



**Children's Hospital Association of Texas**  
**Safety and Quality Collaborative**  
**Asthma Management Pathway (ED and IP)**

**Asthma Scores**

**1. Pediatric Asthma Score (PAS)**

Table 1. The Pediatric Asthma Score (PAS)\*

Score	1	2	3
Respiratory rate			
2-3 years	≤34	35-39	≥40
4-5 years	≤30	31-35	≥36
6-12 years	≤26	27-30	≥31
>12 years	≤23	24-27	≥28
Oxygen requirements	>95% on room air	90% to 95% on room air	<90% on room air or on any oxygen
Auscultation	Normal breath sounds to end-expiratory wheeze only	Expiratory wheezing	Inspiratory and expiratory wheezing to diminished breath sounds
Retractions	None or intercostal	Intercostal & substernal	Intercostal, substernal and supraclavicular
Dyspnea	Speaks in sentences, coos and babbles	Speaks in partial sentences, short cry	Speaks in single words/short phrases/grunting
<b>Scoring Reference</b>			
<b>Asthma severity</b>	<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
Percent of predicted peak flow	>70%	50%-70%	<50%
Pediatric asthma score	5-7	8-11	12-15

\* Values from each category were added to compute total PAS and designation of asthma severity.

**2. Pulmonary Score (PS)**

TABLE 1. Pulmonary Index Score\*

Score	Respiratory Rate (breaths/min)	Wheezing	I:E† Ratio	Accessory Muscle Use
0	<30	None	5/2	0
1	31-45	Terminal expiration	5/3-5/4	+/-
2	46-60	Entire expiration	1/1	++
3	>60	Inspiration and expiration	<1/1	+++

\*Reprinted with permission from: Becker AB, Nelson NA, Simons ER. The pulmonary index assessment of a clinical score for asthma. Am J Dis Child. 1984; 138:574-6. Copyrighted 1984, American Medical Association.  
 †I:E = inspiratory to expiratory.

TABLE 2. Pulmonary Score

Score	Respiratory Rate (breaths/min)		Wheezing	Accessory Muscle Use—Sternocleidomastoid
	<6 Years	≥6 Years		
0	<30	<20	None	No apparent increase
1	31-45	21-35	Terminal expiration with stethoscope	Mild increase
2	46-60	36-50	Entire expiration with stethoscope	Increased
3	>60	>50	Inspiration and expiration without stethoscope	Maximal activity



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#### 3. Pediatric Respiratory Assessment Measure (PRAM)

Signs	0	1	2	3
Suprasternal retractions	Absent		Present	
Scalene muscle contraction	Absent		Present	
Air entry*	Normal	Decreased at bases	Widespread decrease	Absent/minimal
Wheezing*	Absent	Expiratory only	Inspiratory and expiratory	Audible without stethoscope/silent chest with minimal air entry
O <sub>2</sub> saturation	≥95%	92%-94%	<92%	

**Figure 1.** \*If asymmetric findings between the right and left lungs, the most severe side is rated. Reprinted from The Journal of Pediatrics, Vol. 137, Issue 6. Chalut DS, Ducharme FM, Davis GM. The Preschool Respiratory Assessment Measure (PRAM): A responsive index of acute asthma severity. Pages 762-768, Copyright © 2000, with permission from Elsevier.

#### 4. Respiratory Clinical Score

**TABLE 1—Clinical Score**

Variable	Clinical score, circle one			
	0 point	1 point	2 points	3 points
	Respiratory rate (breaths/min), Count respiratory rate for one full minute while patient is awake			
<2 months		≤60	61–69	≥70
2–12 months		≤50	51–59	≥60
1–2 years		≤40	41–44	≥45
2–3 years		≤34	35–39	≥40
4–5 years		≤30	31–35	≥36
6–12 years		≤26	27–30	≥31
>12 years		≤23	24–27	≥28
Retractions	None	Intercostal	Intercostal and substernal	Intercostal, substernal and supraclavicular
Dyspnea				
0–2 years	Normal feeding, vocalizations, and activity	1 of the following: difficulty feeding; decreased vocalization; or agitated	2 of the following: difficulty feeding; decreased vocalization; or agitated	Stops feeding, no vocalizations, or drowsy or confused
2–4 years	Normal feeding, vocalizations, and play	1 of the following: decreased appetite, increased coughing after play, hyperactivity	2 of the following: decreased appetite, increased coughing after play, hyperactivity	Stops eating or drinking, stops playing, or drowsy or confused
≥5 years	Counts to ≥10 in one breath	Counts to 7–9 one breath	Counts to 4–6 in one breath	Counts to ≤3 in one breath
Wheeze	Normal breathing; no wheezing present	End-expiratory wheeze only	Expiratory wheeze only (greater than end-expiratory wheeze)	Inspiratory and expiratory wheeze or diminished breath sounds or both



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**5. Pediatric Asthma Severity Score (PASS)**

Clinical Finding	Definition	0	1	2
Wheezing	High-pitched expiratory sound heard by auscultation	None or mild	Moderate	Severe wheezing or absent wheezing due to poor air exchange
Air entry*	Intensity of inspiratory sounds by auscultation	Normal or mildly diminished	Moderately diminished	Severely diminished
Work of breathing	Observed use of accessory muscles, retractions, or in-breathing	None or mild	Moderate	Severe
Prolongation of expiration	Ratio of duration of expiration to inspiration	Normal or mildly prolonged	Moderately prolonged	Severely prolonged
Tachypnea	Respiratory rate above normal for age	Absent	Present	
Mental status	Observation of the child's state of alertness	Normal	Depressed	

\*Not assessed separately at one of the participating EDs

**6. Clinical Respiratory Score (CRS)**

Mild  $\leq 3$  • Moderate = 4-7 • Severe = 8-12

Assess	Score 0	Score 1	Score 2
<b>Respiratory Rate</b>	<2 months <50 2-12 months <40 1-5 years <30 >5 years <20	<2 months 50-60 2-12 months 40-50 1-5 years 30-40 >5 years 20-30	<2 months >60 2-12 months >50 1-5 years >40 >5 years >30
<b>Auscultation</b>	Good air movement, expiratory scattered wheezing or loose rales/crackles	Depressed air movement, inspiratory and expiratory wheezes or rales/crackles	Diminished or absent breath sounds, severe wheezing, or rales/crackles or marked prolonged expiration
<b>Use of Accessory Muscles</b>	Mild to no use of accessory muscles, mild to no retractions <b>OR</b> nasal flaring on inspiration	Moderate intercostals retractions, mild to moderate use of accessory muscles, nasal flaring	Severe intercostals and substernal retractions, nasal flaring
<b>Mental Status</b>	Normal to mildly irritable	Irritable, agitated, restless	Lethargic
<b>Room Air SpO2</b>	> 95%	90-95%	<90%
<b>Color</b>	Normal	Pale to normal	Cyanotic, dusky



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**References**

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