California EMS System
Core Quality Measures
Instruction Manual

Emergency Medical Services Authority
California Health and Human Services Agency
June 2021
Dave Duncan MD, Director

DAVID DUNCAN, MD
DIRECTOR

LOUIS BRUHNKE
CHIEF DEPUTY DIRECTOR

TOM M^CGINNIS
CHIEF, EMS SYSTEMS DIVISION

TABLE OF CONTENTS

PROJECT BACKGROUND

The Core Quality Measures Project was established in 2012 through a grant from the California Health Care Foundation. The preliminary measures were derived largely from a set of quality indicators developed through a project by the National Quality Forum and the National Association of State EMS Officials' EMS Compass Project. EMS systems across the state are measured on their performance in these measures and can compare their results to other similar LEMSAs. Ultimately, the project highlights opportunities to improve the quality of patient care delivered within an EMS system.

During the one-year period from July 31, 2013, to June 30, 2014, EMSA performed the following activities to deliver a set of publicly available data reports:

1. Created a formal data system profile and written analysis to identify areas for data quality improvement and inform an action plan to address the issues.
2. Sought opportunities for both short-term and long-term data improvement plans.
3. Focused on achieving reliable measures that are high-value and feasible within a short time frame.
4. Refined and published core quality measure sets that describe the coordination and effectiveness of EMS utilizing regional and local information for California. This project focused on the following core measure sets:

   - Trauma
   - Acute Coronary Syndrome/Heart Attack
   - Cardiac Arrest
   - Stroke
   - Respiratory
   - Pain Intervention
   - Pediatric
   - Skill Performance by EMS Providers
   - EMS Response and Transport
   - Public Education Bystander CPR

5. Conducted data workshops for LEMSAs across the state to implement improved data collection and reporting practices with those LEMSAs participating in the California Emergency Medical Services Information System.

EMSA continues to utilize the Core Quality Measures Project to collect information on an annual basis, while maintaining similar direction and goals to the objectives stated above.

WHAT ARE CORE QUALITY MEASURES?

CORE QUALITY MEASURES DEFINITION

The Core Quality Measures (measures) are a set of standardized performance measures intended to examine an EMS system or the treatment of an identified patient condition. The measures focus on processes and interventions that have some evidence of patient benefit for a condition or illness, which helps EMS systems improve the quality of patient care. Measure benchmarks include the following: performance of EMS systems; performance of recommended treatments determined to get the best results for patients with certain medical conditions; and transport of patients to the most appropriate hospital. The data most closely focused on system performance is contained in the following data pieces:

- Arrival at the scene in a timely manner
- Timely, focused patient assessment
- Delivery of time-sensitive prehospital therapy; and
- Transport to a hospital capable of providing necessary care

Information about these treatments is extracted from the prehospital care reports. There is a delay between when data is reported by LEMSAs and when it becomes available for review. EMSA allows time for the data to be compiled before it posts quality data for a given period (e.g., data collected in 2020 is aggregated, reviewed, and subsequently reported in 2021).

CORE QUALITY MEASURES PURPOSE

The primary purpose of the Core Quality Measures Project is to increase the accessibility and accuracy of prehospital data for public, policy, academic, and research purposes to facilitate EMS system evaluation and improvement. The measures serve as a mechanism to reflect LEMSA activity as accurately as possible so that EMSA can better fulfill its obligation to assess the effectiveness of emergency medical services and provide useful quality improvement information. EMS providers may also utilize these measures to assist with quality assurance and continuous quality improvement activities. The collection and analysis of the measures provide the best mechanism to achieve this. The data will become even more useful when all LEMSAs in California participate fully in the project. EMSA looks forward to more robust project participation over time.

MEASURE DEVELOPMENT PROCESS

The measures adopted in the Core Quality Measures Project are reviewed on a continuous basis to ensure they provide increasing value to the EMS community. The dynamic nature of the project lends to collaboration between EMSA and various EMS stakeholders. EMSA established a Core Quality Measures Workgroup by engaging members from various LEMSAs to assist in the ongoing review and revision process of the measures. EMSA compiles the recommendations from the workgroup, with consideration for LEMSA responses from previous year reporting, and incorporates pertinent changes into the Core Quality Measures Instruction Manual each year.

Adjustments to the measures are made to clarify the measures' intent and more accurately report EMS performance in the field. In the most recent adjustments, four measures were retired from the 2019 measure set due to a need to improve focus on a smaller number of metrics while developing improved coordination nationally, thus yielding a measure set of six performance indicators for systemwide measurement of 2020 data. The four retired measures are as follows:

- ACS-1 Aspirin Administration for STEMI or Suspected Cardiac Chest Pain
- ACS-4 Advanced Hospital Notification for STEMI Patients
- STR-2 Glucose Testing for Suspected Stroke Patients
- STR-4 Advanced Hospital Notification for Stroke Patients

Retired measures will be re-specified and approved for inclusion in future years. If additional measures are adopted, EMSA will strive to provide LEMSAs with ample notice to ensure that the appropriate data systems are established in each local region for proper data collection and reporting.

ESSENTIAL DATA ELEMENTS

The table below lists all essential data elements found in this instruction manual. Each data element plays a vital role in EMSA's ability to collect and report on the Core Quality Measures Project. EMS providers and LEMSAs should ensure that these data elements are appropriately captured and populated in every patient care record. To achieve this, providers shall collect and submit data to the LEMSA utilizing a National Emergency Medical Services Information System (NEMSIS) compliant software vendor including fields identified in the NEMSIS standard as mandatory, required, recommended and optional, and the California specific value sets. Descriptive values shall be used in the compliant submission of data to the LEMSA with minimal use of not and null values and limited only to situations where no other value is appropriate for documentation of a given situation.

Data Element Name	Data Element Number
Incident/Patient Disposition	eDisposition.12
Additional Transport Mode Descriptors	eDisposition.18
Hospital Capability	eDisposition.23
Trauma Center Criteria	eInjury.03
Vehicular, Pedestrian, or Other Injury Risk Factor	eInjury.04
Medication Given	eMedications.03
Age	ePatient.15
Age Units	ePatient.16
Procedure	eProcedures.03
Type of Service Requested	eResponse.05
Primary Role of the Unit	eResponse.07
Additional Response Mode Descriptors	eResponse.24
Provider's Primary Impression	eSituation.11
Provider's Secondary Impressions	eSituation.12
Pulse Oximetry	eVitals.12
Respiratory Rate	eVitals.14
End Tidal Carbon Dioxide (ETCO2)	eVitals.16
Blood Glucose Level	eVitals.18
Stroke Scale Score	eVitals.29

QUALIFYING DATA FOR 2020 CALENDAR YEAR REPORT

EMSA requests that each LEMSA report data for all measures for the calendar year 2020, at which time NEMSIS Version 3.4.0 standard was utilized. For consistency, only data from this version of NEMSIS should be reported to EMSA as the measurement specifications are designed for NEMSIS Version 3.4.0. A reporting spreadsheet has been provided to each LEMSA to report qualifying data for the annual Core Quality Measures Report (2020 calendar year).

INSTRUCTIONS FOR RUNNING CORE QUALITY MEASURE REPORTS

The following pages contain specification sheets for each measure. Consistency is key to comparing the reported results at the statewide and nationwide levels. EMSA requests that all LEMSAs utilize this same approach (a single specification/query for the entire state). Only data elements and codes found in this document shall be used to calculate each indicator. Run each measure <u>exactly as specified</u>. Do not use custom elements or fields specific to a local jurisdiction or an EMS provider.

TRANSPORT OF TRAUMA PATIENTS TO A TRAUMA CENTER

Measure Set	Trauma
Measure ID #	TRA-2
Measure Name	Transport of Trauma Patients to a Trauma Center
Measure Description	Percentage of trauma patients meeting CDC Step 1 or 2 or 3 criteria that were transported to a trauma center originating from a 911 response.
Type of Measure	Process
Reporting Value & Unit	Percentage (%)
Denominator Statement (Population)	Number of trauma patients meeting CDC Step 1 or 2 or 3 criteria originating from a 911 response.
Denominator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • **(**eInjury.03 Trauma Center Criteria = 2903001 "Amputation proximal to wrist or ankle or ankle" 2903003 "Crushed, degloved, mangled, or pulseless extremity" 2903005 "Chest wall instability or deformity (e.g., flail chest)" 2903007 "Glasgow Coma Score ≤13" 2903009 "Open or depressed skull fracture" 2903011 "Paralysis" 2903013 "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 year) or need for ventilatory support" 2903019 "Systolic Blood Pressure <90 mmHg 2903021 "Two or more proximal long-bone fractures" *OR* • eInjury.04 Vehicular, Pedestrian, or Other Injury Risk Factor = 2904001 "Auto v. Pedestrian/Bicyclist Thrown, Run Over, or > 20 MPH Impact" 2904003 "Fall Adults: > 20 ft. (one story is equal to 10 ft.)" 2904005 "Fall Children: > 10 ft. or 2-3 times the height of the child" 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" 2904015 "Motorcycle Crash > 20 MPH"**)** *Count by patients treated rather than by number of responses.*
Denominator Exclusion Criteria	None
Numerator Statement (Subpopulation)	Number of trauma patients meeting CDC Step 1 or 2 or 3 criteria transported to a trauma center originating from a 911 response.
Numerator Inclusion Criteria	*All events where:* • [eResponse.05 Type of Service Requested](#) = 2205001 "911 Response (Scene)" *AND* • **(**[eInjury.03 Trauma Center Criteria](#) = 2903001 "Amputation proximal to wrist or ankle or ankle" 2903003 "Crushed, degloved, mangled, or pulseless extremity" 2903005 "Chest wall instability or deformity (e.g., flail chest)" 2903007 "Glasgow Coma Score ≤13" 2903009 "Open or depressed skull fracture" 2903011 "Paralysis" 2903013 "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 year) or need for ventilatory support" 2903019 "Systolic Blood Pressure <90 mmHg 2903021 "Two or more proximal long-bone fractures" *OR* • [eInjury.04 Vehicular, Pedestrian, or Other Injury Risk Factor](#) = 2904001 "Auto v. Pedestrian/Bicyclist Thrown, Run Over, or > 20 MPH Impact" 2904003 "Fall Adults: > 20 ft. (one story is equal to 10 ft.)" 2904005 "Fall Children: > 10 ft. or 2-3 times the height of the child" 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" 2904015 "Motorcycle Crash > 20 MPH"**)** *AND* • [eDisposition.23 Hospital Capability](#) = 9908021 "Trauma Center Level 1"

	9908023 "Trauma Center Level 2" 9908025 "Trauma Center Level 3" 9908027 "Trauma Center Level 4" *Count by patients treated rather than by number of responses.*
Numerator Exclusion Criteria	None
Indicator Formula Numeric Expression	The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is N/D = %
Example of Final Reporting Value (Number & Unit)	95%
Measure Value Interpretation	For this measure, a higher value indicates better quality.
Sampling	No
Aggregation	Yes
Blinded	Yes
Data Collection Approach	• Retrospective data sources for required data elements include administrative data and prehospital care records. • Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.

TREATMENT ADMINISTERED FOR HYPOGLYCEMIA

Measure Set	Hypoglycemia
Measure ID #	HYP-1
Measure Name	Treatment Administered for Hypoglycemia
Measure Description	Percentage of patients that received treatment to correct their hypoglycemia originating from a 911 response.
Type of Measure	Process
Reporting Value & Unit	Percentage (%)
Denominator Statement (Population)	Number of patients who had a blood glucose level indicating hypoglycemia originating from a 911 response.
Denominator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" • eVitals.18 Blood Glucose Level < 60 *Count by patients treated rather than by number of responses*
Denominator Exclusion Criteria	None
Numerator Statement (Subpopulation)	Number of patients who received treatment to correct their hypoglycemia originating from a 911 response.
Numerator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • eVitals.18 Blood Glucose Level < 60 *AND* • **(**eMedications.03 Medication Given = 4832 "Glucagon" 4850 "Glucose" 92972 "Insta-Glucose" 237648 "Dextrose (D10)" 237653 "Glucose 500 MG/ML Injectable Solution" 260258 "Glucose 250 MG/ML Injectable Solution" 309778 "Glucose 500 MG/ML Injectable Solution" 317630 "Glucose 100 MG/ML" 372326 "Glucose Chewable Tablet" 376937 "Glucose Injectable Solution" 377980 "Glucose Oral Gel" 1165819 "Glucose Injectable Product" 1165822 "Glucose Oral Liquid Product"

	1165823 "Glucose Oral Product" 1794567 "Glucose Injection" 1795477 "500 ML glucose 100 MG/ML Injection" 1795480 "250 ML glucose 100 MG/ML Injection" 1795610 "250 ML Glucose 50 MG/ML Injection" *OR* • eProcedures.03 Procedure = 225285007 "Giving oral fluid" 710925007 "Provision of food"**)** *Count by patients treated rather than by number of responses.*
Numerator Exclusion Criteria	None
Indicator Formula Numeric Expression	The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is N/D = %
Example of Final Reporting Value (Number & Unit)	95%
Measure Value Interpretation	For this measure, a higher value indicates better quality.
Sampling	No
Aggregation	Yes
Blinded	Yes
Data Collection Approach	• Retrospective data sources for required data elements include administrative data and prehospital care records. • Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.

PREHOSPITAL SCREENING FOR SUSPECTED STROKE PATIENTS

Measure Set	Stroke
Measure ID #	STR-1
Measure Name	Prehospital Screening for Suspected Stroke Patients
Measure Description	Percentage of suspected stroke patients that received a prehospital stroke screening originating from a 911 response.
Type of Measure	Process
Reporting Value & Unit	Percentage (%)
Denominator Statement (Population)	Number of patients who had a primary or secondary impression of stroke originating from a 911 response.
Denominator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • **(**eSituation.11 Provider's Primary Impression = I63.9 "Stroke/CVA/TIA" *OR* • eSituation.12 Provider's Secondary Impressions = I63.9 "Stroke/CVA/TIA"**)** *Count by patients treated rather than by number of responses.*
Denominator Exclusion Criteria	None
Numerator Statement (Subpopulation)	Number of patients who had a primary or secondary impression of stroke originating from a 911 response and yielded a documented stroke assessment.
Numerator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • **(**eSituation.11 Provider's Primary Impression = I63.9 "Stroke/CVA/TIA" *OR* • eSituation.12 Provider's Secondary Impressions = I63.9 "Stroke/CVA/TIA"**)** *AND* • **(**eVitals.29 Stroke Scale Score = 3329001 "Negative" 3329003 "Non-Conclusive" 3329005 "Positive" *OR*

	• [eVitals.29 Stroke Scale Score](#) = 8801019 "Refused" 8801023 "Unable to Complete"**)** *Count by patients treated rather than by number of responses.*
Numerator Exclusion Criteria	None
Indicator Formula Numeric Expression	The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is N/D = %
Example of Final Reporting Value (Number & Unit)	95%
Sampling	No
Measure Value Interpretation	For this measure, a higher value indicates better quality.
Aggregation	Yes
Blinded	Yes
Data Collection Approach	• Retrospective data sources for required data elements include administrative data and prehospital care records. • Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.

RESPIRATORY ASSESSMENT FOR PEDIATRIC PATIENTS

Measure Set	Pediatric
Measure ID #	PED-3
Measure Name	Respiratory Assessment for Pediatric Patients
Measure Description	Percentage of pediatric patients that had a primary or secondary impression of respiratory distress and received a documented respiratory assessment originating from a 911 response.
Type of Measure	Process
Reporting Value & Unit	Percentage (%)
Denominator Statement (Population)	Number of pediatric patients who had a primary or secondary impression of respiratory distress originating from a 911 response.
Denominator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • **((**ePatient.15 Age < 15 *AND* • ePatient.16 Age Units = 2516009 "Years"**)** *OR* • **(**ePatient.15 Age = Not Null *AND* • ePatient.16 Age Units = 2516001 "Days" 2516003 "Hours" 2516005 "Minutes" 2516007 "Months"**))** *AND* • **(**eSituation.11 Provider's Primary Impression = J80 "Respiratory Distress/Other" J98.01 "Respiratory Distress/Bronchospasm" *OR* • eSituation.12 Provider's Secondary Impressions = J80 "Respiratory Distress/Other" J98.01 "Respiratory Distress/Bronchospasm"**)** *Count by patients treated rather than by number of responses.*
Denominator Exclusion Criteria	None
Numerator Statement (Subpopulation)	Number of pediatric patients who had a primary or secondary impression of respiratory distress originating from a 911 response and yielded a documented respiratory assessment.

Numerator Inclusion Criteria	*All events where:* • [eResponse.05 Type of Service Requested](#) = 2205001 "911 Response (Scene)" *AND* • **((**[ePatient.15 Age](#) < 15 *AND* • [ePatient.16 Age Units](#) = 2516009 "Years"**)** *OR* • **(**[ePatient.15 Age](#) = Not Null *AND* • [ePatient.16 Age Units](#) = 2516001 "Days" 2516003 "Hours" 2516005 "Minutes" 2516007 "Months"**))** *AND* • **(**[eSituation.11 Provider's Primary Impression](#) = J80 "Respiratory Distress/Other" J98.01 "Respiratory Distress/Bronchospasm" *OR* • [eSituation.12 Provider's Secondary Impressions](#) = J80 "Respiratory Distress/Other" J98.01 "Respiratory Distress/Bronchospasm"**)** *AND* • **(**[eVitals.12 Pulse Oximetry](#) = Logical and Present [min 0 - max 100] *OR* • [eVitals.16 End Tidal Carbon Dioxide (ETCO2)](#) = Logical and Present [min 0 - max 200]**)** *AND* • [eVitals.14 Respiratory Rate](#) = Logical and Present [min 0 - max 300] *Count by patients treated rather than by number of responses.*
Numerator Exclusion Criteria	None
Indicator Formula Numeric Expression	The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is N/D = %
Example of Final Reporting Value (Number & Unit)	95%
Measure Value Interpretation	For this measure, a higher value indicates better quality.
Sampling	No
Aggregation	Yes
Blinded	Yes

Data Collection Approach	• Retrospective data sources for required data elements include administrative data and prehospital care records. • Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.

911 REQUESTS FOR SERVICES THAT INCLUDED A LIGHTS AND/OR SIRENS RESPONSE

Measure Set	Response and Transport
Measure ID #	RST-4
Measure Name	911 Requests for Services That Included a Lights and/or Sirens Response
Measure Description	Percentage of EMS responses originating from a 911 request that included the use of lights and/or sirens during a response.
Type of Measure	Process
Reporting Value & Unit	Percentage (%)
Denominator Statement (Population)	Number of EMS responses originating from a 911 request.
Denominator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)"
Denominator Exclusion Criteria	None
Numerator Statement (Subpopulation)	Number of EMS responses originating from a 911 request that included a lights and/or sirens response.
Numerator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • eResponse.24 Additional Response Mode Descriptors = 2224015 "Lights and Sirens" 2224017 "Lights and No Sirens" 2224021 "Initial No Lights or Sirens, Upgraded to Lights and Sirens" 2224023 "Initial Lights and Sirens, Downgraded to No Lights or Sirens"
Numerator Exclusion Criteria	None
Indicator Formula Numeric Expression	The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is N/D = %
Example of Final Reporting Value (Number & Unit)	15%
Measure Value Interpretation	For this measure, a lower value indicates better quality.

Sampling	No
Aggregation	Yes
Blinded	Yes
Data Collection Approach	- Retrospective data sources for required data elements include administrative data and prehospital care records. - Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.

911 REQUESTS FOR SERVICES THAT INCLUDED A LIGHTS AND/OR SIRENS TRANSPORT

Measure Set	Response and Transport
Measure ID #	RST-5
Measure Name	911 Requests for Services That Included a Lights and/or Sirens Transport
Measure Description	Percentage of EMS transports originating from a 911 request that included the use of lights and/or sirens during patient transport.
Type of Measure	Process
Reporting Value & Unit	Percentage (%)
Denominator Statement (Population)	Number of EMS transports originating from a 911 request.
Denominator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • eResponse.07 Primary Role of the Unit = 2207003 "Ground Transport" *AND* • eDisposition.12 Incident/Patient Disposition = 4212033 "Patient Treated, Transported by this EMS Unit" *Count by patients treated rather than by number of responses.*
Denominator Exclusion Criteria	None
Numerator Statement (Subpopulation)	Number of EMS transports originating from a 911 request that included a lights and/or sirens patient transport.
Numerator Inclusion Criteria	*All events where:* • eResponse.05 Type of Service Requested = 2205001 "911 Response (Scene)" *AND* • eResponse.07 Primary Role of the Unit = 2207003 "Ground Transport" *AND* • eDisposition.12 Incident/Patient Disposition = 4212033 "Patient Treated, Transported by this EMS Unit" *AND* • eDisposition.18 Additional Transport Mode Descriptors = 4218011 "Lights and Sirens" 4218013 "Lights and No Sirens" 4218017 "Initial No Lights or Sirens, Upgraded to Lights and Sirens"

	4218019 "Initial Lights and Sirens, Downgraded to No Lights or Sirens" *Count by patients treated rather than by number of responses.*
Numerator Exclusion Criteria	None
Indicator Formula Numeric Expression	The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is N/D = %
Example of Final Reporting Value (Number & Unit)	15%
Measure Value Interpretation	For this measure, a lower value indicates better quality.
Sampling	No
Aggregation	Yes
Blinded	Yes
Data Collection Approach	• Retrospective data sources for required data elements include administrative data and prehospital care records. • Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.

STATUTORY AUTHORITY

The California Emergency Medical Services Authority (EMSA) is responsible for creating a "statewide system for emergency medical services" and for the "coordination and integration of all state activities concerning emergency medical services" ((Health and Safety Code (HSC) 1797.1)). Moreover, EMSA is required to "assess each EMS area or the system's service area for the purpose of determining the need for additional emergency medical services, coordination of emergency medical services, and the effectiveness of emergency medical services" (HSC 1797.102). Local EMS agencies (LEMSAs) are required to "plan, implement, and evaluate an EMS system" (HSC 1797.204).

Per HSC 1797.103, EMSA shall "develop planning and implementation guidelines for emergency medical services systems" which address several components, including data collection and evaluation. Additionally, EMSA shall develop statewide guidelines for "quality improvement systems which monitor and promote improvement in the quality of care provided by EMT-Ps throughout the state" (HSC 1797.174). As a result of the statutory mandates, EMSA has established regulations requiring system data collection and evaluation of prehospital care reports ((California Code of Regulations (CCR), Title 22, Division 9, Chapter 4, Sections 100148, 100169, and 100170)). EMS system quality improvement regulations (CCR, Title 22, Division 9, Chapter 12) define the requirements for LEMSAs, EMS service providers, and base hospitals in their role as part of the EMS system. These requirements include, but are not limited to, the implementation of an EMS Quality Improvement Program and the use of defined indicators to assess the LEMSA system, as demonstrated by the California EMS System Core Quality Measures Project defined in this manual (SYS 100-04). The Core Quality Measures Project establishes appropriate indicators to reflect ongoing quality improvement efforts by the LEMSAs aimed at clinical and transport activities and reflective of quality improvement activities at the local level.

To evaluate system impact on patients, the continuum of care from dispatch to prehospital to hospital disposition must be connected. In addition, there must be reporting on performance measures, such as those included in the Core Quality Measures Project. Using the data derived from this project, we can better understand how the care provided by EMS personnel translates to improved patient outcomes and system effectiveness.

REFERENCE INFORMATION

The Core Quality Measures Instruction Manual contains references and coding from the documents listed below. All data elements and values referenced in the manual are coded using NEMSIS. Please refer to the following documents regarding the codes found in each measure:

NEMSIS 3.4.0 Data Dictionary – Updated 7/13/2016
(http://nemsis.org/media/nemsis_v3/release-3.4.0/datadictionary/PDFHTML/DEMEMS/index.html)

National Association of State EMS Officials – EMS Compass Project
(https://nasemso.org/projects/ems-compass/)

NHTSA: Emergency Medical Services Performance Measures – Updated 12/2009
(https://www.ems.gov/pdf/research/Studies-and-Reports/EMS_Performance_Measures_2009.pdf)

National EMS Quality Alliance (NEMSQA) – National EMS Quality Measure Set – Updated 12/2019
(https://www.nemsqa.org/completed-quality-measures/)

California EMS System Core Quality Measures

Gavin Newsom
Governor
State of California

Mark Ghaly, MD, MPH
Secretary
Health and Human Services Agency

Dave Duncan, MD Director
Emergency Medical Services Authority

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