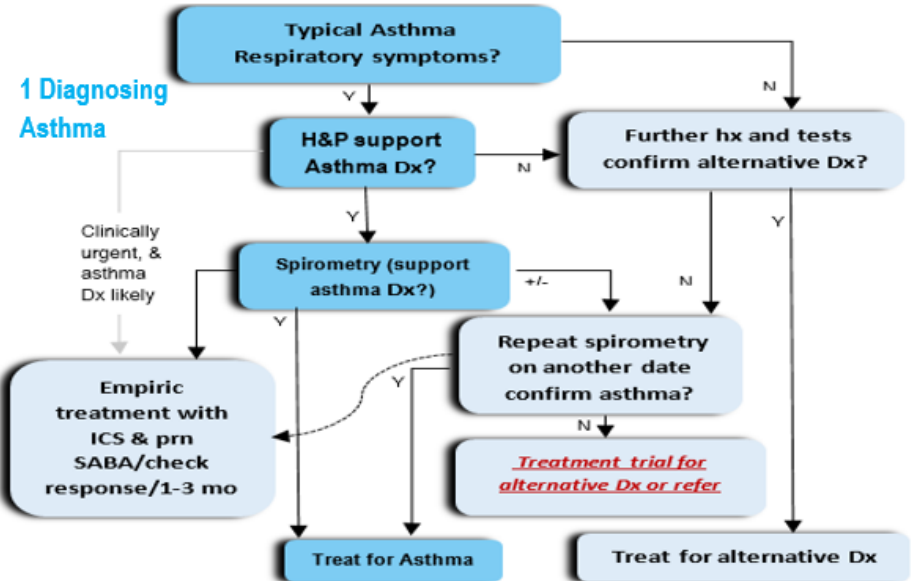
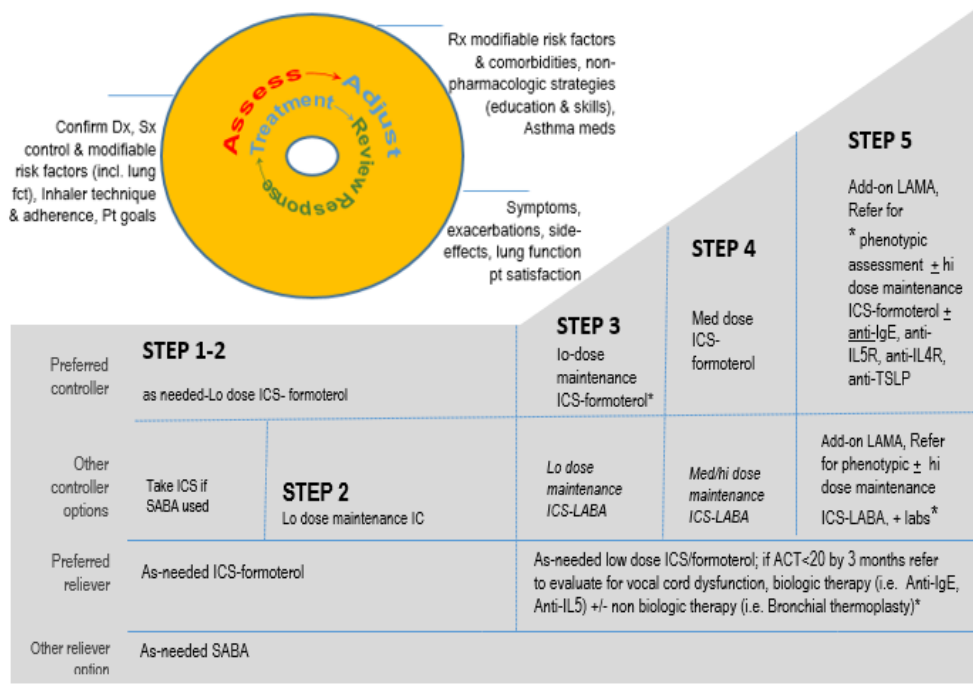


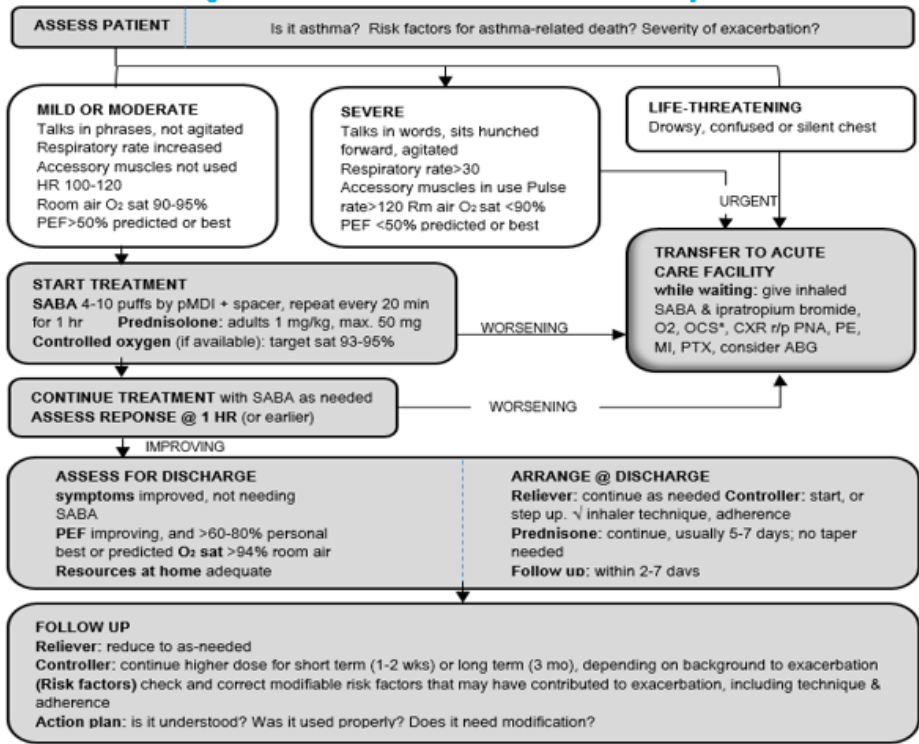


<b>BDP</b>	Beclomethasone dipropionate	<b>LAMA</b>	Long-acting muscarinic antagonist
<b>BUD</b>	Budesonide	<b>OCS</b>	Oral corticosteroid
<b>DPI</b>	Dry powdered inhaler	<b>PEF</b>	Peak expiratory flow
<b>FEV<sub>1</sub></b>	Forced expiratory volume in 1 sec	<b>pMDI</b>	Pressurized metered dose inhaler
<b>FVC</b>	Forced vital capacity	<b>SABA</b>	Short-acting β <sub>2</sub> -agonist
<b>HDM</b>	House dust mite	<b>SLIT</b>	Sublingual immunotherapy
<b>ICS</b>	Inhaled corticosteroid	<i>GINA Main Report 2022 Front Cover</i>	
<b>LABA</b>	Long-acting β <sub>2</sub> -agonist		

**2 STEPWISE APPROACH TO ASTHMA MANAGEMENT**



**3 Management of Asthma Exacerbations in Primary Care**



Consider ordering spirometry with DLCO, IgE, eosinophil count and complete radioallergosorbent test (RAST) \*

**Asthma codes:**

Intermittent	Mild	Moderate	Severe
Step 1	Step 2	Step 3	Step 4
Activity: Normal	Minor limitation	Some limitation	Extreme limitation
FEV <sub>1</sub> : normal	normal	>60 <80% predicted	<60% predicted
FEV <sub>1</sub> /FVC: normal	Normal	↓5%	↓>5%

Have patient complete Asthma Control Test (ACT) <https://www.asthma.com/additional-resources/asthma-control-test.html>

Provide guided self-management education (self-monitoring + written action plan + regular review)	Consider step up Rx for uncontrolled sx, exacerbations or risks (after recheck Dx, inhaler technique and adherence)
Treat modifiable risk factors and comorbidities, e.g. smoking, obesity, anxiety	May add SLIT in adult HDM-sensitive patients with allergic rhinitis with exacerbations despite ICS (& FEV <sub>1</sub> is >70% )
Advise non-pharmacological therapies & strategies (physical activity, weight loss, avoidance of asthma sensitizers)	Consider stepping down if sx controlled for 3 mo + low risk for exacerbations. Ceasing ICS is not advised.

In two to six weeks, evaluate level of asthma control that is achieved to adjust therapy accordingly

**ASTHMA / COPD PRESCRIPTION MEDICATION FORMULARY (Updated 2.23.23)**

MEDICATION CLASS	MEDI-CAL	MISP
Short-acting Beta <sub>2</sub> -Agonists	Albuterol meter dosed inhaler (ProAir HFA) 90 mcg/actuation Albuterol nebulizer 0.63 mg/3 mL 1.25 mg/3 mL 2.5 mg/3 mL (0.083%) 2.5 mg/0.5 mL (0.5%; concentrated, needs saline) Levalbuterol meter dosed inhaler (Xopenex HFA) 45 mcg/actuation Levalbuterol nebulizer 0.31 mg/3 mL 0.63 mg/3 mL 1.25 mg/3 mL	Albuterol sulfate HFA (ProAir) 90 mcg/actuation Albuterol sulfate neb 0.083% (2.5 mg/3 mL), Albuterol nebulizer 0.5% (2.5 mg/5 mL)
Long-acting Beta <sub>2</sub> -Agonists	Salmeterol (Serevent Diskus)	Salmeterol (Serevent Diskus)
Short-acting Anticholinergics	Ipratropium (Atrovent HFA) Ipratropium nebulizer 0.02% (2.5 mL)	Ipratropium nebulizer 0.02% (2.5 mL)
Long-acting Anticholinergics	Tiotropium (Spiriva Respimat) 1.25 mcg/actuation; 2.5 mcg/actuation	Tiotropium 18 mcg capsule (Spiriva Handihaler) – <i>FDA approved for COPD</i>
Short-acting Anticholinergics /Short-acting Beta <sub>2</sub> -Agonists Combination	Ipratropium/Albuterol meter dosed inhaler (Combivent Respimat) Ipratropium bromide 20 mcg/albuterol (base) 100 mcg per inhalation Ipratropium/Albuterol nebulizer 0.5 mg/3 mg per 3 mL	
<b>Inhaled Corticosteroids</b>		
<i>Low-dose:</i> beclomethasone HFA (Qvar HFA) 80 mcg-240 mcg/day, fluticasone HFA (Flovent HFA) 88-264 mcg/day, fluticasone DPI (Flovent Diskus) 100-300 mcg/day, mometasone DPI (Asmanex Twisthaler) 220 mcg/day <i>Medium-dose:</i> beclomethasone HFA (Qvar HFA) 240 mcg-480 mcg/day, fluticasone HFA (Flovent HFA) 220-440 mcg/day, fluticasone DPI (Flovent Diskus) 300-500 mcg/day, mometasone DPI (Asmanex Twisthaler) 440 mcg/day <i>High-dose:</i> beclomethasone HFA (Qvar) > 480 mcg/day, flunisolide HFA (Aerospan HFA) >640 mcg/day, fluticasone HFA (Flovent HFA) >440 mcg/day, fluticasone DPI (Flovent Diskus) >500 mcg/day, mometasone DPI (Asmanex Twisthaler) >440 mcg/day		
Inhaled Corticosteroids	Asmanex HFA (50, 100, 200 mcg) Asmanex Twisthaler (110, 220 mcg) Flovent HFA (44, 110, 220 mcg) Flovent Diskus (50, 100, 250 mcg)	Pulmicort Flexhaler (90, 180 mcg) Pulmicort Nebulizer (0.25 mg/2 mL, 0.5 mg/2 mL; 1 mg/2 mL) Qvar RediHaler (40, 80 mcg)
Corticosteroid / Long-acting Beta <sub>2</sub> -agonists Combination	Advair Diskus Advair HFA Anoro Ellipta	Breo Ellipta Dulera Symbicort
Systemic Corticosteroids	Methylprednisolone Prednisone Prednisolone	Methylprednisolone Prednisone Prednisolone
Leukotriene Antagonists	Montelukast	Montelukast
Methylxanthines	Theophylline	