



KENTUCKY BOARD OF EMERGENCY MEDICAL SERVICES



2020 PEDIATRIC INCIDENTS

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2020 Pediatric Incidents *Patients Under 18 Years of Age*

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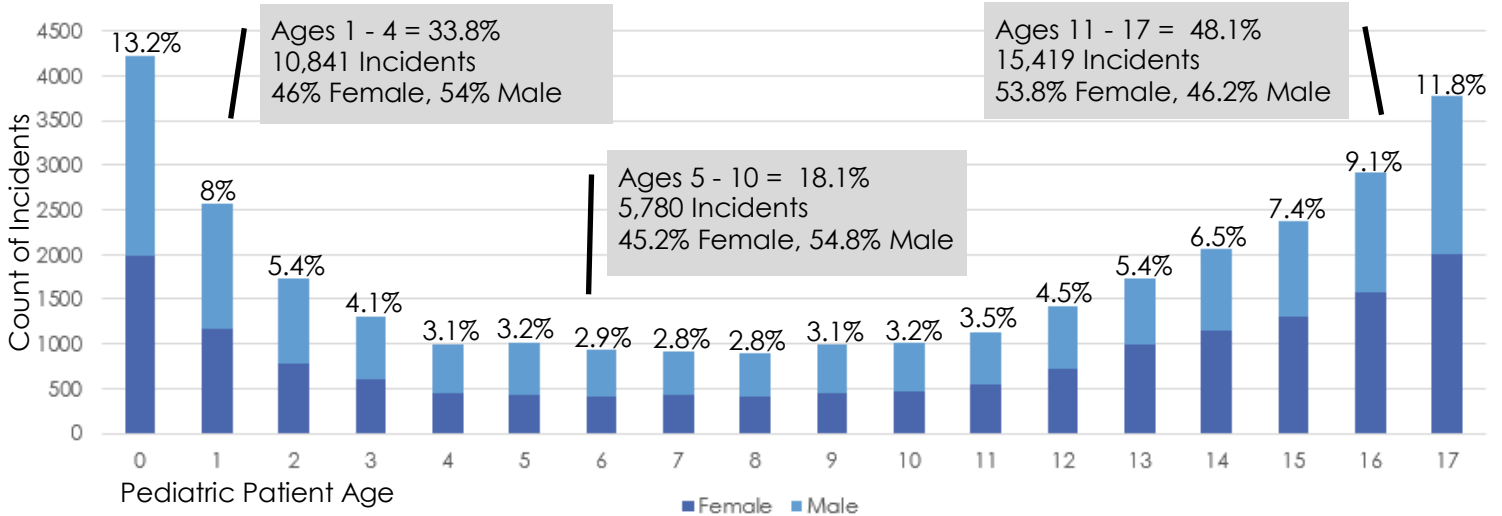


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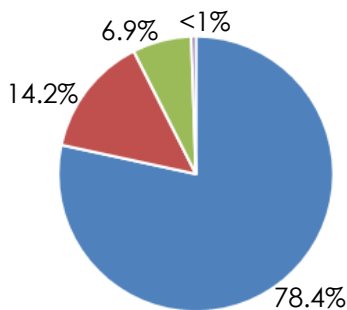
32,444 Pediatric Incidents Reported to the Kentucky State Ambulance Reporting System (KSTARS), accounting for 3.8% of all incidents in 2020.



Patient Age	#	Female	Male	Female %	Male %
<1	4,226	1,980	2,246	46.8%	53.2%
1	2,577	1,180	1,397	45.8%	54.2%
2	1,727	780	947	45.2%	54.8%
3	1,311	580	731	44.3%	55.7%
4	1,000	450	550	45%	55%
5	1,023	420	603	41%	59%

The above demographic data does not include incidents where gender is not reported.

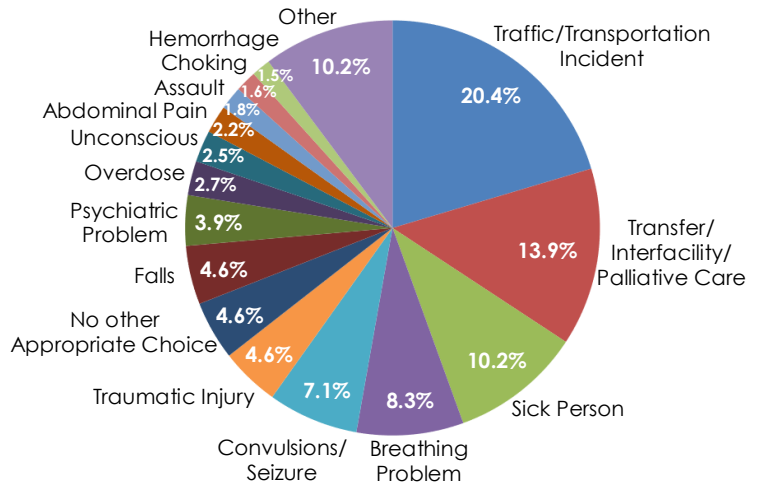
Type of Service Requested



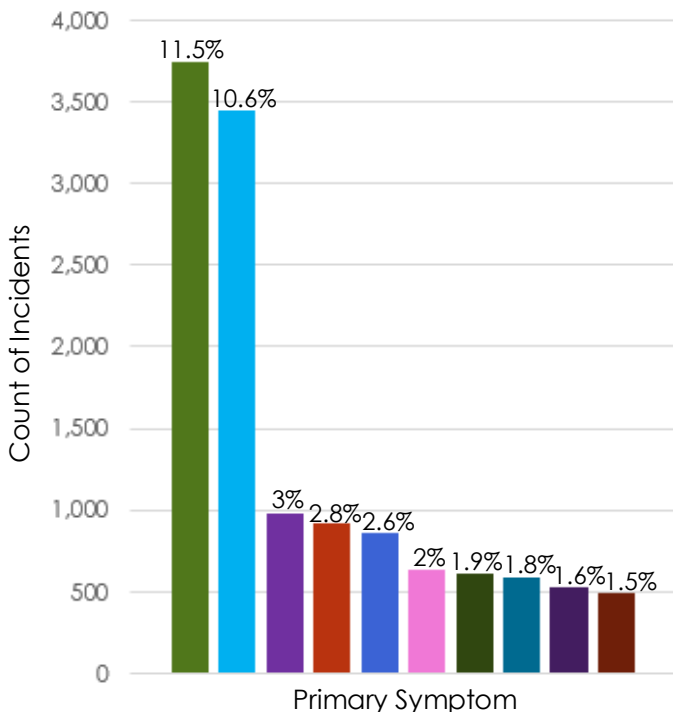
Response Type	#	Other =
911 Response	25,432	Intercept 23
Interfacility Transport	4,593	Mutual Aid 35
Medical Transport	2,251	Public Assistance 82
Other	170	Standby 30

Top 15 Incident Complaints Reported by Dispatch

1. Traffic/Transportation Incident	6,613 (20.4%)
2. Transfer/Interfacility/Palliative Care	4,497 (13.9%)
3. Sick Person	3,313 (10.2%)
4. Breathing Problem	2,704 (8.3%)
5. Convulsions/Seizure	2,288 (7.1%)
6. Traumatic Injury	1,493 (4.6%)
7. No Other Appropriate Choice	1,490 (4.6%)
8. Falls	1,483 (4.6%)
9. Psychiatric Problem/Abnormal Behavior/ Suicide Attempt	1,273 (3.9%)
10. Overdose/Poisoning/Ingestion	864 (2.7%)
11. Unconscious/Fainting/Near-Fainting	803 (2.5%)
12. Abdominal Pain/Problems	705 (2.2%)
13. Assault	588 (1.8%)
14. Choking	535 (1.6%)
15. Hemorrhage/Laceration	481 (1.5%)



Top 10 Patient Primary Symptoms



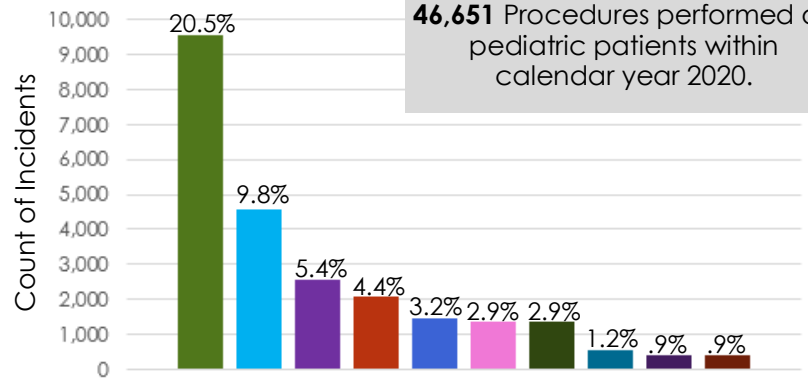
Situation Primary Symptom	#	%
Other General Symptoms and Signs	3,741	11.5%
Encounter for General Examination	3,453	10.6%
Pain, Unspecified	980	3.0%
Unspecified injury of head	915	2.8%
Fever	856	2.6%
Suicidal Ideations	639	2.0%
Unspecified Injury of Face	614	1.9%
Seizure (Absence, Partial, Grand Mal)	584	1.8%
Altered Mental Status	530	1.6%
Pain, Headache	488	1.5%

Top 15 Medications Administered

7,501 medication administrations.
4,307 (13.3%) pediatric patients received medication.

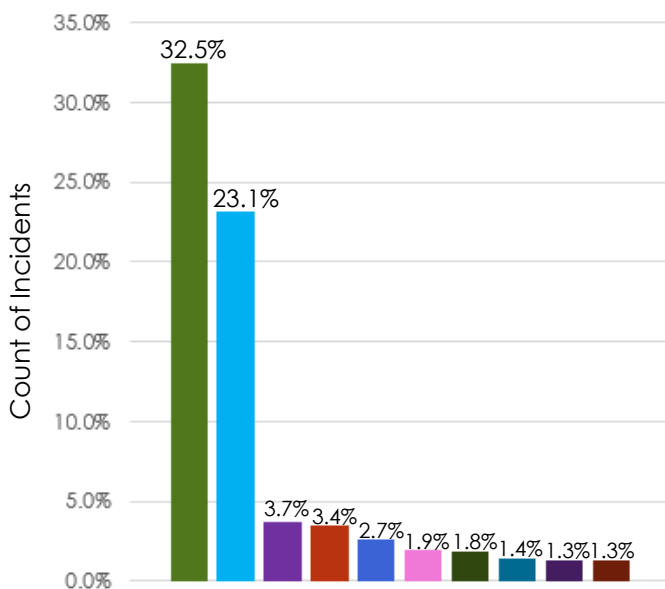
1. Oxygen	2,418	32.2%
2. Fentanyl	784	10.5%
3. Sodium Chloride	507	6.8%
4. Ondansetron	464	6.2%
5. Albuterol	402	5.4%
6. Epinephrine	319	4.3%
7. Midazolam	301	4%
8. Ketamine	225	3%
9. Normal Saline	223	3%
10. Morphine	160	2.1%
11. Naloxone	149	2%
12. Lorazepam	117	1.6%
13. Acetaminophen	103	1.4%
14. Dextrose	100	1.3%
15. Diphenhydramine	98	1.3%

Top 15 Procedures Performed



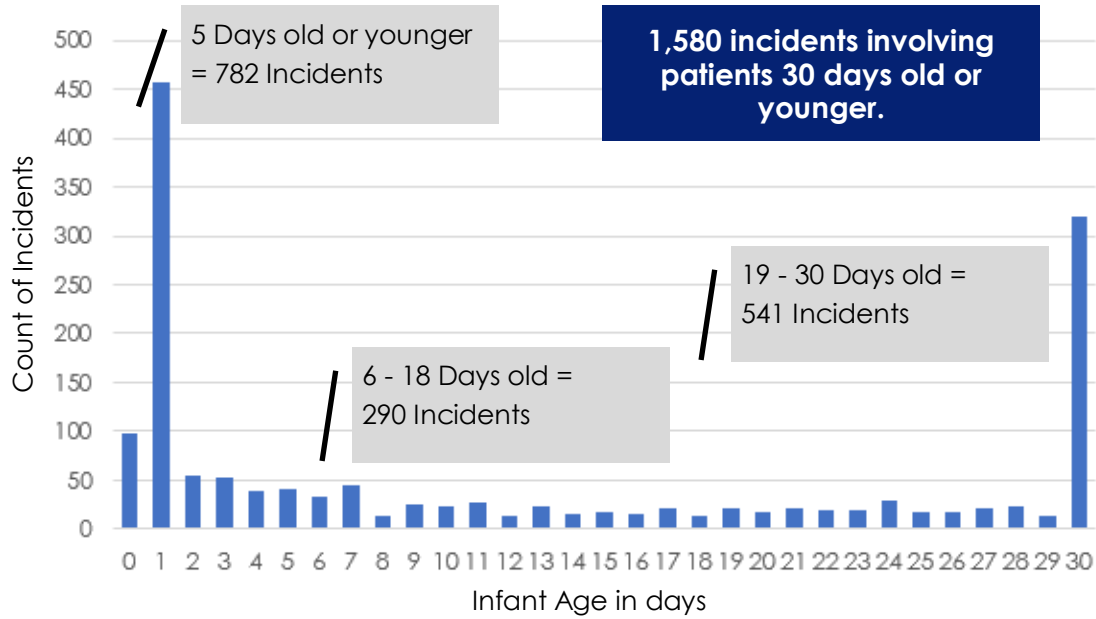
1. Evaluation Procedure	9,562	20.5%
2. Extremity Vein Catheterization	4,573	9.8%
3. 3 Lead ECG Obtained	2,534	5.4%
4. Patient Assessment	2,073	4.4%
5. Spinal Immobilization (Cervical)	1,471	3.2%
6. 12 Lead ECG Obtained	1,363	2.9%
7. Moving Patient to a Stretcher	1,337	2.9%
8. Infection Control Procedure	549	1.2%
9. Application of Bandage	412	.9%
10. Splinting (General)	401	.9%

Top 10 Causes of Injury



1. Car occupant (driver) (passenger) injured in unspecified traffic accident	2,764	32.5%
2. Fall	1,967	23.1%
3. Assault by bodily force	312	3.7%
4. Person injured in unspecified vehicle accident	293	3.4%
5. Unspecified occupant of other special all-terrain or other off-road motor vehicle injured in traffic accident	226	2.7%
6. Contact with unspecified sharp object, undetermined intent	163	1.9%
7. Bitten by dog	154	1.8%
8. Other specified events, undetermined intent	119	1.4%
9. Intentional self-harm by unspecified shar object	114	1.3%
10. Pedal cyclist (driver) (passenger) injured in unspecified nontraffic accident	108	1.3%

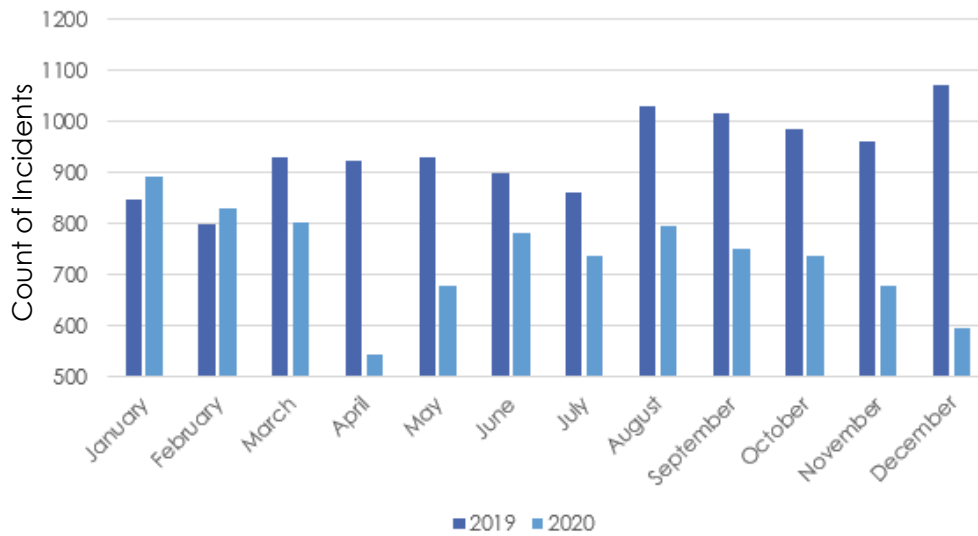
Infants <= 30 Days Old



Infant Age	#				
< 1 Day Old	97	11 Days Old	28	22 Days Old	20
1 Day Old	458	12 Days Old	13	23 Days Old	19
2 Days Old	55	13 Days Old	24	24 Days Old	29
3 Days Old	52	14 Days Old	16	25 Days Old	17
4 Days Old	38	15 Days Old	18	26 Days Old	17
5 Days Old	41	16 Days Old	15	27 Days Old	21
6 Days Old	33	17 Days Old	21	28 Days Old	24
7 Days Old	45	18 Days Old	13	29 Days Old	14
8 Days Old	14	19 Days Old	21	30 Days Old	320
9 Days Old	26	20 Days Old	18	Total	1,580
10 Days Old	24	21 Days Old	21		

Incident Month Name	#		
January	170 (10.8%)	July	147 (9.3%)
February	139 (8.8%)	August	124 (7.8%)
March	134 (8.5%)	September	122 (7.7%)
April	119 (7.5%)	October	146 (9.2%)
May	118 (7.5%)	November	107 (6.8%)
June	116 (7.3%)	December	138 (8.7%)
Total = 1,580			

Pediatric Respiratory Distress



Incident Month name	2019	2020
January	847 (7.5%)	893 (10.1%)
February	798 (7.1%)	831 (9.4%)
March	929 (8.3%)	802 (9.1%)
April	922 (8.2%)	544 (6.2%)
May	931 (8.3%)	679 (7.7%)
June	900 (8%)	780 (8.8%)
July	861 (7.7%)	738 (8.4%)
August	1,029 (9.1%)	794 (9%)
September	1,016 (9%)	749 (8.5%)
October	985 (8.8%)	738 (8.4%)
November	962 (8.5%)	678 (7.7%)
December	1,072 (9.5%)	595 (6.7%)
Total	11,252	8,821

Top 10 Medications Administered			
Medication	#		
Oxygen	1,795 (42.7%)	Midazolam	98 (2.3%)
Albuterol	791 (18.8%)	Ipratropium	74 (1.8%)
Fentanyl	353 (8.4%)	Ketamine	70 (1.7%)
Sodium Chloride	171 (4.1%)	Lorazepam	51 (1.2%)
Ondansetron	156 (3.7%)	Other	522 (12.4%)
Epinephrine	125 (3%)		
Total	4,206		

The above data was extracted from the Kentucky State Ambulance Reporting System (KSTARS) by using NEMSQA's Pediatric Respiratory Assessment (Pediatrics-01) inclusion criteria.

National EMS Quality Pediatric Performance Measures

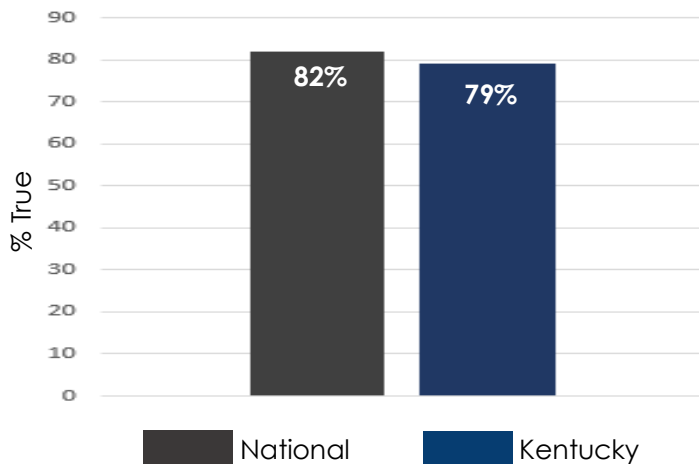
The National EMS Quality Alliance (NEMSQA), is an independent, non-governmental, organization that is the standard bearer for EMS quality measures. Their mission is to develop and endorse evidence-based quality measures for EMS and healthcare partners that improve the experience and outcomes of patients and care providers. The following data assesses the performance of EMS in Kentucky to National EMS records in regards to pediatric incidents using NEMSQA's National EMS Quality Measure Set (NEMSQMS):

Source: <https://www.nemsqa.org/>

Pediatrics-01

PEDIATRIC RESPIRATORY ASSESSMENT

79% of Kentucky EMS pediatric patients who experienced respiratory distress received a respiratory assessment.



Pediatrics-01	
State	% True
Kentucky	79%
National	82%

Biospatial Southern State Participants	
Alabama	88%
Florida	89%
Georgia	83%
Mississippi	86%
South Carolina	81%
Virginia	83%

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:

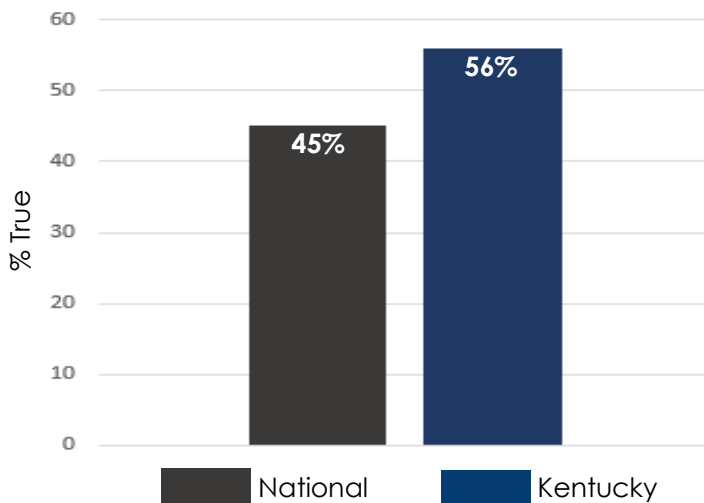
Numerator Statement	EMS responses originating from a 911 request for patients who received both a SPO2 and respiratory rate measurement during the EMS response.
Denominator Statement	All EMS responses originating from a 911 request for patients <18 years of age with a primary or secondary impression of respiratory distress... Respiratory distress may include impressions of: asthma, dyspnea, unspecified orthopnea, shortness of breath, diagnosis of a respiratory ailment, or complaint/condition commonly associated with dyspnea.

National EMS Quality Pediatric Performance Measures

Pediatrics-02

ADMINISTRATION OF BETA AGONIST FOR PEDIATRIC ASTHMA

56% of Kentucky EMS pediatric patients with a diagnosis of asthma had an aerosolized beta agonist administered.



Pediatrics-02	
State	% True
Kentucky	56%
National	45%

Biospatial Southern State Participants	
Alabama	45%
Florida	54%
Georgia	48%
Mississippi	34%
South Carolina	56%
Virginia	52%

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 2-18 years of age with a diagnosis of asthma who had an aerosolized beta agonist administered.

MEASURE COMPONENTS:

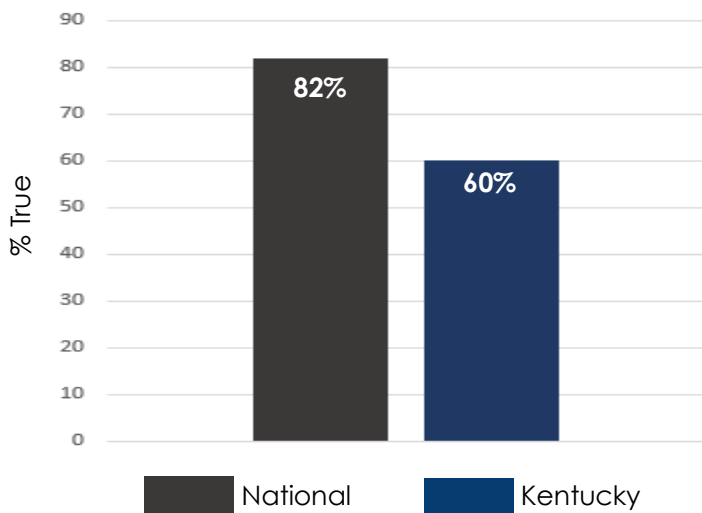
Numerator Statement	EMS responses originating from a 911 request for patients who had an aerosolized beta agonist administered by an EMS professional during the EMS response. Beta agonist medications may include: <ul style="list-style-type: none"> • Albuterol • Levalbuterol • Metaproterenol
Denominator Statement	All EMS responses originating from a 911 request for patients 2-18 years of age with a primary or secondary impression of asthma exacerbation or acute bronchospasm.

National EMS Quality Pediatric Performance Measures

Pediatrics-03

DOCUMENTATION OF ESTIMATED WEIGHT IN KILOGRAMS

60% of Kentucky EMS pediatric patients who received a weight-based medication had a documented weight in kilograms.



Pediatrics-03	
State	% True
Kentucky	60%
National	82%

Biospatial Southern State Participants	
Alabama	92%
Florida	86%
Georgia	64%
Mississippi	83%
South Carolina	75%
Virginia	62%

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 of age who received a weight-based medication and had a documented weight in kilograms or length-based weight estimate documented during the EMS response.

MEASURE COMPONENTS:

Numerator Statement	EMS responses originating from a 911 request for patients in which a weight value was documented in kilograms or a length-based weight was documented during the EMS response.
Denominator Statement	All EMS responses originating from a 911 request for patients less than 18 years of age who received a weight-based medication during the EMS response.

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