Tallying Total Task Time
to Tacitly Tender the Team

Does Anybody Really Know What Time It Is?
(That Makes a Clinical Difference in 2016
AND That Makes a People Difference in 2017!)

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1,100 square miles
Population
– 1.6 million day
– 1.2 million night
208,746 calls (+9%)
149,029 transports (+2%)
71% transports (-5%)
People Matter
Several time-related variables were studied. The time from collapse to initiation of cardiopulmonary resuscitation and the time from collapse to definitive care were significantly associated with survival; these two times were jointly related. The time to definitive care was strongly associated with survival, and it was unlikely to result in survival if definitive care was provided more than 6 minutes after collapse. If either time was exceeded, the survival rate was greatly reduced. The time to initiation of CPR and defibrillation was also found to be significantly associated with survival. Emergency medical service personnel were provided with a report of the time to initiation of CPR in order to improve the time to definitive care provided by emergency medical technicians in defibrillation.

(JAMA 241:1905-1907, 1979)
System Response Time Standards for Ambulances

Before Nov. 1, 2013
- Priority 1  8:59
  – 11:59 outside OKC/TUL
- Priority 2  12:59

After Nov. 1, 2013
- Priority 1  10:59
  – 11:59 outside OKC/TUL
- Priority 2  24:59
<table>
<thead>
<tr>
<th></th>
<th>All Calls Pre 11/1/13</th>
<th>All Calls Post 11/1/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 1</td>
<td>11:56</td>
<td>12:54</td>
</tr>
<tr>
<td>Priority 2</td>
<td>12:07</td>
<td>17:44</td>
</tr>
</tbody>
</table>

Priority 1 change impact is 0:58 at 90% fractile

Priority 2 change impact is 5:37 at 90% fractile
### Actual Effect on Ambulance Response Times – Metro Tulsa

<table>
<thead>
<tr>
<th></th>
<th>All Calls Pre 11/1/13</th>
<th>All Calls Post 11/1/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 1</td>
<td>11:17</td>
<td>12:28</td>
</tr>
<tr>
<td>Priority 2</td>
<td>12:47</td>
<td>18:04</td>
</tr>
</tbody>
</table>

Priority 1 change impact is 1:11 at 90% fractile

Priority 2 change impact is 5:17 at 90% fractile
Operational & Clinical Results

• Year Prior to Response Time Changes
  – 179,753 RLS responses

• Year After Response Time Changes
  – 57,112 RLS responses (31%)
    – 124,459 Non-RLS responses (69%)

• Now X 3 yrs (350,000+ Non-RLS) & counting!
• Still without evident clinical detriments!
Everything still wasn’t perfect

- Medics were tired
- Medics were depressed
- Medics were angry (& leaving)
- Spouses/families were unhappy

- End of shift ≠ end of work (2-3 hr holdovers)
- Sick & tired of being sick & tired
The “Wake Up!” Calls – May 2016

• “So, Doc, SORRY TO BOTHER YOU, but we need your help. We’re worried about this patient and we’ve been on scene two hours trying to get him/her to go to the hospital....”

• “So, Doc, sorry to bother you, but we need your help. We’re worried about this patient and we’ve been on scene TWO HOURS trying to get him/her to go to the hospital....”
“LEAN-ing” into Learning

Crew
- Lack of the big picture from the Patient's perspective
- Hours per week U/BU
- Age
- Tenure
- Crews don't care
- Crews are not accountable
- Instability of Work Force
- Crews don't go 10-8

Process
- Not being real
- Charting takes too long
- Chaos in not trusted
- Underutilized EMR's
- Fire underutilized
- Fire underutilized
- Low morale
- Not enough time for a billable ticket
- Don't face the brutal facts
- Fear that it's all about money

Culture
- Lack of Team approach
- Old vs New thinking
- Inter agency relationship
- Fire underutilized
- Low morale
- Lack of positive reinforcement
- Don't face the brutal facts
- Fear that it's all about money
- Keep us from a 20 min scene time or 65 task time

Management
- Don't give the facts
- FTO's and Sups don't have data
- Lack of accountability
- Data in not trusted
- People don't know what needs to be on the chart

Dispatch
- Hospital disconnect
- People are unsure about how to chart
- Lack of understanding

Training
- Computers slow
- Battery life of computer
- Too long to download printed PCR

IT
- Tablet and Software is slow

Team
- Positive Atmosphere
- Pride
- High Trust
- Career Path
- Realistic View - Progressive Collaborative Functions
- Self Actualization

Team approach
- Communication
- Feedback Engagement - Close the Loop
- IT Solutions
- System Vision
- Send out OMAC
- Send out Team members and an elevator speech
- Create dashboard for the team members
So what did we learn in “reasons why”?

- No set goal for scene/mission times
- Field supervisors seen as negative
- Management doesn’t face the “brutal facts”
- Inconsistent team approach
- Lack of empowerment
- Changing software and hardware too slow
- Pessimism and “desperate for hope”
There is hope

- Medical oversight & operations commitment
- Frontline focus group
  - Meetings every 2 weeks
  - Frontline, ops mgmt, medical oversight
  - Listening and “getting real...with real facts”
- Empowering every level of provider
- Trusting the process
  - Led by a Black Belt in Lean/Six Sigma
Task Time Eastern Division by Stage

Before

Transition

After

Individual Value

Observation

1 6 11 16 21 26 31 36 41 46

UCL=81.34

\( \bar{X} = 78.75 \)

LCL=76.16
<table>
<thead>
<tr>
<th>Row Labels</th>
<th>Average of Chute Time</th>
<th>Average of Crew Drive Time</th>
<th>Average of Scene Time</th>
<th>Average of Transport Time</th>
<th>Average of Drop Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eastern Division</strong></td>
<td>0.35</td>
<td>8.51</td>
<td>23.84</td>
<td>15.95</td>
<td>35.67</td>
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<tr>
<td>After</td>
<td>0.28</td>
<td>8.20</td>
<td>23.07</td>
<td>15.58</td>
<td>31.95</td>
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<tr>
<td>Before</td>
<td>0.39</td>
<td>8.72</td>
<td>24.37</td>
<td>16.20</td>
<td>38.26</td>
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<tr>
<td><strong>Western Division</strong></td>
<td>0.46</td>
<td>8.86</td>
<td>24.21</td>
<td>16.52</td>
<td>27.63</td>
</tr>
<tr>
<td>After</td>
<td>0.39</td>
<td>8.91</td>
<td>23.35</td>
<td>16.35</td>
<td>26.93</td>
</tr>
<tr>
<td>Before</td>
<td>0.50</td>
<td>8.83</td>
<td>24.76</td>
<td>16.63</td>
<td>28.09</td>
</tr>
</tbody>
</table>
Does all this really achieve anything?

- Metropolitan OKC 295 scene responses/day
  - $295 \times 2.9 \text{ mins} = 14 \text{ hours/day}$

- Metropolitan Tulsa 275 scene responses/day
  - $275 \times 8.9 \text{ mins} = 41 \text{ hours/day}$

- EMS system added ambulance capability???
  - $19,710 \text{ hours/year}$
Results

• Improving mental & physical health in EMS (“downtime” & leaving work on time)
  AND

• Increased readiness (units on the street)
  AND

• Increased clinical capabilities (morale)

• It doesn’t have to be “OR”
Resources

• okctulomd.com

• Treatment Protocols

• Draft Protocol 14J: Scene Coordination
  – Validated beta version
  – Full implementation Spring 2017