



*Kansas Board of
Emergency Medical Services
2024*

**NATIONAL EMS QUALITY
PERFORMANCE MEASURES**

High impact, practical, evidence-
based measures for the assessment
of EMS Performance.

KANSAS



ABOUT

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 to improve the experience and outcomes of patients and care providers. This report assesses the performance of EMS in Kansas to National EMS records using NEMSQA's National EMS Quality Measure Set (NEMSQMS):



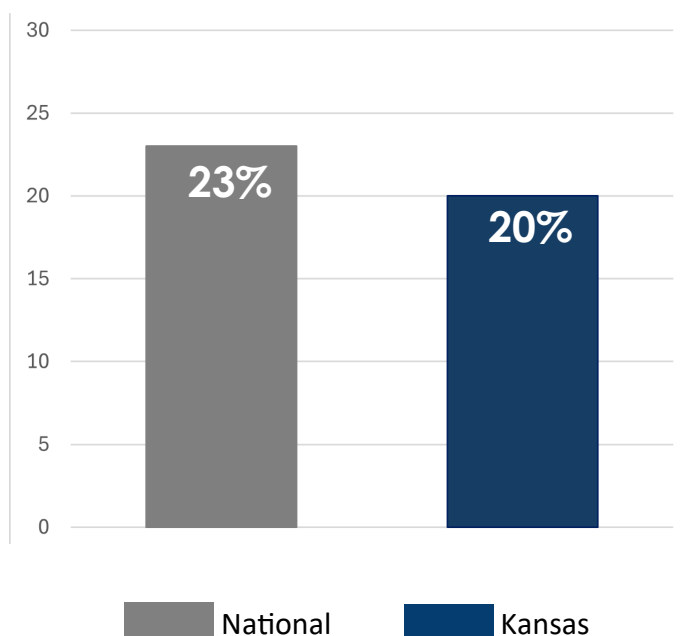
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*** New Measures Added in 2023

SUCCESSFUL FIRST ADVANCED AIRWAY PLACEMENT WITHOUT HYPOTENSION OR HYPOXIA

20% of Kansas EMS patients receiving successful advanced airway placement on the first attempt did not have hypotension or hypoxia during the peri-intubation period.



2024		
	True	Unknown
Kansas	20%	66%
National	23%	64%

Kansas EMS Region Comparison		
Region 1	7%	93%
Region 2	<10 records	<10 records
Region 3	28%	60%
Region 4	29%	59%
Region 5	7%	76%
Region 6	17%	66%

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 who received a successful advanced airway placement on first attempt without documented hypotension or hypoxia during the peri-intubation period.

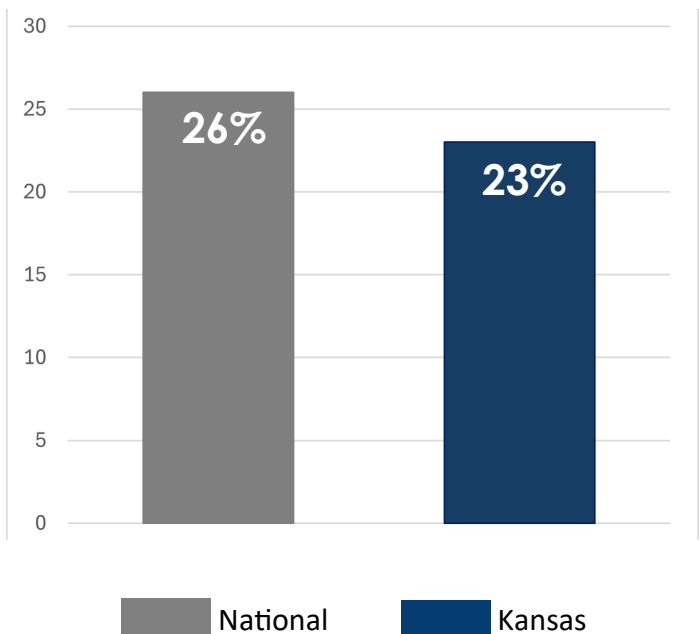
MEASURE COMPONENTS:

Numerator Statement	EMS responses with successful first attempt airway placement without documented hypotension or hypoxia during the peri-intubation period.
Denominator Statement	All EMS responses originating from a 911 request for patients who received an advanced airway attempt.

***NEW MEASURE IN 2023

ADEQUATE OXYGEN SATURATION ACHIEVED BEFORE INTUBATION PROCEDURE

23% of Kansas EMS patients receiving intubation have adequate oxygen levels achieved prior to intubation.



Airway-05		
	2023	2024
Kansas	22%	23%
National	25%	26%
Kansas EMS Region Comparison		
Region 1	13%	0%
Region 2	<10 records	<10 records
Region 3	19%	22%
Region 4	41%	27%
Region 5	10%	14%
Region 6	21%	22%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Percentage of intubation procedures performed during an EMS response originating from a 911 request in which adequate patient oxygen levels were achieved prior to intubation procedure.

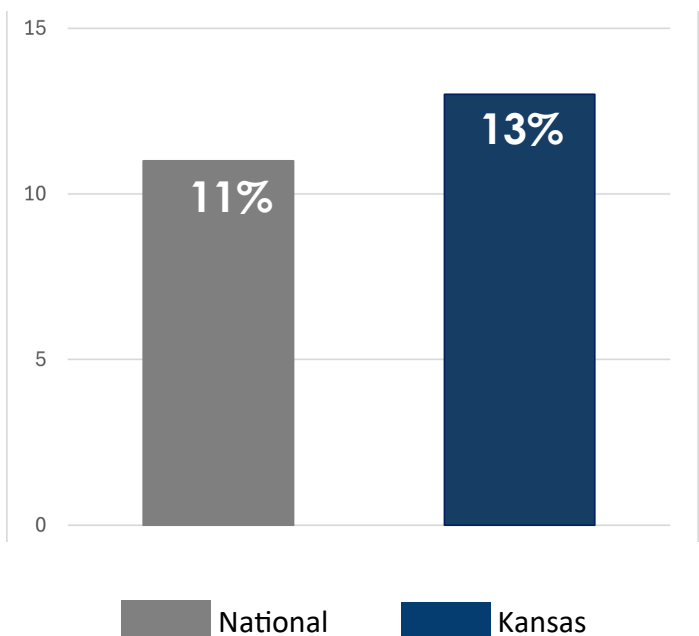
MEASURE COMPONENTS:

Numerator Statement	Intubation procedures in which adequate patient oxygen levels were achieved prior to the intubation procedure.
Denominator Statement	All endotracheal intubation procedures performed during an EMS response originating from a 911 request.

***NEW MEASURE IN 2023

WAVEFORM CAPNOGRAPHY AIRWAY DEVICE MONITORING

13% of Kansas EMS patients receiving successful advanced airway procedures have waveform capnography used for tube placement confirmation and monitoring..



2024		
	True	Unknown
Kansas	13%	5%
National	11%	4%

Kansas EMS Region Comparison		
Region 1	24%	0%
Region 2	8%	0%
Region 3	21%	0%
Region 4	26%	0%
Region 5	5%	11%
Region 6	19%	0%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Successful advanced airway procedures performed during an EMS response originating from a 911 request in which waveform capnography is used for tube placement confirmation and monitoring.

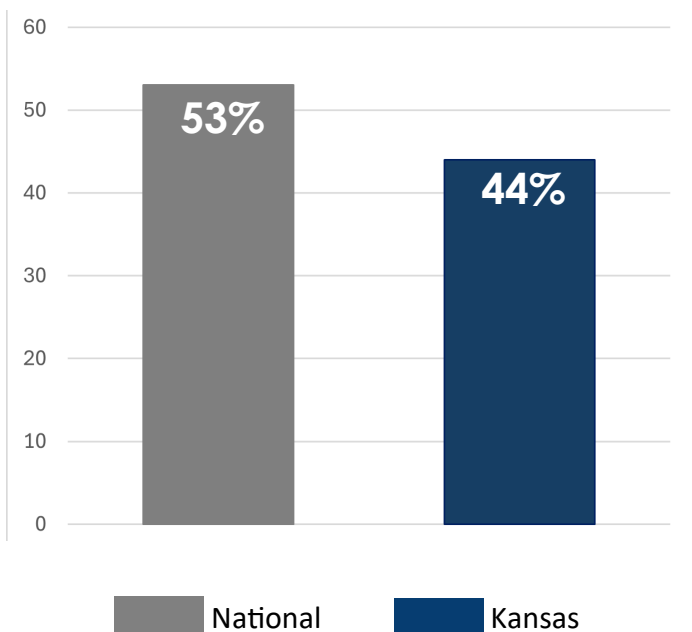
MEASURE COMPONENTS:

Numerator Statement	Successful advanced airway procedures in which waveform capnography is used for tube placement confirmation and monitoring.
Denominator Statement	All successful airway procedures performed during an EMS response originating from a 911 request.

***NEW MEASURE IN 2023

ADMINISTRATION OF BETA AGONIST FOR ASTHMA

44% of Kansas EMS patients with a diagnosis of asthma had an aerosolized beta agonist administered.



Asthma-01		
	2023	2024
Kansas	42%	44%
National	53%	53%

Kansas EMS Region Comparison		
Region 1	48%	61%
Region 2	70%	47%
Region 3	42%	28%
Region 4	55%	67%
Region 5	41%	54%
Region 6	25%	39%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

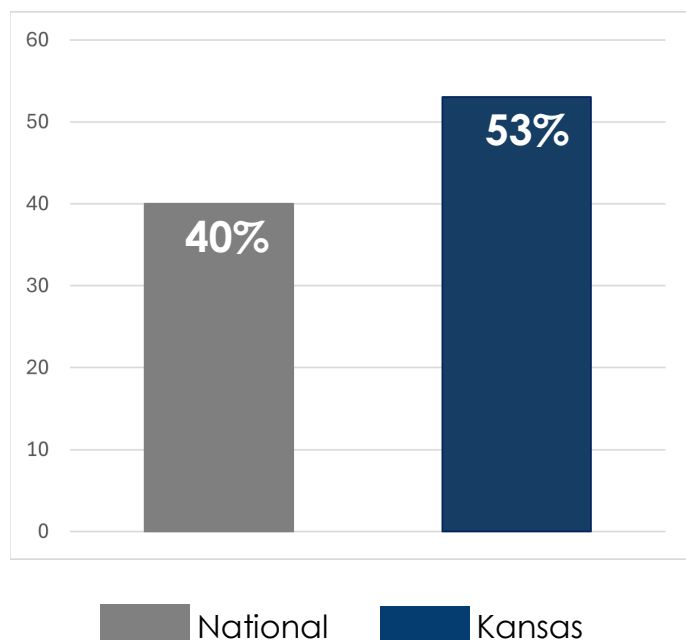
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request for patients with a diagnosis of asthma who had an aerosolized beta agonist administered.

MEASURE COMPONENTS:

Numerator Statement	EMS responses 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 with a primary or secondary impression of asthma exacerbation or acute bronchospasm.

TREATMENT ADMINISTERED FOR HYPOGLYCEMIA

53% of Kansas EMS responses received treatment to correct hypoglycemia.



Hypoglycemia-01		
	2023	2024
Kansas	55%	53%
National	40%	40%

Kansas EMS Region Comparison		
Region 1	57%	54%
Region 2	68%	72%
Region 3	79%	79%
Region 4	56%	48%
Region 5	29%	29%
Region 6	58%	55%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

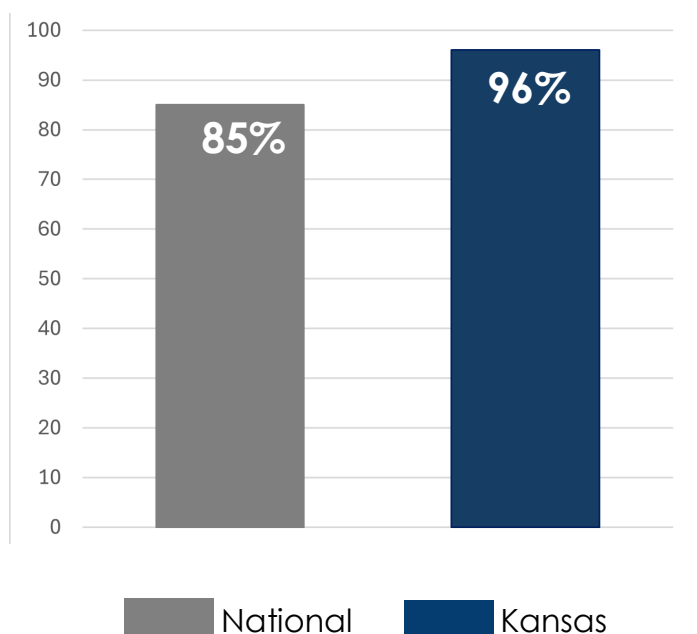
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request for patients who received treatment to correct their hypoglycemia.

MEASURE COMPONENTS:

Numerator Statement	EMS responses for patients receiving treatment to correct their hypoglycemia during the EMS response. Treatments to correct hypoglycemia: <ul style="list-style-type: none"> • Food • Oral glucose (tablets, glucose gel, tube of cake icing, etc.) • Dextrose IV/IN • Glucagon IM/IN
Denominator Statement	All EMS responses originating from a 911 request for patients with hypoglycemia and a GCS of <15 or an AVPU of <A or patients with a primary or secondary impression of altered mental status and a blood glucose level of <60.

DOCUMENTATION OF ESTIMATED WEIGHT IN KILOGRAMS

96% of Kansas EMS pediatric patients who received a medication had a documented weight in kilograms.



Pediatrics-03b		
	2023	2024
Kansas	94%	96%
National	82%	85%

Kansas EMS Region Comparison		
Region 1	84%	97%
Region 2	96%	93%
Region 3	95%	100%
Region 4	87%	90%
Region 5	93%	94%
Region 6	89%	96%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

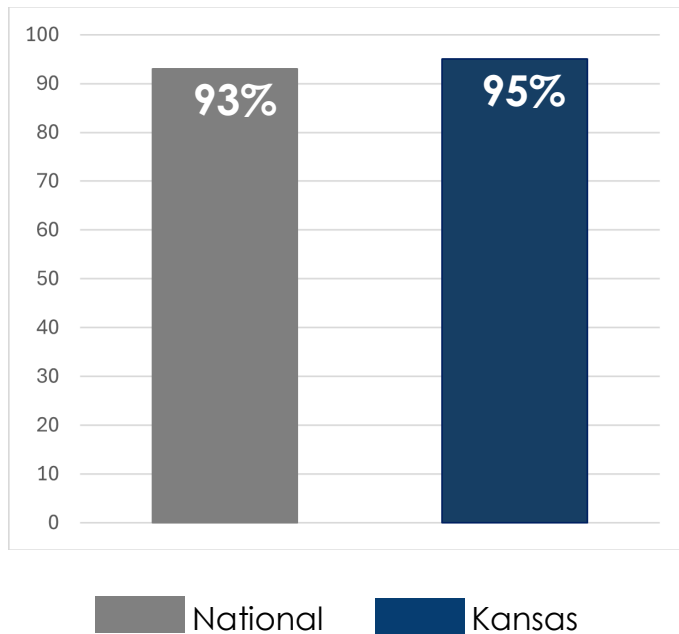
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request for patients less than 18 years of age who received a medication and had a documented weight in kilograms or length-based weight estimate documented during the EMS response.

MEASURE COMPONENTS:

Numerator Statement	EMS responses 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 medication during the EMS response.

RESPIRATORY ASSESSMENT

95% of Kansas EMS patients who experienced respiratory distress received a respiratory assessment.



Respiratory-01		
	2023	2024
Kansas	96%	95%
National	92%	93%

Kansas EMS Region Comparison		
Region 1	93%	93%
Region 2	90%	91%
Region 3	98%	99%
Region 4	95%	96%
Region 5	93%	96%
Region 6	95%	97%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

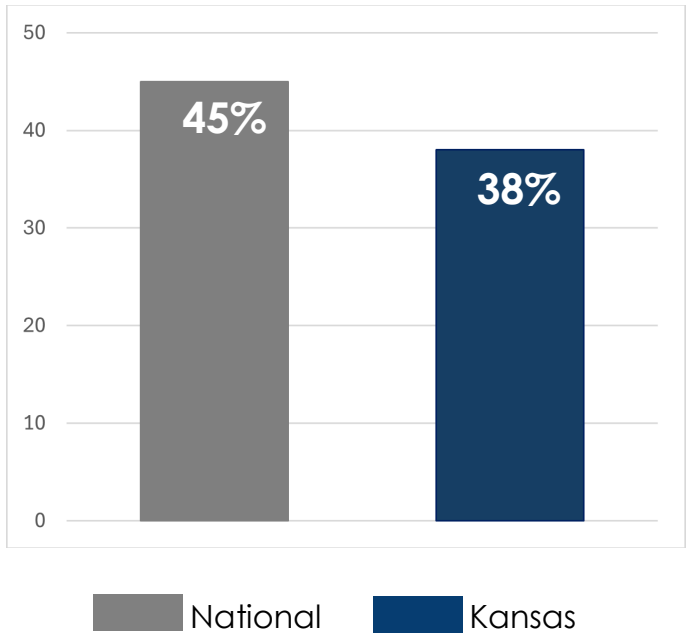
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request for patients with primary or secondary impression of respiratory distress who had a respiratory assessment.

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 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.

OXYGEN ADMINISTRATION FOR HYPOXIA

38% of Kansas EMS patients with hypoxia have oxygen administered by EMS.



Respiratory-02		
	2023	2024
Kansas	50%	38%
National	48%	45%
Kansas EMS Region Comparison		
Region 1	52%	50%
Region 2	56%	57%
Region 3	54%	22%
Region 4	49%	50%
Region 5	46%	44%
Region 6	46%	50%

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 with hypoxia during which oxygen is administered.

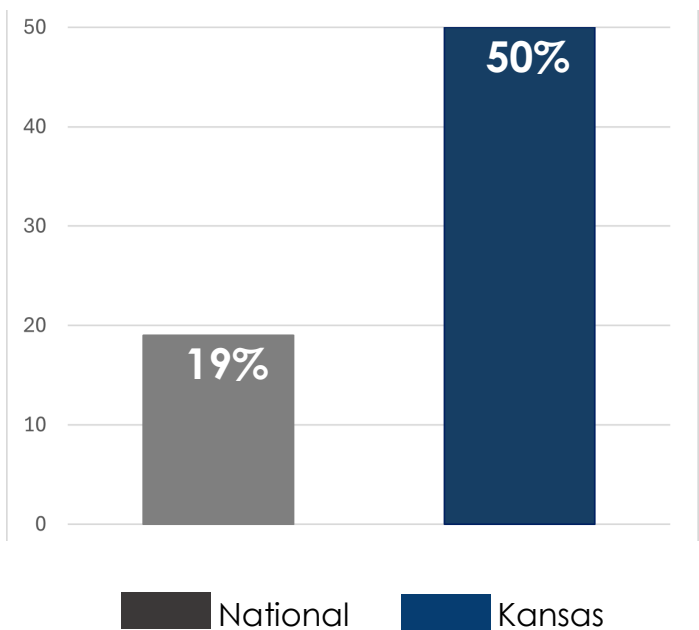
MEASURE COMPONENTS:

Numerator Statement	EMS responses during which oxygen is administered.
Denominator Statement	All EMS responses originating from a 911 request for patients with hypoxia (Pulse Oximetry < 90).

***NEW MEASURE IN 2023

USE OF LIGHTS AND SIRENS DURING RESPONSE TO SCENE

50% of Kansas EMS 911 responses did not use lights and sirens during response.



Safety-01		
	2023	2024
Kansas	47%	50%
National	18%	19%

Kansas EMS Region Comparison		
Region 1	42%	45%
Region 2	32%	37%
Region 3	51%	53%
Region 4	45%	48%
Region 5	48%	51%
Region 6	43%	47%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

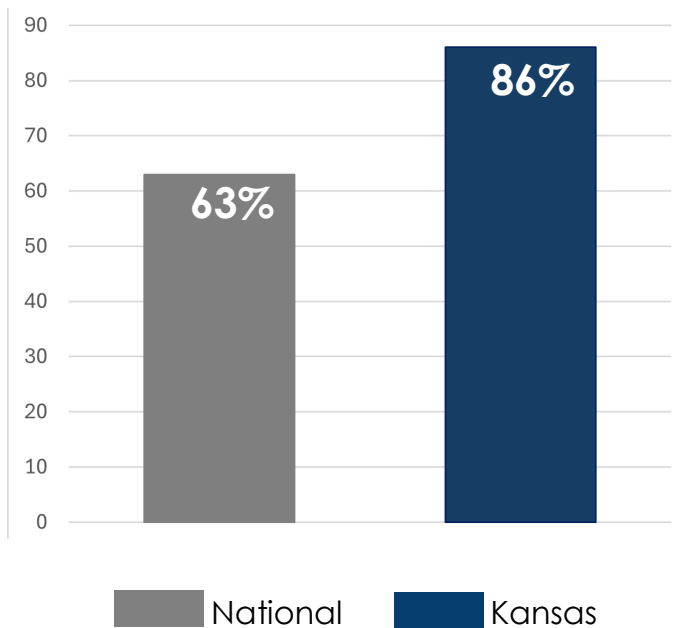
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request in which lights and sirens were not used during response.

MEASURE COMPONENTS:

Numerator Statement	EMS responses during which lights and sirens were not used.
Denominator Statement	All EMS responses originating from a 911 request.

USE OF LIGHTS AND SIRENS DURING TRANSPORT

86% of Kansas EMS 911 responses did not use lights and sirens during transport.



Safety-02		
	2023	2024
Kansas	80%	86%
National	60%	63%

Kansas EMS Region Comparison		
Region 1	69%	78%
Region 2	68%	80%
Region 3	89%	94%
Region 4	78%	90%
Region 5	76%	82%
Region 6	85%	92%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

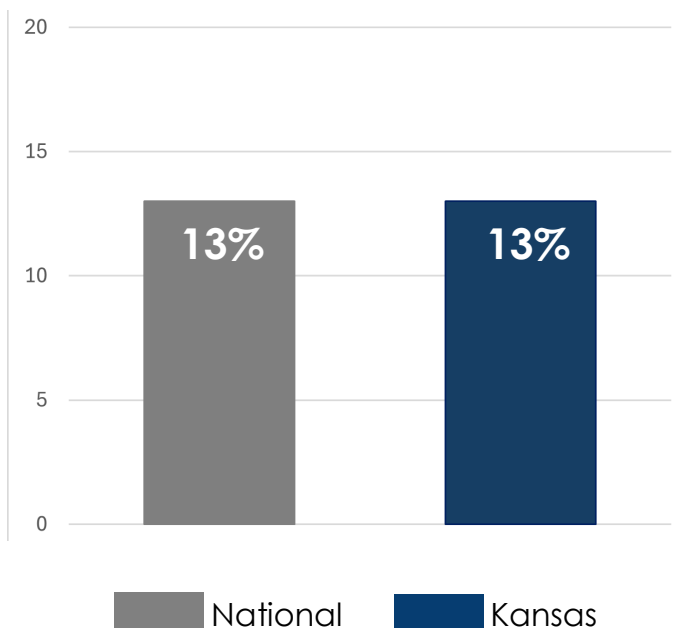
MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request during which lights and sirens were not used during patient transport.

MEASURE COMPONENTS:

Numerator Statement	EMS transports during which lights and sirens were not used.
Denominator Statement	All EMS transports originating from a 911 request.

PEDIATRIC RESTRAINT DEVICE USED DURING TRANSPORT

13% of Kansas EMS transports for patients less than 8 years old utilized a pediatric restraint device.



Safety-04		
	True	Unknown
Kansas	13%	26%
National	13%	29%

Kansas EMS Region Comparison		
Region 1	14%	40%
Region 2	14%	50%
Region 3	24%	25%
Region 4	12%	57%
Region 5	15%	7%
Region 6	16%	45%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request or interfacility request for patients less than 8 years of age during which patients are transported using a pediatric restraint device.

MEASURE COMPONENTS:

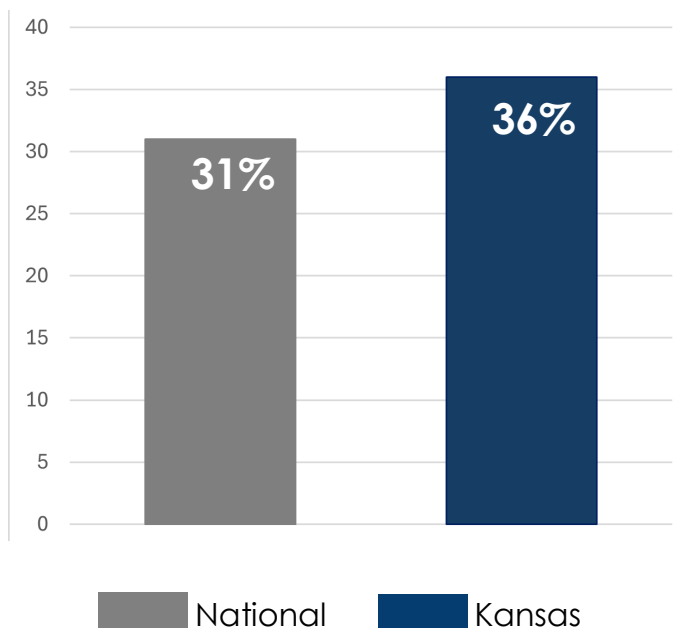
Numerator Statement	EMS transports during which patients are restrained in a car seat during transport. (Car seat can include any pediatric restraint device manufactured for pediatric transport)
Denominator Statement	All EMS transports originating from a 911 request or interfacility request for patients less than 8 years of age..

***NEW MEASURE IN 2023

NOT A REQUIRED ELEMENT IN KANSAS SCHEMATRON

PATIENT WITH STATUS EPILEPTICUS RECEIVING INTERVENTION

36% of Kansas EMS 911 responses for patients with status epilepticus received benzodiazepine aimed at terminating their seizure.



Seizure-02		
	2023	2024
Kansas	37%	36%
National	27%	31%

Kansas EMS Region Comparison		
Region 1	30%	34%
Region 2	33%	50%
Region 3	45%	43%
Region 4	17%	14%
Region 5	37%	43%
Region 6	34%	30%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

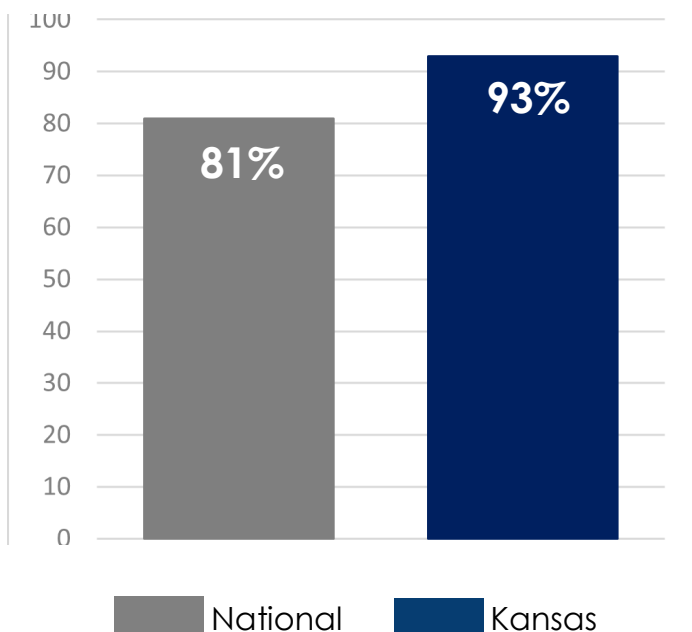
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request for patients with status epilepticus who received benzodiazepine aimed at terminating their status seizure during the EMS response.

MEASURE COMPONENTS:

Numerator Statement	EMS responses for patients who received benzodiazepine aimed at terminating their status seizure during the EMS response. Benzodiazepines may include: Diazepam Lorazepam Midazolam
Denominator Statement	All EMS responses originating from a 911 request for patients with a primary or secondary impression of status epilepticus.

SUSPECTED STROKE RECEIVING PREHOSPITAL STROKE ASSESSMENT

93% of Kansas EMS patients suffering from a suspected stroke received a stroke assessment.



Stroke-01		
	2023	2024
Kansas	93%	93%
National	81%	81%

Kansas EMS Region Comparison		
Region 1	91%	97%
Region 2	91%	100%
Region 3	94%	99%
Region 4	96%	100%
Region 5	87%	88%
Region 6	91%	100%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

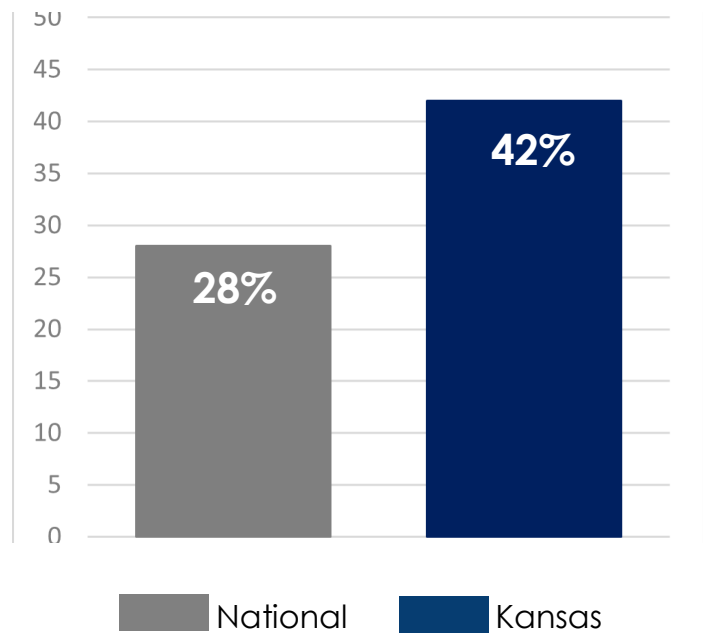
MEASURE DESCRIPTION: Percentage of EMS responses originating from a 911 request for patients suffering from a suspected stroke who had a stroke assessment performed during the EMS response.

MEASURE COMPONENTS:

Numerator Statement	EMS responses for patients who had a stroke assessment performed on scene during the EMS Response.
Denominator Statement	All EMS responses originating from a 911 request for patients with a primary or secondary impression of stroke.

ECG PERFORMED FOR SYNCOPE PATIENTS

42% of Kansas EMS patients suffering syncope have a 12-lead (or greater) ECG performed.



Syncope-01		
	2023	2024
Kansas	42%	42%
National	28%	28%
Kansas EMS Region Comparison		
Region 1	16%	14%
Region 2	6%	8%
Region 3	40%	54%
Region 4	10%	9%
Region 5	48%	45%
Region 6	18%	22%

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 with syncope during which a 12-lead (or greater) ECG is performed.

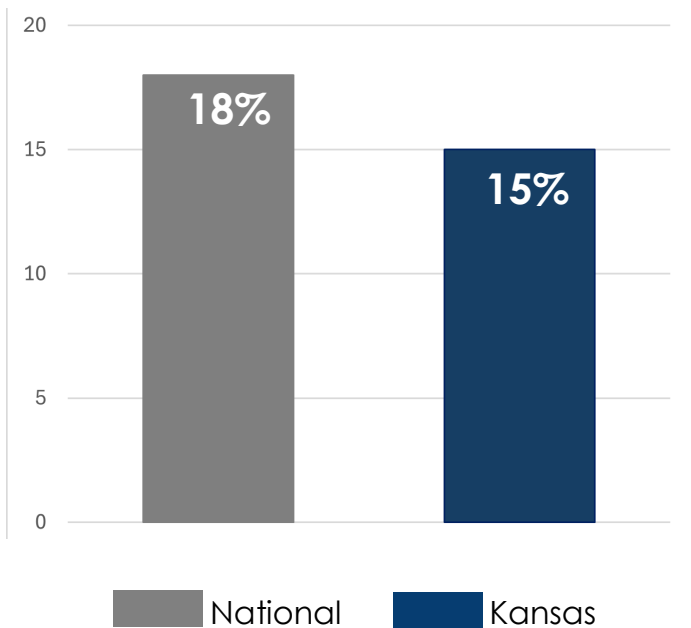
MEASURE COMPONENTS:

Numerator Statement	EMS responses during which a 12-lead (or greater) ECG is performed.
Denominator Statement	All EMS responses originating from a 911 request for patients with syncope.

***NEW MEASURE IN 2023

CLINICAL ASSESSMENTS FOR PATIENTS WITH TRAUMATIC BRAIN INJURY

15% of Kansas EMS patients suffering TBI have SPO2, ETCO2, and SBP documented.



TBI-01		
	2023	2024
Kansas	15%	15%
National	17%	18%
Kansas EMS Region Comparison		
Region 1	9%	6%
Region 2	7%	6%
Region 3	24%	23%
Region 4	14%	14%
Region 5	12%	12%
Region 6	9%	7%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request for patients with suspected traumatic brain injury during which oxygen level, ETCO2, and systolic blood pressure are documented.

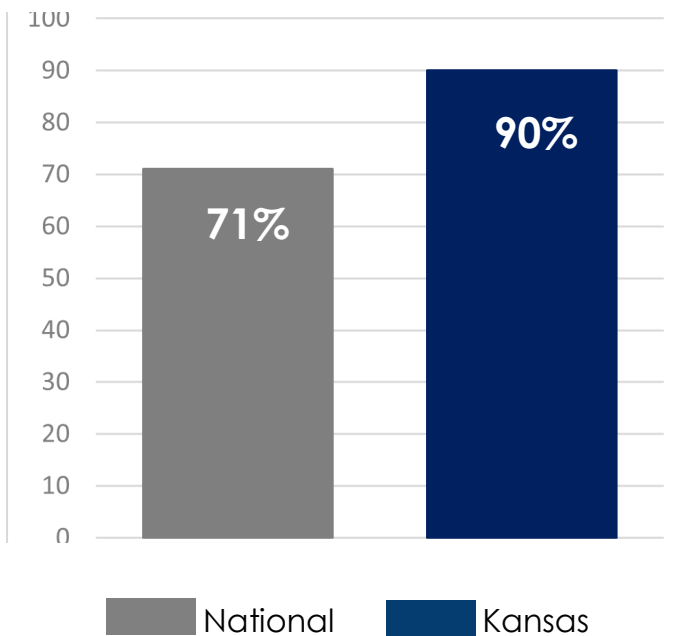
MEASURE COMPONENTS:

Numerator Statement	EMS transports during which SPO@, ETCO2, and systolic blood pressure are documented.
Denominator Statement	All EMS transports originating from a 911 request for patients with suspected traumatic brain injury.

***NEW MEASURE IN 2023

INJURED PATIENTS ASSESSED FOR PAIN

90% of Kansas EMS transported patients with injury were assessed for pain.



Trauma-01		
	2023	2024
Kansas	90%	90%
National	71%	71%

Kansas EMS Region Comparison		
Region 1	93%	94%
Region 2	95%	91%
Region 3	97%	97%
Region 4	95%	96%
Region 5	85%	85%
Region 6	95%	98%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

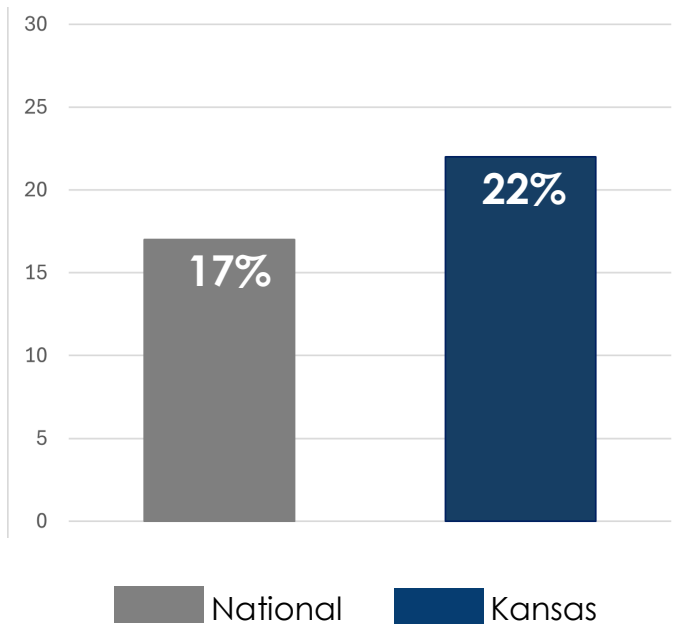
MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request for patients with injury who were assessed for pain.

MEASURE COMPONENTS:

Numerator Statement	EMS transports for patients with any pain scale value documented during the EMS encounter.
Denominator Statement	All EMS transports originating from a 911 request for patients with injury and a Glasgow Coma Score (GCS) of 15 or an Alert Verbal Painful Unresponsiveness (AVPU) of A.

EFFECTIVENESS OF PAIN MANAGEMENT FOR INJURED PATIENTS

22% of Kansas EMS injured patients lowered their pain score during the EMS encounter.



Trauma-03		
	2023	2024
Kansas	23%	22%
National	18%	17%

Kansas EMS Region Comparison		
Region 1	18%	19%
Region 2	15%	17%
Region 3	29%	29%
Region 4	22%	21%
Region 5	20%	17%
Region 6	25%	27%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

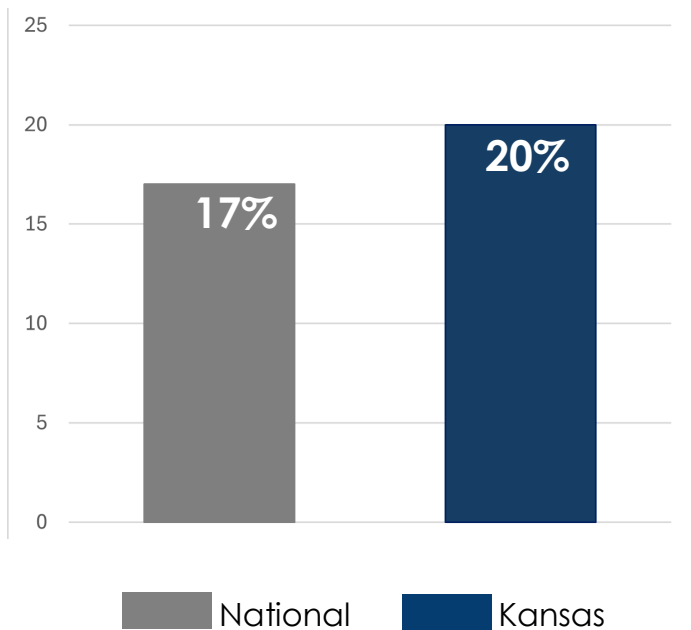
MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request for patients whose pain score was lowered during the EMS encounter.

MEASURE COMPONENTS:

Numerator Statement	EMS transports for patients with two or more documented pain scores and a final pain score value less than the first documented pain score.
Denominator Statement	All EMS transports originating from a 911 request for patients with injury and a Glasgow Coma Score (GCS) of 15 or an Alert Verbal Painful Unresponsive (AVPU) of A who had an initial pain score of greater than zero.

TRAUMA PATIENTS TRANSPORTED TO A TRAUMA CENTER

20% of Kansas EMS trauma patients meeting ACS criteria are transported to a trauma center.



Trauma-04		
	2023	2024
Kansas	18%	20%
National	13%	17%

Kansas EMS Region Comparison		
Region 1	25%	27%
Region 2	1%	1%
Region 3	23%	19%
Region 4	23%	17%
Region 5	10%	20%
Region 6	43%	23%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request for patients who meet ACS prehospital field triage criteria who are transported to a trauma center.

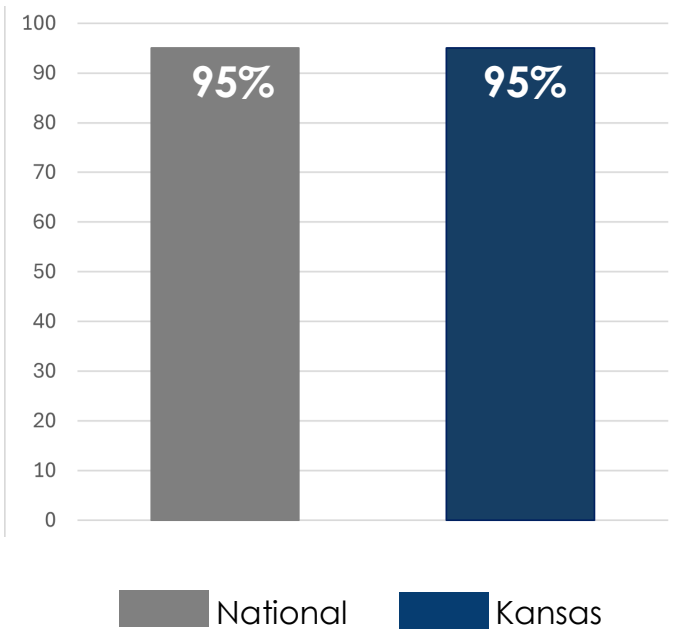
MEASURE COMPONENTS:

Numerator Statement	EMS transports for patients transported to a trauma center.
Denominator Statement	All EMS transports originating from a 911 request for patients with trauma.

Trauma-04 was updated in October 2023 with broader denominator criteria to capture more patients

DOCUMENTATION OF GCS, SBP, AND RESPIRATORY RATE

95% of Kansas EMS trauma patients have GCS, SBP, and RR documented.



Trauma-08		
	2023	2024
Kansas	94%	95%
National	94%	95%

Kansas EMS Region Comparison		
Region 1	89%	92%
Region 2	82%	80%
Region 3	97%	97%
Region 4	84%	85%
Region 5	95%	97%
Region 6	93%	95%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request for patients with trauma during which GCS, systolic blood pressure, and respiratory rate are documented..

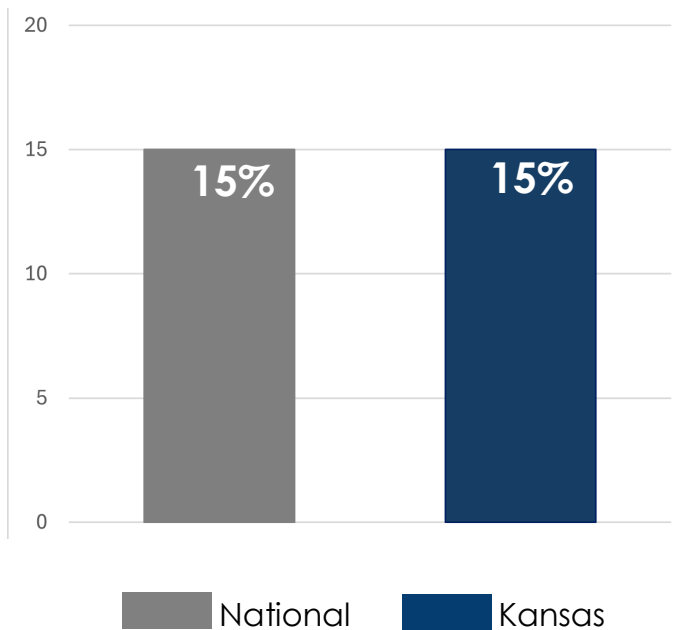
MEASURE COMPONENTS:

Numerator Statement	EMS transports during which GCS, systolic blood pressure, and respiratory rate are documented.
Denominator Statement	All EMS transports originating from a 911 request for patients with trauma.

***NEW MEASURE IN 2023

TRAUMA CALL RATE

15% of Kansas EMS trauma patients meeting ACS field triage criteria have a pre-arrival trauma alert initiated.



Trauma-14		
	2023	2024
Kansas	14%	15%
National	14%	15%

Kansas EMS Region Comparison		
Region 1	19%	23%
Region 2	9%	15%
Region 3	20%	16%
Region 4	15%	19%
Region 5	9%	11%
Region 6	20%	20%

MEASURE SCORE INTERPRETATION: For this measure, a higher score indicates better quality.

MEASURE DESCRIPTION: Percentage of EMS transports originating from a 911 request for patients who meet ACS prehospital field triage criteria for whom a pre-arrival trauma alert or activation is initiated.

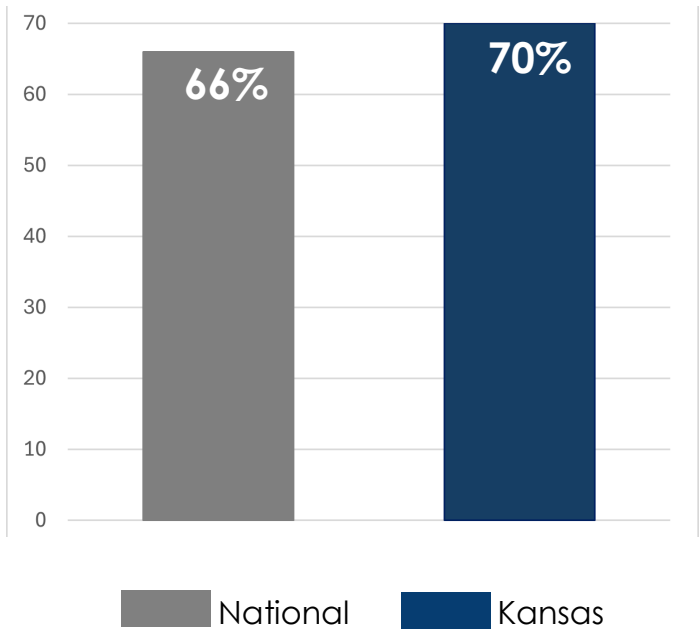
MEASURE COMPONENTS:

Numerator Statement	EMS transports for patients whom a pre-arrival trauma alert or activation was initiated.
Denominator Statement	All EMS transports originating from a 911 request for patients with trauma.

***NEW MEASURE IN 2023

VITAL SIGNS DOCUMENTED

70% of Kansas EMS 911 patients not transported have a basic set of vitals signs documented.



TTR-01		
	2023	2024
Kansas	75%	70%
National	70%	66%

Kansas EMS Region Comparison		
Region 1	64%	73%
Region 2	52%	50%
Region 3	82%	72%
Region 4	66%	69%
Region 5	68%	71%
Region 6	62%	61%

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 not transported by EMS during which a basic set of vital signs is documented..

MEASURE COMPONENTS:

Numerator Statement	EMS responses during which a basic set of vital signs (SBP, DBP, heart rate, pulse oximetry, respiratory rate, and GCS or AVPU) is documented.
Denominator Statement	All EMS responses originating from a 911 request for patients not transported by EMS.

***NEW MEASURE IN 2023

Special thanks to the Kentucky Board of EMS for allowing us to use their template to edit and publish our performance



Kansas Board of Emergency Medical Services



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