

Mechanical Behaviors: The LINC Trial vs the Memphis Experience

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Eagles Consortium





LINC Results

Outcome	Mechanical compressions (%)	Manual compressions (%)
4-h survival (primary end point)	23.6	23.7
ICU discharge	7.5	6.4
Hospital discharge	8.3	7.8
Good neurological outcome (CPC 1-2) at 1 mo	8.1	7.3
Good neurological outcome (CPC 1-2) at 6 mo	8.5	7.6

LINC Results

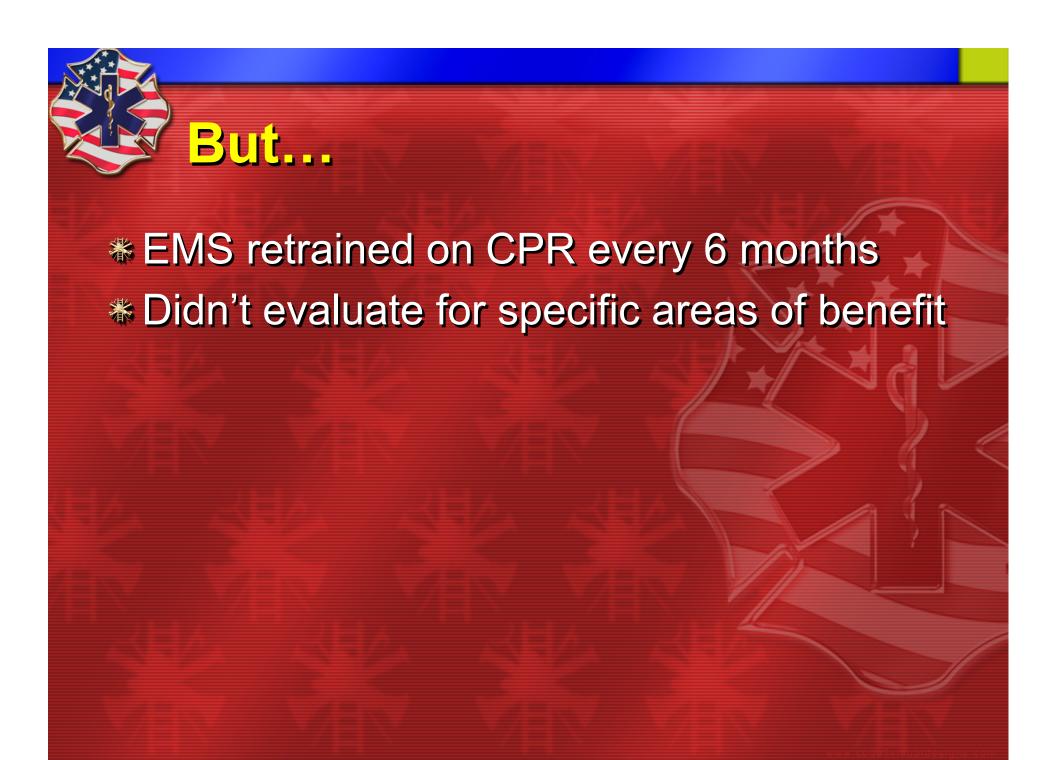
CPC=clinical performance category



And so...

Confirmed Mechanical is as good as high quality CPR

* No difference in outcomes





Memphis Fire Department

- * Approximately 1,900 personnel
 - **350+ Medics**
 - **№ 1500+ EMTs**
- **\$ 59 Stations**
- *** 60 Engines**
- *** 27 Truck Companies**
- *** 36 ALS Ambulances**
- *** 3 Heavy Squads**
- Sponsoring Agency for USAR Tennessee Task Force 1





Lucas Deployment

* Began field trials in 2011 as a pilot project



2011

- *** Cardiac Arrest Calls: 1,132**
- *** WITH LUCAS DEVICE**
- * ROSC: 1
- * No ROSC: 4
- *** WITHOUT LUCAS DEVICE**
- * ROSC: 174
- **№ No ROSC: 754**

* **192 Responses for ROSC were noted as "Not Available"

25%

23%



2012

- ** Lucas device deployed on 18/36 ambulances
 - No other changes in training, tools, meds, number units, or response times
 - *** Units selected were randomly chosen**
 - * Frequent changes in assigned medics

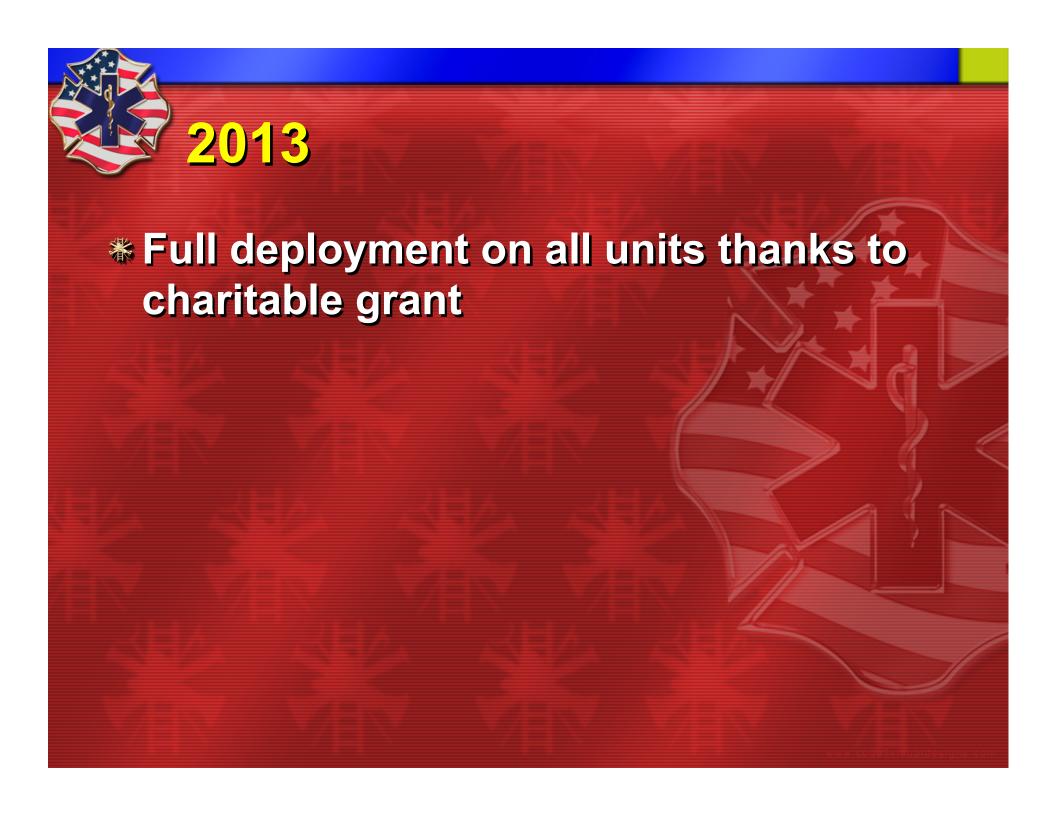


2012 results

- *** Cardiac Arrest Calls: 1,204**
- *** WITH LUCAS DEVICE**
- * ROSC: 37
- **No ROSC: 77**
- ***WITHOUT LUCAS DEVICE:**
- * ROSC: 213
- **No ROSC: 825**

48%

26%





2103 results

- **** Cardiac Arrest Calls: 1,134**
- ***WITH LUCAS DEVICE**
- * ROSC: 128
- **No ROSC: 258**
- *** WITHOUT LUCAS DEVICE:**
- * ROSC: 220
- **№ No ROSC: 775**
- * **194 Responses "Not Available"

49.6%

28.3%



2014 to date...

- *** Cardiac Arrest Calls: 172**
- *** WITH LUCAS DEVICE**
- * ROSC: 13
- **No ROSC: 50**
- *** WITHOUT LUCAS DEVICE:**
- * ROSC: 23
- * No ROSC: 127

26%

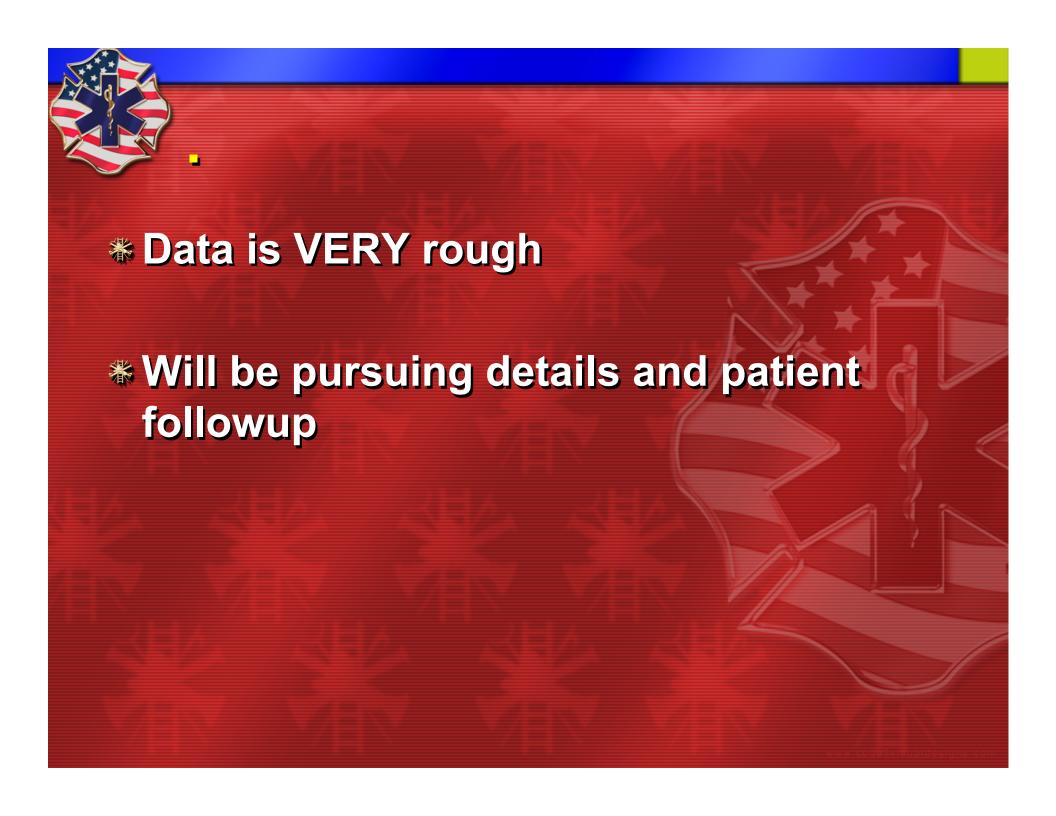
18%



Why the differences? (IMHO)

*We transport a significant number of cardiac arrests

- ***Fewer Pauses?**
- ***More consistency?**
- *Lots of time moving patients in situations where CPR quality is poor





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Thanks to Institute for HealthCare Improvement