

PRAM (Pediatric Respiratory Assessment Measure) Score Assessment for Asthma

PURPOSE

PRAM is a 12-point clinical scoring rubric that captures a patient's asthma severity using a combination of scalene muscle contraction, suprasternal retractions, wheezing, air entry and oxygen saturation.¹ PRAM was originally developed for patients aged 3 – 6 years and subsequently validated in children aged 1 to 17 years old, in whom it performed equally well.¹

POLICY STATEMENTS

The PRAM is a validated scoring tool to classify the severity of exacerbations and its response to treatment in children with asthma. The PRAM scoring is performed in the Emergency Department, Pediatric Intensive Care Unit (PICU), and all inpatient units by all members of the health care team including Physicians, Registered Nurses, Nurse Practitioners and Respiratory Therapists.

SITE APPLICABILITY

Applicable to all areas where patients are cared for at BCCH.

PRACTICE LEVEL/COMPETENCIES

Patient assessment and calculation of the PRAM score is a foundational competency practiced after completion of the required education. The education is based upon the PRAM teaching module⁴ devised by the Clinical Research and Knowledge Transfer Unit on Childhood Asthma (CRUCA), Sainte-Justine Hospital, Montreal, Quebec.

The tool is available on the following website: www.childasthmatools.umontreal.ca

PRAM Scoring Table and Notes

Criteria	Description	Score	Notes
O2 saturation	≥ 95%	0	O2 saturation must be measured with the patient breathing ambient air until stabilization of the oximetry value for at least 1 minute. TURN OFF supplementary oxygen when measuring PRAM. If SpO2 falls to <92% you can turn oxygen back on immediately as they have automatically scored maximum (2) points.
	92 - 94%	1	
	< 92%	2	
Suprasternal Retraction	Absent	0	The suprasternal retraction is visible indrawing of the skin above the sternum and between the sterno-cleido-mastoid muscle with every intake of breath This is a visual assessment.
	Present	2	
Scalene muscle Contraction	Absent	0	The scalenes are deep cervical muscles located in the floor of the lateral aspect of the neck.

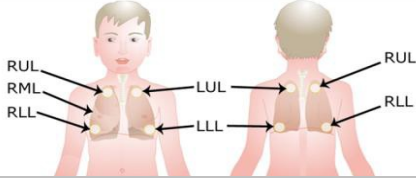
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Score Assessment for Asthma

	Present	2	<p>Scalene contraction cannot be seen. <u>This is a palpable assessment.</u> Land mark for locating scalene muscles in the triangle bordered by the clavicle (in the front), the trapezius (in the back) and neck (medially) in line with the ear lobe.</p> <p>Occurs in about 10% of all patients – only those with severe asthma exacerbations.</p>
Air Entry	<p>Normal</p> <p>↓at the base</p> <p>↓at the apex and the base</p> <p>Minimal or absent</p>	<p>0</p> <p>1</p> <p>2</p> <p>3</p>	<p>**In cases of asymmetry, the most severely affected lung field determines the rating</p> <p>Use lung fields to grade air entry. Lung field = two contiguous VERTICAL auscultation zones of the major lobes:</p> <p>Right anterior lung field: RUL & RML Right posterior lung field: RUL & RLL Left anterior lung field: LUL & LLL Left posterior lung field: LUL & LLL</p> 
Wheezing	<p>Absent</p> <p>Expiratory only</p> <p>Inspiratory (± expiratory)</p> <p>Audible without stethoscope or silent chest (minimal or no air entry)</p>	<p>0</p> <p>1</p> <p>2</p> <p>3</p>	<p>Use auscultation zones to grade wheeze At least two auscultation zones must be affected to influence the rating</p> <p>**In case of asymmetry, the two most severely affected auscultation zones, irrespectively of their location (RUL, RML, RLL, LUL, LLL), will determine the rating criterion."</p>
Score Severity PRAM score total	0 – 3 Mild	4 – 7 Moderate	8 – 12 Severe

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DOCUMENTATION

Registered Nurse to complete documentation as per unit requirements using one of the following:

- Emergency Department Asthma Assessment and Management Form
- BCCH Critical Care Flowsheet
- In-patient Daily Flowsheet

Respiratory Therapists: Document PRAM scores on the Respiratory Therapy Flowsheet or Respiratory Therapy Progress note depending upon the modality of respiratory support the patient is receiving.

Physicians: Document PRAM scores in History and Progress notes.

REFERENCES

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Lehr, A.R., McKinney, M.L., Gouin, S., Blais, J.G., Pusic, M.V., & Ducharme, F.M. (2013). Development and pretesting of an electronic learning module to train health care professionals on the use of the pediatric respiratory assessment measure to assess acute asthma severity. *Canadian Respiratory Journal*,20(6), 435-41.

Clinical Research and Knowledge Transfer Unit on Childhood Asthma (CRUCA) of the Research Centre of Sainte-Justine University Hospital Center. *Paediatric Respiratory Assessment Measure (PRAM) Teaching Module*. Retrieved July 17, 2015 from <http://www.chu-sainte-justine.org/pram>

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