Asthma: diagnosis and chronic management in children ≤11 years

Key Facts

- Asthma in children can be challenging to diagnose and requires careful history of previous treatments for respiratory symptoms.
- Children who are usually well and ONLY wheeze when they have a viral illness should NOT be diagnosed with asthma. They have viral wheeze. Inhaled short acting beta-agonists (salbutamol) may help.

Clinical Presentation

Breathlessness, wheeze, chest tightness, or cough that is:

- ✓ Worse at night and early morning or with a viral infection
- ✓ Comes with/after exercise
- ✓ Comes with allergen exposure or cold air.

Investigation

- ✓ A good history is more important than any test. Focus on the features above (Xrays and blood tests only helpful if another condition suspected)
- ✓ Spirometry is the gold standard for diagnosis, but rarely necessary and currently not available in Kijabe.
- ✓ Trial of treatment with SABA (as needed) and 8 weeks of inhaled steroids can be used to confirm the diagnosis.

Management

Transfer patient to Casualty if features of Asthma exacerbation: unstable vitals, patient can't complete sentences, difficulty in breathing with use of accessory muscles.

Management of chronic stable asthma

See attached GINA 2021 stepwise management figures on page 2 and 3 for children under 5 years and 6-11 years respectively.

- ✓ Seek OPD consultant advice before escalating to step 3.
- ✓ A spacer device should **always** be used with an aerosol/MDI inhaler. Children under 10 years cannot coordinate their breathing well enough to use any other device. Use a bottle if they can't afford spacer.
- ✓ Check inhaler/spacer technique before escalating to the next step (see separate protocol on 'Inhaler technique in asthma and COPD').
- ✓ Check and prescribe recommended inhaler doses in mcg and NOT in puffs only.

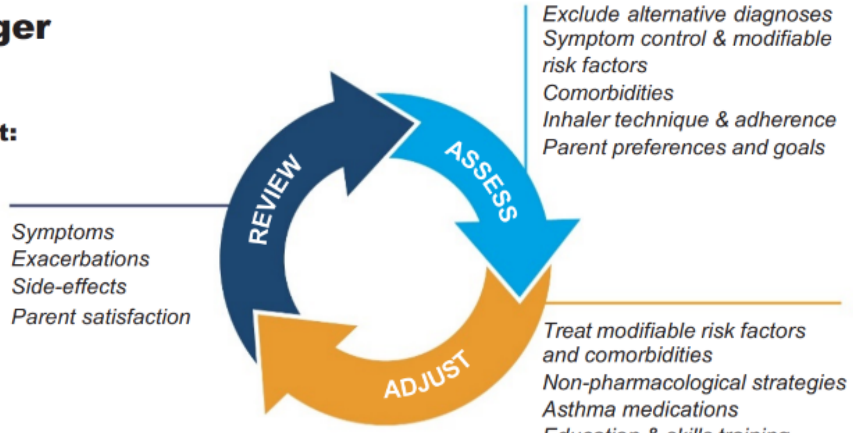
References:

2019 Primary Care International COPD Clinical Guide

Global Initiative for Asthma (GINA) 2021 Guideline

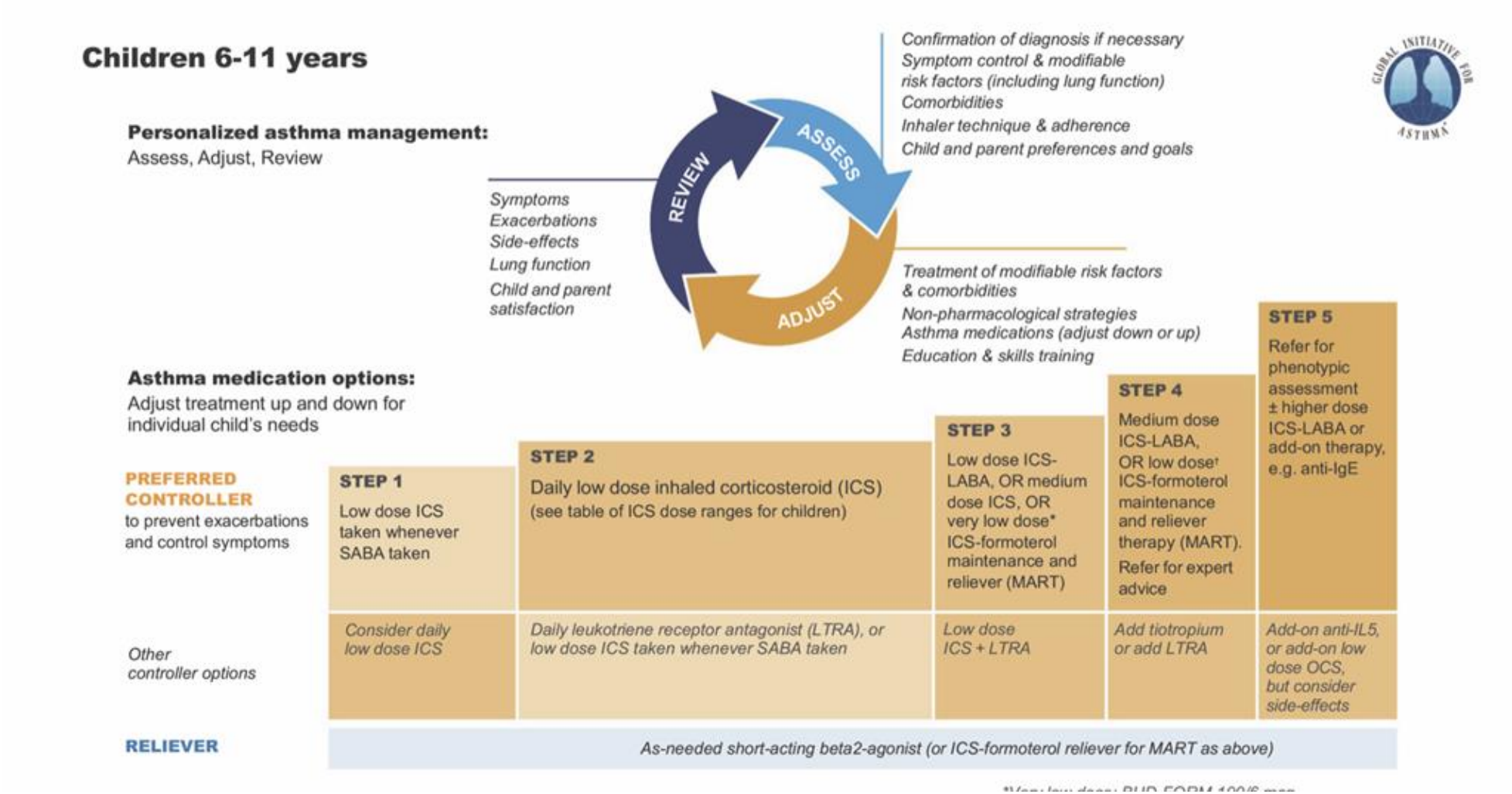
Children 5 years and younger

Personalized asthma management:
Assess, Adjust, Review response



Asthma medication options:
Adjust treatment up and down for individual child's needs

	STEP 1	STEP 2	STEP 3	STEP 4
PREFERRED CONTROLLER CHOICE		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
Other controller options		*Daily leukotriene receptor antagonist (LTRA), or intermittent short courses of ICS at onset of respiratory illness*	*Low dose ICS + LTRA Consider specialist referral*	*Add LTRA, or increase ICS frequency, or add intermittent ICS*
RELIEVER	*As-needed short-acting β_2-agonist*			
CONSIDER THIS STEP FOR CHILDREN WITH:	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


Children 6-11 years
Personalized asthma management:
Assess, Adjust, Review
Confirmation of diagnosis if necessary
Symptom control & modifiable risk factors (including lung function)
Comorbidities
Inhaler technique & adherence
Child and parent preferences and goals
ASSESS
ADJUST
REVIEW
Symptoms
Exacerbations
Side-effects
Lung function
Child and parent satisfaction
Treatment of modifiable risk factors & comorbidities
Non-pharmacological strategies
Asthma medications (adjust down or up)
Education & skills training
Asthma medication options:
Adjust treatment up and down for individual child's needs
PREFERRED CONTROLLER
to prevent exacerbations and control symptoms
STEP 1
Low dose ICS taken whenever SABA taken
STEP 2
Daily low dose inhaled corticosteroid (ICS)
(see table of ICS dose ranges for children)
STEP 3
Low dose ICS-LABA, OR medium dose ICS, OR very low dose* ICS-formoterol maintenance and reliever (MART)
STEP 4
Medium dose ICS-LABA, OR low dose† ICS-formoterol maintenance and reliever therapy (MART).
Refer for expert advice
STEP 5
Refer for phenotypic assessment ± higher dose ICS-LABA or add-on therapy, e.g. anti-IgE
Other controller options
Consider daily low dose ICS
Daily leukotriene receptor antagonist (LTRA), or low dose ICS taken whenever SABA taken
Low dose ICS + LTRA
Add tiotropium or add LTRA
Add-on anti-IL5, or add-on low dose OCS, but consider side-effects
RELIEVER
As-needed short-acting beta2-agonist (or ICS-formoterol reliever for MART as above)