



National EMS Quality Alliance

EMS Compass 2.0

Pediatrics-01 Measure Package

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Pediatrics-01: Pediatric Respiratory Assessment

This measure also does not have direct evidence to support its validity. However, it is known that providers often express discomfort with assessment of children and that respiratory distress is one of the most common serious conditions encountered by EMS providers in pediatric patients. The TEP agreed this measure is clinically important and there is value to measuring it. The medical community agrees that, if a pediatric patient is experiencing respiratory distress, a respiratory assessment should be conducted. Performing the respiratory assessment on the patient is the first step to determining if additional clinical interventions are necessary, and it is important that this process in care be measured. The intent of this measure is to determine if pediatric patients experiencing respiratory distress are receiving respiratory assessments.

The denominator, or initial population, for this measure includes EMS encounters for patients less than 18 years of age with a primary or secondary impression of respiratory distress. Those who are familiar with the original EMS Compass candidate measure may recognize the changes in the denominator for the re-specified measure. The inclusion criteria have been expanded from less than 15 years of age to less than 18 years of age and has been expanded to include a general impression of respiratory distress, which could include many different respiratory conditions. These changes mirror what is found in current published guidelines and literature for pediatric respiratory distress and assessments.

The numerator for the re-specified measure has not changed. While the TEP discussed potentially adding additional elements of a respiratory assessment, such as auscultation of the lung, it was ultimately decided to limit the numerator to SPO2 and respiratory rate measurements, due to feasibility concerns. While there are other elements to a respiratory assessment, Pediatrics-01 focuses on the completion and documentation of these two elements.

To the experienced EMS Professional, Pediatrics-01 appears to state the obvious – Every patient should have an assessment of their respiratory status. However, documentation of this fundamental element of care is often not completed. This may be simply a documentation omission but may also represent an incomplete clinical assessment or perhaps because providers are less comfortable assessing children than adults. An agency or system can use this measure to identify gaps in standard care or documentation of that care and target areas for improvement. This will drive recognition for the importance of this measure.

Pediatrics-01: Pediatric Respiratory Assessment

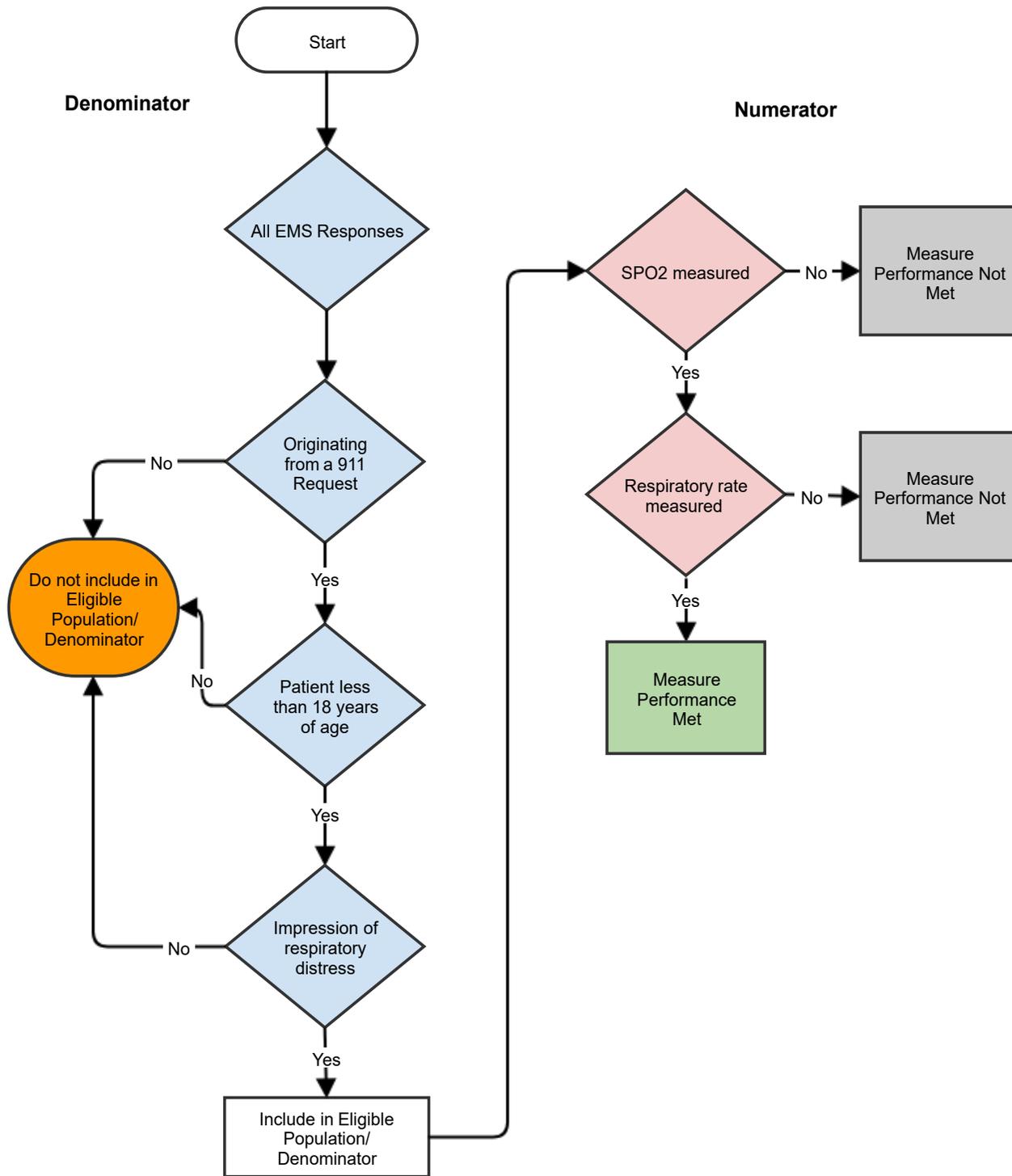
Measure Score Interpretation: For this measure, a higher score indicates better quality.

Measure Description	
Percentage of EMS responses originating from a 911 request for patients less than 18 years old with primary or secondary impression of respiratory distress who had a respiratory assessment.	
Measure Components	
Numerator Statement	EMS responses originating from a 911 request for patients who received both a SPO2 and respiratory rate measurement during the EMS response.
Denominator Statement	<p>All EMS responses originating from a 911 request for patients <18 years of age with a primary or secondary impression of respiratory distress.</p> <p>Respiratory distress may include impressions of:</p> <ul style="list-style-type: none"> • Asthma • Dyspnea • Unspecified Orthopnea • Shortness of breath • Diagnosis of a respiratory ailment • Complaint or condition commonly associated with dyspnea
Denominator Exclusions	None
Denominator Exceptions	None
Supporting Guidance & Other Evidence	<p>The following flowcharts were taken verbatim from the referenced treatment protocol:</p> <p>National Association of State EMS Officials, National Model EMS Clinical Guidelines for Pediatric Respiratory Distress:ⁱ</p> <p>Patient Management</p> <ol style="list-style-type: none"> 1. History <ol style="list-style-type: none"> a. Onset of symptoms (history of choking) b. Concurrent symptoms (fever, cough, rhinorrhea, tongue/lip swelling, rash, labored breathing, foreign body aspiration) c. Sick contacts d. Treatments given e. Personal history of asthma, wheezing, or croup in past 2. Exam <ol style="list-style-type: none"> a. Full set of vital signs (T, BP, RR, P, O2 sat) b. Presence of stridor at rest or when agitated c. Description of cough d. Other signs of distress (grunting, nasal flaring, retracting) e. Color (pallor, cyanosis, normal)

	f. Mental status (alert, tired, lethargic, unresponsive)
Measure Importance	
Rationale	Pediatric transports make up approximately 10% of all EMS requests, and respiratory distress is a common reason for these requests. A 2015 retrospective study found that 13.7% of pediatric EMS transports were due to respiratory distress. ⁱⁱ
Measure Designation	
Measure purpose	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Quality Improvement • <input checked="" type="checkbox"/> Accountability • <input type="checkbox"/> MOC
Type of measure	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Process • <input type="checkbox"/> Outcome • <input type="checkbox"/> Structure • <input type="checkbox"/> Efficiency
National Quality Strategy/Priority/CMS Measure Domain	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Clinical Process-Effectiveness • <input type="checkbox"/> Patient Safety • <input type="checkbox"/> Patient Experience • <input type="checkbox"/> Care Coordination • <input type="checkbox"/> Efficiency: Overuse • <input type="checkbox"/> Efficiency: Cost • <input type="checkbox"/> Population & Community Health
CMS Meaningful Measure Domain	<ul style="list-style-type: none"> • <input type="checkbox"/> Medication Management • <input type="checkbox"/> Admissions and Readmissions to Hospitals • <input type="checkbox"/> Transfer of Health Information and Interoperability • <input type="checkbox"/> Preventative Care • <input checked="" type="checkbox"/> Management of Chronic Conditions • <input type="checkbox"/> Prevention, Treatment, and Management of Mental Health • <input type="checkbox"/> Prevention and Treatment of Opioid and Substance • <input type="checkbox"/> Risk Adjusted Mortality • <input type="checkbox"/> Equity of Care • <input type="checkbox"/> Community Engagement • <input type="checkbox"/> Appropriate Use of Healthcare • <input type="checkbox"/> Patient-focused Episode of Care • <input type="checkbox"/> Risk-Adjusted Total Cost of Care • <input type="checkbox"/> Healthcare-associated infections • <input type="checkbox"/> Preventable Healthcare Harm • <input type="checkbox"/> Care is Personalized and Aligned with Patient's Goals • <input type="checkbox"/> End of Life Care according to Preferences • <input type="checkbox"/> Patient's Experience of Care • <input type="checkbox"/> Patient Reported Functional Outcomes
Level of measurement	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Individual EMS Professional

	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> EMS Agency
Care setting	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Pre-Hospital Care
Data source	<ul style="list-style-type: none"> • <input checked="" type="checkbox"/> Electronic Patient Care Record (eCPR) data • <input type="checkbox"/> Administrative Data/Claims (inpatient, outpatient or multiple-source claims) • <input checked="" type="checkbox"/> Paper medical record/Chart abstracted • <input checked="" type="checkbox"/> Registry

Clinical Quality Measure Flow for Pediatrics-01 Pediatric Respiratory Assessment



NEMESIS Pseudocode: Pediatrics-01: Pediatric Respiratory Assessment

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components	
Numerator Pseudocode	and eVitals.12 Pulse Oximetry is not null and eVitals.14 Respiratory Rate is not null
Denominator Pseudocode	((ePatient.15 Age is less than 18 and ePatient.16 Age Units is 2516009 ("Years")) or (ePatient.15 Age is not null and ePatient.16 Age Units is in (2516001 ("Days"), 2516003 ("Hours"), 2516005 ("Minutes"), 2516007 ("Months")))) and (eSituation.11 Provider's Primary Impression matches /^I50.9 J00 J05 J18.9 J20.9 J44.1 J45.901 J80 J81 J93.9 J96 J98.01 R05R06 R09.2 T17.9/ ("Heart failure, unspecified," "Acute nasopharyngitis....," "Acute obstructive laryngitis and epiglottitis....," "Pneumonia, unspecified organism," "Acute bronchitis, unspecified," "Chronic obstructive pulmonary disease with (acute) exacerbation," "Unspecified asthma with (acute) exacerbation," "Acute respiratory distress syndrome," "Pulmonary edema....," "Pneumothorax, unspecified," "Respiratory failure, unspecified," "Acute bronchospasm," "Respiratory disorder, unspecified," "Cough," "Abnormalities of breathing," "Respiratory arrest," or "Foreign body in respiratory tract, part unspecified")

or [eSituation.12 Provider's Secondary Impressions](#) matches
/^I50.9|J00|J05|J18.9|J20.9|J44.1|J45.901|J80|J81|J93.9|J96|J98.01|R05
R06|R09.2| T17.9/
("Heart failure, unspecified,"
"Acute nasopharyngitis....,"
"Acute obstructive laryngitis and epiglottitis...,"
"Pneumonia, unspecified organism,"
"Acute bronchitis, unspecified,"
"Chronic obstructive pulmonary disease with (acute) exacerbation,"
"Unspecified asthma with (acute) exacerbation,"
"Acute respiratory distress syndrome,"
"Pulmonary edema...,"
"Pneumothorax, unspecified,"
"Respiratory failure, unspecified,"
"Acute bronchospasm,"
"Respiratory disorder, unspecified,"
"Cough,"
"Abnormalities of breathing,"
"Respiratory arrest," or
"Foreign body in respiratory tract, part unspecified")

)
and [eResponse.05 Type of Service Requested](#) is 2205001 ("911 Response
(Scene)")

ⁱ NASEMSO Medical Directors Council. (2017) National Model EMS Clinical Guidelines. *National Association of State EMS Officials*, 138-141.

ⁱⁱ Drayna, P.C., Browne, L.R., Guse, C.E. Brousseau, D.C., & Lerner, E.B. (2015) Prehospital Pediatric Care: Opportunities for Training, Treatment, and Research, *Prehospital Emergency Care*, 19:3, 441-447.