently, e.g. ≥ 3 per year. Give diagnostic trial for 3 months. Consider specialist referral.

Symptom pattern consistent with asthma, and asthma symptoms not well-controlled or ≥ 3 exacerbations per year.

STEP 3

STEP 4



Symptoms

Symptom pattern consistent with asthma, and asthma symptoms not well-controlled or ≥ 3 exacerbations per year.

Before stepping up, check for alternative diagnosis, check inhaler skills, review adherence and exposures

- **STEP 2:**

جرعات صغيرة من الستيروئيدات

الانشاقية أو المونتيلوكاست

يومية للصيانة مع إعطاء السالبوتامول

انشاقا عند اللزوم



لم نحصل على السيطرة على الأعراض بالجرعات الصغيرة. نعيد التقييم السريري وطريقة المعالجة قبل الانتقال لمرحلة أعلى.

Personalized asthma management:
Assess, Adjust, Review response

Asthma medication options:

Adjust treatment up and down for individual child's needs

PREFERRED CONTROLLER CHOICE

Other controller options
(limited indications, or less evidence for efficacy or safety)

RELIEVER

CONSIDER THIS STEP FOR CHILDREN WITH:

STEP 1		STEP 2		STEP 3		STEP 4	
				STEP 3 Double 'low dose' ICS Low dose ICS + LTRA Consider specialist referral			
				As-needed short-acting beta ₂ -agonist			
				Asthma diagnosis, and asthma not well-controlled on low dose ICS Before stepping up, check for alternative diagnosis, check inhaler skills, review adherence and exposures			

Factors
Comorbidities
Inhaler technique & adherence
Parent preferences and goals

symptoms

Symptom pattern consistent with asthma, and asthma symptoms not well-controlled or ≥3 exacerbations per year

Before stepping up, check for alternative diagnosis, check

STEP 3:

نضاعف جرعة الستيروئيدات الانشاقية أو
نضيف لها المونتيلوكاست
مع إعطاء السالبيوتامول عند اللزوم



لازالت لدينا أعراض رغم الجرعات المتوسطة من الستيروئيدات والمونتيوكاست إعادة تقييم كاملة- اختصاصي

Children 5 years and younger

Personalized asthma management:
Assess, Adjust, Review response

Exclude alternative diagnoses
Symptom control & modifiable risk factors
Comorbidities
Inhaler technique & adherence
Parent preferences and goals

Asthma medication options:

Adjust treatment up and down for individual child's needs

PREFERRED CONTROLLER CHOICE

Other controller options
(limited indications, or less
evidence for efficacy or
safety)

RELIEVER

**CONSIDER THIS STEP
FOR
CHILDREN WITH:**

STEP 1		STEP 2		STEP 3	
As-needed short-acting beta ₂ -agonist					
				Before stepping up, check inhaler skills, review	

Before stepping up, check for alternative diagnosis,
check inhaler skills, review adherence and exposures

STEP 4

Continue
controller & refer
for specialist
assessment

Add LTRA, or increase
ICS frequency, or add
intermittent ICS

Asthma not
well-controlled
on double ICS

- Other options!**
Evidence D

• Add to the regular daily ICS
are the main problem

تقييم درجة السيطرة على الربو

<i>Characteristic</i>	Controlled (All of the following)	Partly controlled (Any present in any week)	Uncontrolled
Daytime symptoms	≤ 2 / week	> 2 / week	3 or more features of partly controlled asthma present in any week
Limitations of activities	None	Any	
Nocturnal symptoms / awakening	None	Any	
Need for rescue / "reliever" treatment	≤ 2 / week	> 2 / week	
Lung function (PEF or FEV₁)	Normal	$< 80\%$ predicted or personal best (if known) on any day	
Exacerbation	None	One or more / year	1 in any week

تقييم درجة السيطرة على الربو

هل كان لدى الطفل خلال الأسابيع الأربعة الماضية أيًا مما يلي: ضبط جيد: ضبط جزئي: غير مضبوط

• أعراض خلال النهار تديم أكثر من عدة دقائق وتكرر أكثر من مرة بالأسبوع

لا ☐ نعم ☐

• هل يوجد تحدد بالنشاطات اليومية بسبب الربو (ركض، يلعب)

أقل من بقية الأطفال، يتعب بسهولة خلال المشي أو اللعب (لا واحدة) 1 - 2 منها 3 - 4 منها

لا ☐ نعم ☐

• هل هناك سعال ليلي أو استيقاظ من النوم بسبب الربو

لا ☐ نعم ☐

الحاجة إلى مقلدات 2β انشاقية قصيرة الأمد < من مرة بالأسبوع

لا ☐ نعم ☐

وسائل قياس السيطرة على الربو

Asthma Control Questionnaire (ACQ)¹ •

Asthma Control Test (ACT)² •

**Asthma Therapy Assessment
Questionnaire (ATAQ)³ •**

1. Juniper EF, et al. Eur Respir J. 1999;14:902-907. 2. Nathan RA, et al. J Allergy Clin Immunol. 2004;113:59-65. 3. Vollmer WM, et al. Am J Respir Crit Care Med. 1999;160:1647-1652.

Asthma Control Test™ (ACT)

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?

Score

All of
the time

1

Most of
the time

2

Some of
the time

3

A little of
the time

4

None of
the time

5

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

More than
once a day

1

Once
a day

2

3 to 6 times
a week

3

Once or twice
a week

4

Not at all

5

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?

4 or more
nights a week

1

2 or 3 nights
a week

2

Once
a week

3

Once
or twice

4

Not at all

5

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

3 or more
times per day

1

1 or 2 times
per day

2

2 or 3 times
per week

3

Once a week
or less

4

Not at all

5

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

Not controlled
at all

1

Poorly
controlled

2

Somewhat
controlled

3

Well
controlled

4

Completely
controlled

5

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Patient Total Score

Childhood Asthma Control Test for children 4 to 11 years old.

Know the score.

This test will provide a score that may help your doctor determine if your child's asthma treatment plan is working or if it might be time for a change.

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.

**19
or less**

If your child's score is 19 or less, it may be a sign that your child's asthma is not controlled as well as it could be. No matter what the score, bring this test to your doctor to talk about your child's results.





Have your child complete these questions.

1. How is your asthma today?

 0 Very bad	 1 Bad	 2 Good	 3 Very good
---	--	---	--

SCORE

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

 0 It's a big problem, I can't do what I want to do.	 1 It's a problem and I don't like it.	 2 It's a little problem but it's okay.	 3 It's not a problem.
--	--	---	--

3. Do you cough because of your asthma?

 0 Yes, all of the time.	 1 Yes, most of the time.	 2 Yes, some of the time.	 3 No, none of the time.
--	---	---	--

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

 0 Yes, all of the time.	 1 Yes, most of the time.	 2 Yes, some of the time.	 3 No, none of the time.
--	---	---	--

Please complete the following questions on your own.

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

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

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

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

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

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

TOTAL

Please turn this page over to see what your child's total score means.

Childhood Asthma Control Test

Questions Completed by Child

1. How is your asthma today?

SCORE



Very bad



Bad



Good



Very Good

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



It's a big problem, I can't do what I want to do.



It's a problem and I don't like it.



It's a little problem but it's okay.



It's not a problem

3. Do you cough because of your asthma?



Yes, all of the time.



Yes, most of the time.



Yes, some of the time.



No, none of the time

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



Yes, all of the time.



Yes, most of the time.



Yes, some of the time.



No, none of the time

Childhood Asthma Control Test

Questions Completed by Parent/Caregiver

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

5

Not at all

4

1-3 days/mo

3

4-10 days/mo

2

11-18 days/mo

1

19-24 days/mo

0

Everyday

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

5

Not at all

4

1-3 days/mo

3

4-10 days/mo

2

11-18 days/mo

1

19-24 days/mo

0

Everyday

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

5

Not at all

4

1-3 days/mo

3

4-10 days/mo

2

11-18 days/mo

1

19-24 days/mo

0

Everyday

TOTAL

Childhood Asthma Control Test

- **Score ≤ 19**
 - Sign of “not well controlled” asthma
 - “Step-up” therapy
- **Score ≤ 15**
 - “Very poorly controlled” asthma

RETURN TO HOME PAGE

The Childhood Asthma Test

Share your results with your doctor

For kids
under
age 5

Step 2: Write the number of your answer in the score box provided to the right of each question.

Step 3: Add up the numbers in the score box for your total score.

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

Score

1

During the past 4 weeks, how often was your child bothered by breathing problems, such as wheezing, coughing, or shortness of breath?

Not at all Once or twice Once every week 2 or 3 times a week 4 or more times a week

20 15 10 5 0

2

During the past 4 weeks, how often did your child's breathing problems (wheezing, coughing, shortness of breath) wake him or her up at night?

Not at all Once or twice Once every week 2 or 3 times a week 4 or more times a week

20 15 10 5 0

3

During the past 4 weeks, to what extent did your child's breathing problems, such as wheezing, coughing, or shortness of breath, interfere with his or her ability to play, go to school, or engage in usual activities that a child should be doing at his or her age?

Not at all Slightly Moderately Quite a lot Extremely

20 15 10 5 0

4

During the past 3 months, how often did you need to treat your child's breathing problems (wheezing, coughing, shortness of breath) with rescue or quick-relief medications (albuterol, Ventolin®, Proventil®, Maxair®, proAIR®, Xopenex®, or Primatene Mist®)?

Not at all Once or twice Once every week 2 or 3 times a week 4 or more times a week

20 15 10 5 0

5

During the past 12 months, how often did your child need to take oral corticosteroids (prednisone®, prednisolone®, Orapred®, Prelone®, or Decadron®) for breathing problems not controlled by other medications?

Never Once Twice 3 times 4 or more times

20 15 10 5 0

Total

*Control means your child's breathing problems are not getting in the way of everyday activities.Please see reverse side for an explanation of
what your child's total TRACK score means.

Stepwise management



تخفيض العلاج:

يخفض الكورتيكوستيروئيد كل 3 شهور
وتخفض الجرعة تقريبا 25-50% كل مرة.
مع المراقبة كل 4-6 أسابيع.

العلاج

الأعراض

توازن

الجرعة اليومية المنخفضة من الستيروئيدات الانشاقية للأطفال بعمر 5 سنوات وأقل.

الجرعة المنخفضة مكغ/يوم	اسم الدواء
100	بكلوميثازون ديبروبيونات
200 500	بديزونيد بالبخاخات مع الحجيرة بديزونيد بجهاز ارذاذ
100	HFA فلوتيكازون بروبيونات
160	سيسليسونيد
لا تتوفر دراسات لسلامة استعماله دون 4سنوات	موميتازون فلورات
لا تتوفر دراسات لسلامة استعماله بهذا العمر	تريامسينولون أسيتونيد

Beclomethasone HFA 40 or 80 mcg/puff

	Child 0 to 4	Child 5 to 11
Low daily dose	NA:	<u>80-160 mcg/day</u> 40 mcg/puff – 1 to 2 puffs 2/ day
Medium daily dose	NA:	<u>160-320 mcg/day</u> 80 mcg/puff - 1 to 2 puffs twice per day
High daily dose	NA:	<u>480-640mcg/day</u> 80 mcg/puff - 3 to 4 puffs twice per day

Budesonide DPI* 90 or 180 mcg/inhalation

	Child 0 to 4	Child 5 to 11
Low daily dose	NA:	<u>180-360mcg/day</u> 90 mcg/inhalation - 1 to 2 inhalations twice / day
Medium daily dose	NA:	<u>360-720mcg/ day</u> 180 mcg/inhalation - 1 to 2 inhalations twice / day
High daily dose	NA:	<u>1080-1440mcg/ day</u> 180 mcg/inhalation - 3 to 4 inhalations twice / day

Budesonide nebulization suspension 0.25 mg/2 mL, 0.5 mg/2 mL, or 1 mg/2 mL		
	Child 0 to 4	Child 5 to 11
Low daily dose	0.25 to 0.5 mg once daily or as 2 divided doses	0.5 mg once daily or as 2 divided doses
Medium daily dose	0.75 to 1 mg once daily or as 2 or 3 divided doses	1 mg once daily or as 2 divided doses
High daily dose	1.25 to 2 mg once daily or	2 mg once daily or as 2 divided doses

Fluticasone DPI / 50, 100, or 250 mcg/inhalation

	Child 0 to 4	Child 5 to 11
Low daily dose	NA:	<u>100-200mcg/ day</u> 50 mcg/inhalation - 1 to 2 inhalations twice per day
Medium daily dose	NA:	<u>300-400mcg/ day</u> *100 mcg/inhalation – 1 inh in AM & 2 inh in PM to 2 inhalations 2/day
High daily dose	NA:	<u>500mcg/ day</u> *100 mcg/inhalation – 2 inh in AM and 3 in PM *250 mcg/inha– 1 inh 2/day

**Asthma treatment is not
“set and forget”,
and not just medication**



الآثار الجانبية للعلاجات

الربوية

**Adverse effects of
asthma
medications
in children**



أجهزة الاستنشاق





تدبير الربو عند الأطفال :

ابدأ العلاج حسب تقييمك لدرجة شدة الربو عند الطفل

و راقب الاستجابة على المعالجة

وتابع في حال السيطرة على المعالجة.

أعد التقييم في حال عدم حدوث الاستجابة للعلاج أو
نقص الاستجابة.

تثقيف وتعليم

نسيطر على الربو

بالعمل بشكل متكامل بين الطبيب
والطفل وعائلته لتجهيز خطة
تدبير شخصية للربو، مكتوبة،
عملية، ومناسبة طبيًا ودون
أعراض جانبية.

وَشَكَرًا

لِاصْغَائِكُمْ