Draft Quality Measures

DRAFT MEASURE SPECIFICATIONS

Contents

NEMSQA-04: Trauma Patients Transported to Trauma Center

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

Measure Description	
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	
Initial Population	All EMS transports originating from a 911 request for patients with trauma
Initial Population Pseudocode	**NEMSIS**
	(eSituation.02 Possible Injury is 9922005 ("Yes") and (eResponse.05 Type of Service Requested is in (2205001 ("Emergency Response (Primary Response Area)"), 2205003 ("Emergency Response (Intercept)"), 2205009 ("Emergency Response (Mutual Aid)")))) and eDisposition.30 Transport Disposition is in (4230001 ("Transport by This EMS Unit (This Crew Only)"), 4230003 ("Transport by This EMS Unit, with a Member of Another Crew"), 4230007 ("Transport by Another EMS Unit, with a Member of this Crew"))))
Denominator Statement	**Denominator 1:** EMS transports in the initial population for patients greater than or equal to 65 years of age who meet ACS prehospital field triage criteria **Denominator 2:**

	EMS transports in the initial population for patients 10 to 64 years of age who meet ACS prehospital field triage criteria **Denominator 3:** EMS transports in the initial population for patients less than 10 years of age who meet ACS prehospital field triage criteria
Denominator Pseudocode	**NEMSIS**

	Denominator 1 (Patients Greater than or Equal to 65 Years of age)
	
	    Initial Population
	and
	    (ePatient.15 Age greater than or equal 65
	and
	    ePatient.16 Age Units is 2516009 ("Years"))
	and
	
	    eVitals.21 Glasgow Coma Score-Motor is in
	    (
	    1 ("No Motor Response (All Age Groups)"),
	    2 ("Extension to pain (All Age Groups)"),
	    3 ("Flexion to pain (All Age Groups)"),
	    4 ("Withdrawal from pain (All Age Groups)"),
	    5 ("Localizing pain (All Age Groups)"))
	or
	    eExam.23 Lung Assessment is in
	    (
	    3523001 ("Breath Sounds-Absent"),
	    3523003 ("Breath Sounds-Decreased"),
	    3523011 ("Increased Respiratory Effort"))
	or
	    eExam.25 Chest Assessment is in
	    (
	    3525005 ("Accessory Muscles Used with Breathing"),
	    3525023 ("Flail Segment"),
	    3525039 ("Retraction"))

or

eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
3315009 ("Rapid"),
3315011 ("Shallow"),
3315013 ("Weak/Agonal"))

or

eProcedures.03 Procedure matches
(
243142003 Dual pressure spontaneous ventilation support (regime/therapy);
47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
429705000 Insertion of esophageal tracheal combitube (procedure);
427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
424979004 Laryngeal mask airway insertion (procedure);
23674004 Orotracheal intubation (procedure);
450601000124103 Orotracheal intubation using bougie device (procedure);
241689008 Rapid sequence induction (procedure);
450611000124100 Insertion of single lumen supraglottic airway device (procedure))

or

eVitals.12 Pulse Oximetry is <90

or

eVitals.06 SBP (Systolic Blood Pressure) is <110

or (

exists vitals group where (eVitals.10 Heart Rate

is greater than

eVitals.06 SBP (Systolic Blood Pressure)))

or

	eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in (2903001 ("Amputation proximal to wrist or ankle"), 3903003 ("Crushed, degloved, mangled, or pulseless extremity"), 2903005 ("Chest wall instability or deformity (e.g., flail chest)"). 2903009 ("Open or depressed skull fracture"), 2903011 ("Paralysis"), 3903013 ("Pelvic fractures"), 2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"), 2903017 ("Respiratory Rate <10 or >29 breaths per minute (<20 in infants aged <1) or need for ventilatory support") , 3903021 ("Two or more proximal long-bone fractures")) or eExam.16 Extremities Assessment is in (3516043 ("Motor Function-Abnormal/Weakness"), 3516067 ("Sensation-Absent")) or eExam.20 Neurological Assessment is in (3520017 ("Hemiplegia-Left"), 3520019 ("Hemiplegia-Right"), 3520043 ("Weakness-Left Sided"), 3520045 ("Weakness-Right Sided")) or eProcedures.03 Procedures is in (20655006 Application of tourniquet (procedure); 24173005 Tourniquet procedure (procedure); 241731009 Tourniquet positioning (uninflated) (procedure); 241733007 Tourniquet cuff inflation (procedure); 241734001 Upper tourniquet cuff inflation (procedure); 241735000 Lower tourniquet cuff inflation (procedure); 241736004 Manual tourniquet application (procedure);

398260007 Tourniquet positioned on patient (procedure);
447686008 Application of pressure to wound (procedure))

or

eInjury.04 Trauma Triage Criteria (Steps 3 and 4) is in
(
2904001 ("Auto v. Pedestrian/Bicyclist Thrown, Run Over, or >20 MPH Accident"),
2904007 ("Crash Death in Same Passenger Compartment"),
2904009 ("Crash Ejection (partial or complete) from automobile"),
2904011 ("Crash Intrusion, Including roof: > 12 in. occupant site; > 18 in. any site"),
2904013 ("Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury"))

or

eInjury.09 Height of Fall (feet) is >10

or

eResponse.10 Type of Scene Delay is 2210011 ("Extrication")

or

eInjury.01 Cause of Injury matches
/^(V20)|(V21)||(V22)|(V23)|(V24)|(V25)|(V26)|(V27)|(V28)|(V29)|(V30)|(V31)|(V32)|(V33)|(V34)|(V35)|
(V36)|(V37)|(V38)|(V39)|(V80)|(V86)|\
("Motorcycle rider injured in collision with pedestrian or animal…,"
"Motorcycle rider injured in collision with pedal cycle…,"
"Motorcycle rider injured in collision with two- or three- wheeled motor vehicle…,"
"Motorcycle rider injured in collision with car, pick-up truck or van…,"
"Motorcycle rider injured in collision with heavy transport vehicle or bus…,"
"Motorcycle rider injured in collision with railway train or railway vehicle…,"
"Motorcycle rider injured in collision with other nonmotor vehicle…,"
"Motorcycle rider injured in collision with fixed or stationary object…,"
"Motorcycle rider injured in noncollision transport accident…,"
"Motorcycle rider injured in other and unspecified transport accidents…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedal cycle…,"
"Occupant of three-wheeled motor vehicle injured in collision with two- or three- wheeled motor vehicle…,"

"Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van…,"
"Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus…,"
"Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with other nonmotor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object…,"
"Occupant of three-wheeled motor vehicle injured in noncollision transport accident…,"
"Occupant of three-wheeled motor vehicle injured in other and unspecified transport accidents…,"
"Animal-rider or occupant of animal drawn vehicle injured in transport accident…,"
"Occupant of special all-terrain or other off-road motor vehicle, injured in transport accident…"))

Denominator 2 (Patients 10 to 64 years of age)

Initial Population
and
(
    (ePatient.15 Age greater than or equal 10
and
    ePatient.16 Age Units is 2516009 ("Years"))
and
    (ePatient.15 Age less than or equal to 64
and
    ePatient.16 Age Units is 2516009 ("Years")))
and

    eVitals.21 Glasgow Coma Score-Motor is in
    (
    1 ("No Motor Response (All Age Groups)"),
    2 ("Extension to pain (All Age Groups)"),
    3 ("Flexion to pain (All Age Groups)"),
    4 ("Withdrawal from pain (All Age Groups)"),
    5 ("Localizing pain (All Age Groups)"))
or
    eExam.23 Lung Assessment is in

	(3523001 ("Breath Sounds-Absent") 3523003 ("Breath Sounds-Decreased") 3523011 ("Increased Respiratory Effort")) or eExam.25 Chest Assessment is in (3525005 ("Accessory Muscles Used with Breathing") 3525023 ("Flail Segment") 3525039 ("Retraction")) or eVitals.15 Respiratory Effort is in (3315001 ("Apneic") 3315003 (Labored") 3315005 ("Mechanically Assisted (BVM, CPAP, etc.)") 3315009 ("Rapid") 3315011 ("Shallow") 3315013 ("Weak/Agonal")) or eProcedures.03 Procedure matches (243142003 Dual pressure spontaneous ventilation support (regime/therapy); 47545007 Continuous positive airway pressure ventilation treatment (regime/therapy); 429705000 Insertion of esophageal tracheal combitube (procedure); 427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure); 424979004 Laryngeal mask airway insertion (procedure); 23674004 Orotracheal intubation (procedure); 450601000124103 Orotracheal intubation using bougie device (procedure); 241689008 Rapid sequence induction (procedure); 450611000124100 Insertion of single lumen supraglottic airway device (procedure)) or (eVitals.10 Heart Rate

	is greater than
	
	   eVitals.06 SBP (Systolic Blood Pressure))
	or
	   eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in
	   (
	   2903001 ("Amputation proximal to wrist or ankle"),
	   3903003 ("Crushed, degloved, mangled, or pulseless extremity"),
	   2903005 ("Chest wall instability or deformity (e.g., flail chest)"),
	   2903009 ("Open or depressed skull fracture"),
	   2903011 ("Paralysis"),
	   3903013 ("Pelvic fractures"),
	   2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"),
	   2903017 ("Respiratory Rate <10 or >29 breaths per minutes (<20 in infants aged <1) or need for ventilatory support"),
	   2903019 ("Systolic Blood Pressure <90 mmHg"),
	   3903021 ("Two or more proximal long-bone fractures"))
	or
	
	   eExam.16 Extremities Assessment is in
	   (
	   3516043 ("Motor Function-Abnormal/Weakness"),
	   3516067 ("Sensation-Absent"))
	or
	   eExam.20 Neurological Assessment is in
	   (
	   3520017 ("Hemiplegia-Left"),
	   3520019 ("Hemiplegia-Right"),
	   3520043 ("Weakness-Left Sided"),
	   3520045 ("Weakness-Right Sided"))
	
	or
	   eProcedures.03 Procedures is in
	   (

	20655006 Application of tourniquet (procedure); 24173005 Tourniquet procedure (procedure); 241731009 Tourniquet positioning (uninflated) (procedure); 241733007 Tourniquet cuff inflation (procedure); 241734001 Upper tourniquet cuff inflation (procedure); 241735000 Lower tourniquet cuff inflation (procedure); 241736004 Manual tourniquet application (procedure); 398260007 Tourniquet positioned on patient (procedure); 447686008 Application of pressure to wound (procedure)) or eInjury.04 Trauma Triage Criteria (Steps 3 and 4) is in (2904001 ("Auto v. Pedestrian/Bicyclist Thrown, Run Over, or >20 MPH Accident"), 2904007 ("Crash Death in Same Passenger Compartment"), 2904009 ("Crash Ejection (partial or complete) from automobile"), 2904011 ("Crash Intrusion, Including roof: > 12 in. occupant site; > 18 in. any site"), 2904013 ("Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury")) or eInjury.09 Height of Fall (feet) is >10 or eResponse.10 Type of Scene Delay is 2210011 ("Extrication") or eInjury.01 Cause of Injury matches /^(V20)|(V21)||(V22)|(V23)|(V24)|(V25)|(V26)|(V27)|(V28)|(V29)|(V30)|(V31)|(V32)|(V33)|(V34)| (V35)| (V36)|(V37)|(V38)|(V39)|(V80)|(V86)|\\ ("Motorcycle rider injured in collision with pedestrian or animal…," "Motorcycle rider injured in collision with pedal cycle…," "Motorcycle rider injured in collision with two- or three- wheeled motor vehicle…," "Motorcycle rider injured in collision with car, pick-up truck or van…," "Motorcycle rider injured in collision with heavy transport vehicle or bus…," "Motorcycle rider injured in collision with railway train or railway vehicle…," "Motorcycle rider injured in collision with other nonmotor vehicle…,"

"Motorcycle rider injured in collision with fixed or stationary object…,"
"Motorcycle rider injured in noncollision transport accident…,"
"Motorcycle rider injured in other and unspecified transport accidents…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedal cycle…,"
"Occupant of three-wheeled motor vehicle injured in collision with two- or three- wheeled motor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van…,"
"Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus…,"
"Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with other nonmotor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object…,"
"Occupant of three-wheeled motor vehicle injured in noncollision transport accident…,"
"Occupant of three-wheeled motor vehicle injured in other and unspecified transport accidents…,"
"Animal-rider or occupant of animal drawn vehicle injured in transport accident…,"
"Occupant of special all-terrain or other off-road motor vehicle, injured in transport accident…"))

Denominator 3 (Patients <10 years of age)

Initial Population
and
((
(ePatient.15 Age less than 10
and
ePatient.16 Age Units is 2516009 ("Years"))
or
(ePatient.15 Age less is less than 120
and
ePatient.16 Age Units is in
(
2516001 ("Days"),
2516003 ("Hours"),

	2516005 ("Minutes"), 2516007 ("Months")))) and eVitals.21 Glasgow Coma Score-Motor is in (1 ("No Motor Response (All Age Groups)"), 2 ("Extension to pain (All Age Groups)"), 3 ("Flexion to pain (All Age Groups)"), 4 ("Withdrawal from pain (All Age Groups)"), 5 ("Localizing pain (All Age Groups)")) or (eVitals.14 Respiratory Rate is <10 and eVitals.14 Respiratory Rate is >29) or eExam.23 Lung Assessment is in (3523001 ("Breath Sounds-Absent"), 3523003 ("Breath Sounds-Decreased"), 3523011 ("Increased Respiratory Effort")) or eExam.25 Chest Assessment is in (3525005 ("Accessory Muscles Used with Breathing"), 3525023 ("Flail Segment"), 3525039 ("Retraction")) or eVitals.15 Respiratory Effort is in (3315001 ("Apneic"), 3315003 (Labored"), 3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),

	3315009 ("Rapid"), 3315011 ("Shallow"), 3315013 ("Weak/Agonal")) or eProcedures.03 Procedure matches (243142003 Dual pressure spontaneous ventilation support (regime/therapy); 47545007 Continuous positive airway pressure ventilation treatment (regime/therapy); 429705000 Insertion of esophageal tracheal combitube (procedure); 427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure); 424979004 Laryngeal mask airway insertion (procedure); 23674004 Orotracheal intubation (procedure); 450601000124103 Orotracheal intubation using bougie device (procedure); 241689008 Rapid sequence induction (procedure); 450611000124100 Insertion of single lumen supraglottic airway device (procedure)) or eVitals.12 Pulse Oximetry is <90 or (eVitals.06 SBP (Systolic Blood Pressure) is (greater than or equal to 70 PLUS ePatient.15 Age X 2)) or eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in (2903001 ("Amputation proximal to wrist or ankle"), 3903003 ("Crushed, degloved, mangled, or pulseless extremity"), 2903005 ("Chest wall instability or deformity (e.g., flail chest)"), 2903009 ("Open or depressed skull fracture"), 2903011 ("Paralysis"), 3903013 ("Pelvic fractures"), 2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"), 3903021 ("Two or more proximal long-bone fractures")) or

eExam.16 Extremities Assessment is in

(

3516043 ("Motor Function-Abnormal/Weakness")

3516067 ("Sensation-Absent"))

or

eExam.20 Neurological Assessment is in

(

3520017 ("Hemiplegia-Left"),

3520019 ("Hemiplegia-Right"),

3520043 ("Weakness-Left Sided"),

3520045 ("Weakness-Right Sided"))

or

eProcedures.03 Procedures is in

(

20655006 Application of tourniquet (procedure);

24173005 Tourniquet procedure (procedure);

241731009 Tourniquet positioning (uninflated) (procedure);

241733007 Tourniquet cuff inflation (procedure);

241734001 Upper tourniquet cuff inflation (procedure);

241735000 Lower tourniquet cuff inflation (procedure);

241736004 Manual tourniquet application (procedure);

398260007 Tourniquet positioned on patient (procedure);

447686008 Application of pressure to wound (procedure))

or

eInjury.04 Vehicular, Pedestrian, or Other Injury Risk Factor is in

(

2904001 ("Auto v. Pedestrian/Bicyclist Thrown, Run Over, or >20 MPH Accident"),

2904007 ("Crash Death in Same Passenger Compartment"),

2904009 ("Crash Ejection (partial or complete) from automobile"),

2904011 ("Crash Intrusion, Including roof: > 12 in. occupant site; > 18 in. any site"),

2904013 ("Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury"))

or

eInjury.09 Height of Fall (feet) is >10

or

	eResponse.10 Type of Scene Delay is 2210011 ("Extrication") or eInjury.01 Cause of Injury matches /^(V20)|(V21)||(V22)|(V23)|(V24)|(V25)|(V26)|(V27)|(V28)|(V29)|(V30)|(V31)|(V32)|(V33)|(V34)| (V35)| (V36)|(V37)|(V38)|(V39)|(V80)|(V86)|\\ ("Motorcycle rider injured in collision with pedestrian or animal…," "Motorcycle rider injured in collision with pedal cycle…," "Motorcycle rider injured in collision with two- or three- wheeled motor vehicle…," "Motorcycle rider injured in collision with car, pick-up truck or van…," "Motorcycle rider injured in collision with heavy transport vehicle or bus…," "Motorcycle rider injured in collision with railway train or railway vehicle…," "Motorcycle rider injured in collision with other nonmotor vehicle…," "Motorcycle rider injured in collision with fixed or stationary object…," "Motorcycle rider injured in noncollision transport accident…," "Motorcycle rider injured in other and unspecified transport accidents…," "Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal…," "Occupant of three-wheeled motor vehicle injured in collision with pedal cycle…," "Occupant of three-wheeled motor vehicle injured in collision with two- or three- wheeled motor vehicle…," "Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van…," "Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus…," "Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle…," "Occupant of three-wheeled motor vehicle injured in collision with other nonmotor vehicle…," "Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object…," "Occupant of three-wheeled motor vehicle injured in noncollision transport accident…," "Occupant of three-wheeled motor vehicle injured in other and unspecified transport accidents…," "Animal-rider or occupant of animal drawn vehicle injured in transport accident…," "Occupant of special all-terrain or other off-road motor vehicle, injured in transport accident…"))
Denominator Exclusions	None

Denominator Exceptions	None
Numerator Statement	**Numerator for Populations 1-3 (Calculate 3 Rates):** EMS transports for patients transported to a trauma center
Numerator Pseudocode	**NEMSIS**
	Numerator for Populations 1-3 (Calculate 3 Rates): eDisposition.23 Hospital Capability is in (9908021 ("Trauma Center Level 1") 9908023 ("Trauma Center Level 2") 9908025 ("Trauma Center Level 3") 9908027 ("Trauma Center Level 4") 9908029 ("Trauma Center Level 5"))
Supporting Guidance & Other Evidence	Reference ACS Prehospital Trauma Guidelines
Measure Importance	
Rationale	Reference ACS Prehospital Trauma Guidelines
Measure Designation	
Measure purpose	• ☒ Quality Improvement • ☒ Accountability
Type of measure	• ☒ Process • ☐ Outcome • ☐ Structure • ☐ Efficiency
National Quality Strategy/Priority/CMS Measure Domain	• ☒ Clinical Process-Effectiveness • ☐ Patient Safety • ☐ Patient Experience • ☒ Care Coordination

	• ☐ Efficiency: Overuse
	• ☐ Efficiency: Cost
	• ☐ Population & Community Health
Level of measurement	• ☒ Individual EMS Professional
	• ☒ EMS Agency
	• ☒ State Level
Care setting	• ☒ Pre-Hospital Care
Data source	• ☒ Electronic Patient Care Record (eCPR) data
	• ☐ Administrative Data/Claims (inpatient, outpatient or multiple-source claims)
	• ☒ Paper medical record/Chart abstracted
	• ☒ Registry

F.A.I.R. Trauma-14: Trauma Call Rate

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	
Initial Population	All EMS transports originating from a 911 request for patients with trauma
Initial Population Pseudocode	**NEMSIS**
	(
	eSituation.02 Possible Injury is 9922005 ("Yes")
	and
	(
	eResponse.05 Type of Service Requested is in
	(
	2205001 ("Emergency Response (Primary Response Area)"),
	2205003 ("Emergency Response (Intercept)"),
	2205009 ("Emergency Response (Mutual Aid)")))))

	and eDisposition.30 Transport Disposition is in (4230001 ("Transport by This EMS Unit (This Crew Only)"), 4230003 ("Transport by This EMS Unit, with a Member of Another Crew"), 4230007 ("Transport by Another EMS Unit, with a Member of this Crew"))))
Denominator Statement	**Denominator 1:** EMS transports in the initial population for patients greater than or equal to 65 years of age who meet ACS prehospital field triage criteria **Denominator 2:** EMS transports in the initial population for patients 10 to 64 years of age who meet ACS prehospital field triage criteria **Denominator 3:** EMS transports in the initial population for patients less than 10 years of age who meet ACS prehospital field triage criteria

Denominator Pseudocode	**NEMSIS**
	Denominator 1 (Patients Greater than or Equal to 65 Years of age)
	
	    Initial Population
	and
	    (ePatient.15 Age greater than or equal 65
	and
	    ePatient.16 Age Units is 2516009 ("Years"))
	and
	
	    eVitals.21 Glasgow Coma Score-Motor is in
	    (
	    1 ("No Motor Response (All Age Groups)"),
	    2 ("Extension to pain (All Age Groups)"),
	    3 ("Flexion to pain (All Age Groups)"),

	4 ("Withdrawal from pain (All Age Groups)"), 5 ("Localizing pain (All Age Groups)")) or eExam.23 Lung Assessment is in (3523001 ("Breath Sounds-Absent"), 3523003 ("Breath Sounds-Decreased"), 3523011 ("Increased Respiratory Effort")) or eExam.25 Chest Assessment is in (3525005 ("Accessory Muscles Used with Breathing"), 3525023 ("Flail Segment"), 3525039 ("Retraction")) or eVitals.15 Respiratory Effort is in (3315001 ("Apneic"), 3315003 (Labored"), 3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"), 3315009 ("Rapid"), 3315011 ("Shallow"), 3315013 ("Weak/Agonal")) or eProcedures.03 Procedure matches (243142003 Dual pressure spontaneous ventilation support (regime/therapy); 47545007 Continuous positive airway pressure ventilation treatment (regime/therapy); 429705000 Insertion of esophageal tracheal combitube (procedure); 427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure); 424979004 Laryngeal mask airway insertion (procedure); 23674004 Orotracheal intubation (procedure);

	450601000124103 Orotracheal intubation using bougie device (procedure); 241689008 Rapid sequence induction (procedure); 450611000124100 Insertion of single lumen supraglottic airway device (procedure)) or eVitals.12 Pulse Oximetry is <90 or eVitals.06 SBP (Systolic Blood Pressure) is <110 or (exists vitals group where (eVitals.10 Heart Rate is greater than eVitals.06 SBP (Systolic Blood Pressure))) or eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in (2903001 ("Amputation proximal to wrist or ankle"), 3903003 ("Crushed, degloved, mangled, or pulseless extremity"), 2903005 ("Chest wall instability or deformity (e.g., flail chest)"), 2903009 ("Open or depressed skull fracture"), 2903011 ("Paralysis"), 3903013 ("Pelvic fractures"), 2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"), 2903017 ("Respiratory Rate <10 or >29 breaths per minute (<20 in infants aged <1) or need for ventilatory support") , 3903021 ("Two or more proximal long-bone fractures")) or eExam.16 Extremities Assessment is in (3516043 ("Motor Function-Abnormal/Weakness"), 3516067 ("Sensation-Absent")) or

eExam.20 Neurological Assessment is in

(

3520017 ("Hemiplegia-Left"),

3520019 ("Hemiplegia-Right"),

3520043 ("Weakness-Left Sided"),

3520045 ("Weakness-Right Sided"))

or

eProcedures.03 Procedures is in

(

20655006 Application of tourniquet (procedure);

24173005 Tourniquet procedure (procedure);

241731009 Tourniquet positioning (uninflated) (procedure);

241733007 Tourniquet cuff inflation (procedure);

241734001 Upper tourniquet cuff inflation (procedure);

241735000 Lower tourniquet cuff inflation (procedure);

241736004 Manual tourniquet application (procedure);

398260007 Tourniquet positioned on patient (procedure);

447686008 Application of pressure to wound (procedure))

or

eInjury.04 Trauma Triage Criteria (Steps 3 and 4) is in

(

2904001 ("Auto v. Pedestrian/Bicyclist Thrown, Run Over, or >20 MPH Accident"),

2904007 ("Crash Death in Same Passenger Compartment"),

2904009 ("Crash Ejection (partial or complete) from automobile"),

2904011 ("Crash Intrusion, Including roof: > 12 in. occupant site; > 18 in. any site"),

2904013 ("Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury"))

or

eInjury.09 Height of Fall (feet) is >10

or

eResponse.10 Type of Scene Delay is 2210011 ("Extrication")

or

eInjury.01 Cause of Injury matches
/^(V20)|(V21)||(V22)|(V23)|(V24)|(V25)|(V26)|(V27)|(V28)|(V29)|(V30)|(V31)|(V32)|(V33)|(V34)|(V35)|
(V36)|(V37)|(V38)|(V39)|(V80)|(V86)|\
("Motorcycle rider injured in collision with pedestrian or animal…,"
"Motorcycle rider injured in collision with pedal cycle…,"
"Motorcycle rider injured in collision with two- or three- wheeled motor vehicle…,"
"Motorcycle rider injured in collision with car, pick-up truck or van…,"
"Motorcycle rider injured in collision with heavy transport vehicle or bus…,"
"Motorcycle rider injured in collision with railway train or railway vehicle…,"
"Motorcycle rider injured in collision with other nonmotor vehicle…,"
"Motorcycle rider injured in collision with fixed or stationary object…,"
"Motorcycle rider injured in noncollision transport accident…,"
"Motorcycle rider injured in other and unspecified transport accidents…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedal cycle…,"
"Occupant of three-wheeled motor vehicle injured in collision with two- or three- wheeled motor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van…,"
"Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus…,"
"Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with other nonmotor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object…,"
"Occupant of three-wheeled motor vehicle injured in noncollision transport accident…,"
"Occupant of three-wheeled motor vehicle injured in other and unspecified transport accidents…,"
"Animal-rider or occupant of animal drawn vehicle injured in transport accident…,"
"Occupant of special all-terrain or other off-road motor vehicle, injured in transport accident…"))

Denominator 2 (Patients 10 to 64 years of age)

Initial Population
and
(

(ePatient.15 Age greater than or equal 10

and

ePatient.16 Age Units is 2516009 ("Years"))

and

(ePatient.15 Age less than or equal to 64

and

ePatient.16 Age Units is 2516009 ("Years")))

and

eVitals.21 Glasgow Coma Score-Motor is in
(
1 ("No Motor Response (All Age Groups)"),
2 ("Extension to pain (All Age Groups)"),
3 ("Flexion to pain (All Age Groups)"),
4 ("Withdrawal from pain (All Age Groups)"),
5 ("Localizing pain (All Age Groups)"))

or

eExam.23 Lung Assessment is in
(
3523001 ("Breath Sounds-Absent"),
3523003 ("Breath Sounds-Decreased"),
3523011 ("Increased Respiratory Effort"))

or

eExam.25 Chest Assessment is in
(
3525005 ("Accessory Muscles Used with Breathing"),
3525023 ("Flail Segment"),
3525039 ("Retraction"))

or

eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
3315009 ("Rapid"),

3315011 ("Shallow"),
3315013 ("Weak/Agonal"))
or

eProcedures.03 Procedure matches
(
243142003 Dual pressure spontaneous ventilation support (regime/therapy);
47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
429705000 Insertion of esophageal tracheal combitube (procedure);
427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
424979004 Laryngeal mask airway insertion (procedure);
23674004 Orotracheal intubation (procedure);
450601000124103 Orotracheal intubation using bougie device (procedure);
241689008 Rapid sequence induction (procedure);
450611000124100 Insertion of single lumen supraglottic airway device (procedure))

or (

eVitals.10 Heart Rate

is greater than

eVitals.06 SBP (Systolic Blood Pressure))
or

eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in
(
2903001 ("Amputation proximal to wrist or ankle"),
3903003 ("Crushed, degloved, mangled, or pulseless extremity"),
2903005 ("Chest wall instability or deformity (e.g., flail chest)"),
2903009 ("Open or depressed skull fracture"),
2903011 ("Paralysis"),
3903013 ("Pelvic fractures"),
2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"),
2903017 ("Respiratory Rate <10 or >29 breaths per minutes (<20 in infants aged <1) or need for ventilatory support"),
2903019 ("Systolic Blood Pressure <90 mmHg"),

	3903021 ("Two or more proximal long-bone fractures"))
	or
	eExam.16 Extremities Assessment is in (3516043 ("Motor Function-Abnormal/Weakness"), 3516067 ("Sensation-Absent"))
	or
	eExam.20 Neurological Assessment is in (3520017 ("Hemiplegia-Left"), 3520019 ("Hemiplegia-Right"), 3520043 ("Weakness-Left Sided"), 3520045 ("Weakness-Right Sided"))
	or
	eProcedures.03 Procedures is in (20655006 Application of tourniquet (procedure); 24173005 Tourniquet procedure (procedure); 241731009 Tourniquet positioning (uninflated) (procedure); 241733007 Tourniquet cuff inflation (procedure); 241734001 Upper tourniquet cuff inflation (procedure); 241735000 Lower tourniquet cuff inflation (procedure); 241736004 Manual tourniquet application (procedure); 398260007 Tourniquet positioned on patient (procedure); 447686008 Application of pressure to wound (procedure))
	or
	eInjury.04 Trauma Triage Criteria (Steps 3 and 4) is in (2904001 ("Auto v. Pedestrian/Bicyclist Thrown, Run Over, or >20 MPH Accident"), 2904007 ("Crash Death in Same Passenger Compartment"), 2904009 ("Crash Ejection (partial or complete) from automobile"), 2904011 ("Crash Intrusion, Including roof: > 12 in. occupant site; > 18 in. any site"), 2904013 ("Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury"))
	or
	eInjury.09 Height of Fall (feet) is >10

or

eResponse.10 Type of Scene Delay is 2210011 ("Extrication")

or

eInjury.01 Cause of Injury matches
/^(V20)|(V21)||(V22)|(V23)|(V24)|(V25)|(V26)|(V27)|(V28)|(V29)|(V30)|(V31)|(V32)|(V33)|(V34)|(V35)|
(V36)|(V37)|(V38)|(V39)|(V80)|(V86)|\
("Motorcycle rider injured in collision with pedestrian or animal…,"
"Motorcycle rider injured in collision with pedal cycle…,"
"Motorcycle rider injured in collision with two- or three- wheeled motor vehicle…,"
"Motorcycle rider injured in collision with car, pick-up truck or van…,"
"Motorcycle rider injured in collision with heavy transport vehicle or bus…,"
"Motorcycle rider injured in collision with railway train or railway vehicle…,"
"Motorcycle rider injured in collision with other nonmotor vehicle…,"
"Motorcycle rider injured in collision with fixed or stationary object…,"
"Motorcycle rider injured in noncollision transport accident…,"
"Motorcycle rider injured in other and unspecified transport accidents…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal…,"
"Occupant of three-wheeled motor vehicle injured in collision with pedal cycle…,"
"Occupant of three-wheeled motor vehicle injured in collision with two- or three- wheeled motor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van…,"
"Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus…,"
"Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with other nonmotor vehicle…,"
"Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object…,"
"Occupant of three-wheeled motor vehicle injured in noncollision transport accident…,"
"Occupant of three-wheeled motor vehicle injured in other and unspecified transport accidents…,"
"Animal-rider or occupant of animal drawn vehicle injured in transport accident…,"
"Occupant of special all-terrain or other off-road motor vehicle, injured in transport accident…"))

or

Denominator 3 (Patients <10 years of age)

Initial Population
and
((
(ePatient.15 Age less than 10
and
ePatient.16 Age Units is 2516009 ("Years"))
or
(ePatient.15 Age less is less than 120
and
ePatient.16 Age Units is in
(
2516001 ("Days"),
2516003 ("Hours"),
2516005 ("Minutes"),
2516007 ("Months"))))
and

eVitals.21 Glasgow Coma Score-Motor is in
(
1 ("No Motor Response (All Age Groups)"),
2 ("Extension to pain (All Age Groups)"),
3 ("Flexion to pain (All Age Groups)"),
4 ("Withdrawal from pain (All Age Groups)"),
5 ("Localizing pain (All Age Groups)"))

or (
eVitals.14 Respiratory Rate is <10
and
eVitals.14 Respiratory Rate is >29)
or
eExam.23 Lung Assessment is in
(

| | 3523001 ("Breath Sounds-Absent"),
3523003 ("Breath Sounds-Decreased"),
3523011 ("Increased Respiratory Effort"))
or

eExam.25 Chest Assessment is in
(
3525005 ("Accessory Muscles Used with Breathing"),
3525023 ("Flail Segment"),
3525039 ("Retraction"))
or

eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
3315009 ("Rapid"),
3315011 ("Shallow"),
3315013 ("Weak/Agonal"))
or

eProcedures.03 Procedure matches
(
243142003 Dual pressure spontaneous ventilation support (regime/therapy);
47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
429705000 Insertion of esophageal tracheal combitube (procedure);
427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
424979004 Laryngeal mask airway insertion (procedure);
23674004 Orotracheal intubation (procedure);
450601000124103 Orotracheal intubation using bougie device (procedure);
241689008 Rapid sequence induction (procedure);
450611000124100 Insertion of single lumen supraglottic airway device (procedure)))
or

eVitals.12 Pulse Oximetry is <90
or (

eVitals.06 SBP (Systolic Blood Pressure) is (greater than or equal to 70 |

	PLUS
	     ePatient.15 Age X 2))
	or
	
	     eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in
	(
	2903001 ("Amputation proximal to wrist or ankle"),
	3903003 ("Crushed, degloved, mangled, or pulseless extremity"),
	2903005 ("Chest wall instability or deformity (e.g., flail chest)"),
	2903009 ("Open or depressed skull fracture"),
	2903011 ("Paralysis"),
	3903013 ("Pelvic fractures"),
	2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"),
	3903021 ("Two or more proximal long-bone fractures"))
	or
	eExam.16 Extremities Assessment is in
	(
	3516043 ("Motor Function-Abnormal/Weakness"),
	3516067 ("Sensation-Absent"))
	or
	
	eExam.20 Neurological Assessment is in
	(
	3520017 ("Hemiplegia-Left"),
	3520019 ("Hemiplegia-Right"),
	3520043 ("Weakness-Left Sided"),
	3520045 ("Weakness-Right Sided"))
	or
	eProcedures.03 Procedures is in
	(
	20655006 Application of tourniquet (procedure);
	24173005 Tourniquet procedure (procedure);
	241731009 Tourniquet positioning (uninflated) (procedure);
	241733007 Tourniquet cuff inflation (procedure);

	241734001 Upper tourniquet cuff inflation (procedure); 241735000 Lower tourniquet cuff inflation (procedure); 241736004 Manual tourniquet application (procedure); 398260007 Tourniquet positioned on patient (procedure); 447686008 Application of pressure to wound (procedure)) or eInjury.04 Vehicular, Pedestrian, or Other Injury Risk Factor is in (2904001 ("Auto v. Pedestrian/Bicyclist Thrown, Run Over, or >20 MPH Accident"), 2904007 ("Crash Death in Same Passenger Compartment"), 2904009 ("Crash Ejection (partial or complete) from automobile"), 2904011 ("Crash Intrusion, Including roof: > 12 in. occupant site; > 18 in. any site"), 2904013 ("Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury")) or eInjury.09 Height of Fall (feet) is >10 or eResponse.10 Type of Scene Delay is 2210011 ("Extrication") or eInjury.01 Cause of Injury matches /^(V20)|(V21)||(V22)|(V23)|(V24)|(V25)|(V26)|(V27)|(V28)|(V29)|(V30)|(V31)|(V32)|(V33)|(V34)|(V35)| (V36)|(V37)|(V38)|(V39)|(V80)|(V86)|\\ ("Motorcycle rider injured in collision with pedestrian or animal…," "Motorcycle rider injured in collision with pedal cycle…," "Motorcycle rider injured in collision with two- or three- wheeled motor vehicle…," "Motorcycle rider injured in collision with car, pick-up truck or van…," "Motorcycle rider injured in collision with heavy transport vehicle or bus…," "Motorcycle rider injured in collision with railway train or railway vehicle…," "Motorcycle rider injured in collision with other nonmotor vehicle…," "Motorcycle rider injured in collision with fixed or stationary object…," "Motorcycle rider injured in noncollision transport accident…," "Motorcycle rider injured in other and unspecified transport accidents…,"

	"Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal…," "Occupant of three-wheeled motor vehicle injured in collision with pedal cycle…," "Occupant of three-wheeled motor vehicle injured in collision with two- or three- wheeled motor vehicle…," "Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van…," "Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus…," "Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle…," "Occupant of three-wheeled motor vehicle injured in collision with other nonmotor vehicle…," "Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object…," "Occupant of three-wheeled motor vehicle injured in noncollision transport accident…," "Occupant of three-wheeled motor vehicle injured in other and unspecified transport accidents…," "Animal-rider or occupant of animal drawn vehicle injured in transport accident…," "Occupant of special all-terrain or other off-road motor vehicle, injured in transport accident…"))
Denominator Exclusions	None
Denominator Exceptions	None
Numerator Statement	**Numerator (Calculate 3 Rates):** EMS transports for patients for whom a pre-arrival trauma alert or activation was initiated
Numerator Pseudocode	**NEMSIS** **Calculate 3 Rates:** **Numerator 1:** eDisposition.24 Hospital Capability is in (4224003 ("Yes-Adult Trauma"), 4224017 ("Yes-Trauma (General)")) **Numerator 2:**

	[eDisposition.24 Hospital Capability](#) is in (4224003 ("Yes-Adult Trauma"), 4224011 ("Yes-Pediatric Trauma"), 4224017 ("Yes-Trauma (General)")) **Numerator 3:** [eDisposition.24 Hospital Capability](#) is in (4224003 ("Yes-Adult Trauma"), 4224011 ("Yes-Pediatric Trauma"), 4224017 ("Yes-Trauma (General)"))
Supporting Guidance & Other Evidence	Reference ACS Prehospital Trauma Guidelines
Measure Importance	
Rationale	Reference ACS Prehospital Trauma Guidelines
Measure Designation	
Measure purpose	• ☒ Quality Improvement • ☒ Accountability
Type of measure	• ☒ Process • ☐ Outcome • ☐ Structure • ☐ Efficiency
National Quality Strategy/Priority/CMS Measure Domain	• ☒ Clinical Process-Effectiveness • ☐ Patient Safety • ☐ Patient Experience • ☒ Care Coordination • ☐ Efficiency: Overuse • ☐ Efficiency: Cost • ☐ Population & Community Health

Level of measurement	• ☒ Individual EMS Professional • ☒ EMS Agency • ☒ State Level
Care setting	• ☒ Pre-Hospital Care
Data source	• ☒ Electronic Patient Care Record (eCPR) data • ☐ Administrative Data/Claims (inpatient, outpatient or multiple-source claims) • ☒ Paper medical record/Chart abstracted • ☒ Registry

ACS-01a: Trauma Patients Transported to Highest Level Trauma Center

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 red field triage criteria who are transported to a Level I or II trauma center	
Measure Components	
Initial Population	All EMS transports originating from a 911 request for patients with trauma

Initial Population Pseudocode	**NEMSIS**
	
	 (
	  eSituation.02 Possible Injury is 9922005 ("Yes")
	 and
	
	 (
	  eResponse.05 Type of Service Requested is in
	  (
	  2205001 ("Emergency Response (Primary Response Area)"),
	  2205003 ("Emergency Response (Intercept)"),
	  2205009 ("Emergency Response (Mutual Aid)"))))
	
	 and
	
	  eDisposition.30 Transport Disposition is in
	  (

	4230001 ("Transport by This EMS Unit (This Crew Only)"), 4230003 ("Transport by This EMS Unit, with a Member of Another Crew"), 4230007 ("Transport by Another EMS Unit, with a Member of this Crew"))))
Denominator Statement	**Denominator 1:** EMS transports in the initial population for patients greater than or equal to 65 years of age who meet ACS prehospital red field triage criteria **Denominator 2:** EMS transports in the initial population for patients 10 to 64 years of age who meet ACS prehospital red field triage criteria **Denominator 3:** EMS transports in the initial population for patients less than 10 years of age who meet ACS prehospital red field triage criteria

Denominator Pseudocode	**NEMSIS**
	Denominator 1 (Patients Greater than or Equal to 65 Years of age)
	
	     Initial Population
	and
	     (ePatient.15 Age greater than or equal 65
	and
	     ePatient.16 Age Units is 2516009 ("Years"))
	and
	     eVitals.21 Glasgow Coma Score-Motor is in
	     (
	     1 ("No Motor Response (All Age Groups)"),
	     2 ("Extension to pain (All Age Groups)"),
	     3 ("Flexion to pain (All Age Groups)"),
	     4 ("Withdrawal from pain (All Age Groups)"),
	     5 ("Localizing pain (All Age Groups)"))
	or
	     eExam.23 Lung Assessment is in
	     (
	     3523001 ("Breath Sounds-Absent"),

3523003 ("Breath Sounds-Decreased"),
3523011 ("Increased Respiratory Effort"))

or

eExam.25 Chest Assessment is in
(
3525005 ("Accessory Muscles Used with Breathing"),
3525023 ("Flail Segment"),
3525039 ("Retraction"))

or

eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
3315009 ("Rapid"),
3315011 ("Shallow"),
3315013 ("Weak/Agonal"))

or

eProcedures.03 Procedure matches
(
243142003 Dual pressure spontaneous ventilation support (regime/therapy);
47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
429705000 Insertion of esophageal tracheal combitube (procedure);
427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
424979004 Laryngeal mask airway insertion (procedure);
23674004 Orotracheal intubation (procedure);
450601000124103 Orotracheal intubation using bougie device (procedure);
241689008 Rapid sequence induction (procedure);
450611000124100 Insertion of single lumen supraglottic airway device (procedure))

or

eVitals.12 Pulse Oximetry is <90

or

eVitals.06 SBP (Systolic Blood Pressure) is <110

or (

exists vitals group where (eVitals.10 Heart Rate

is greater than

eVitals.06 SBP (Systolic Blood Pressure)))

or

eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in
(
2903001 ("Amputation proximal to wrist or ankle"),
3903003 ("Crushed, degloved, mangled, or pulseless extremity"),
2903005 ("Chest wall instability or deformity (e.g., flail chest)"),
2903009 ("Open or depressed skull fracture"),
2903011 ("Paralysis"),
3903013 ("Pelvic fractures"),
2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or
knee"),
2903017 ("Respiratory Rate <10 or >29 breaths per minute (<20 in infants aged <1) or need for
ventilatory support") ,
3903021 ("Two or more proximal long-bone fractures"))

or

eExam.16 Extremities Assessment is in
(
3516043 ("Motor Function-Abnormal/Weakness"),
3516067 ("Sensation-Absent"))

or

eExam.20 Neurological Assessment is in
(
3520017 ("Hemiplegia-Left"),
3520019 ("Hemiplegia-Right"),
3520043 ("Weakness-Left Sided"),
3520045 ("Weakness-Right Sided"))

or

eProcedures.03 Procedures is in

(
20655006 Application of tourniquet (procedure);
24173005 Tourniquet procedure (procedure);
241731009 Tourniquet positioning (uninflated) (procedure);
241733007 Tourniquet cuff inflation (procedure);
241734001 Upper tourniquet cuff inflation (procedure);
241735000 Lower tourniquet cuff inflation (procedure);
241736004 Manual tourniquet application (procedure);
398260007 Tourniquet positioned on patient (procedure);
447686008 Application of pressure to wound (procedure)))

Denominator 2 (Patients 10 to 64 years of age)

Initial Population
and
(
(ePatient.15 Age greater than or equal 10
and
ePatient.16 Age Units is 2516009 ("Years"))
and
(ePatient.15 Age less than or equal to 64
and
ePatient.16 Age Units is 2516009 ("Years")))
and

eVitals.21 Glasgow Coma Score-Motor is in
(
1 ("No Motor Response (All Age Groups)"),
2 ("Extension to pain (All Age Groups)"),
3 ("Flexion to pain (All Age Groups)"),
4 ("Withdrawal from pain (All Age Groups)"),
5 ("Localizing pain (All Age Groups)"))
or
eExam.23 Lung Assessment is in

(
3523001 ("Breath Sounds-Absent"),
3523003 ("Breath Sounds-Decreased"),
3523011 ("Increased Respiratory Effort"))

or

eExam.25 Chest Assessment is in
(
3525005 ("Accessory Muscles Used with Breathing"),
3525023 ("Flail Segment"),
3525039 ("Retraction"))

or

eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
3315009 ("Rapid"),
3315011 ("Shallow"),
3315013 ("Weak/Agonal"))

or

eProcedures.03 Procedure matches
(
243142003 Dual pressure spontaneous ventilation support (regime/therapy);
47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
429705000 Insertion of esophageal tracheal combitube (procedure);
427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
424979004 Laryngeal mask airway insertion (procedure);
23674004 Orotracheal intubation (procedure);
450601000124103 Orotracheal intubation using bougie device (procedure);
241689008 Rapid sequence induction (procedure);
450611000124100 Insertion of single lumen supraglottic airway device (procedure)))

or (

eVitals.10 Heart Rate

	is greater than
	eVitals.06 SBP (Systolic Blood Pressure))
	or
	eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in (2903001 ("Amputation proximal to wrist or ankle"), 3903003 ("Crushed, degloved, mangled, or pulseless extremity"), 2903005 ("Chest wall instability or deformity (e.g., flail chest)"), 2903009 ("Open or depressed skull fracture"), 2903011 ("Paralysis"), 3903013 ("Pelvic fractures"), 2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"), 2903017 ("Respiratory Rate <10 or >29 breaths per minutes (<20 in infants aged <1) or need for ventilatory support"), 2903019 ("Systolic Blood Pressure <90 mmHg"), 3903021 ("Two or more proximal long-bone fractures"))
	or
	eExam.16 Extremities Assessment is in (3516043 ("Motor Function-Abnormal/Weakness"), 3516067 ("Sensation-Absent"))
	or
	eExam.20 Neurological Assessment is in (3520017 ("Hemiplegia-Left"), 3520019 ("Hemiplegia-Right"), 3520043 ("Weakness-Left Sided"), 3520045 ("Weakness-Right Sided"))
	or
	eProcedures.03 Procedures is in (20655006 Application of tourniquet (procedure);

24173005 Tourniquet procedure (procedure);
241731009 Tourniquet positioning (uninflated) (procedure);
241733007 Tourniquet cuff inflation (procedure);
241734001 Upper tourniquet cuff inflation (procedure);
241735000 Lower tourniquet cuff inflation (procedure);
241736004 Manual tourniquet application (procedure);
398260007 Tourniquet positioned on patient (procedure);
447686008 Application of pressure to wound (procedure)))

Denominator 3 (Patients <10 years of age)

Initial Population
and
((
(ePatient.15 Age less than 10
and
ePatient.16 Age Units is 2516009 ("Years"))
or
(ePatient.15 Age less is less than 120
and
ePatient.16 Age Units is in
(
2516001 ("Days"),
2516003 ("Hours"),
2516005 ("Minutes"),
2516007 ("Months"))))
and

eVitals.21 Glasgow Coma Score-Motor is in
(
1 ("No Motor Response (All Age Groups)"),
2 ("Extension to pain (All Age Groups)"),
3 ("Flexion to pain (All Age Groups)"),
4 ("Withdrawal from pain (All Age Groups)"),
5 ("Localizing pain (All Age Groups)"))

or (

eVitals.14 Respiratory Rate is <10
and
eVitals.14 Respiratory Rate is >29)
or

eExam.23 Lung Assessment is in
(
3523001 ("Breath Sounds-Absent"),
3523003 ("Breath Sounds-Decreased"),
3523011 ("Increased Respiratory Effort"))
or

eExam.25 Chest Assessment is in
(
3525005 ("Accessory Muscles Used with Breathing"),
3525023 ("Flail Segment"),
3525039 ("Retraction"))
or

eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
3315009 ("Rapid"),
3315011 ("Shallow"),
3315013 ("Weak/Agonal"))
or

eProcedures.03 Procedure matches
(
243142003 Dual pressure spontaneous ventilation support (regime/therapy);
47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
429705000 Insertion of esophageal tracheal combitube (procedure);
427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
424979004 Laryngeal mask airway insertion (procedure);
23674004 Orotracheal intubation (procedure);

450601000124103 Orotracheal intubation using bougie device (procedure); 241689008 Rapid sequence induction (procedure)); 450611000124100 Insertion of single lumen supraglottic airway device (procedure)) or [eVitals.12 Pulse Oximetry](#) is <90 or ([eVitals.06 SBP (Systolic Blood Pressure)](#) is (greater than or equal to 70 PLUS [ePatient.15 Age](#) X 2)) or [eInjury.03 Trauma Triage Criteria (Steps 1 and 2)](#) is in (2903001 ("Amputation proximal to wrist or ankle"), 3903003 ("Crushed, degloved, mangled, or pulseless extremity"), 2903005 ("Chest wall instability or deformity (e.g., flail chest)"), 2903009 ("Open or depressed skull fracture"), 2903011 ("Paralysis"), 3903013 ("Pelvic fractures"), 2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"), 3903021 ("Two or more proximal long-bone fractures")) or [eExam.16 Extremities Assessment](#) is in (3516043 ("Motor Function-Abnormal/Weakness"), 3516067 ("Sensation-Absent")) or [eExam.20 Neurological Assessment](#) is in (3520017 ("Hemiplegia-Left"), 3520019 ("Hemiplegia-Right"), 3520043 ("Weakness-Left Sided"), 3520045 ("Weakness-Right Sided"))

	or eProcedures.03 Procedures is in (20655006 Application of tourniquet (procedure); 24173005 Tourniquet procedure (procedure); 241731009 Tourniquet positioning (uninflated) (procedure); 241733007 Tourniquet cuff inflation (procedure); 241734001 Upper tourniquet cuff inflation (procedure); 241735000 Lower tourniquet cuff inflation (procedure); 241736004 Manual tourniquet application (procedure); 398260007 Tourniquet positioned on patient (procedure); 447686008 Application of pressure to wound (procedure)))
Denominator Exclusions	None
Denominator Exceptions	None
Numerator Statement	**Numerator 1-3 (Calculate 3 Rates):** Patients transported to a Level 1 or Level II Trauma Center
Numerator Pseudocode	**NEMSIS** **Numerator 1-3 (Calculate 3 Rates):** eDisposition.23 Hospital Capability is in (9908021 ("Trauma Center Level 1") 9908023 ("Trauma Center Level 2")
Supporting Guidance & Other Evidence	Reference ACS Prehospital Trauma Guidelines
Measure Importance	
Rationale	Reference ACS Prehospital Trauma Guidelines
Measure Designation	
Measure purpose	• ☒ Quality Improvement • ☒ Accountability

Type of measure	• ☒ Process
	• ☐ Outcome
	• ☐ Structure
	• ☐ Efficiency
National Quality Strategy/Priority/CMS Measure Domain	• ☒ Clinical Process-Effectiveness
	• ☐ Patient Safety
	• ☐ Patient Experience
	• ☒ Care Coordination
	• ☐ Efficiency: Overuse
	• ☐ Efficiency: Cost
	• ☐ Population & Community Health
Level of measurement	• ☒ Individual EMS Professional
	• ☒ EMS Agency
	• ☒ State Level
Care setting	• ☒ Pre-Hospital Care
Data source	• ☒ Electronic Patient Care Record (eCPR) data
	• ☐ Administrative Data/Claims (inpatient, outpatient or multiple-source claims)
	• ☒ Paper medical record/Chart abstracted
	• ☒ Registry

ACS-01b: Distance to Nearest Trauma Center

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

Measure Description
Histogram of distance from location of injury to nearest Level I or Level II trauma center for EMS transports originating from a 911 request for patients who met ACS red prehospital field triage criteria who were not transported to a Level I or Level II trauma center.
Measure Components
Initial Population   All EMS transports originating from a 911 request for patients with trauma

Initial Population Pseudocode	NEMSIS

	(
	
	     eSituation.02 Possible Injury is 9922005 ("Yes")
	 and
	
	 (
	
	     eResponse.05 Type of Service Requested is in
	     (
	     2205001 ("Emergency Response (Primary Response Area)"),
	     2205003 ("Emergency Response (Intercept)"),
	     2205009 ("Emergency Response (Mutual Aid)"))))
	
	 and
	
	     eDisposition.30 Transport Disposition is in
	     (
	     4230001 ("Transport by This EMS Unit (This Crew Only)"),
	     4230003 ("Transport by This EMS Unit, with a Member of Another Crew"),
	     4230007 ("Transport by Another EMS Unit, with a Member of this Crew"))))

Denominator Statement	**Denominator 1:** EMS transports in the initial population for patients greater than or equal to 65 years of age who meet ACS prehospital field red triage criteria and are not transported to a Level I or Level II Trauma Center **Denominator 2:** EMS transports in the initial population for patients 10 to 64 years of age who meet ACS prehospital field red triage criteria and are not transported to a Level I or Level II Trauma Center **Denominator 3:** EMS transports in the initial population for patients less than 10 years of age who meet ACS prehospital field red triage criteria and are not transported to a Level I or Level II Trauma Center
Denominator Pseudocode	NEMSIS
	Denominator 1 (Patients Greater than or Equal to 65 Years of age) Initial Population

and
      (ePatient.15 Age greater than or equal 65
and
      ePatient.16 Age Units is 2516009 ("Years"))
and

      eVitals.21 Glasgow Coma Score-Motor is in
      (
      1 ("No Motor Response (All Age Groups)"),
      2 ("Extension to pain (All Age Groups)"),
      3 ("Flexion to pain (All Age Groups)"),
      4 ("Withdrawal from pain (All Age Groups)"),
      5 ("Localizing pain (All Age Groups)")
or
      eExam.23 Lung Assessment is in
      (
      3523001 ("Breath Sounds-Absent"),
      3523003 ("Breath Sounds-Decreased"),
      3523011 ("Increased Respiratory Effort"))
or
      eExam.25 Chest Assessment is in
      (
      3525005 ("Accessory Muscles Used with Breathing"),
      3525023 ("Flail Segment"),
      3525039 ("Retraction"))
or
      eVitals.15 Respiratory Effort is in
      (
      3315001 ("Apneic"),
      3315003 (Labored"),
      3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),
      3315009 ("Rapid"),
      3315011 ("Shallow"),
      3315013 ("Weak/Agonal"))
or

eProcedures.03 Procedure matches

(

243142003 Dual pressure spontaneous ventilation support (regime/therapy);

47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);

429705000 Insertion of esophageal tracheal combitube (procedure);

427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);

424979004 Laryngeal mask airway insertion (procedure);

23674004 Orotracheal intubation (procedure);

450601000124103 Orotracheal intubation using bougie device (procedure);

241689008 Rapid sequence induction (procedure);

450611000124100 Insertion of single lumen supraglottic airway device (procedure))

or

eVitals.12 Pulse Oximetry is <90

or

eVitals.06 SBP (Systolic Blood Pressure) is <110

or (

exists vitals group where (eVitals.10 Heart Rate

is greater than

eVitals.06 SBP (Systolic Blood Pressure))

or

eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in

(

2903001 ("Amputation proximal to wrist or ankle"),

3903003 ("Crushed, degloved, mangled, or pulseless extremity"),

2903005 ("Chest wall instability or deformity (e.g., flail chest)"),

2903009 ("Open or depressed skull fracture"),

2903011 ("Paralysis"),

3903013 ("Pelvic fractures"),

2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"),

2903017 ("Respiratory Rate <10 or >29 breaths per minute (<20 in infants aged <1) or need for ventilatory support") ,

3903021 ("Two or more proximal long-bone fractures"))

or

     eExam.16 Extremities Assessment is in
     (
     3516043 ("Motor Function-Abnormal/Weakness"),
     3516067 ("Sensation-Absent"))

or

     eExam.20 Neurological Assessment is in
     (
     3520017 ("Hemiplegia-Left"),
     3520019 ("Hemiplegia-Right"),
     3520043 ("Weakness-Left Sided"),
     3520045 ("Weakness-Right Sided"))

or

     eProcedures.03 Procedures is in
     (
     20655006 Application of tourniquet (procedure);
     24173005 Tourniquet procedure (procedure);
     241731009 Tourniquet positioning (uninflated) (procedure);
     241733007 Tourniquet cuff inflation (procedure);
     241734001 Upper tourniquet cuff inflation (procedure);
     241735000 Lower tourniquet cuff inflation (procedure);
     241736004 Manual tourniquet application (procedure);
     398260007 Tourniquet positioned on patient (procedure);
     447686008 Application of pressure to wound (procedure))

and

     eDisposition.23 Hospital Capability is not in
     (
     9908021 ("Trauma Center Level 1"),
     9908023 ("Trauma Center Level 2")))

Denominator 2 (Patients 10 to 64 years of age)

     Initial Population

and

(
     (ePatient.15 Age greater than or equal 10

and
     ePatient.16 Age Units is 2516009 ("Years"))

and
     (ePatient.15 Age less than or equal to 64

and
     ePatient.16 Age Units is 2516009 ("Years")))

and

eVitals.21 Glasgow Coma Score-Motor is in
(
1 ("No Motor Response (All Age Groups)"),
2 ("Extension to pain (All Age Groups)"),
3 ("Flexion to pain (All Age Groups)"),
4 ("Withdrawal from pain (All Age Groups)"),
5 ("Localizing pain (All Age Groups)"))

or
eExam.23 Lung Assessment is in
(
3523001 ("Breath Sounds-Absent"),
3523003 ("Breath Sounds-Decreased"),
3523011 ("Increased Respiratory Effort"))

or
eExam.25 Chest Assessment is in
(
3525005 ("Accessory Muscles Used with Breathing"),
3525023 ("Flail Segment"),
3525039 ("Retraction"))

or
eVitals.15 Respiratory Effort is in
(
3315001 ("Apneic"),
3315003 (Labored"),
3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),

	3315009 ("Rapid"),
	3315011 ("Shallow"),
	3315013 ("Weak/Agonal"))
	
	or
	
	    eProcedures.03 Procedure matches
	    (
	    243142003 Dual pressure spontaneous ventilation support (regime/therapy);
	    47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);
	    429705000 Insertion of esophageal tracheal combitube (procedure);
	    427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);
	    424979004 Laryngeal mask airway insertion (procedure);
	    23674004 Orotracheal intubation (procedure);
	    450601000124103 Orotracheal intubation using bougie device (procedure);
	    241689008 Rapid sequence induction (procedure);
	    450611000124100 Insertion of single lumen supraglottic airway device (procedure)))
	
	or (
	    eVitals.10 Heart Rate
	
	is greater than
	
	    eVitals.06 SBP (Systolic Blood Pressure))
	or
	    eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in
	    (
	    2903001 ("Amputation proximal to wrist or ankle"),
	    3903003 ("Crushed, degloved, mangled, or pulseless extremity"),
	    2903005 ("Chest wall instability or deformity (e.g., flail chest)"),
	    2903009 ("Open or depressed skull fracture"),
	    2903011 ("Paralysis"),
	    3903013 ("Pelvic fractures"),
	    2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"),

2903017 ("Respiratory Rate <10 or >29 breaths per minutes (<20 in infants aged <1) or need for ventilatory support"),
2903019 ("Systolic Blood Pressure <90 mmHg"),
3903021 ("Two or more proximal long-bone fractures"))

or

eExam.16 Extremities Assessment is in
(
3516043 ("Motor Function-Abnormal/Weakness"),
3516067 ("Sensation-Absent"))

or

eExam.20 Neurological Assessment is in
(
3520017 ("Hemiplegia-Left"),
3520019 ("Hemiplegia-Right"),
3520043 ("Weakness-Left Sided"),
3520045 ("Weakness-Right Sided"))

or

eProcedures.03 Procedures is in
(
20655006 Application of tourniquet (procedure);
24173005 Tourniquet procedure (procedure);
241731009 Tourniquet positioning (uninflated) (procedure);
241733007 Tourniquet cuff inflation (procedure);
241734001 Upper tourniquet cuff inflation (procedure);
241735000 Lower tourniquet cuff inflation (procedure);
241736004 Manual tourniquet application (procedure);
398260007 Tourniquet positioned on patient (procedure);
447686008 Application of pressure to wound (procedure))

and

eDisposition.23 Hospital Capability is not in
(

9908021 ("Trauma Center Level 1"),
9908023 ("Trauma Center Level 2")))

Denominator 3 (Patients <10 years of age)

Initial Population
and
((
(ePatient.15 Age less than 10
and
ePatient.16 Age Units is 2516009 ("Years"))
or
(ePatient.15 Age less is less than 120
and
ePatient.16 Age Units is in
(
2516001 ("Days"),
2516003 ("Hours"),
2516005 ("Minutes"),
2516007 ("Months"))))
and

eVitals.21 Glasgow Coma Score-Motor is in
(
1 ("No Motor Response (All Age Groups)"),
2 ("Extension to pain (All Age Groups)"),,
3 ("Flexion to pain (All Age Groups)"),
4 ("Withdrawal from pain (All Age Groups)"),
5 ("Localizing pain (All Age Groups)"))

or (
eVitals.14 Respiratory Rate is <10
and
eVitals.14 Respiratory Rate is >29)
or

eExam.23 Lung Assessment is in

(

3523001 ("Breath Sounds-Absent"),

3523003 ("Breath Sounds-Decreased"),

3523011 ("Increased Respiratory Effort"))

or

eExam.25 Chest Assessment is in

(

3525005 ("Accessory Muscles Used with Breathing"),

3525023 ("Flail Segment"),

3525039 ("Retraction"))

or

eVitals.15 Respiratory Effort is in

(

3315001 ("Apneic"),

3315003 (Labored"),

3315005 ("Mechanically Assisted (BVM, CPAP, etc.)"),

3315009 ("Rapid"),

3315011 ("Shallow"),

3315013 ("Weak/Agonal"))

or

eProcedures.03 Procedure matches

(

243142003 Dual pressure spontaneous ventilation support (regime/therapy);

47545007 Continuous positive airway pressure ventilation treatment (regime/therapy);

429705000 Insertion of esophageal tracheal combitube (procedure);

427753009 Insertion of esophageal tracheal double lumen supraglottic airway (procedure);

424979004 Laryngeal mask airway insertion (procedure);

23674004 Orotracheal intubation (procedure);

450601000124103 Orotracheal intubation using bougie device (procedure);

241689008 Rapid sequence induction (procedure))

450611000124100 Insertion of single lumen supraglottic airway device (procedure))

or

eVitals.12 Pulse Oximetry is <90

or (

eVitals.06 SBP (Systolic Blood Pressure) is (greater than or equal to 70

PLUS

ePatient.15 Age X 2))

or

eInjury.03 Trauma Triage Criteria (Steps 1 and 2) is in
(
2903001 ("Amputation proximal to wrist or ankle"),
3903003 ("Crushed, degloved, mangled, or pulseless extremity"),
2903005 ("Chest wall instability or deformity (e.g., flail chest)"),
2903009 ("Open or depressed skull fracture"),
2903011 ("Paralysis"),
3903013 ("Pelvic fractures"),
2903015 ("All Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee"),
3903021 ("Two or more proximal long-bone fractures"))

or

eExam.16 Extremities Assessment is in
(
3516043 ("Motor Function-Abnormal/Weakness"),
3516067 ("Sensation-Absent"))

or

eExam.20 Neurological Assessment is in
(
3520017 ("Hemiplegia-Left"),
3520019 ("Hemiplegia-Right"),
3520043 ("Weakness-Left Sided"),
3520045 ("Weakness-Right Sided"))

or

eProcedures.03 Procedures is in
(
20655006 Application of tourniquet (procedure);
24173005 Tourniquet procedure (procedure);
241731009 Tourniquet positioning (uninflated) (procedure);
241733007 Tourniquet cuff inflation (procedure);

	241734001 Upper tourniquet cuff inflation (procedure); 241735000 Lower tourniquet cuff inflation (procedure); 241736004 Manual tourniquet application (procedure); 398260007 Tourniquet positioned on patient (procedure); 447686008 Application of pressure to wound (procedure)) and eDisposition.23 Hospital Capability is not in (9908021 ("Trauma Center Level 1"), 9908023 ("Trauma Center Level 2")))
Denominator Exclusions	EMS transports in which distance is unable to be calculated (Location of scene not fully documented - unable to determine GPS coordinates)
Denominator Exceptions	None
Numerator Statement	Distance from injury location to nearest Level I or Level II Trauma Center, grouped by distance: 1. Less than 25 miles 2. 25 – 50 miles 3. Greater than 50 miles

Numerator Calculation Guidance	**NEMSIS** **Create 3 Histograms (1 per denominator)**
	
	 1. Identify GPS Coordinates of Scene Location (Latitude 1, Longitude 1)
	 2. Identify GPS Coordinates of nearest Level I or Level II Trauma Center (Latitude 2, Longitude 2)
	 3. Calculate distance using Haversine formula (results will return miles):
	     a. **Excel with Lat/Lon in Radians**: =ACOS(SIN(lat1)*SIN(lat2) + COS(lat1)*COS(lat2)*COS(lon2-lon1)) * 3958.8
	     b. **Excel with Lat/Lon in Degrees**: =ACOS(SIN(lat1*PI()/180)*SIN(lat2*PI()/180) + COS(lat1*PI()/180)*COS(lat2*PI()/180)*COS(lon2*PI()/180-lon1*PI()/180)) * 3958.8
	     c. **R**: R (pracma package): haversine(loc1, loc2, R = 3958) #results in miles. Use R = 6371 to result in km.
	     d. **SAS**: Distance = 3958.8*arcos(sin(Y1)*sin(Y2)+cos(Y1)*cos(Y2)*cos(X1-X2));
	 4. Once distance has been calculated, place in appropriate bin below:

	a. Distance < 25.00 Miles
	    b. Distance >= 25.00 and <= 50.00 Miles
	    c. Distance >50.00 miles
	5. Divide each bin by denominator count for denominator stratification

Supporting Guidance & Other Evidence	Reference ACS Prehospital Trauma Guidelines
Measure Importance	
Rationale	Reference ACS Prehospital Trauma Guidelines
Measure Designation	
Measure purpose	• ☒ Quality Improvement • ☒ Accountability
Type of measure	• ☐ Process • ☐ Outcome • ☒ Structure • ☐ Efficiency • ☐ Descriptive
National Quality Strategy/Priority/CMS Measure Domain	• ☒ Clinical Process-Effectiveness • ☐ Patient Safety • ☐ Patient Experience • ☒ Care Coordination • ☐ Efficiency: Overuse • ☐ Efficiency: Cost • ☐ Population & Community Health
Level of measurement	• ☒ EMS Agency • ☒ State Level
Care setting	• ☒Pre-Hospital Care
Data source	• ☒Electronic Patient Care Record (eCPR) data • ☐ Administrative Data/Claims (inpatient, outpatient or multiple-source claims) • ☐ Paper medical record/Chart abstracted • ☒ Registry