Pumping it up in Memphis:

Tennessee Two-Step

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Eagles Consortium
What is our real world experience with the Lucas Device?

What are there reasons for the difference?
Memphis Fire Department

- Approximately 1,900 personnel
  - 350+ Medics
  - 1500+ EMTs
- 59 Stations
- 60 Engines
- 27 Truck Companies
- 36 ALS Ambulances
- Sponsoring Agency for USAR Tennessee Task Force 1
Demographics

- **Annual Call Volume** 125,000 runs

History with the Lucas

- 50% trucks in 2011

Full implementation 2012

- All Cause Cardiac Arrest
<table>
<thead>
<tr>
<th>Medication</th>
<th>Avg</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>Avg Epi</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Avg Atropine</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Avg Amiodarone</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Avg Dextrose</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Avg Narcan</td>
<td>0.2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**Average Number of Defibrillations**: 2
ROSC Rates

% Males with ROSC 25%

% Females with ROSC 31%
2012-2014 ROSC % vs. Age

Age (years) | ROSC (%)
--- | ---
(0-10) | 14%
(11-20) | 19%
(21-30) | 24%
(31-40) | 28%
(41-50) | 25%
(51-60) | 32%
(61-70) | 30%
(71-80) | 31%
(81-90) | 25%
(91-100) | 28%
y = 0.014x + 0.1784

R² = 0.51574

2014 % ROSC vs. Age
The results…

% of Lucas with ROSC  30%

% of Std CPR with ROSC  21%

No other changes in arrest protocol
Why the differences?  (IMHO)

- Fewer Pauses?
- More consistency?
- Lots of time moving patients in situations where CPR quality is poor
Getting those patients back to work…
Thank You!

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