



DEAD RINGERS:
***IMPACT OF AN ON-SCENE DNR AND
TERMINATION POLICY***

MARC ECKSTEIN, MD, MPH, FACEP

MEDICAL DIRECTOR

LOS ANGELES FIRE DEPARTMENT

ASSOCIATE PROFESSOR OF

EMERGENCY MEDICINE

USC SCHOOL OF MEDICINE

BACKGROUND

- ❧ Survival rate for OOHCA remains poor
- ❧ Multiple studies have shown that failure to achieve ROSC in the field is uniformly predictive of poor outcome
- ❧ Varying guidelines exist to terminate resuscitative efforts in the field
- ❧ Transport of OOHCA pts with ongoing CPR remains a common practice in many EMS systems

WHY IS THIS A PROBLEM?

- ⌘ Cost
- ⌘ Manpower
- ⌘ False sense of hope for families
- ⌘ Tying up hospital beds
- ⌘ Unnecessary code 3 driving



SHOULD WE BE TRANSPORTING PATIENTS WITH CPR IN PROGRESS?



EVALUATION OF PRACTICE

- ☞ 2005 Los Angeles study found that 9% of OOHCA pts had resuscitative efforts terminated in the field
- ☞ Wide variability amongst different base stations (range 0-37%)
- ☞ Overall survival rate 1.5%
- ☞ Survival from witnessed VF = 6.1%

Eckstein M, et al. Termination of resuscitative efforts for OOHCA.
Acad Emerg Med 2005;12:65

Eckstein M, et al. Cardiac arrest resuscitation evaluation in Los Angeles: CARE-LA.
Annals of Emergency Medicine, 2005;45:504-509.

WHAT IS THE PROBLEM?

- ⌘ Packaging a cardiac arrest pt necessitates prolonged interruptions in chest compressions
- ⌘ Increased chance of ETT and IV dislodgement
- ⌘ Improper chest compression and ventilation rates
- ⌘ Increased hazards for providers performing CPR in the back of a moving ambulance
- ⌘ Studies have shown that uninterrupted chest compressions is key variable for ROSC

OBJECTIVES



- ❧ To determine the impact of new protocols, training and a QI program to reduce the number of hospital transports of OOHCA pts who fail to achieve ROSC in the field

NEW PROTOCOLS AND TRAINING

- ⌘ Expectation is to remain on scene for at least 20 minutes for OOHCA pts
- ⌘ Individual feedback to paramedics who contacted OLMC while en route to hospital with ongoing CPR
- ⌘ Introduction of digital, waveform capnography for both ETT confirmation and use as a prognostic tool

METHODS

- ☞ Training provided for all prehospital providers and OLMC individuals (base stations)
- ☞ New BCLS/ACLS guidelines emphasizing uninterrupted chest compressions and minimizing overventilation
- ☞ Continuous QI program measuring ongoing data with individual feedback
- ☞ Prospective evaluation for 1 year (2007) compared with our previously published data (2000-2001)

RESULTS

- ∞ ROSC ↑↑ from 6.5% to 25.3%
- ∞ Rate of termination of resuscitative efforts in the field ↑↑ from 9% to 28%

PRESENTING RHYTHM



∞ Incidence of VF = 19.4%

∞ Incidence of VF ('00-'01) = 14.7%

CONCLUSIONS

- ❧ Hospital transport for most OOHCA pts who fail to achieve ROSC in the field is futile
- ❧ This common practice is associated with tremendous costs
- ❧ Various clinical prediction rules exist for termination of resuscitative efforts in the field
- ❧ Application of new guidelines with appropriate training and an active QI program can have a significant impact on performance