Dan Smiley, Chief Deputy Director, California EMS Authority

CORE MEASURE CONCEPTS

For this morning...
- Related activities & participant roles
  - Authority
  - Reports to legislature
- Quality improvement
  - Tools for any EMS systems
  - The case for standardization
- Data
  - Next steps for CEMSIS

Your Core Measures Experience...

Will depend on...

who you are

the activity

the audience

Activities Related to Core Measures

<table>
<thead>
<tr>
<th>EMSA</th>
<th>Local EMS Agencies</th>
<th>EMS Provider Agencies</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Statewide integration</td>
<td>✔</td>
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</tr>
<tr>
<td>Regional assessment</td>
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</tr>
<tr>
<td>Plan, implement, evaluate systems</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Quality improvement guidelines</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Data collection &amp; evaluation</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Quality improvement program</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Statutory Authority

EMSA | Local EMS Agencies | EMS Provider Agencies
Statewide integration | HS 1797.1 | |
Regional assessment | HS 1797.102 | |
Plan, implement, evaluate systems | HS 1797.204 | |
Quality improvement guidelines | HS 1797.174 | |
Data collection & evaluation | HS 1797.103 | HS 1797.103 22 CCR |
Quality improvement program | HS 1797.103 | |

REGULATORY AUTHORITY
CCR, Title 22, Division 9, Chapters 4 and 12

Legislative Mandate

Annual report to the Legislature:
→ effectiveness of EMS systems
→ impact on death and disability
(HS 1797.121)
Core Measures as quality improvement tools

Quality improvement is NOT a destination!

Core Measures as quality improvement tools

It's a continuous process…

… with rapid cycles of improvement.

Core Measures as quality improvement tools

Donabedian's Quality of Care Framework

- 1980s
- Conceptualized three quality-of-care dimensions
  - **Structure** (Attributes of Setting)
  - **Process** (Good Medical Practices)
  - **Outcome** (Impact of Care)

Quality Improvement Frameworks

IOM's Six Aims for Improvement

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Safe</td>
<td>Avoiding injuries to patients from the care that is intended to help them</td>
</tr>
<tr>
<td>2</td>
<td>Effective</td>
<td>Services based on scientific knowledge to all who could benefit</td>
</tr>
<tr>
<td>3</td>
<td>Patient Centered</td>
<td>Care that is respectful of and responsive to individual patient preferences, needs and values.</td>
</tr>
<tr>
<td>4</td>
<td>Timely</td>
<td>Reducing waits and harmful delays</td>
</tr>
<tr>
<td>5</td>
<td>Efficient</td>
<td>Avoiding waste of equipment supplies, ideas, and energy</td>
</tr>
<tr>
<td>6</td>
<td>Equitable</td>
<td>Care does not vary in quality because of gender, ethnicity, geographic location or income.</td>
</tr>
</tbody>
</table>
Quality Improvement Frameworks

**PDCA Cycle**
- **Plan**: Plan a change or test how something works
- **Do**: Carry out plan
- **Check**: Look at results
- **Act**: Decide actions for improvement

**Six Sigma**
- **DMAIC model**
  - Define
  - Measure
  - Analyze
  - Improve
  - Control

Our EMS System needs Standardized Core Measures.

**Control**
- Ensure the results
- Develop and execute appropriate data collection method
- Find problem's root causes

**Define**
- Understand problem and financial impact

**Measure**
- Generate and implement solutions

**Improve**
- Ensure the results
- Develop and execute appropriate data collection method
- Find problem's root causes
California EMS Core Measures

- 10 Sets
- 28 Measures total
- 21 Measures in 2013
  - submissions due to EMSA by May 31, 2013
- 7 Additional Measures in 2014
  - on Data Year 2012

Our EMS System needs Standardized Core Measures.

Now we have defined measures.

What about our EMS system data?

What is CEMSIS?

California EMS Information System
- 3 Parts ......
  1. Concept of having a Statewide Data System
  2. Data Dictionary
  3. Software Platform that we use to collect/analyze data

Data system gaps

From CHCF project, we learned:

- CEMSIS insufficient to answer priority questions
- Data quality varies greatly across state
- Fragmented adoption and implementation
Day 2 | Core Measures Overview

Additional EMS data system gaps

- ePCR systems
  - LEMSAs level
  - Provider level
- Real-time HIE between hospital and field
- eTracking patients across jurisdictional boundaries

Future of CEMSIS

Vision

Shared Implementation:

<table>
<thead>
<tr>
<th>EMSA</th>
<th>LEMSAs</th>
<th>EMS Providers</th>
<th>Hospitals</th>
</tr>
</thead>
</table>

NEMSIS 3

New Data Elements Definitions

Not compatible with CEMSIS/NEMSIS 2.2.1

Transformation to V3 may require a separate database

The Case for NEMSIS 3

Detail & Clarity

<table>
<thead>
<tr>
<th>NEMSIS 2.2.1</th>
<th>Patient Care Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury/disease event</td>
<td></td>
</tr>
<tr>
<td>911 first contact</td>
<td></td>
</tr>
<tr>
<td>EMS dispatch</td>
<td></td>
</tr>
<tr>
<td>Arrival on scene</td>
<td></td>
</tr>
<tr>
<td>Patient care</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
</tr>
<tr>
<td>Arrival at destination</td>
<td></td>
</tr>
<tr>
<td>Inpatient care</td>
<td></td>
</tr>
<tr>
<td>Sub-acute recovery</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>NEMSIS 3</th>
<th>Patient Care Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury/disease event</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sub-acute recovery</td>
<td></td>
</tr>
</tbody>
</table>

The Case for NEMSIS 3

Enhanced “Structure” Data

<table>
<thead>
<tr>
<th>Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury/disease event</td>
</tr>
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<tr>
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<tr>
<td>Sub-acute recovery</td>
</tr>
</tbody>
</table>

OUTCOMES!

The Case for NEMSIS 3

One Standard for Everyone

The entire NEMSIS 3 data dictionary

Provider Organizations

Local EMS Agencies

EMSA

NEMSIS
Day 2 | Core Measures Overview

The Case for NEMSIS 3 | One Standard for Everyone

Your Data Dictionary Requirements depend on:

- who you are
- your activities
- your audience

The Case for NEMSIS 3 | One Standard for Everyone

The entire NEMSIS 3 data dictionary

Provider Organizations

- Local EMS Agencies
  - EMSA
  - NEMSIS

The state may require less data than a LEMSA chooses to collect, but not less than what’s required for state-level activities and submission to NEMSIS.

The Case for NEMSIS 3 | One Standard for Everyone

The entire NEMSIS 3 data dictionary

Provider Organizations

- Local EMS Agencies
  - EMSA
  - NEMSIS

LEMSAs may not need quite as much data because they have different roles and responsibilities.

The Case for NEMSIS 3 | NEMSIS is phasing out Version 2

January 1, 2015
NEMSIS will no longer accept Version 2.2.1 data

January 1, 2014
NEMSIS will begin accepting Version 3 data

“The Ask”

LEMSAs begin work on NEMSIS 3 adoption ASAP

EMS Providers work to implement ePCR, using NEMSIS 3 data standards and tools

Assess local capability for HIE

“One Patient, One Record”
TRANSFORMING DATA INTO INFORMATION AND QUALITY PROCESSES

Craig Stroup, Contra Costa County EMS Agency

Some Important Distinctions About Continuous Quality Improvement

- Soft vs. hard evidence
- Sometimes close is good enough
- Blame the process not the person
- The process is "perfectly designed" to get the outcome.

Why the sport of baseball…

…is a really good quality improvement program:

Quality indicators (attributes) of a baseball system

<table>
<thead>
<tr>
<th>Structure</th>
<th>+</th>
<th>Process</th>
<th>=</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Things</td>
<td>+</td>
<td>Activities</td>
<td>=</td>
<td>Results</td>
</tr>
<tr>
<td>Field, Players</td>
<td>+</td>
<td>Hits, Outs</td>
<td>=</td>
<td>Score</td>
</tr>
<tr>
<td>AEDs</td>
<td>+</td>
<td>Defibrillations</td>
<td>=</td>
<td>Survival</td>
</tr>
</tbody>
</table>

“He who has data is king”

Better Decisions
Knowledge
Information
Communication
Data

Customers
Patients
Clinicians
Subject Experts

Data Specialists
IT Support
Technical Experts
Interface Experts

Quality Indicator

Asking the question
Answering the question

INDICATOR
Day 2 | Core Measures Overview

**Suggested Statistical Benchmark Analysis**

<table>
<thead>
<tr>
<th>Format</th>
<th>Numeric Expression</th>
</tr>
</thead>
</table>

Why collect the data?
- 2011
- 2012 Q1

What data will be collected?
- 2010 Q3
- 2011 Q2
- 2010 Q4
- 2011 Q4
- Q1 2012

Where

What training is needed for the data collectors?

Who will collect the data?
- 2010 Q2
- 2011 Q3

How will the data be measured?

**Example EMS System Report**

**Using Core Indicators**

- % Bystander CPR Performed

**Example EMS System Report**

**Using Core Indicators**

- % Cardiac Survival – Utstein by Year
  (witnessed & found in shock-able rhythm) N=32

---

**Better Data**

Davis Balestracci

There are four key questions to any data collection that should always be clarified prior to beginning:

1. Why collect the data?
2. What methods will be used for the analysis?
3. What data will be collected?
4. How will the data be measured?

There are four more questions relating to the logistics of the data collection process:

1. How often will the data be collected?
2. Where will the data be collected?
3. Who will collect the data?
4. What training is needed for the data collectors?
Example EMS System Report Using Core Indicators

STEMI Mean Door to PCI Time Interval

National Benchmark <60 mins

Example of Completed ISS Exercise #1

Lessons Learned

- Indicators have to be formed by consensus of the stakeholders and subject experts.
- Consensus among stakeholders is the key to trust.
- Trust is the key to having meaningful indicators and data.
- The more you know what is wrong with your data the more useful it becomes.
- Many times close is good enough.
- It's the third or fourth time, that you start to get good.
- The discussion is often more important than the outcome.
- Cutting costs does not eliminate the cause of costs.

Looking at “Our Stuff”
A Four Step CQI Decision-Making Process

<table>
<thead>
<tr>
<th>Visualize</th>
<th>Analyze</th>
<th>Compromise</th>
<th>Actualize</th>
</tr>
</thead>
</table>

Three Primary Domains of Evaluation

- Patient Safety
- System Performance
- Cost Efficiencies

Process Analysis

Evaluation of data by using graphic representations of activities which show trends and variations over time.

Control Chart in Excel
Evaluation of Trauma On-Scene Interval Indicator

1. Was the process safe and in control?
2. Is there an opportunity to increase patient safety?
3. Did it meet performance expectations?
4. Is there an opportunity to increase performance levels?
5. Is there an opportunity to institute a cost saving initiative?
6. Is there an opportunity to institute an operational efficiency initiative?
7. Was an Action Plan Initiated?

Taking Action

- by far the weakest link in process
- takes the most energy
- developing the “Action Plan”

Rapid Cycle Improvement (RCI) for EMS

**What is rapid cycle improvement?**
- Traditional quality improvement (PDCA) process, except…
- Work accelerated for implementation within 90 day cycle

**When should RCI be initiated?**
- Most applicable to system issues which require timely resolution due to high risk or high frequency attributes
- Highly suitable for EMS

Checking Action

- what it is?
- how it is measured?
- what is the benchmark or end point?
- how will it be reviewed?

Example of Completed ISS Exercise #1

“Coming together is a beginning. Keeping together is progress. Working together is success.”

Henry Ford
Core Measures Task Force Members

REVIEW OF CORE MEASURE SETS

TRAUMA

TRA-1: Scene time for severely injured patients
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Date of incident is 2009 [2010, 2011]

TRA-2: Direct transport to trauma center for severely injured patients
- All denominator criteria
- Receiving hospital is trauma center
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Patient transported to hospital
- Date of incident is 2009 [2010, 2011]

ACUTE CORONARY SYNDROME

ACS-1: Aspirin administration for chest pain/discomfort
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Date of incident is 2009 [2010, 2011]

ACS-2: 12 lead EKG performance
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Date of incident is 2009 [2010, 2011]

ACS-3: Scene time for suspected heart attack patients
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Logical times available
- Date of incident is 2009 [2010, 2011]

ACS-4: Advance hospital notification for suspected acute coronary syndrome (2014)
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Logical times available
- Date of incident is 2009 [2010, 2011]

ACS-5: Direct transport to PCI center for patients meeting criteria
- Type of service requested is 911 response to scene
- Response mode is lights and sirens
- Impression is blunt or penetrating injury
- Specific vital sign indicators
- Logical times available
- Date of incident is 2009 [2010, 2011]
**ACS-1 Aspirin administration for chest pain/discomfort**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>process</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPORTED IN</td>
<td>percentage</td>
</tr>
<tr>
<td>TO CALCULATE</td>
<td>divide numerator by denominator</td>
</tr>
</tbody>
</table>

- All denominator criteria
- Patient given aspirin by EMS personnel
- Age is 35 years or older
- Provider impression is chest pain / discomfort
- Date of incident is within 2009 [2010, 2011]

**ACS-2 Performance of 12-Lead EKG**

<table>
<thead>
<tr>
<th>TYPE</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>percentage</td>
</tr>
<tr>
<td>TO CALCULATE</td>
<td>divide numerator by denominator</td>
</tr>
</tbody>
</table>

- All denominator criteria
- Patient received 12 Lead EKG by paramedic
- Age is 35 years or older
- Provider impression is chest pain / discomfort
- Date of incident is within 2009 [2010, 2011]

**ACS-3 Scene time for suspected heart attack patients**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>process</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPORTED IN</td>
<td>minutes</td>
</tr>
<tr>
<td>TO CALCULATE</td>
<td>arrange values in ascending order, take 90th percentile of distribution</td>
</tr>
</tbody>
</table>

- Emergency medical service is requested
- Responding EMS vehicle travels by ground
- Response mode to scene is lights and sirens
- Date of incident is 2009 [2010, 2011]
- Scene times are available and logical

**ACS-4 Advance hospital notification for suspected acute coronary syndrome**

**ACS-5 Rate of direct transport to PCI center for patients meeting criteria**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>process</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPORTED IN</td>
<td>percentage</td>
</tr>
<tr>
<td>TO CALCULATE</td>
<td>divide numerator by denominator</td>
</tr>
</tbody>
</table>

- All denominator criteria
- Patient transported directly to interventional cardiac cath. lab facility
- Age is 35 years or older
- ECG by paramedic indicates STEMI
- Date of incident is within 2009 [2010, 2011]

**CARDIAC ARREST**

**CAR-1 AED prior to EMS arrival**

**CAR-2 Return of spontaneous circulation after out-of-hospital cardiac arrests**

**CAR-3 Out-of-hospital cardiac arrest survivals to ED discharge**

**CAR-4 Out-of-hospital cardiac arrest survivals to hospital discharge**
**Day 2 | Core Measures Overview**

**CAR-1** AED prior to EMS arrival

- **TYPE:** process
- **REPORTED IN:** percentage
- **TO CALCULATE:** divide numerator by denominator

To be developed for 2014

**CAR-2** Return of spontaneous circulation for out-of-hospital cardiac arrests

- **All denominator criteria**
  - Patient has return of spontaneous circulation
  - Patient experiences cardiac arrest (before or after EMS arrival)
  - Cardiac arrest etiology is presumed cardiac
  - CPR attempted
  - Date of incident is within 2009 [2010, 2011]

**CAR-3** Out-of-hospital cardiac arrest survivals to ED discharge

- **All denominator criteria**
  - ED disposition is hospital admission, transfer, or discharge home

- **Outcome**
  - Patient experiences cardiac arrest (before or after EMS arrival)
  - Cardiac arrest etiology is presumed cardiac
  - CPR attempted
  - Date of incident is within 2009 [2010, 2011]

**CAR-4** Out-of-hospital cardiac arrest survivals to hospital discharge

- **All denominator criteria**
  - Hospital disposition is transfer or discharge home

- **Outcome**
  - Patient experiences cardiac arrest (before or after EMS arrival)
  - Cardiac arrest etiology is presumed cardiac
  - CPR attempted
  - Date of incident is within 2009 [2010, 2011]

**STROKE**

**STR-1** Identification of suspected stroke in the field

**STR-2** Glucose testing for suspected stroke patients

**STR-3** Scene time for suspected stroke patients

**STR-4** Advance hospital notification for suspected stroke

**STR-5** Direct transport to stroke center for patients meeting criteria

To be developed for 2014
STR-2 Glucose testing for suspected stroke patients

- All denominator criteria
  - Provider impression is neurological deficit secondary to CVA/TIA
  - Patient age is 18 years or older
  - Date of incident is within 2009 [2010, 2011]

- TYPE: process
- REPORTED IN: percentage
- TO CALCULATE: divide numerator by denominator

STR-3 Scene time for suspected stroke patients

- Emergency medical service is requested
  - Responding EMS vehicle travels by ground
    - Provider impression is neurological deficit secondary to CVA/TIA
    - Date of incident is 2009 [2010, 2011]
    - Patient is age 18 years or older
    - Scene times are available and logical

- TYPE: process
- REPORTED IN: minutes
- TO CALCULATE: Arrange values in ascending order, take 90th percentile of distribution

STR-4 Advance hospital notification for stroke

To be developed for 2014

STR-5 Direct transport to stroke center for patients meeting criteria

- All denominator criteria
  - Provider impression is neurological deficit secondary to CVA/TIA
  - Patient age is 18 years or older
  - Date of incident is within 2009 [2010, 2011]

RESPIRATORY

RES-1 CPAP given for patients with respiratory distress (2014)
RES-2 Beta2 agonist administration

RES-1 CPAP given for patients with respiratory distress

To be developed for 2014
**RES-2 Beta2 agonist administration**

- Provider impression is respiratory distress
- Patient age is 14 years or older
- Date of incident is within 2009 [2010, 2011]
- Patient received bronchodilator or beta2 agonist by EMS

**PED-1 Pediatric asthma patients receiving bronchodilators**

- Provider impression is respiratory distress
- Patient age is less than 14 years
- Date of incident is within 2009 [2010, 2011]
- Patient received bronchodilator or beta2 agonist by EMS

**PED-2 Transport to pediatric trauma center**

To be developed for 2014

**PAIN INTERVENTION**

**PAI-1 Pain intervention**

- Recorded pain value of 7 or greater
- Patient age is 14 years or older
- Date of incident is within 2009 [2010, 2011]
Day 2 | Core Measures Overview

**PAI-2: Results of pain intervention**

To be developed for 2014

---

**PERFORMANCE OF SKILLS**

**SKL-1: Endotracheal intubation success rate**

- All denominator criteria
  - Number of endotracheal intubation attempts is 1 or 2
  - At least one ET attempt was recorded as successful

- Patient received attempted endotracheal intubation by EMS
  - Date of incident is within 2009 [2010, 2011]

**SKL-2: End tidal CO₂ performed on any successful endotracheal intubation**

- All denominator criteria
  - Number of endotracheal intubation attempts is 1 or 2
  - At least one ET attempt was recorded as successful

- Patient received attempted endotracheal intubation by EMS
  - Date of incident is within 2009 [2010, 2011]

---

**RESPONSE AND TRANSPORT**

**RST-1: Ambulance response time by ambulance zone (Emergency)**

- Type of service requested is 911 response to scene
- Primary role of the unit is transport
- Response mode to scene is lights and sirens
- Date of incident is 2009 [2010, 2011]
- Related times are available and logical
- Events occurred in ambulance zone of interest

---
Cardiopulmonary Resuscitation

RST-2: Ambulance response time by ambulance zone (Non-emergency)

<table>
<thead>
<tr>
<th>TYPE REPORTED IN</th>
<th>TO CALCULATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Minutes</td>
</tr>
</tbody>
</table>

- Type of service requested is 911 response to scene
- Primary role of the unit is transport
- Response mode to scene is NO lights and sirens
- Date of incident is 2009 [2010, 2011]
- Related times are available and logical
- Events occurred in ambulance zone of interest

RST-3: Transport of patients to hospital

<table>
<thead>
<tr>
<th>TYPE REPORTED IN</th>
<th>TO CALCULATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Percentage</td>
</tr>
</tbody>
</table>

- Type of service requested is 911 response to scene
- Primary role of the unit is transport
- Response mode is lights and sirens
- Date of incident is within 2009 [2010, 2011]
- Related times are logical
- Events occurred in ambulance zone of interest

Cardiopulmonary Resuscitation

PUB-1: Out-of-hospital cardiac arrests receiving bystander CPR (2014)

- To be developed for 2014

Ways to submit and publish Core Measures depends on:

- who you are
- the activity
- audience

Submitted by Jens Tärning and Amar Chadgar from The Noun Project
Submitting and Publishing Core Measures

- Core Measures are a good thing for the EMS System in California
- The use and development of Core Measures is truly long overdue

Submitting and Publishing Core Measures

- The data received from the local EMS agencies will be reviewed by the Core Measures Task Force prior to publication

Submitting and Publishing Core Measures

- Information that has a high confidence level (good/accurate) will be published by local EMS agency name
- Illogical (bad/poor/misleading) information will not be published

Submitting and Publishing Core Measures

- Notes/explanations/caveats will be included with published information to describe the results received
- Local EMS agencies are encouraged to provide explanations for situations where the Core Measures do not populate well/at all

Submitting and Publishing Core Measures

- Future Core Measures (i.e.: 2014 data year) will be noticed in advance to the local EMS agencies

Submitting and Publishing Core Measures

- If individual Core Measures (i.e.: Skill 1: ET Tube Success) are not valid based on the information received, that Core Measure will not be published
- An explanation that the measure did not yield valid information will be noted on the summary of Core Measures placed on the EMSA Website
Submitting and Publishing Core Measures

• The information EMSA prepares for its website will be shared with the local EMS agencies prior to publication

Core Measures submission to EMSA by Local EMS Agencies

• Local EMS Agencies have good information about their systems
• Data currently provided to CEMSIS only comes from 17 local EMS agencies
• Data in CEMSIS is not populating well

Ways to submit Core Measures

Provider Agency
Local EMS Agency
EMSA

• Fill out provided reporting tool for submission to EMSA

Ways to submit Core Measures

Provider Agency
Local EMS Agency
EMSA

• Submit summary to CHCF
• EMS Commission
Day 2 | Core Measures Overview

**Step 1** Identify the requirements

- Measure Set ID
- Denominator (Value (Count))
- Numerator (Value (Count))
- Type of Reporting

**Step 2** Calculate the measure

- TRA-2: Direct transport to trauma center for severely injured patients

<table>
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**Step 2** Calculate the measure

- TRA-2: Direct transport to trauma center for severely injured patients

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Why publish Core Measures

- Show the value of EMS
- Transparency of health care
- Potential reimbursement requirements
- System evaluation with like EMS participants

Ways to publish Core Measures

Provider Agency
- Local EMS Agency
- EMSA

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Ways to publish Core Measures

Provider Agency
Local EMS Agency
EMS A

Regional Committees
Local Constituents
Governing Bodies

Ways to publish Core Measures

Provider Agency
Local EMS Agency
EMS A

California HealthCare Foundation
EMS A website
EMS A newsletter
Commission on EMS

EMSA Core Measure Publishing Consideration

Hailey Pate, Data Program Analyst, California EMS Authority

CORE MEASURES IN ACTION

Core Measure Usage Scenarios

Collect Core Measure reports from Local EMS Agencies on a regular basis
Publish state-level performance measures

TRA-1 Scene time for severely injured trauma patients

Type of service requested in 911 response to scene:
- Response mode is to...
- Impression is blunt or...
- Specific vital sign...
- Patient transported
- Start time...

Month 1 Month 2 Month 3 Month 4
**TRI-1: Scene time for severely injured trauma patients**

- Type of service requested is 911 response to scene.
- Response mode is lights and sirens.
- Impression is blunt or penetrating injury.
- Specific vital signs indicators.
- Patient transported to hospital.
- Related times are available and logical.

### Time unit left scene

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<thead>
<tr>
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<th>Frequency</th>
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<tr>
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<tr>
<td>18:33</td>
<td>200</td>
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<tr>
<td>06:10</td>
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<td>3.8%</td>
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Core Measure Usage Scenarios

EMSA

Local EMS Agency

Service Provider Agency

There are tons!

Core Measures will improve California’s EMS data quality.

Acknowledgements

California HealthCare Foundation

Joe Barger • Louis Bruhnke • Dennis Carter • David Chang
Cathy Chidester • Kara Davis • Ric Maloney • Susan Mori • Jan Ogar
Kate Remick • Laurent Repass • Dana Solomon • Karl Sporer
Craig Stroup • Jason Vega • Laura Wallin

Sandy Salaber • Adam Davis • Hailey Pate • Teri Harness
Dan Smiley • Howard Backer
Contra Costa EMS • Los Angeles County EMS Agency

… and all of our local partners who attended!

Core Measures Contact

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