Contra Costa EMS Agency
Core Quality Indicators
Q1 2013 Report
System Utilization
Q1 2013 Report
Contra Costa County 911 Ambulance
% Transport per Response by Month Through Q1 2013
Median=76.3%
(Data excludes SRVFD)
Contra Costa County
Ambulance Responses
by Month through Q1 2013
(excludes data from SRVFD)

No Special Cause Detected

<table>
<thead>
<tr>
<th>Chart Type:</th>
<th>Chart for Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centerline:</td>
<td>6,989</td>
</tr>
<tr>
<td>Process Limits:</td>
<td>Lower: 6,213 Upper: 7,765</td>
</tr>
</tbody>
</table>

- Avg of Data Shown: 6988.533
- Median Data Shown: 7046
- Sigma for Limits: 258.7
- 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

Database Column 1
Contra Costa County
Ambulance Transports
by Month through Q1 2013
(excludes data from SRVFD)
Contra Costa Hospitals
EMS Diversion by Cumulative Hours
Q1 2013
N=364 hr.'s

<table>
<thead>
<tr>
<th>Location</th>
<th>Hr.'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMCSP</td>
<td>22</td>
</tr>
<tr>
<td>JMC</td>
<td>1</td>
</tr>
<tr>
<td>JMWC</td>
<td>54</td>
</tr>
<tr>
<td>KR</td>
<td>105</td>
</tr>
<tr>
<td>SRRMC</td>
<td>166</td>
</tr>
<tr>
<td>SD</td>
<td>16</td>
</tr>
</tbody>
</table>
Contra Costa Hospitals
EMS Diversion by Cause (%)
Q1 2013: N=364 hr.'s

- **CT**: 70%
- **TRAUMA**: 18%
- **Other**: 12%
- **STEMI**: 7%
- **INT**: 5%
Base Hospital
Q1 2013 Report
Base Hospital Average Daily Calls
By Year + Q1 2013
N(Q1)=792

Median = 9.4
DAILY BASE CALL BY CALL TYPE

AVERAGE CALLS PER DAY

- Arrest
- Medical
- Trauma


Values: 7.6, 7.0, 6.9, 6.2, 6.5, 7.2, 6.7, 7.2
Base Contact for Adult vs. Pediatric Patients

<table>
<thead>
<tr>
<th>Year</th>
<th>Pediatric Calls</th>
<th>Adult Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>421</td>
<td>3988</td>
</tr>
<tr>
<td>2003</td>
<td>369</td>
<td>3815</td>
</tr>
<tr>
<td>2004</td>
<td>390</td>
<td>3309</td>
</tr>
<tr>
<td>2005</td>
<td>360</td>
<td>3239</td>
</tr>
<tr>
<td>2006</td>
<td>290</td>
<td>3153</td>
</tr>
<tr>
<td>2007</td>
<td>297</td>
<td>2983</td>
</tr>
<tr>
<td>2008</td>
<td>216</td>
<td>2673</td>
</tr>
<tr>
<td>2009</td>
<td>258</td>
<td>2708</td>
</tr>
<tr>
<td>2010</td>
<td>138</td>
<td>3084</td>
</tr>
<tr>
<td>2011</td>
<td>209</td>
<td>2930</td>
</tr>
<tr>
<td>2012</td>
<td>214</td>
<td>2979</td>
</tr>
</tbody>
</table>

Note: Pediatric age 14 or below
Cardiac Arrest
Q1 2013 Report

Data Source: CARES Registry through June 2012.
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival
% Bystander CPR by Quarter
By Quarter through Q1 2013
Cardiac Arrest Survival Utstein
By Quarter through Q1: 2013

Q1 2011: 25%
Q2 2011: 30%
Q3 2011: 25%
Q4 2011: 20%
Q1 2012: 15%
Q2 2012: 20%
Q3 2012: 30%
Q4 2012: 35%
Q1 2013: 29%
No Special Cause Detected

Chart Type: Chart for Individuals
Database Column
Avg of Data Shown 31.69231
Median Data Shown 33
Sigma for Limits 5.171
Base for Limits Average MR

Centerline: 31.69
Process Limits: Lower: 16.18 Upper: 47.21

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

% Cardiac Arrest Survival – Utstein
By Month through Q1 2013
STEMI System
Q1 2013 Report
Contra Costa STEMI System
Median Prehospital Scene Time Interval
By Month through Q1 2013

Special Cause Detected

Chart Type: Chart for Individuals
Database Column: 1

- Centerline: 14.19
- Process Limits: Lower: 10.18, Upper: 18.20

- Avg of Data Shown: 14.18667
- Median Data Shown: 14
- Sigma for Limits: 1.336
- 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

Reviewed Doc Issue: Excluded or Missing Data
Contra Costa STEMI System
Overtriage By Month through Q1 2013

Activations: N=48
Confirmed: N=20
% Overtriage: 42%
Contra Costa County STEMI System
911 to First PCI Time
Q1 2013

<75 mins: 15%
<90 mins: 55%
<120 mins: 100%
Trauma System
Q1 2013 Report
### Trauma Activations

% ISS >15 through Q1 2013

<table>
<thead>
<tr>
<th>No Special Cause Detected</th>
<th>Chart Type: Chart for Individuals</th>
<th>Database Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg of Data Shown</td>
<td>Centerline: 0.2211</td>
<td>1</td>
</tr>
<tr>
<td>Median Data Shown</td>
<td>Process Limits: Lower: 0.009368</td>
<td></td>
</tr>
<tr>
<td>Sigma for Limits</td>
<td>Upper: 0.4329</td>
<td></td>
</tr>
<tr>
<td>Base for Limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. 1 Beyond Control Limit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. 9 On One Side of Average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C. 6 Trending Up or Down</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D. 14 Alternating Up &amp; Down</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E. 2 of 3 Beyond 2 Sigma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F. 4 of 5 Beyond 1 Sigma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G. 15 Within 1 Sigma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H. 8 Outside 1 Sigma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X. Excluded or Missing Data</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dates</th>
<th>% ISS</th>
<th>Chart Type:</th>
<th>Database Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 11</td>
<td>20%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Feb 11</td>
<td>30%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Mar 11</td>
<td>40%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Apr 11</td>
<td>50%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>May 11</td>
<td>60%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jun 11</td>
<td>70%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jul 11</td>
<td>80%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Aug 11</td>
<td>90%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Sep 11</td>
<td>10%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Oct 11</td>
<td>20%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Nov 11</td>
<td>30%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Dec 11</td>
<td>40%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jan 12</td>
<td>50%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Feb 12</td>
<td>60%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Mar 12</td>
<td>70%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Apr 12</td>
<td>80%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>May 12</td>
<td>90%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jun 12</td>
<td>10%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jul 12</td>
<td>20%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Aug 12</td>
<td>30%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Sep 12</td>
<td>40%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Oct 12</td>
<td>50%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Nov 12</td>
<td>60%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Dec 12</td>
<td>70%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jan 13</td>
<td>80%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Feb 13</td>
<td>90%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Mar 13</td>
<td>10%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Apr 13</td>
<td>20%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>May 13</td>
<td>30%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jun 13</td>
<td>40%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Jul 13</td>
<td>50%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Aug 13</td>
<td>60%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Sep 13</td>
<td>70%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Oct 13</td>
<td>80%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Nov 13</td>
<td>90%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
<tr>
<td>Dec 13</td>
<td>10%</td>
<td>Chart for Individuals</td>
<td>1</td>
</tr>
</tbody>
</table>

Centerline: 0.2211      Process Limits:   Lower: 0.009368   Upper:   0.4329

No Special Cause Detected

Chart Type: Chart for Individuals
Contra Costa Trauma Activations
% ISS <15 through Q1 2013
N=1538
Trauma Activations
% ISS<15 through Q1 2013

No Special Cause Detected

Chart Type: Chart for Individuals
Database Column 1

Avg of Data Shown 0.776296
Median Data Shown 0.76
Sigma for Limits 0.07229
Base for Limits Average MR

Centerline: 0.7763
Process Limits: Lower: 0.5594 Upper: 0.9932

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
ISS <15 Discharged Home through Q1 2013

No Special Cause Detected

<table>
<thead>
<tr>
<th>Avg of Data Shown</th>
<th>0.268148</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Data Shown</td>
<td>0.27</td>
</tr>
<tr>
<td>Sigma for Limits</td>
<td>0.05217</td>
</tr>
<tr>
<td>Base for Limits</td>
<td>Average MR</td>
</tr>
</tbody>
</table>

Chart Type: Chart for Individuals

Centerline: 0.2681
Process Limits: Lower: 0.1116, Upper: 0.4247

- 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

Database Column 1
Contra Costa Trauma Activations
% ISS < 15 - Discharged Home through Q1 2013
N=587
Median Prehospital On Scene Time Interval
Blunt vs. Penetrating Trauma
Q1 2013

<table>
<thead>
<tr>
<th>Time In Mins</th>
<th>Blunt</th>
<th>Penetrating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>
Patient Safety
Contra Costa EMS
Patient Safety Events
by Frequency and Type
Q1 2013: N=9

Q1 2013
High Risk Incidents
N = 0

N=5

N=3

N=1

Operations
Clinical
Other

Operations
Clinical
Other

Q1 2013
High Risk Incidents
N = 0
Adhoc Studies
Q1 2013
Time Interval (Minutes) from Hospital Arrival at ED
Until Transfer of Care
AMR Data - July 2012 to June 2013

Note: Transfer of care defined as time when patient physically off ambulance gurney and nursing report completed. CCRMC data includes both ED and Psychiatric Emergency Services (PES) data. San Ramon Regional data not included (<3 transports/month).
Endotracheal Tube Success (Percent of Patients) 2012-13

- Non-Traumatic Cardiac Arrest (231): 62.8%
- Non-Traumatic - Perfusing (8): 50.0%
- Traumatic Arrest (11): 63.6%
- Traumatic - Perfusing (6): 66.7%
- All Patients (256): 62.5%
King Airway Success (Primary and Rescue)
2012-13

- Non-Traumatic Cardiac Arrest (142): 78.9%
- Non-Traumatic - Perfusing (5): 40.0%
- Traumatic Arrest (9): 100.0%
- Traumatic - Perfusing (6): 66.7%
- All Patients (162): 78.4%
Percent Documentation of Numerical Value for ETCO2 in PCR 2012-13

- Non-Traumatic Cardiac Arrest (257): 61%
- Non-Traumatic - Perfusing (6): 83%
- Traumatic Arrest (16): 38%
- Traumatic - Perfusing (8): 25%
- All Patients (287): 70%
Numerical Documentation of ETCO2
Endotracheal Tube vs. King Airway
2012-13

Non-Traumatic Cardiac Arrest (145 / 112)
Non-Traumatic - Perfusing (4 / 2)
Traumatic Arrest (7 / 9)
Traumatic - Perfusing (4 / 4)
All Patients (160 / 127)

<table>
<thead>
<tr>
<th>Category</th>
<th>ET</th>
<th>King</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Traumatic Cardiac Arrest</td>
<td>71%</td>
<td>49%</td>
</tr>
<tr>
<td>Non-Traumatic - Perfusing</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>Traumatic Arrest</td>
<td>57%</td>
<td>22%</td>
</tr>
<tr>
<td>Traumatic - Perfusing</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>All Patients</td>
<td>70%</td>
<td>37%</td>
</tr>
</tbody>
</table>
END REPORT
Q1 2013