Asthma <u>Severity</u> Classification

Components of Severity		Age (years)	Intermittent	Persistent		
				Mild	Moderate	Severe
Impairment	Symptoms	All	≤2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime Awakenings	0-4	0	1-2x/month	3-4x/month	>1x/week
		≥5	≤2x/month	3-4x/month	>1x/week but not nightly	Often 7x/week
	SABA use for rescue (not EIB)	All	≤ 2 days/week	>2 days/week but not daily	Daily	Several times per day
	Interference with normal activity	All	None	Minor limitation	Some limitation	Extremely limited
	Lung Function FEV1 (predicted) or PEF (personal best)	≥5	Normal FEV1 between exacerbations; > 80%	>80%	60 - 80%	<60%
	Lung Function FEV1/FVC	5-11	>85 %	>80 %	75 -80 %	<75 %
		≥12	Normal	Normal	Reduced 5%	Reduced >5%
Risk	Exacerbations requiring systemic corticosteroids	0-4	0-1/year	≥2 exacerbations in 6 months OR ≥4 wheezing episodes/1 yr. lasting >1 day AND risk factors for persistent asthma		
		5-11				
		≥12		≥2x/year		
Recommended Step Therapy		0-4	Step 1	Step 2	Step 3 or 4	Step 5 or 6
		5-11				
		≥ 12				
		All			Consider short course of oral steroids	

Asthma <u>Control</u> Classification

Components of Severity		Age (years)	Asthma is		
			Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	0-4	≤2 days/week, but not more than 1 per day	>2 days/week or multiple times on ≤2 days/week	Throughout the day
		5-11	≤2 days/week		
		≥ 12		>2 days/week	
	Nighttime Awakenings	0-4	≤1x/month	> 1x/month	>1x/week
		5-11		≥2x/month	≥2x/week
		≥ 12	≤2x/month	1-3x/week	≥4x/week
	SABA use for rescue (not EIB)	All	>2 days/week but not daily	Daily	Several times per day
	Interference with normal activity	All	Minor limitation	Some limitation	Extremely limited
	Lung Function				
	FEV1 (predicted) or PEF (personal best)	≥5	>80%	60 - 80%	<60%
	FEV1/FVC	5-11	>80 %	75 -80 %	<75 %
	Validated questionnaire				
	ACT / ACQ / ATAQ	≥ 12	≥ 20 / ≤ 0.75 / 0	16-19 / ≥1.5 / 1-2	≤15 / n/a / 3-4
Risk	Exacerbations requiring systemic corticosteroids	0-4	0-1X/year	2-3X/year	>3X/year
		5-11		≥ 2X/year Consider severity and interval since last exacerbation	
		≥12			
Recommended Step Therapy		All	Maintain current step; reevaluate at follow-up and potentially decrease in 3 months	Step up 1 step	Step up 1-2 steps and consider short course of oral steroids

2020 Asthma Management Recommendations

		STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
		Intermittent Asthma	Persistent Asthma: Daily Meds (INCREASING STEP NUMBERS = INCREASES TREATMENT REGIMEN)				
0-4 years of age	Preferred Tx	SABA PRN	Low-dose ICS	Medium-dose ICS	Medium-dose ICS + LABA	High-Dose ICS + LABA	High-dose ICS + LABA + Oral CS
	Alternative Tx		Montelukast or Cromolyn		Medium-dose ICS + Montelukast	High-Dose ICS + Montelukast	High-dose ICS + Montelukast + Oral CS
	Quick Relief	PRN Short Acting Beta Agonist (SABA): albuterol or levalbuterol (Use ≥ 2x / week may indicate need for step up)					
5-11 years of age	Preferred Tx	SABA PRN	Low-dose ICS	Daily and PRN Low-dose ICS-formoterol (Max 8 puffs)	Daily and PRN Medium-dose ICS-formoterol (Max 8 puffs)	High-dose ICS + LABA	High-dose ICS +LABA + Oral CS
	Alternative Tx		LTRA, Cromolyn, Nedocromil or Theophylline	Medium-dose ICS or Low-dose ICS + LABA, LTRA or Theophylline	Medium-dose ICS + LABA, LTRA, or Theophylline	High-dose ICS + LTRA or theophylline	High-dose ICS + LTRA or Theophylline + Oral CS
			Consider allergen immunotherapy for those with persistent symptoms after allergen exposure			Consider Omalizumab	
	Quick Relief	SABA PRN (Use ≥ 2x / week may indicate need for step up)					
≥12 years of age	Preferred Tx	SABA PRN	Low-dose ICS or PRN concomitant ICS	Daily and PRN Low-dose ICS-formoterol (Max 12 puffs)	Daily and PRN Medium-dose ICS-formoterol (Max 12 puffs)	Medium-dose ICS + LABA + LAMA	High-dose ICS + LABA + oral CS
	Alternative Tx		LTRA, Cromolyn, Nedocromil, Zileuton, or Theophylline	Medium-dose ICS or Low-dose ICS + LABA, LAMA, LTRA, Theophylline, or Zileuton	Medium-dose ICS + LABA, LAMA, LTRA, Theophylline, or Zileuton	Medium- dose ICS + LABA or High-dose ICS + LTRA	
			Consider allergen immunotherapy for those with persistent symptoms after allergen exposure			Consider adding asthma biologics (e.g., anti-IgE, IL5, IL5R, IL4/IL13)	

Corticosteroid – Inhaled Preparations: Asthma	Low Daily Dose	Med Daily Dose	High Daily Dose
Medication			
Beclomethasone HFA (QVAR®) 40 mcg/puff, 80 mcg/puff	0-4: NA 5-11: 80-160 mg ≥12: 80-240 mcg	0-4: NA 5-11:>160-320 mcg ≥12: >240-480 mcg	0-4: NA 5-11: >320 mcg ≥12: >480 mcg
Budesonide DPI (Pulmicort Flexhaler®;) 90 mcg/puff, 180 mcg/puff, 200 mcg/puff	0-4: NA 5-11: 180-400 mcg ≥12: 180-600 mcg	0-4: NA 5-11: >400-800 mcg ≥12: >600-1200 mcg	0-4: NA 5-11: >800 mcg ≥12: >1200 mcg
Budesonide nebulized (Pulmicort Respules) 0.25 mg, 0.5 mg, 1 mg	0-4: 0.25-0.5 mg 5-11: 0.5 mg	0-4: >0.5-1mg 5-11: 1 mg	0-4: > 1 mg 5-11: 2 mg
Ciclesonide (Alvesco®) 80 mcg/puff, 160 mcg/puff	≥12: 80- 160 mcg	≥12: >160 – 320 mcg	≥12: >320 mcg
Fluticasone HFA (Flovent® HFA) 44 mcg/puff, 110 mcg/puff, 220 mcg/puff	0-4: 176 mcg 5-11: 88-176 mcg ≥12: 88-264 mcg	0-11: 176-352 mcg ≥12: >264-440 mcg	0-11: >352 mcg ≥12: >440 mcg
Fluticasone DPI (Flovent® Diskus®) 50 mcg/puff, 100 mcg/puff	0-4: NA 5-11: 100-200mcg ≥12: 100-300 mcg	0-4: NA 5-11: >200-400 mcg ≥12: >300-500 mcg	0-4: NA 5-11: >400 mcg ≥12: 500 mcg
Mometasone DPI (Asmanex® Twisthaler®) 220 mcg/puff	4-11 : 110 mcg ≥12: 220 mcg	4-11: 110 mcg ≥12: 440 mcg	4-11: 110 mcg ≥12: >440 mcg
DPI = dry powder inhaler, HFA = hydrofluoroalkane			

LAMA: Long-acting Muscarinic Antagonists

Medication	Recommended Dosage		
	0-4 years	5-11 years	>12 years
Tiotropium (Spiriva Respimat) 1.25 mcg/actuation	SNE	≥ 6 yrs: 2 inh daily	2 inh daily
Fluticasone, umeclidinium, vilanterol (Trelegy Ellipta) 100/62.5/25 mcg; 200/62.5/25 mcg/actuation	SNE	SNE	≥ 18 yrs: 1 inh daily
Indacaterol, glycopyrrolate, mometasone Enerzair Breezhaler 150/50/160 mcg	SNE	SNE	≥ 18 yrs: 1 inh daily