

Online Table I: Acute Asthma Intensity Research Score (AAIRS) Components				
Component	Component Value			
	0	1	2	3
Retractions				
Sternocleidomastoid	No		Yes	
Intercostal	No		Yes	
Subcostal	No		Yes	
Air Entry	Normal	Decreased at bases	Widespread decrease	Absent or minimal
Wheezing	Absent	Expiratory	Inspiratory and expiratory	Audible without stethoscope or silent chest
SpO ₂	>95%	92-94%	<92%	
Expiratory Phase	Normal	Prolonged	Severely prolonged	

Severity categories by AAIRS: mild = 1 – 5; moderate = 6 – 11; severe = 12 – 16

Online Table II: Demographic and Asthma Severity Variables of participants ages 5 – 17 years with acute asthma exacerbations			
Demographic Variable	FeNO measurement availability		Overall cohort (n = 806)
	Yes (n = 436)	No (n = 370)	
Age (years)*	9.0 [7.0, 12.0]	7.0 [5.0, 9.0]	8.0 [6.0,11.0]
Sex			
Male, n (%)	261 (60)	234 (63)	495 (61)
Race, n (%)			
African-American	244 (56)	218 (59)	462 (57)
White	191 (44)	146 (39)	337 (42)
Asian	1 (0)	5 (1)	6 (1)
American Indian/Alaskan	0 (0)	1 (0)	1 (0)
Hispanic ethnicity, n (%)	28 (6)	30 (8)	58 (7)
Body Mass Index *	18.8 [16.2, 22.5]	16.7 [15.3, 19.8]	17.9 [15.5,21.8]
Type of Insurance, n (%)			
Commercial	174 (40)	132 (36)	306 (38)
TennCare/Medicaid	254 (58)	233 (63)	487 (60)
None	8 (2)	5 (1)	13 (2)
2 nd hand smoke exposure in primary residence, n (%)	173 (40)	128 (35)	301 (37)
Participant smokes cigarettes, n (%)	6 (1)	1 (0)	7 (1)
Current upper respiratory infection symptoms, n (%)	156 (36)	156 (42)	312 (39)
AAIRS *	3 [1, 6]	6 [3, 9]	5 [2,8]
% predicted FEV ₁ (n=463)* **	56 [40, 76]	42 [32, 61]	51 [36,73]
Asthma Severity Variable			
Medications in Use, n (%)			
Inhaled albuterol	356 (82)	310 (84)	666 (83)
Inhaled corticosteroid	181 (42)	162 (44)	343 (43)
Acute course of systemic corticosteroid	104 (24)	88 (24)	192 (24)
Leukotriene receptor antagonist	94 (25)	128 (29)	222 (28)
Chronic systemic corticosteroid	17 (4)	6 (2)	23 (3)
GINA control variables, n (%)			
Daytime symptoms > 2 times per week	206 (47)	171 (46)	377 (47)
Nighttime symptoms ≥ once per week	239 (55)	197 (53)	436 (54)
Limitation of activity	226 (52)	165 (45)	391 (49)
Rescue treatment ≥ 2 times per week	207 (47)	158 (43)	365 (45)
History of intensive care admission, n (%)	88 (20)	65 (18)	153 (19)

*median [interquartile range]

**463 participants (60%) provided ATS-criteria spirometry for % predicted FEV₁