

TREATMENT OF CHRONIC ASTHMA



By :

Dr.Rashida Amir

(Paeds Depart.BBH)

Components of Optimal Asthma Management

- 1) Regular Assessment & Monitoring
- 2) Control Of Factors Contributing To Asthma Severity
- 3) Asthma Pharmacotherapy
- 4) Patient Education

1. Regular Assessment & Monitoring

■ To determine :

frequency of asthma symptoms

frequency of “rescue” SABA medication use

no & severity of asthma exacerbations

participation in activities



■ Asthma checkups :

every 2-4 wks until good control is achieved

2-4 checkups/yr to maintain good control

■ Lung Function Monitoring :

spirometry (at least annually)

2. Control of Factors Contributing to Asthma Severity

❖ Eliminate & Reduce Problematic Environmental Exposures :



- tobacco smoke
- allergens (pets , pests , dust mites , cockroaches , molds)
- airway irritants (wood / coal smoke , dust perfumes , chemical ,

❖ Treat co-morbid conditions :

- Rhinitis
- Sinusitis
- Gastroesophageal reflux



❖ Annual Influenza Vaccination :
(unless egg-allergic)



3. Asthma Pharmacotherapy

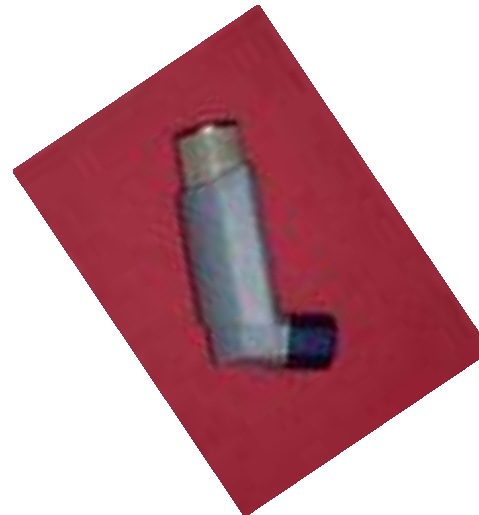
- A. Quick-Reliever “Rescue” Medications
- B. Long-Term Controller “Daily” Medications

A. Quick-Reliever “Rescue” Medications

- i. Short-acting inhaled B-agonists (SABA) :
albuterol ; levabuterol ; terbutaline ;
pirbuterol
- ii. Anticholinergic agents :
ipratropium bromide
- iii. Short-acting systemic corticosteroids

Modes of Delivery / Use :

- ❑ _ MDI (metered – dose inhaler)
- ❑ DPI (dry powder inhaler)
- ❑ Nebulizers
- ❑ Suspension / Syp



B. Long-term Controller “ Daily” Medications

used when :

- “ Three Strikes” Rule
- children with frequent exacerbations
(2 exacerbations < 6 wks apart)

Medications

- i. ICSs (Inhaled Corticosteroids)
- ii. Systemic Corticosteroids
- iii. LABA
- iv. Leukotriene-Modifying Agents
- v. NSAIDs
- vi. Methylxanthines
- vii. Anti - IGE



i. ICSs (Inhaled Corticosteroids)

- 05 approved ICSs by FDA
- adverse effects :
 - oral candidiasis (thrush)
 - due to mucosal irritation &
 - local immunosuppression
 - dysphonia (hoarse voice)
 - due to vocal cord myopathy





ii. Systemic Corticosteroids

- prednisone
- prednisolone
- methylprednisolone

iii. LABA (Long-Acting Inhaled B-Agonists)

- Salmeterol &
- Formoterol

- Duration of effect = 12 hr

iv. Leukotriene-Modifying Agents

02 classes :

- a) leukotriene synthesis inhibitors
 - eg. Zileuton (not approved in < 12yrs)

- a) leukotriene receptor antagonists (LTRA)
 - eg. Montelukast (> 01yr of age ; OD)
Zafirlukast (> 05yrs of age ; BD)

v. NSAIDs

- cromolyn &
- nedocromil

- Dose = 2 -4 times / day


vi. Methylxanthines

- Theophylline
(phosphodiesterase inhibitor)
- alternative monotherapy controller agent
(for older children)
- adverse effects :
headache ; poor concentration ;
insomnia ; vomiting ; seizures



vii. Anti - IGE

- Omalizumab
- humanized monoclonal antibody
- > 12yrs of age
- every 2 -4 wks s/c



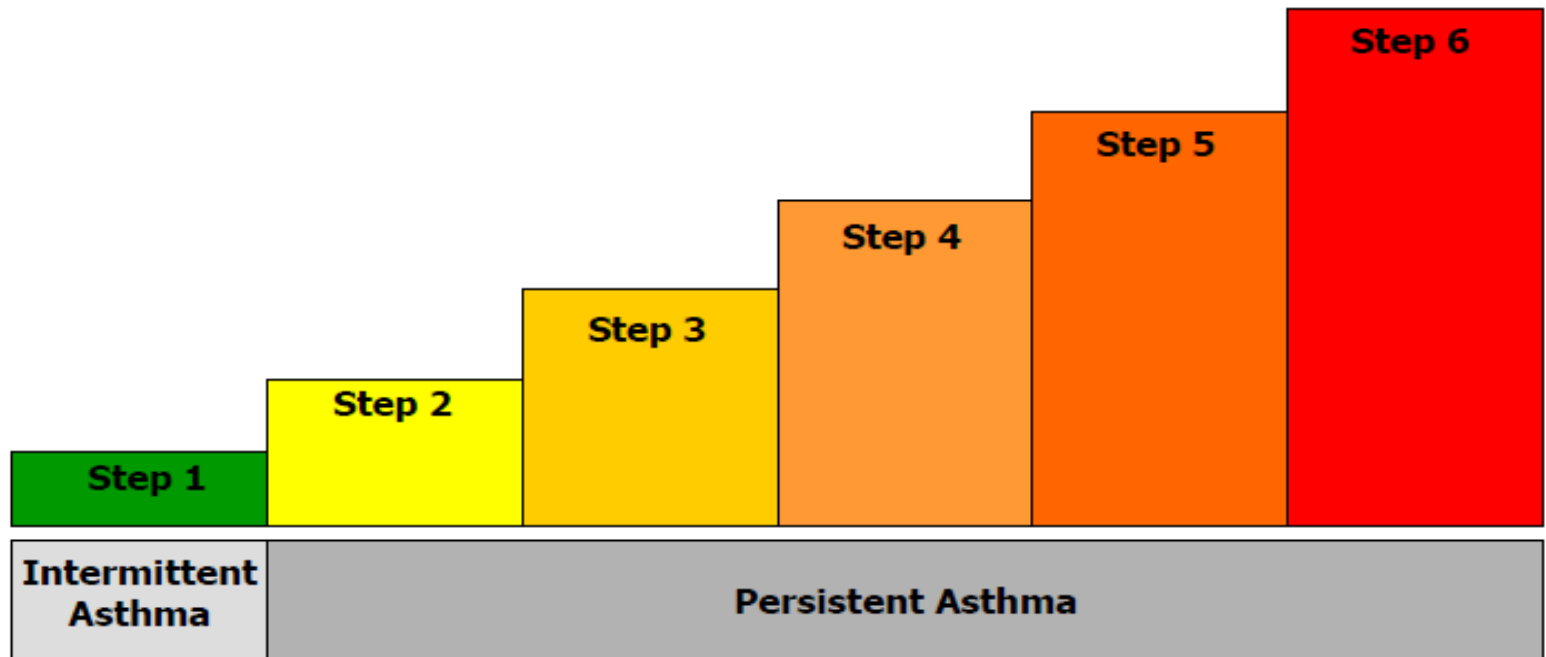
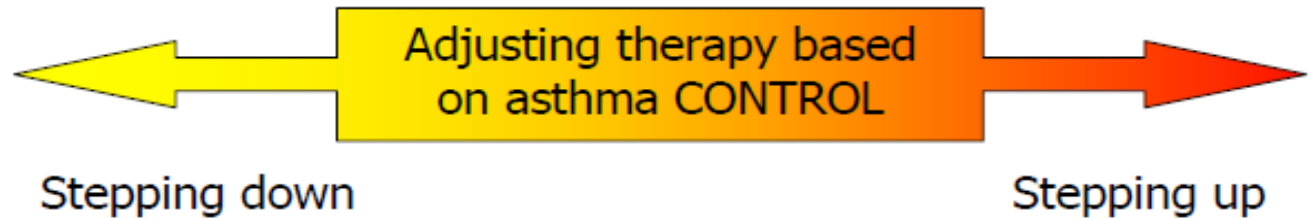
Step-wise Approach of Management

- i.e. STEP – UP ; STEP – DOWN
- Based on asthma severity

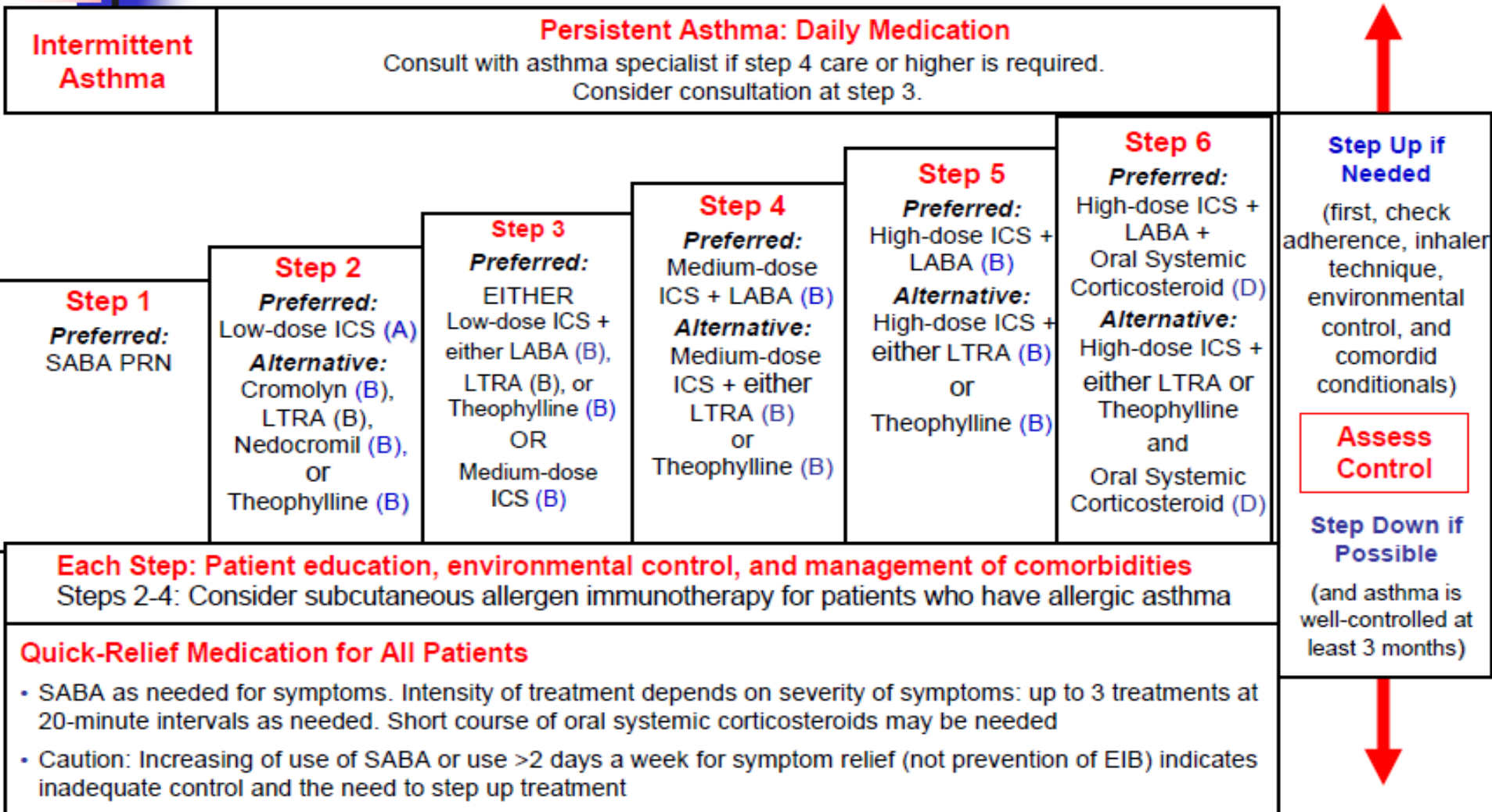
Classification of Asthma Severity

classification	step	Days with symptoms	Nights with symptoms
Severe persistent	4	continual	frequent
Moderate persistent	3	daily	> 1 / wk
Mild persistent	2	➤ 2 / wk but < 1 time/day	> 2 /month
Mild intermittent	1	< 2 / wk	< 2 /month

Asthma Treatment




Stepwise Approach for Managing Asthma in Children 5-11 Years of Age



4. Patient Education

- Specify goals of management
- explain basic facts
- address concerns
- teach / demonstrate proper technique
- investigate & manage factors contributing to asthma severity



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- written 2-part asthma management plan :
 1. Daily “ routine” management plan
 2. Action plan for asthma exacerbations

 - Regular follow-up visits
 - 2 – 4 / yr
 - monitor lung function annually

THANK YOU

