

EMS 2008

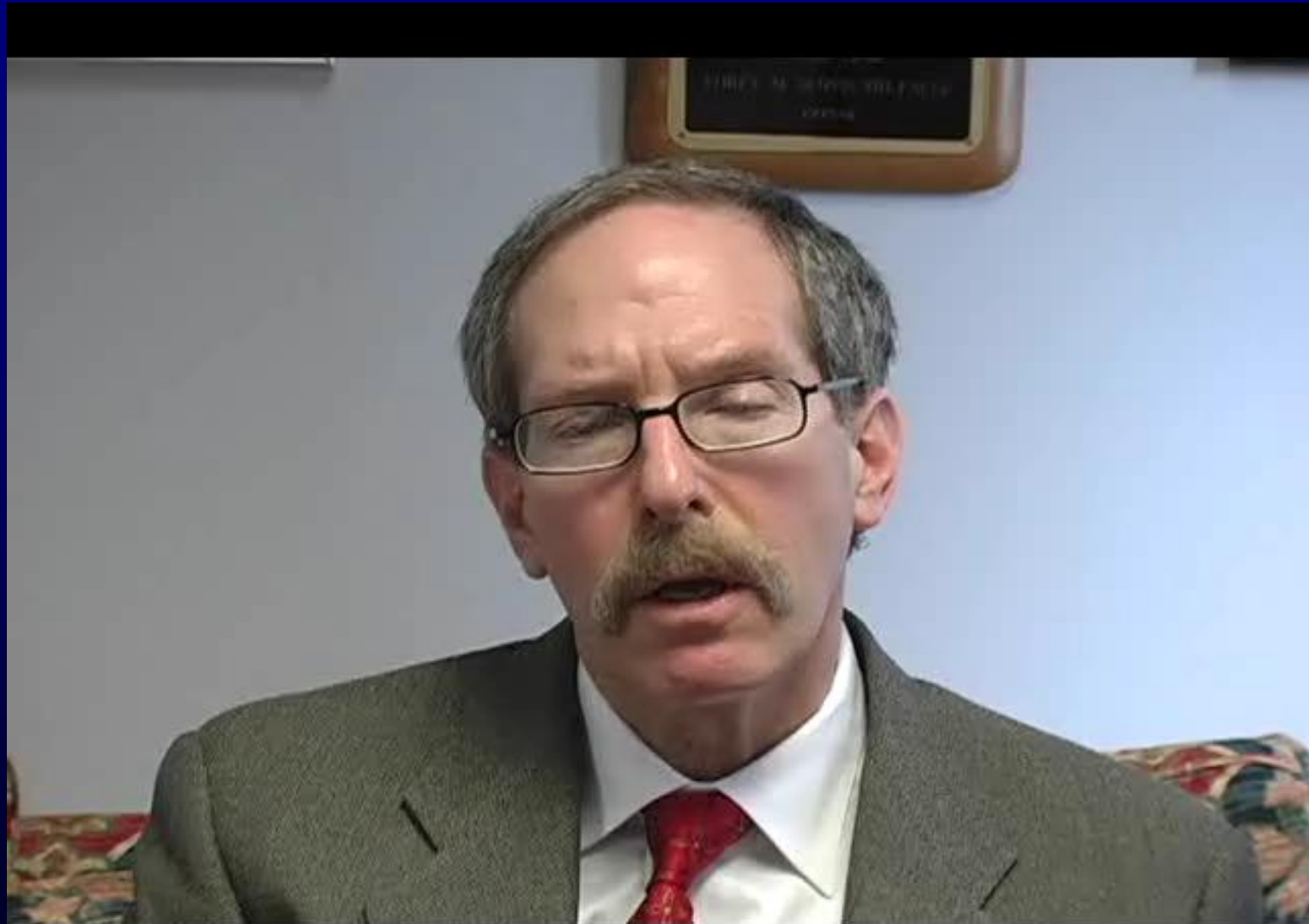
Where are We Headed

Corey M. Slovis, M.D.

Vanderbilt University Medical Center

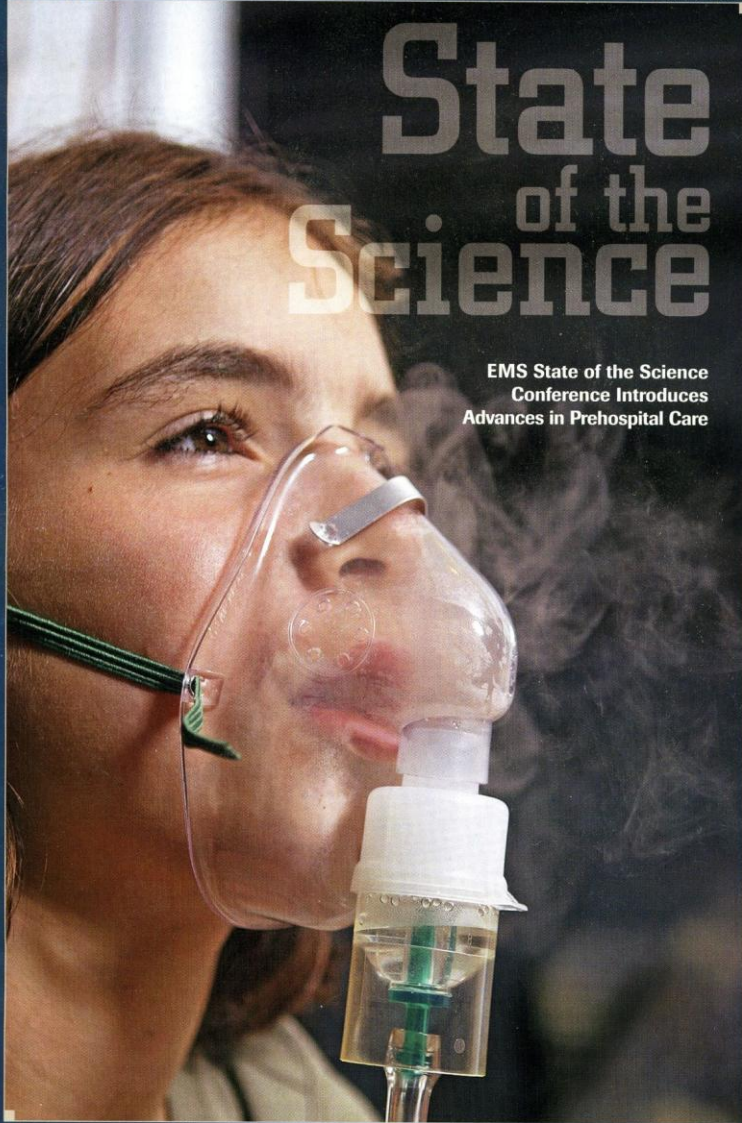
Metro Nashville Fire Department

Nashville International Airport



State of the Science

EMS State of the Science
Conference Introduces
Advances in Prehospital Care



DEVELOPED IN CONJUNCTION WITH THE U.S. METROPOLITAN MUNICIPALITIES EMS MEDICAL DIRECTORS
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JEMS
JOURNAL OF EMERGENCY MEDICAL SERVICES

- Prehospital 12 Leads
- NIPPV
- Induced Hypothermia
- Interosseous
- Nasal Medication

We are expanding
our use of medications

PRELIMINARY REPORT

PROSPECTIVE EVALUATION OF ONDANSETRON FOR UNDIFFERENTIATED NAUSEA AND VOMITING IN THE PREHOSPITAL SETTING

Craig R. Warden, MD, MPH, Raymond Moreno, MD, Mohamud Daya, MD, MS

Prehospital Emerg Care 2008;12:87-91

- Zofram previously an oncology antiemetic
- Prior cost \$70 - \$80
 - Now 70 – 80 cents!!!/dose
- Can even be given as oral dissolving tablet
- High efficacy, low toxicity
- 50% ↓ in vomiting in 952 patients

Old Drugs
Stubbornly STAY

EVALUATION OF PREHOSPITAL USE OF FUROSEMIDE IN PATIENTS WITH RESPIRATORY DISTRESS

Jason Jaronik, MD, Paul Mikkelsen, MD, William Fales, MD, FACEP,
David T. Overton, MD, FACEP

ABSTRACT

Objective. To evaluate the appropriateness of prehospital use of furosemide. **Methods.** All patients over 18 years old receiving prehospital furosemide were retrospectively identified, and cases were matched to subsequent hospital records.

INTRODUCTION

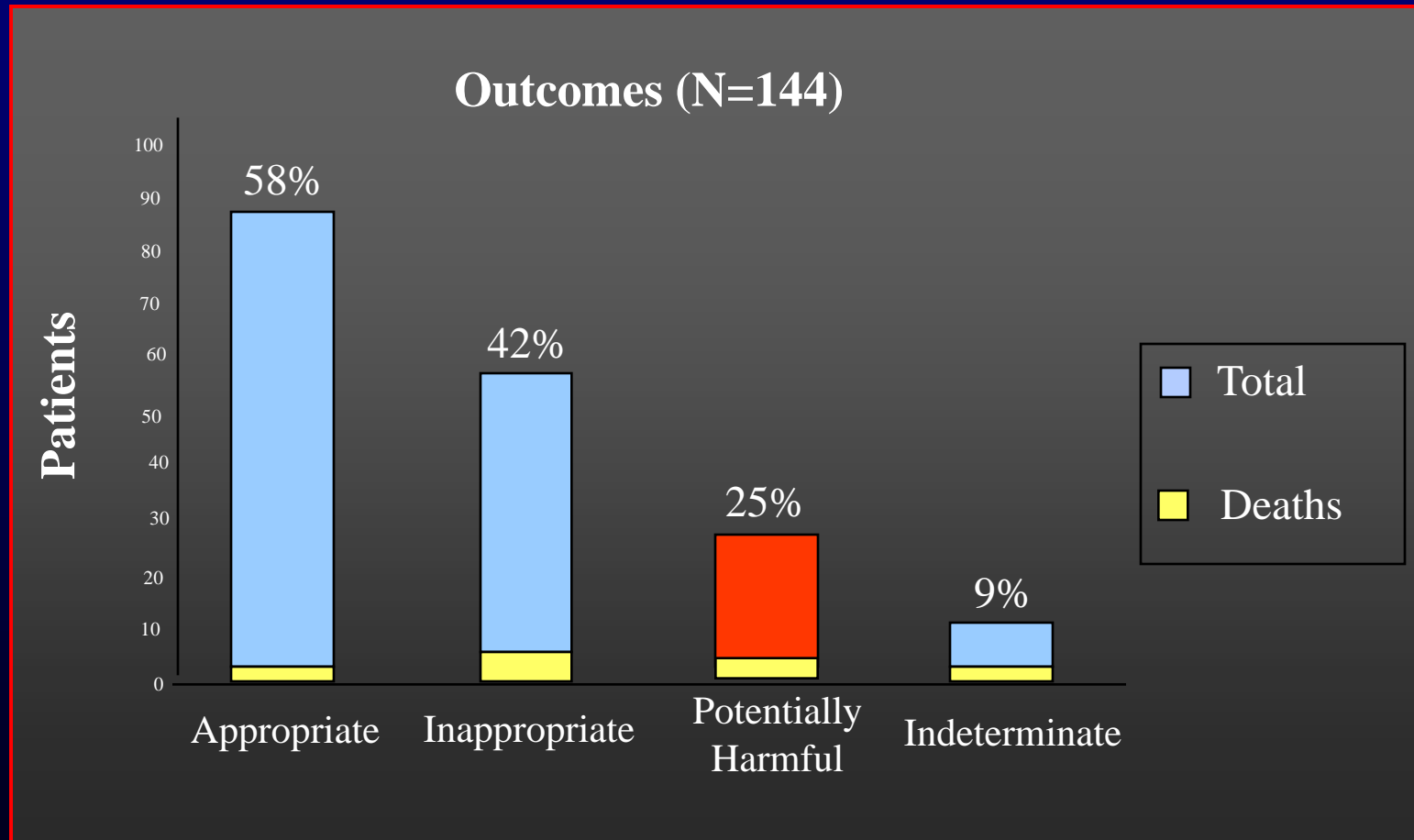
Prehospital providers commonly administer intravenous furosemide to patients with suspected decompensated congestive heart failure. However, we have noted incidents in which prehospital furosemide was

Prehospital Emerg Care 2006;10:194-197

- 144 patients, average age 74.9 years old
- Only 59% had CHF as 1^o or 2^o diagnosis
- Lasix inappropriate in 42%
- Lasix potentially harmful in 17%
- Neither MDs or Paramedics
can diagnose CHF accurately
- **NO CXR NO LASIX**

Lasix Use

Prehospital Emerg Care 2006;10:194-197



And Newer Uses
for Older Drugs

NALOXONE USE IN A TIERED-RESPONSE EMERGENCY MEDICAL SERVICES SYSTEM

Daniel Belz, BA, Jacob Lieb, BS, Tom Rea, MD, MPH, Mickey S. Eisenberg, MD, PhD

ABSTRACT

Objective. To examine the delivery and effect of naloxone for opioid overdose in a tiered-response emergency medical services (EMS) system and to ascertain how much time

in cases of opioid overdose in most communities. States set their own individual standards governing the specific treatments EMTs are allowed to provide. In general, states restrict EMTs from obtaining intravenous access or administering parenteral pharmacotherapies

Prehospital Emerg Care 2006;10:468-471

- 164 patients treated with Naloxone
- EMTs on scene 5 minutes earlier
>10 min in 1/4
- Narcan caused agitation in 15%, vomiting in 4%
- Should EMTs use Naloxone spray?

CPR “Givens”
Continue to be Challenged

EFFECTS OF AN IMPEDANCE THRESHOLD DEVICE ON HEMODYNAMICS AND RESTORATION OF SPONTANEOUS CIRCULATION IN PROLONGED PORCINE VENTRICULAR FIBRILLATION

James J. Menegazzi, David D. Salcido, Michael T. Menegazzi, Jon C. Rittenberger, Brian P. Suffoletto, Eric S. Logue, Timothy J. Mader

ABSTRACT

Background. An impedance threshold device (ITD) has been designed to enhance circulation during CPR by creating a

ular fibrillation; heart arrest; defibrillation; cardiopulmonary resuscitation.

PREHOSPITAL EMERGENCY CARE 2007;11:179-185

Prehospital Emerg Care 2007;11:179-185

- Used Swine model with VF
- Std CPR vs Impedance Threshold Device CPR
- ↑ Venous return via ↑ neg intrathoracic pressure
- ROSC worse with ITD-CPR
- Short-term Survival Worse with ITD-CPR

Survival Outcomes With the Introduction of Intravenous Epinephrine in the Management of Out-of-Hospital Cardiac Arrest

Marcus Eng Hock Ong, MBBS, MPH

Eng Hoe Tan, MBBS, MSc

Faith Suan Peng Ng, MApp Stat

Anushia Panchalingham, RN

Swee Han Lim, MBBS, FRCS Ed

From the Department of Emergency Medicine, Singapore General Hospital (MEH Ong, SH Lim, Yap, Venkataraman); the Medical Department, Singapore Civil Defence Force (Tan); the Clinical Trials and Epidemiology Research Unit (FSP Ng, Panchalingham); the Emergency Medicine Department, National University Hospital (Manning); the Department of Emergency Medicine, Alexandra Hospital (VYK Ong); the Department of Emergency Medicine, Changi General Hospital (SHC Lim); the Children's Emergency, KK Women's and Children's Hospital (Tham); and the Department of Cardiology, Tan Tock Seng Hospital (KS Ng), Singapore City, Singapore.

Annals Emerg Med 2007;50: 635-642

- Epinephrine is “The CPR Drug”
- 1,296 pts: Epi vs. No Epi: in Cardiac Arrest
- Evaluated ROC, Survival, Discharge + Rhythm
- Epinephrine did NOT improve any measure for any pulseless rhythm

Prehospital 12 Lead Experience Matures

**THE POSITIVE PREDICTIVE VALUE OF PARAMEDIC VERSUS EMERGENCY
PHYSICIAN INTERPRETATION OF THE PREHOSPITAL 12-LEAD
ELECTROCARDIOGRAM**

Daniel P. Davis, MD, Cheryl Graydon, RN, BS, Robert Stein, MD, Siobhan Wilson,
BS, Barbara Buesch, RN, BS, Shelley Berthiaume, RN, BS, David M. Lee, MD, Jaime Rivas, MD,
Gary M. Vilke, MD, Dennis R. Leahy, MD

ABSTRACT

Background. Obtaining a prehospital 12-lead ECG may im-

diogram; paramedics; chest pain; percutaneous intervention;
cardiac receiving centers.

PREHOSPITAL EMERGENCY CARE 2007;11:399-402

Prehospital Emerg Care 2007;11:399-402

- 110 Cardiac Alert Patients
- 78% of EMS Alerts = STEMI
- 100% of ED MD + Paramedic Alerts = STEMI
- Three are better than two
- Optimal ECG Readings:
 - **Machine + Paramedic + MD**

And Yet
We Still Need to Be Careful
and Not Have Hubris

FOCUS ON ENDOTRACHEAL INTUBATION

UNRECOGNIZED MISPLACEMENT OF ENDOTRACHEAL TUBES BY GROUND PREHOSPITAL PROVIDERS

David D. Wirtz, MD, MPH, Christine Ortiz, MD, David H. Newman, MD,
Inna Zhitomirsky

Prehospital Emerg Care 2007;11:213-218

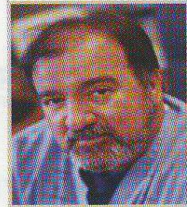
- 192 patients in New York City
- ETCO₂ not uniformly used
- 9% of EMS ETTs misplaced
- 5/12 had signs of life pre “ETT”
- **We must demand ETCO₂ confirmation
or NOT ALLOW ETT in our systems**

EMS is no longer a job

EMS is no longer
for amateurs

IN-HOSPITAL CARE— EXTENSION OF EMS

Reversing the Traditional Perspective



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“Excellent medical care always needs to start on-scene”

**Prehospital EMS care is driving
improved In-hospital care**

We need to be proud,
not have hubris,
and possess **KAIZEN** –
ever increasing sense of **excellence**

Responsibility
is a Heavy Responsibility

Cheech of Cheech and Chong



NASHVILLE
MUSIC CITY
FIRE
RESCUE
EMS
FIRE DEPT.