Contra Costa EMS Agency
Core Quality Indicators
Q1 & Q2 2014
System Utilization

Q1 & Q2 2014
Contra Costa County
911 Ambulance Response and Transport
By Month Through Q2 2014
(Data excludes SRVFD)
Contra Costa County 911 Ambulance
% Transport per Response by Month Through Q2 2014

Median = 78%

<table>
<thead>
<tr>
<th>Month</th>
<th>% Transports</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/1/2013</td>
<td>75</td>
</tr>
<tr>
<td>7/1/2013</td>
<td>75</td>
</tr>
<tr>
<td>8/1/2013</td>
<td>77</td>
</tr>
<tr>
<td>9/1/2013</td>
<td>75</td>
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<tr>
<td>10/1/2013</td>
<td>75</td>
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<tr>
<td>11/1/2013</td>
<td>76</td>
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<td>12/1/2013</td>
<td>76</td>
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<tr>
<td>1/1/2014</td>
<td>81</td>
</tr>
<tr>
<td>2/1/2014</td>
<td>82</td>
</tr>
<tr>
<td>3/1/2014</td>
<td>82</td>
</tr>
<tr>
<td>4/1/2014</td>
<td>79</td>
</tr>
<tr>
<td>5/1/2014</td>
<td>79</td>
</tr>
<tr>
<td>6/1/2014</td>
<td>78</td>
</tr>
</tbody>
</table>
Contra Costa Hospitals
EMS Diversion by Cumulative Hours
Q1, Q2 2014
233 Total Hours on Diversion Q1-Q2

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR</td>
<td>91</td>
</tr>
<tr>
<td>DSP</td>
<td>66</td>
</tr>
<tr>
<td>SDMC</td>
<td>38</td>
</tr>
<tr>
<td>SRVMC</td>
<td>30</td>
</tr>
<tr>
<td>JMMWC</td>
<td>11</td>
</tr>
<tr>
<td>JMMC-C</td>
<td>6</td>
</tr>
<tr>
<td>KWC</td>
<td>1</td>
</tr>
<tr>
<td>KA</td>
<td>0</td>
</tr>
</tbody>
</table>
Contra Costa Hospitals
EMS Diversion by % Cause
Q1, Q2 2014
233 Total Hours on Diversion Q1-Q2

CT 61%
TRAUMA 18%
OTHER 21%
STEMI 13%
Base Hospital

Q1 & Q2 2014

2014 base data not yet available
Base Hospital Average Daily Calls
By Year to Q4 2013
N(Q2)=775

Median = 9.4

<table>
<thead>
<tr>
<th>Year</th>
<th>Calls per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>12.1</td>
</tr>
<tr>
<td>2003</td>
<td>11.5</td>
</tr>
<tr>
<td>2004</td>
<td>10.1</td>
</tr>
<tr>
<td>2005</td>
<td>9.9</td>
</tr>
<tr>
<td>2007</td>
<td>9.4</td>
</tr>
<tr>
<td>2008</td>
<td>9.0</td>
</tr>
<tr>
<td>2009</td>
<td>7.9</td>
</tr>
<tr>
<td>2010</td>
<td>8.1</td>
</tr>
<tr>
<td>2011</td>
<td>8.8</td>
</tr>
<tr>
<td>2012</td>
<td>8.6</td>
</tr>
<tr>
<td>2013</td>
<td>8.7</td>
</tr>
</tbody>
</table>
AVERAGE DAILY BASE CALL BY CALL TYPE
To Q4 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Arrest</th>
<th>Medical</th>
<th>Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1.8</td>
<td></td>
<td>7.6</td>
</tr>
<tr>
<td>2007</td>
<td>2.0</td>
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<td>7.0</td>
</tr>
<tr>
<td>2008</td>
<td>1.7</td>
<td></td>
<td>6.9</td>
</tr>
<tr>
<td>2009</td>
<td>1.4</td>
<td></td>
<td>6.2</td>
</tr>
<tr>
<td>2010</td>
<td>1.4</td>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td>2011</td>
<td>1.6</td>
<td></td>
<td>7.2</td>
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<tr>
<td>2012</td>
<td>1.7</td>
<td></td>
<td>6.7</td>
</tr>
<tr>
<td>2013</td>
<td>1.4</td>
<td></td>
<td>7.2</td>
</tr>
</tbody>
</table>
Base Contact for Adult vs. Pediatric Patients
To Q4: 2013

Note: Pediatric age 14 or below
Cardiac Arrest

Q1 & Q2 2014

Data Source: CARES Registry through June 2012.
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival
% Bystander CPR by Quarter  
Ending Q2 2014

Q1 N=52/131 Q2 N=56/113

% of all resuscitations attempted

Quarter

32  44  42  43  44  42  43  40  38  36  36  40  49

0  10  20  30  40  50  60


% of all resuscitations attempted
Cardiac Arrest Survival Utstein
By Quarter 2011 to Q2: 2014

Q1 N=38/126 Q2 N=25/113

% of All resuscitations Attempted


26%  23%  25%  37%  17%  22%  33%  30%  22%
STEMI System
Q1 & Q2 2014
Contra Costa STEMI System Activity
Q1 & Q2 2014

Patient count

Q1 | Q2 | Q1 | Q2 | Q1 | Q2
---|---|---|---|---|---
53 | 66 | 31 | 38 | 21 | 32

- Activations
- To Cath Lab
- PCI
Contra Costa STEMI Time Intervals
Q1 & Q2 2014

- Q1: FMC to PCI 82 minutes, D2PCI 56 minutes
- Q2: FMC to PCI 80 minutes, D2PCI 53 minutes
STEMI System Time Benchmarks
Q1 & Q2 2014

- FMC to PCI < 90 mins: 67% (Q1), 57% (Q2)
- Door to PCI < 90 min: 95% (Q1), 95% (Q2)
- FMC to PCI < 90 mins: 57% (Q1), 95% (Q2)
- Door 2 PCI < 90 mins: 95% (Q1), 95% (Q2)
STEMI Median Prehospital Scene Time Interval
By Quarter 2012–Q2 2014
Control Chart Analysis

**Special Cause Detected**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg of Data Shown</td>
<td>13.32</td>
</tr>
<tr>
<td>Median Data Shown</td>
<td>13</td>
</tr>
<tr>
<td>Sigma for Limits</td>
<td>1.182</td>
</tr>
<tr>
<td>Base for Limits</td>
<td>Average MR</td>
</tr>
</tbody>
</table>

**Chart Type:** Chart for Individuals

- **Centerline:** 13.32
- **Process Limits:**
  - Lower: 9.774
  - Upper: 16.87

**Database Column 1**

- A. 1 Beyond Control Limit
- B. 9 On One Side of Average
- C. 6 Trending Up or Down
- D. 14 Alternating Up & Down
- E. 2 of 3 Beyond 2 Sigma
- F. 4 of 5 Beyond 1 Sigma
- G. 15 Within 1 Sigma
- H. 8 Outside 1 Sigma
- X. Excluded or Missing Data
Stroke System

Q1 & Q2 2014

Data Source: MEDS 3 California Stroke Registry
Q1 & Q2 2014 tPA System Metrics
All Primary Stroke Receiving Centers
N = 68

<table>
<thead>
<tr>
<th>Metric</th>
<th>Q1 2014</th>
<th>Q2 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door to tPA</td>
<td>0:46</td>
<td>0:59</td>
</tr>
<tr>
<td>Dispatch to tPA</td>
<td>1:21</td>
<td>1:29</td>
</tr>
<tr>
<td>On-Scene to tPA</td>
<td>1:13</td>
<td>1:21</td>
</tr>
</tbody>
</table>

Median Minutes
Final Disposition of Stroke Alert Patients
Q1 2014
N = 175

Seizures
6%

CVA
43%

ICH
14%

TIA
13%

Other
26%

Other = Sepsis, UTI, ALOC, Drug/Alcohol, Encephalopathy, Migraine, Trauma
Final Disposition of Stroke Alert Patients
Q2 2014
N = 175

Source: Zoll, Meds, PSCs

Other = Sepsis, UTI, ALOC, Drug/Alcohol, Encephalopathy, Migraine, Trauma
STROKE ALERT
Median Prehospital Scene Time Interval
By Quarter 2012–Q 2 2014
Control Chart Analysis
N= Q1: 473 Q2: 474

No Special Cause Detected
Chart Type: Chart for Individuals

Avg of Data Shown 12.975
Median Data Shown 13
Sigma for Limits 0.4679
Base for Limits Average MR

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Benchmark < 15 mins
Trauma System

Q1 & Q2 2014

Source: Contra Costa Trauma registry
Trauma Activations & Discharge
Through Q1 2014

%ISS >15
Trauma Activations

%ISS <15
Trauma Activations

%ISS <15
Discharged Home
Median Prehospital On Scene Time Interval
Blunt vs. Penetrating Trauma
through Q1 2014

<table>
<thead>
<tr>
<th>Time In Mins</th>
<th>Q1 2013</th>
<th>Q2 2013</th>
<th>Q3 2013</th>
<th>Q4 2013</th>
<th>Q1 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blunt</td>
<td>16</td>
<td>13</td>
<td>15</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Penetrating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q1 2013 Q2 2013 Q3 2013 Q4 2013 Q1 2014
Patient Safety

Q1 & Q2 2014
Contra Costa EMS Patient Safety Events by Frequency and Type
Jan-Jun 2014

N=21

Q1/Q2 2014 High Risk Incidents  N = 21
Adhoc Studies
Q1 & Q2 2014
High Performance Cardiac Arrest & CPR Quality Initiative
Average Compression Ratio - CPR 10 Minutes or Greater

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>70%</td>
</tr>
<tr>
<td>Feb</td>
<td>74%</td>
</tr>
<tr>
<td>Mar</td>
<td>77%</td>
</tr>
<tr>
<td>Apr</td>
<td>77%</td>
</tr>
<tr>
<td>May</td>
<td>81%</td>
</tr>
<tr>
<td>Jun</td>
<td>80%</td>
</tr>
<tr>
<td>Jul</td>
<td>81%</td>
</tr>
<tr>
<td>Aug</td>
<td>84%</td>
</tr>
</tbody>
</table>

Source: CodeStat 9.0 annotated cases - 2014 - Contra Costa EMS
Percentage of Cases with Compression Ratio 80% or Greater
CPR 10 Minutes or Longer

Source: CodeStat 6.0 annotated cases - 2014 - Contra Costa EMS
Percent of Cases with Compliance to Both Compression Rate (100-120) and Compression Ratio (80% or Greater)

- Jan: 0%
- Feb: 13%
- Mar: 20%
- Apr: 0%
- May: 38%
- Jun: 50%
- Jul: 67%
- Aug: 71%

Training period indicated.

Source: CodeStat 9.0 annotated cases - 2014 - Contra Costa EMS
Percent with Initial Shock within 90 Seconds of Defibrillator Power On

![Graph showing percent with initial shock within 90 seconds of defibrillator power on for Qtr 1, Qtr 2, and Qtr 3.]

- Qtr 1: 25%
- Qtr 2: 58%
- Qtr 3: 67%

Source: CodeStat 0.2 annotated cases - 2014 - Contra Costa EMS
END REPORT
Q1 & Q2 2014