

**4/9/09**  
**TRAUMA**  
**CARE**  
**IN**  
**ALASKA**

# TRAUMA CARE IN ALASKA 2009

Frank Sacco MD, FACS

Alaska Trauma Systems Review Committee



# Introduction

“If a disease were killing our children at the rate unintentional injuries are, the public would be outraged and demand that this killer be stopped.”

C. Everett Koop, MD, ScDC. ScD  
Former US Surgeon General  
Former General Chairman, The National SafeKids Campaign

# Treating Trauma

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- Like heart disease or cancer, trauma is best combated with a strategy that addresses prevention, acute care and rehabilitation.

# Introduction

- Injury is a major public health problem
  - ▣ Leading cause of death in 1st 4 decades of life
  - ▣ Leading cause of loss of productivity
  
- Despite obvious magnitude little public focus
- Significant progress in individual patient care
- Trauma systems shown to save lives

# Trauma in Alaska

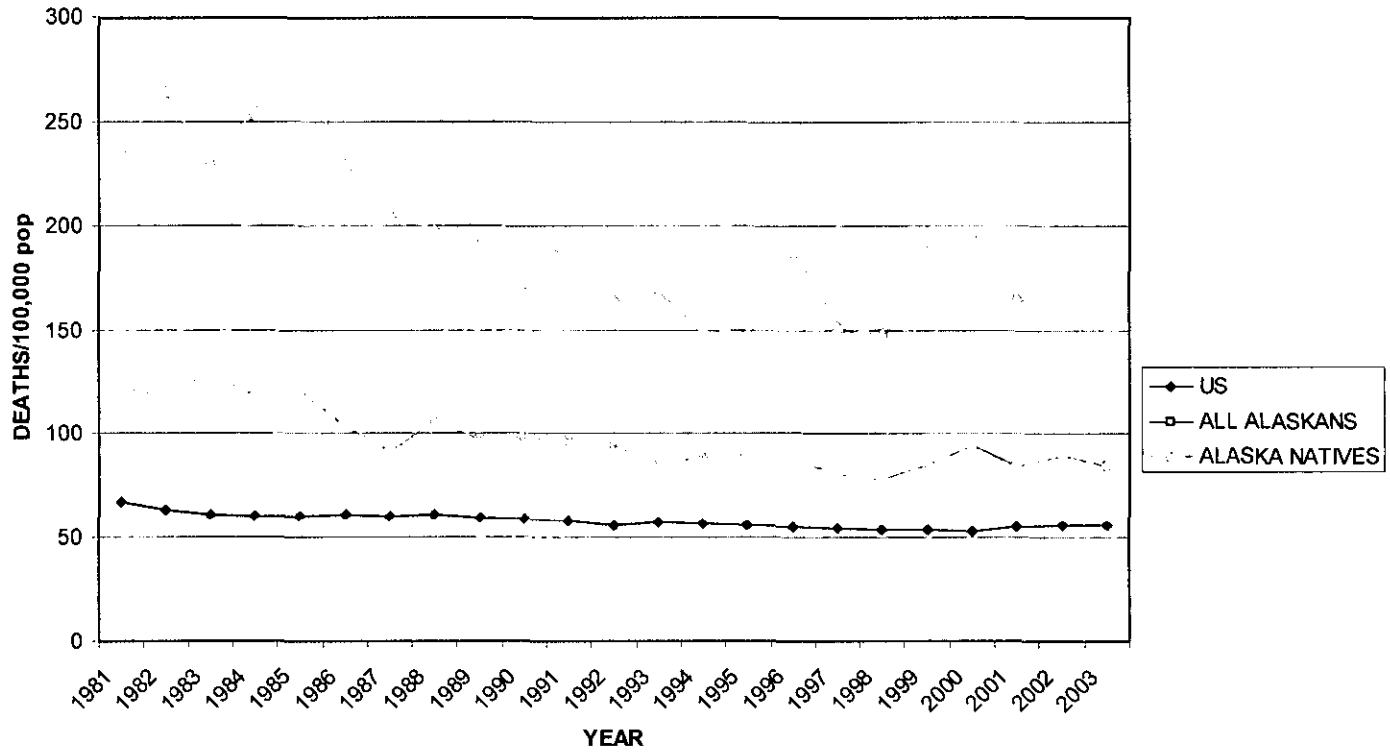
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- Leading cause of death age 1-44.
- 400-500 alaskans die each year.
- Over 5000 admitted to the hospital.
- Over 1000 with permanent disability.
- 800 alaskans hospitalized with brain or spinal cord injuries.

# DEATH FROM TRAUMA IN ALASKA



AGE ADJUSTED MORTALITY FROM TRAUMA

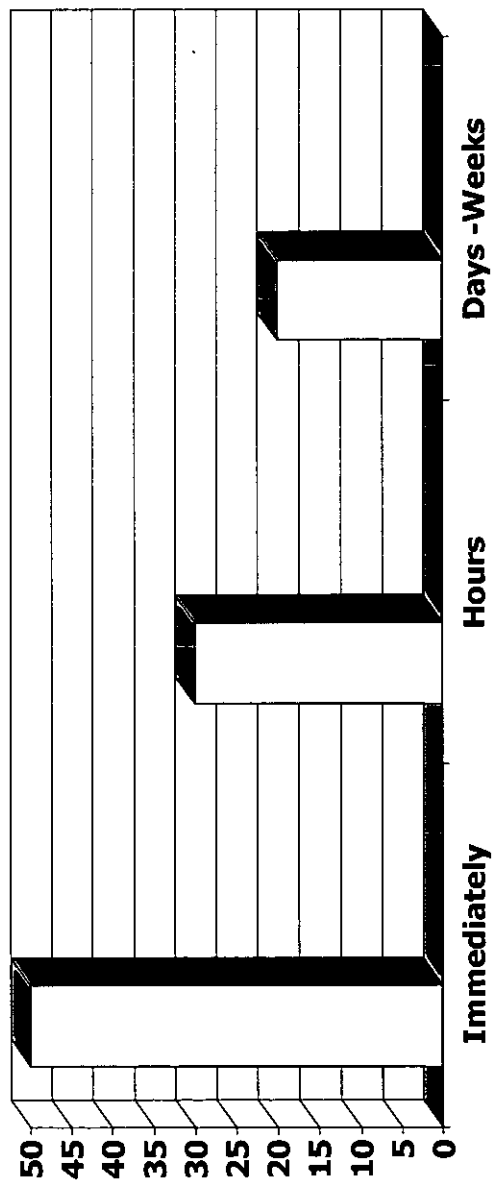
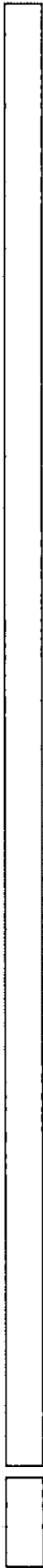


# Trauma in Alaska

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- Motor vehicle crashes leading cause of death.
- Firearm related injuries, second.
- 2004 hospital cost for Alaska trauma patients over \$73 million.
- ~ 25% over trauma admissions uncompensated.

# Death from Trauma



# Trauma Systems

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- u A trauma system consists of hospitals, personnel, and public service agencies with a preplanned response to caring for the injured patient.

# Trauma Systems

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- u Facilities (trauma center designation)
- u Personnel (training)
- u Patient transport
- u Triage

# Facilities-Trauma Centers

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- Level I -Definitive subspecialty care, research.
- Level II – Definitive subspecialty care, surgery, ortho, neurosurgery.
- Level III- General surgery, ortho no neurosurgery
- Level IV- Stabilization, limited or no surgical capacity

# Personnel



- ATLS
- TNCC
- RTTDC
- ETT first responders

# Transport and triage



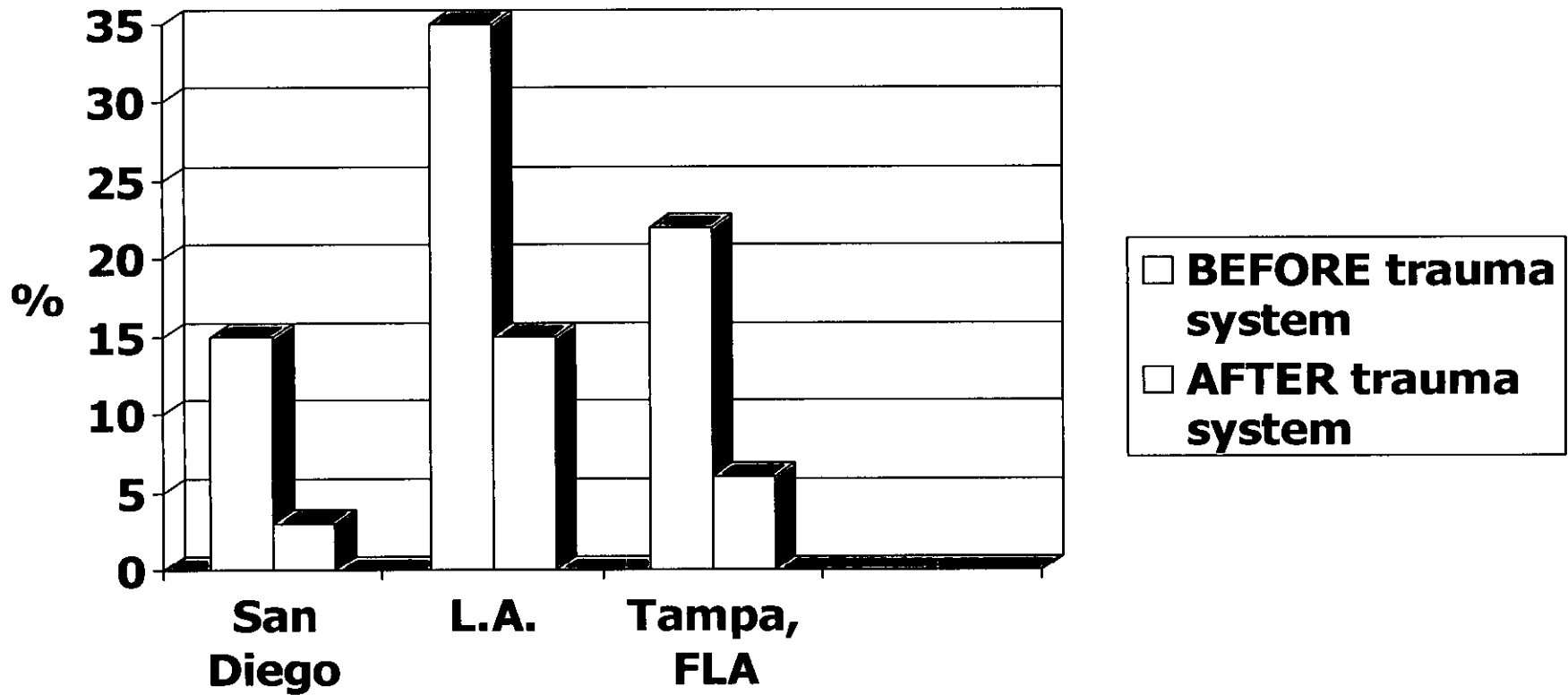
- Guidelines that take into account local resources and capabilities.
- Head Injury Guidelines
- Burn Triage

# Trauma Systems

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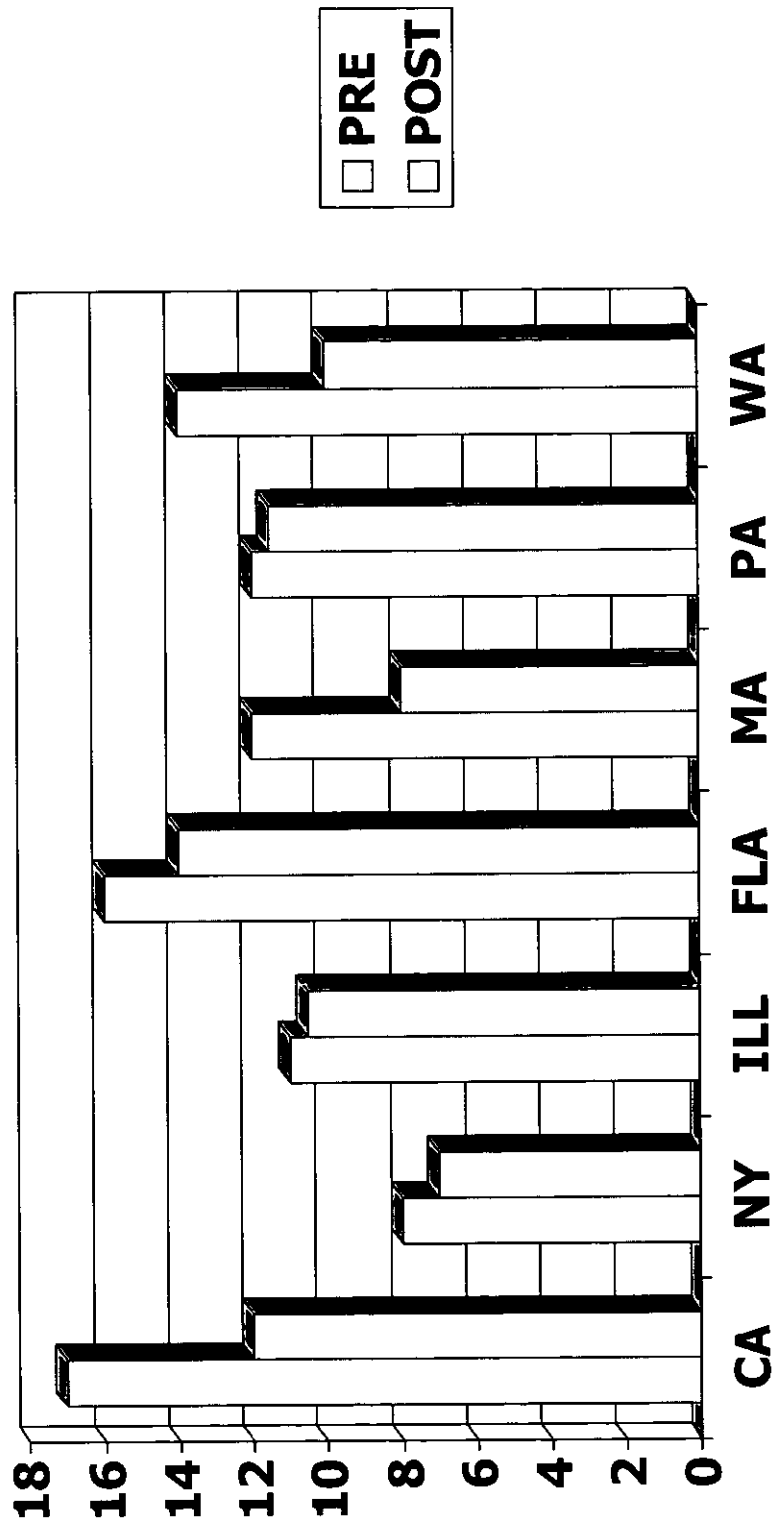
- 15-25% improvement in survival of the seriously injured.
- Increase productive working years
- Improve statewide disaster preparedness.
- Inclusive systems

# Preventable Deaths: The impact of trauma systems



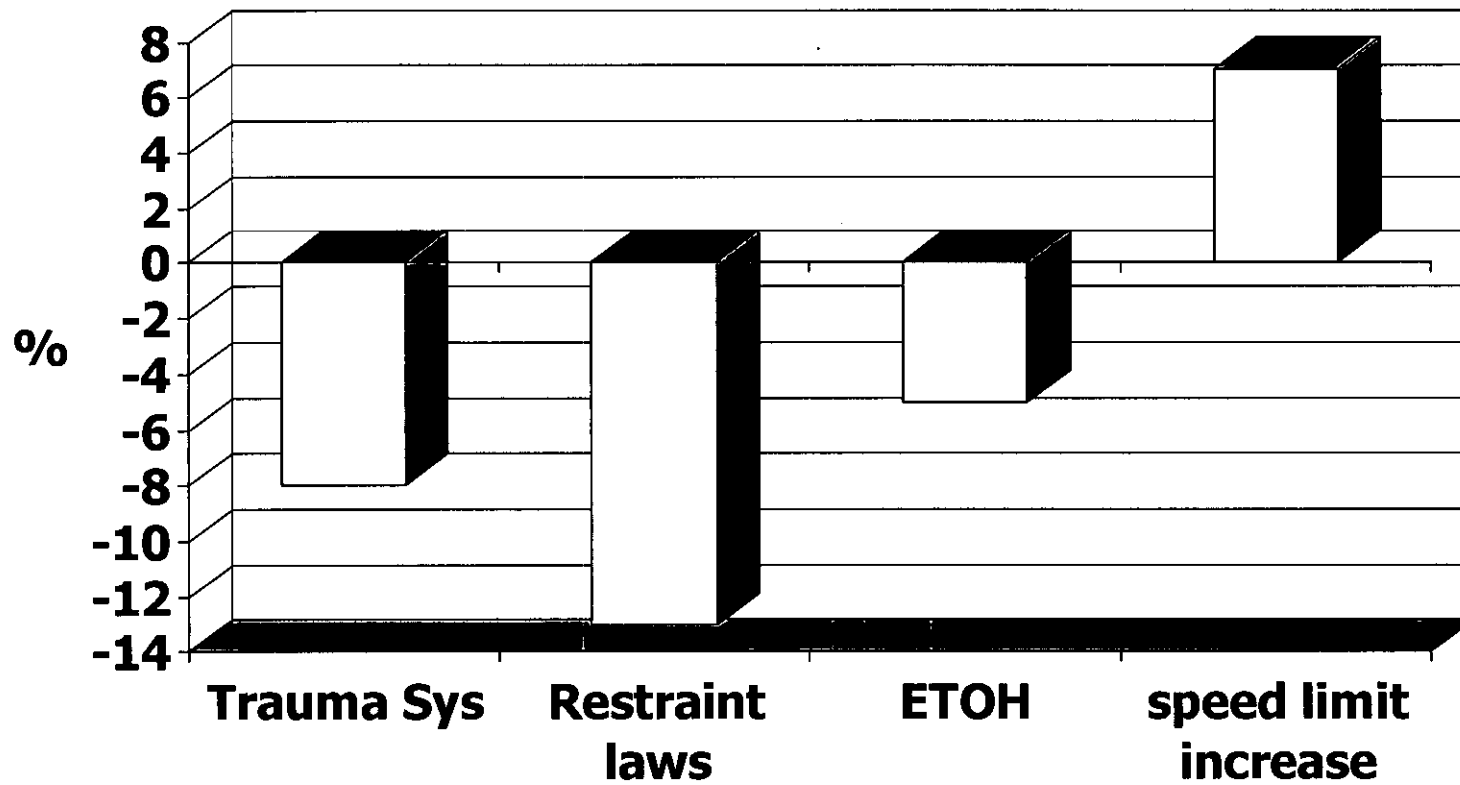
# Trauma Systems & crash mortality

Nathens et.al. 2000



# Trauma systems & crash mortality

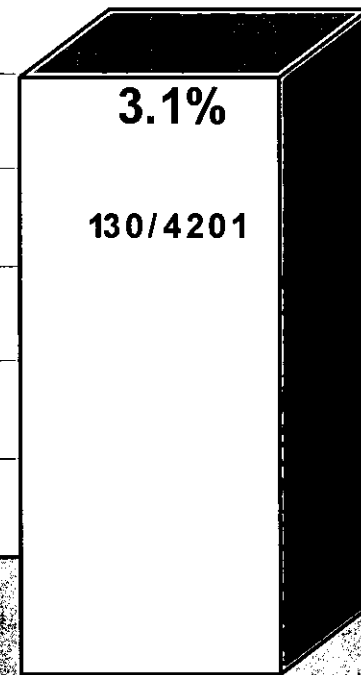
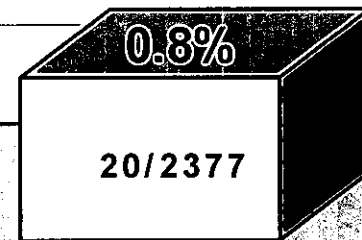
Nathens et.al. 2000



# Anchorage Mortality Rate 2005-2007

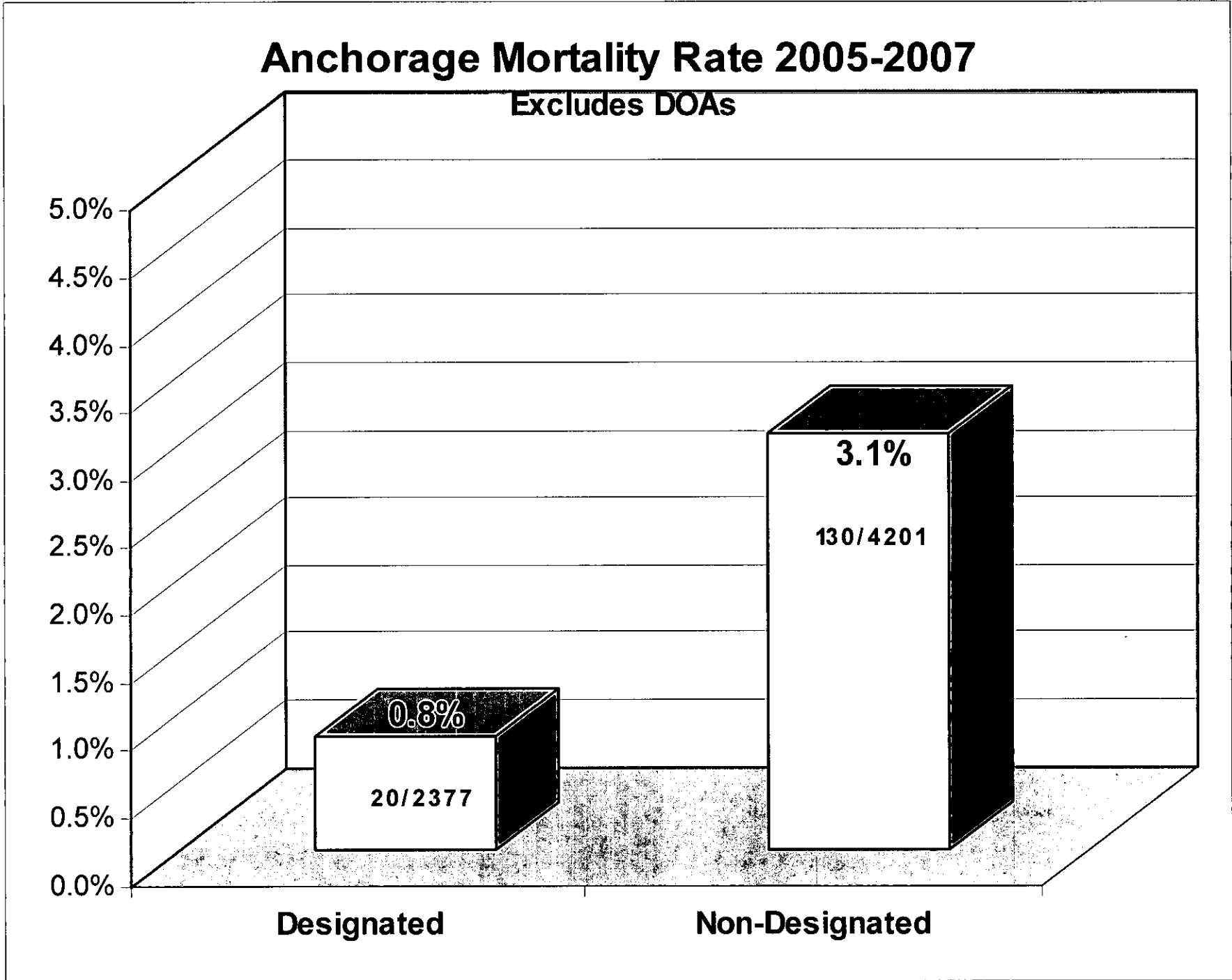
Excludes DOAs

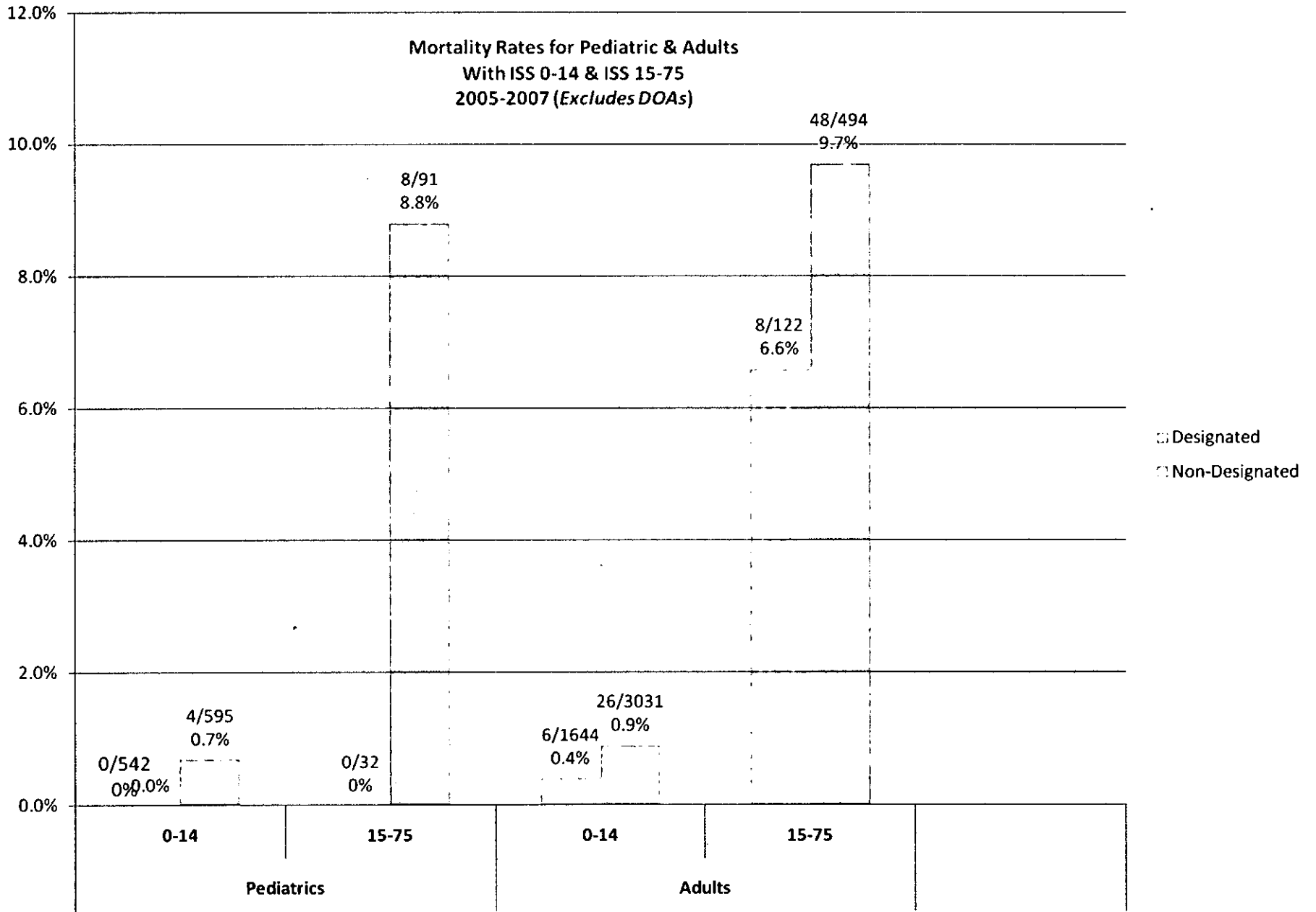
5.0%  
4.5%  
4.0%  
3.5%  
3.0%  
2.5%  
2.0%  
1.5%  
1.0%  
0.5%  
0.0%



Designated

Non-Designated





# Trauma Center and Disaster Preparedness

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- Maintain readiness
- Staffed for all types of injury
- Broad communications with regional hospitals and aeromedical resources.
- Surge capacity
- Decontamination
- Resources to facilitate patient recovery

# Trauma Systems and the Public

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- 2004 Harris poll
- Most people want a trauma system in their area.
- 83% felt it was as important as fire department and were willing to pay extra for it

# Trauma Systems and the Public

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- 75% of those interviewed “thought” there was a trauma system in their state but only 15% lived in states with comprehensive systems

People think a trauma is very important and they want it.

Most think they already have it and they don't.

# Alaska Trauma System

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- ❑ **1993 statute- EMS authority for designating trauma centers created.**
- ❑ **Hospital participation voluntary.**
- ❑ **Standards for trauma center designation follow American College of Surgeons criteria.**

# Alaska Trauma System

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- u **Verification of compliance by outside reviewers for Level I, II, III**
- u **In-state review for Level IV**

# Current Status

## □ **Twenty–four hospitals in Alaska**

### □ **Verified / Certified**

- 1 level II center - ANMC
- 4 level IV centers- NSH -MEH - YKHC –SCH
- 9 other reviews or consultations.

### □ **Non-Verified**

- 2 centers providing care for multiple trauma patients
- 6 centers that provide surgical capabilities
- 2 military hospitals

# State of Alaska:Trauma System Consultation November 2-5 2008

## Site Visit Team

- Reginald A. Burton, MD FACS  
Team Leader, Trauma Surgeon
- Jane Ball, RN, DrPH  
ACS Consultant
- Samir M. Fakhry, MD FACS  
Trauma Surgeon
- Holly Michaels  
ACS Program Coordinator
- Drexdal Pratt, CEM  
State EMS Director
- Nels Sanddal, PhDc, REMT-B  
ACS Consultant
- James D. Upchurch, MD  
Emergency Physician

# Objective

- To help promote a sustainable effort in the graduated development of an inclusive trauma system for Alaska

# Advantages & Assets

- Very committed individuals who use their time and expertise every day to serve Alaska citizens
- Extensive networks for transport
- 3 large medical centers with extensive subspecialty expertise within the state
- Large Level I trauma center in Seattle which freely accepts adult and pediatric trauma patients

# Advantages & Assets

- One center maintaining ACS Level II verification standards and other small hospitals working toward Level IV verification
- Alaska Trauma Registry with all 24 acute care hospitals providing data
- Injury prevention activities are well established
- Initial efforts at legislative change

# Challenges and Vulnerabilities

- No trauma system plan
- Geography / Weather / Remote and isolated communities
- No trauma standards for scene trauma triage or trauma inter-facility transfers
- Trauma system issues have limited visibility within the DHSS
- Public not aware of trauma system issues
- Limited human resources
- Few incentives for hospitals to participate
- No statewide evaluation of system performance

# Trauma Care in Alaska 2009

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- “ There are two healthcare systems for injured patients. One for Alaska natives that adheres to national standards and another for the majority of the population”

# Definitive Care Facilities

- **Establish, as soon as practical, a second Level II Trauma Center in Anchorage in accordance with ACS COT verification criteria to meet the existing volume and acuity demands.**
- **Mandate participation of all acute care hospitals in the trauma system within a 2 year time frame with trauma center designation appropriate to their capabilities.**

# Definitive Care Facilities

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- ❑ **Study pediatric trauma care needs and establish one or more in-state centers of excellence in pediatric trauma care.**
- ❑ **Determine a method of providing financial support for hospitals designated/certified by the state as trauma centers to assist with uncompensated care and the cost of readiness**

# **System Coordination and Patient Flow**

- Implement standardized prehospital triage and trauma activation protocols customized to the three response areas (Anchorage, Southeast, and the bush).**

# Financing

- **Provide state funding to hire a fulltime trauma system manager.**
- **Determine a method of providing financial support for hospitals designated/certified by the state as trauma centers to assist with uncompensated care and the cost of readiness.**

# Alaska Trauma Systems Review Committee

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- MDs, nurses, admin, and prehospital. Meet twice a year.
- Oversight- Trauma designation Level IVs
  - EMS/ prehospital triage and interfacility transfer guidelines
  - Trauma system performance improvement.

# Head Injury Guidelines for Rural and Remote Alaska

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- Developed 2004 by an ad hoc group of the trauma systems review committee.
- Adopted mostly by the tribal system.
- Decreased unnecessary medevacs from the bush 75%. Saving of over \$300,000 medevac costs.
- No adverse consequences.

# Current Activity US

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- 2008 Georgia \$60,000,000 to create trauma fund.
- 2009 Arkansas \$20,000,000 to develop statewide system of trauma center
- Federal legislation currently being considered in the House and Senate.

# Alaska Trauma System: Where do we go now ?

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- Increasing facility participation is essential to developing an inclusive system.
- “Carrots and/or sticks”
- The time has come, this legislation can save lives.