

TRAUMA CARE IN ALASKA 2010

Frank Sacco MD, FACS
Alaska Trauma Systems Review Committee



Goals

- Trauma as a public health problem here in the US and Alaska.
- Trauma systems- Treating the severely injured.
- American College of Surgeons Review: Trauma Care in Alaska.
- The Future.

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, ScD, ScD
Former US Surgeon General
Former General Chairman, The National SafeKids Campaign

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 the magnitude little public focus
- The "neglected disease" since 1966
- Significant progress in individual patient care
- Trauma systems shown to save lives

Trauma in Alaska

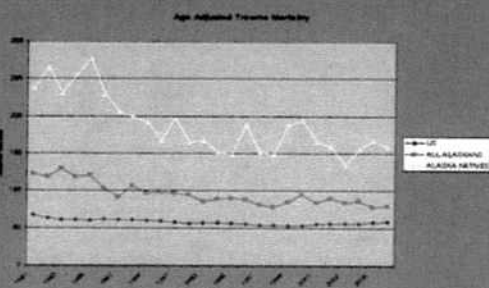
- Second highest trauma mortality in the US
- Leading cause of death age 1-44.
- 400-500 alaskans die each year.
- Over 5000 hospital admissions.
- Over 1000 with permanent disability.

All Cause Mortality Alaska

10 Leading Causes of Death, Alaska
1990: All Ages, Both Sexes

		1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Heart Disease	10	10	10	10	10	10	10	10	10	10
2	Cancer	10	10	10	10	10	10	10	10	10	10
3	Unintentional Injuries	10	10	10	10	10	10	10	10	10	10
4	Stroke	10	10	10	10	10	10	10	10	10	10
5	Chronic Lower Respiratory Disease	10	10	10	10	10	10	10	10	10	10
6	Diabetes Mellitus	10	10	10	10	10	10	10	10	10	10
7	Alcoholism	10	10	10	10	10	10	10	10	10	10
8	Chronic Liver Disease	10	10	10	10	10	10	10	10	10	10
9	Chronic Kidney Disease	10	10	10	10	10	10	10	10	10	10
10	Chronic Disease	10	10	10	10	10	10	10	10	10	10

Trauma Mortality in Alaska



Trauma in Alaska

- 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.

Trauma Systems

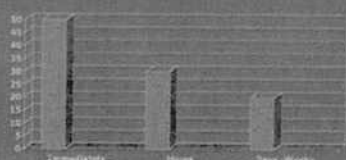
- Wounded in the remote jungle or rice paddy of Vietnam, an American citizen has a better chance for quick definitive surgical care by board certified specialists than were he hit on a highway near his home in the continental United States. Even if he were struck immediately outside the emergency room of most United States hospitals rarely would he be given such prompt, expert operative care as routinely is furnished from the site of combat wounding in Vietnam.

Eiseman, Journal of Trauma, 1967

Trauma Systems

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

Death from Trauma



Trauma Systems: Military Experience

- "The only victor in war is medicine"
- Mayo brothers WWII

Vietnam and Iraq development of systems of care to ensure optimal care from injury to rehab.

Trauma Systems

"Getting the right patient to the right place in the right amount of time."

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

Facilities-Trauma Centers

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

Trained Personnel

- ATLS
- TNCC
- PHTLS
- ETT first responders
- RTTDC

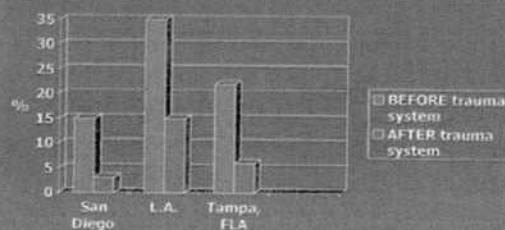
Transport and triage

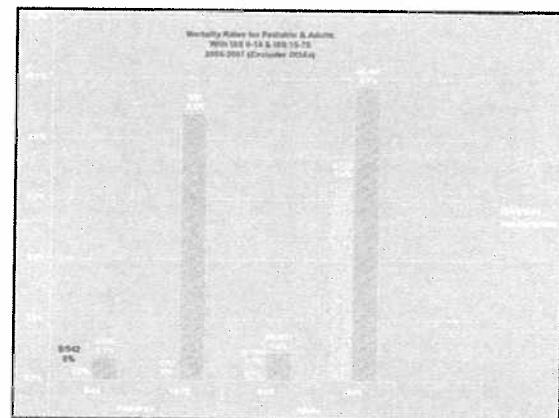
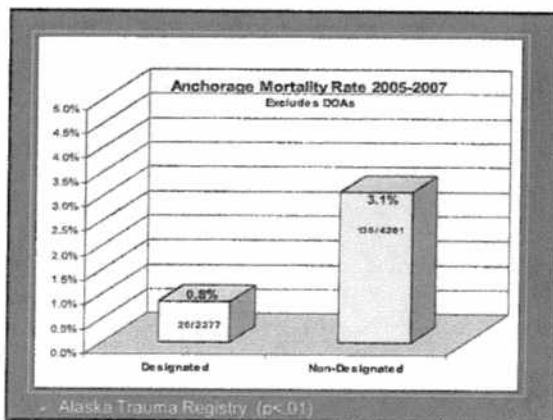
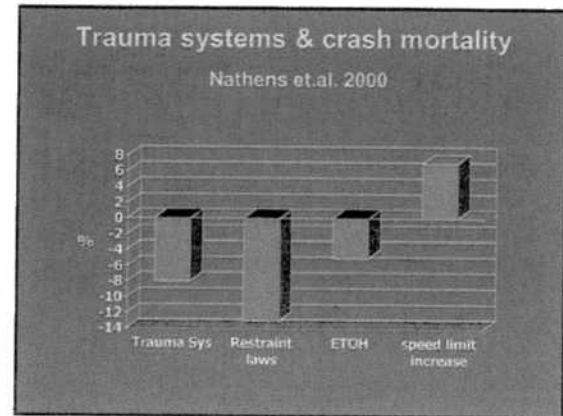
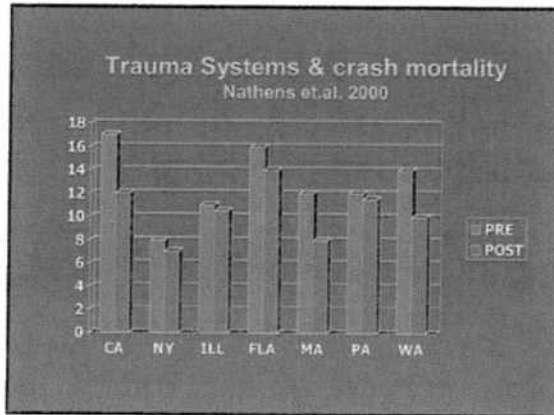
- Guidelines that take into account local resources and capabilities.
- Head Injury Guidelines.
- Burn Triage.

Trauma Systems

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

Preventable Deaths: The impact of trauma systems

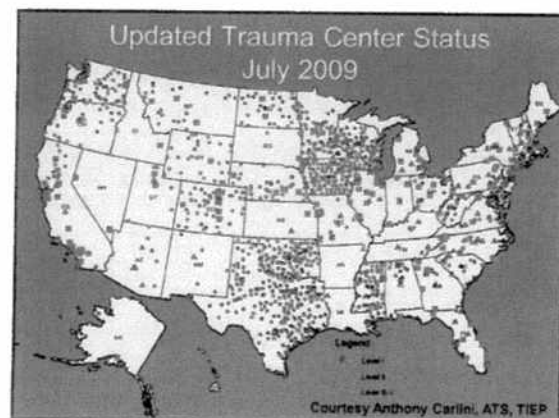


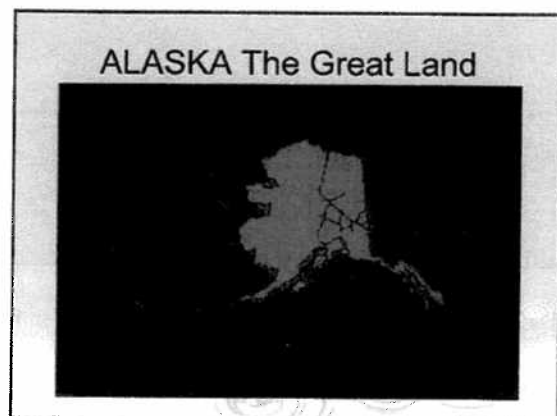


Trauma Center Growth Over Time

	1991	2002	2009
Level I	165	190	199
Level II	209	263	269
Level III	76	251	362
Level IV-V	21	450	748
Total	471	1,154	1,578
Pediatric Only			41

Courtesy Anthony Carlini, ATS, TIEP





Trauma Systems and the Public

- 2004 Harris poll to assess public knowledge and perceptions on trauma and trauma care.
- Most Americans are not aware that injury is the leading cause of death for children, youth, and adults under the age of 34.

Harris Poll

- After hearing a description of a trauma center, almost all Americans feel it is extremely or very important to be treated at a trauma center in the event of a life-threatening injury.

Harris Poll

- Almost 9 out of 10 of Americans feel that having a trauma center nearby is as important as or more important than having a Fire Department or Police Department.

Harris Poll

- At the time of the survey although 75% thought there was a trauma system where they lived only about 20% actually lived in an area covered by a trauma system.
- Nearly all Americans *believe* that if they had a serious or life-threatening injury, they *would* be taken to the hospital that is best equipped to handle their specific injury in less than 1 hour.

Harris Survey- Conclusions

- The majority of the public thinks it is important to have a trauma system. (It is a nonpartisan issue.)
- Most people think they have it already.
- Many who think they are covered by a regional system are not.

Alaska Trauma System

- 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

Verification of compliance by outside reviewers for Level I, II, III

- ◆ In-state review for Level IV

Current Status -16 Years Later

24 hospitals in Alaska

Verified / Certified

- 1 Level II ANMC
- 4 Level IV centers- NSH -MEH - YKHC -SCH
- 9 other facilities with reviews or consultations.

Non-Verified

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

Alaska Trauma Facilities

- Alaska -Only state without a designated Level I or II trauma center that serves the majority of the population.
- Anchorage is the largest city in the US without a designated Level I or II center for the majority of the population.

Insanity

"Insanity is doing the same thing in the same way and expecting a different outcome"

- Old Chinese Proverb

State of Alaska DHSS
Trauma System Consultation
November 2-5 2008

ACS-COT 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 |
| • Drexel Pratt, CEM | State EMS Director |
| • Nels Sanddal, PhD, 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
- Multidisciplinary review of the trauma system
- 17 states have been reviewed

Executive Summary

Advantages & Assets

- 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 maintains ACS Level II verification standards and others have obtained consultations and are working toward verification.
- Alaska Trauma Registry- all 24 acute care hospitals provide 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 standards for scene trauma triage or trauma inter-facility transfers
- Trauma system issues have limited visibility within state government.

Challenges and Vulnerabilities

- 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

- “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”

ACS-COT Alaska Trauma Systems Review
11/2009

Executive Summary

- “Several Alaska Native facilities have sought and achieved verification and designation as trauma centers. . . . To date few of the facilities serving the majority population have made a similar commitment to achieving nationally recognized standards of trauma care.”

ACS-COT Alaska Trauma Systems Review
11/2009

Recommendations: Coalition Building and Community Support

- Develop and disseminate public information about the challenges in providing trauma care and the status of the trauma system in the state for all Alaskans.

Recommendations: Definitive Care Facilities

- Establish, as soon as practical, a second Level II Trauma Center in Anchorage in accordance with ACS 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.

Recommendations: Definitive Care Facilities

- 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

Recommendations: System Coordination and Patient Flow

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

Recommendations: 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.

Themes

- You are closer than you think – many of the components are already in place.
- Alaska is a unique environment different from anywhere else
- You have developed innovative solutions to your unique challenges.
- Despite differences amongst stakeholders, all agree with the need for a consensus developed and integrated trauma system.

ACS Recommendations-Actions

- Commitment by DHSS to create a trauma manager position and develop a statewide trauma plan.
- Trauma Systems Review Committee working to develop metrics to measure trauma system performance.
- Legislation to create incentives for facilities to participate.

Alaska Trauma Systems Review Committee

- MDs, nurses, administrative, and prehospital representation
- Oversight- Trauma Registry
 - Level IV Trauma verification
 - EMS triage and interfacility transfer guidelines
 - Trauma system performance improvement

Alaska Trauma System: Facility Participation

- Increasing facility participation is essential.
- "Carrots and/or sticks"
- ACS recommends both
- Mandatory participation and payment for uncompensated care.

House and Senate Bills 168 and 169

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Barriers

Hospital Administration concerns

- Extra cost especially at Level IIs
- Lack of physician support
- Lack of demand from the community.

Provider Concerns

- Not needed " we do fine"
- No financial incentive to do it.
- More rules and regulations.

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Social Change

- **Pearl Harbor**: A sudden crisis causes fundamental change.
- **The Tipping Point**: Pressure builds to an inflection point of change.
- **Glacial Erosion**: A steady growth or pressure that is hard to resist or ignore.

Ken Mollenhau, Author, Futurist

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How can you help?

The Tipping Point

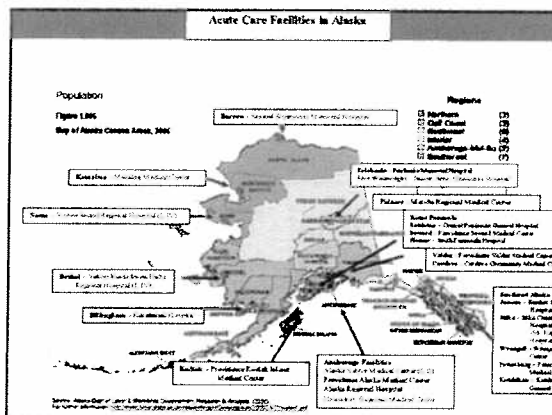
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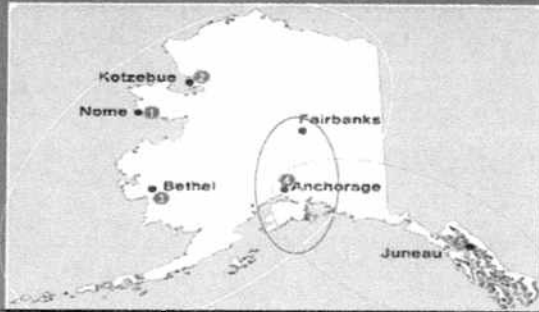


Vision

- An integrated system that addresses trauma from injury prevention through acute care and rehabilitation.

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- An integrated system that addresses trauma from injury prevention through acute care and rehabilitation.

The Future: Alaska Trauma System(s)



Why is this important?

Because it makes a difference and it is the care you want for your family and neighbors if they are seriously injured.