


Ambulance Transport Safety Summit Intro

EMS Subcommittee of the TRB
Ambulance Transport Safety Summit
November 7th, 2008

 TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Ambulance Transport Safety Summit November 7, 2008, 1pm- 5pm Agenda

Welcome and Opening Address:

 Mr. Rick Pain
Dr. James Augustine
Dr. Nadine Levick


Technical Sessions:

- I. Data - (25 minutes with 10 minutes Q&A)
- II. Vehicle Operations - (50 minutes with 10 minutes Q&A)
- III. Vehicles - (40 minutes with 5 minutes Q&A)
- IV. Ergonomics and Human Factors - (30 minutes with 5 minutes Q&A)
- V. Standards - (20 minutes with 5 minutes Q&A)
- VI. Summary of the Sessions and Ethical Considerations (20 minutes with Q&A)

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Ambulance Transport Safety Summit The technical data



James J. Augustine, M.D.

- Acting Medical Director and Assistant Fire Chief, DC Fire and EMS
- Medical Director, Airport Division of the Atlanta Fire Rescue Department, Hartsfield Jackson Atlanta International Airport

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Introduction -

- James J Augustine, M.D. is an emergency physician from Washington, DC. He serves as Assistant Fire Chief-Acting Medical Director for Washington, DC Fire EMS. He is a clinical associate professor in the Department of Emergency Medicine at Wright State University in Dayton, OH. He is a former President of the Ohio Chapter of the American College of Emergency Physicians, and served as the first Chair of the Ohio EMS Board.



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Ambulance Transportation Safety Summit

Sponsored by the Transportation
Research Board (TRB) of the
National Academies

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Why Are We Here?

- People are getting ill, and able to stay out of the hospital. The failure to recognize success of prevention programs in trauma, burn, cardiac arrest, and all forms of premature death
- Closures of hospitals and consolidation of the highest level medical services

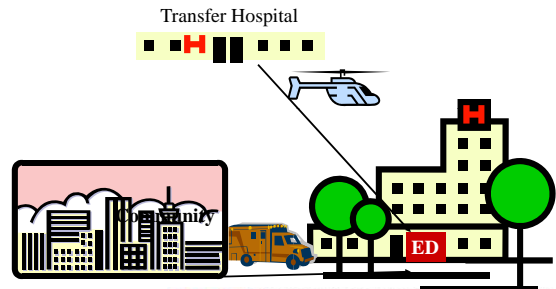


Why Are We Here?



- There are good people trying to help patients, and moving the patients across more miles
- Crashes don't have to happen
- Crashes don't have to cause more injuries
 - **The diversity represented here, first of its kind, will change culture**

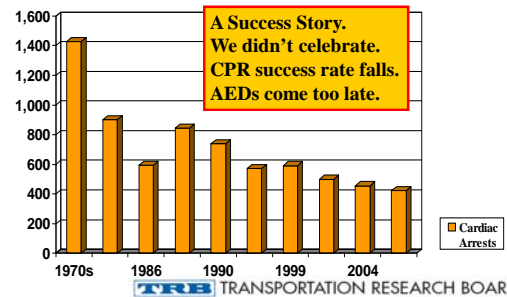
The Transport Challenge

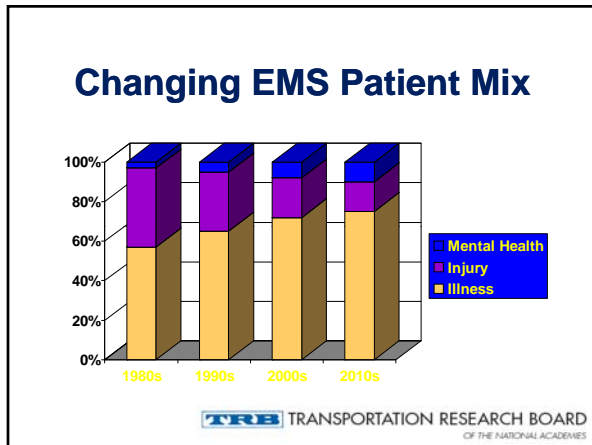
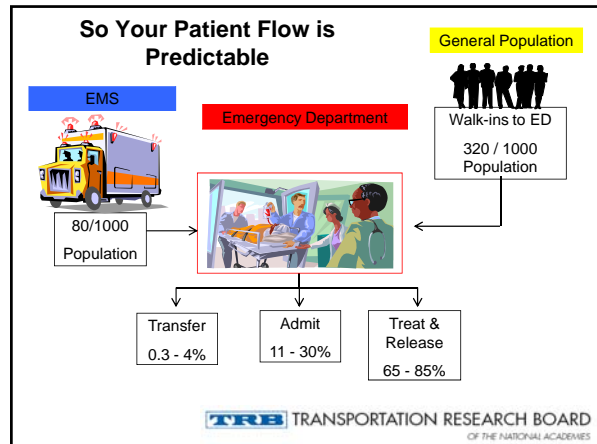
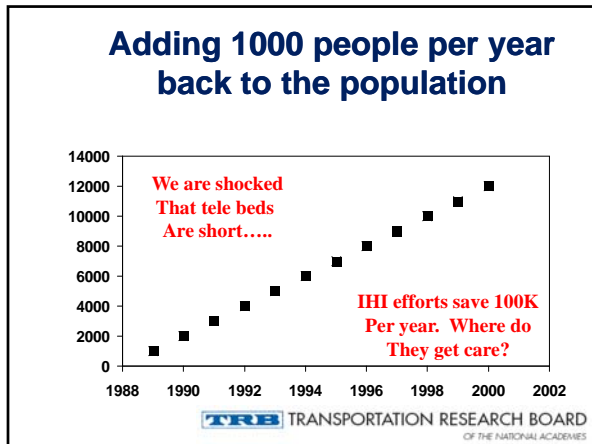


The Burn, Trauma, Injury and Cardiac Arrest Issue



Montgomery County Cardiac Arrests





The Emergency System

- Transporting Ill Patients
- Greater Distances from Homes
- Between High Level Care Centers
- And back home....

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There is a Science of Safety

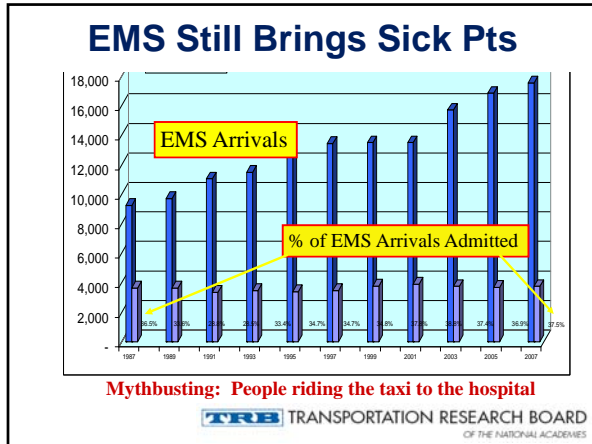
- And there is a Culture Conducive to Safety
- Airline Industry
- Within the Health Care Industry, Delivery of Anesthesia
- Fire Message = "Everyone Goes Home"
- **EMS Message = "Everyone Gets There"**

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The Challenges

- EMS is part of an emergency medical system. No shoes, no shirt, ...no problem
- It is the anytime, anywhere, and any weather challenge
- Anyone can be driving the vehicle
- Air medical system having severe challenge with the sickest patients
- Demand for patient movement will continue to increase

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- ### You are here to Move Forward in the areas of
- Data
 - Vehicle Operations
 - Vehicles
 - Ergonomics and Human Factors
 - Standards
 - Implementation of Safety Programs
- TRB TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES


Thank you for being here to develop the science of Transportation Safety for the Emergency Medical System

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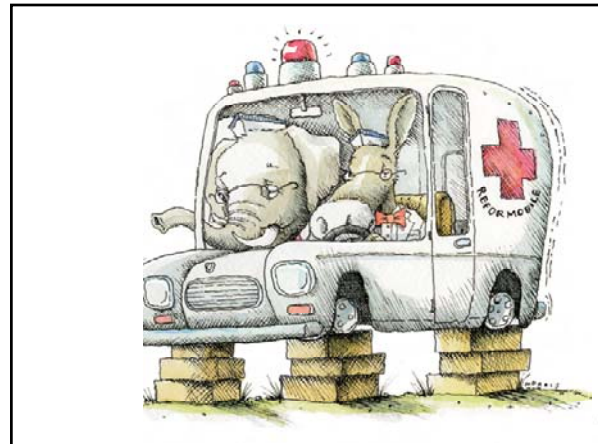
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Introduction -

- Nadine Levick MD MPH is an emergency medicine physician, academic and interdisciplinary researcher with an MPH from Johns Hopkins. Her background includes Faculty positions Johns Hopkins and Columbia Universities, as well as the Melbourne University in Australia and the Royal Australian Flying Doctor Service. She chairs the EMS Transport Safety Subcommittee of National Academies Transportation Research Board, is a member of the Federal National EMS Advisory Council's Safety Committee and the CEO and founder of Objective Safety and the EMS Safety Foundation. Her leading edge work in the field of EMS transport safety has been recognized with many prestigious awards nationally and internationally in the EMS and public safety, Emergency Medicine, and transportation fields.



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Summit Outline

- Systems Safety Engineering
 - Data, vehicle operations, vehicles, human factors and standards
- Transport safety, Biomechanics, Ergonomics, Clinical care and Outcomes
- Patient, Provider and Public safety focus
- Low hanging fruit
- Transfer knowledge into practice
- Path forwards

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Ambulance Transport Safety

- Emergency care, public health, public safety, and patient transportation.
- Important Principle:
Ambulance transport safety is part of a system, the overall balance of risk involves the safety of all occupants and the public
- All get home safely

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The TRB and EMS

- **TRB Mission:**
To provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multi modal.
- Provides service to government, public, and scientific and engineering communities.
- **TRB Goals:**
 - Being prepared for challenges.
 - Conduct and promote knowledge.
 - Provide timely and informed advice.
 - Act as an effective and impartial forum.
 - Promote collaboration.
 - Contribute to the professional development
 - Conduct and promote communications efforts.
 - Contribute to public's understanding.
 - A resource to the nation and to the transportation community worldwide

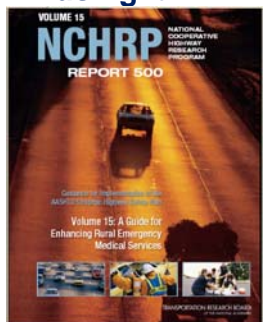
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National Academies TRB EMS/Medical Transport Safety Summit – November 7, 2008



The screenshot shows the TRB website navigation menu and a specific event page for the EMS Safety Subcommittee Mid-year Meeting and Safety Summit on November 7, 2008. The page includes details about the event's focus on emergency care, public health, and patient transportation, and lists the speakers and topics to be discussed.

Transportation Research Board is an excellent resource... we should be using it!!



 RESEARCH BOARD
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Safe Systems Approach



Source: Road Safety Branch, Infrastructure and Surface Transport Policy, Department of Infrastructure, Transport, Regional Development and Local Government, Australia.

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Transport Safety Paradigm:

- Vision Zero (*Tingvall*)

No foreseeable accident should be more severe than the tolerance of the human body to injury so that it does not cause a long term health loss.

Tingvall, C., 'Vision Zero' – World Injury Conference - Melbourne, Australia 1996



Strategy:

- Vision zero (*Tingvall*)

The specifiers and designers of the system are ultimately responsible for the design, operation and use of the road transport system and thereby responsible for the level of safety within the entire system.

Tingvall, C., 'Vision Zero' – World Injury Conference - Melbourne, Australia 1996



Philosophy:

- Vision zero (*Tingvall*)

Life and health can never be exchanged for other benefits within the society.

Whenever someone is killed or seriously injured, necessary steps must be taken to avoid similar events.

Tingvall, C., 'Vision Zero' – World Injury Conference - Melbourne, Australia 1996



November 2008



Maryland Modifies Air Medical Fly Guidelines

Putting safety on the table of a recent local helicopter crash in the state, Maryland EMS officials now are requiring paramedics on certain calls to consult with the controlling tower one way prior to transporting a patient via helo.

According to a letter to all EMS providers from MDEM's Executive Director Robert Bass, MD, effective October 9, "All EMS medical transporters for routine patients that have only category C or category D transportations will require medical control before with the receiving trauma center for helicopter transport."

Bass explained that the new requirement is not intended to "impair or inhibit operations or activities" of existing helicopter transport protocols, but rather to

Ambulance Safety Finally Gains National Attention

Researchers and experts in transportation safety will convene here this month in Washington, DC, for the Inter-Over Ambulance Transportation Safety Summit, sponsored by the Transportation Research Board (TRB) of the National Academies. The summit, which will be Webcast, will present the current state of ambulance safety research and accidents through the meeting proceedings a reference document of all currently available, but sometimes disparate, published scientific research on ambulance safety.

"I don't believe that this has ever happened anywhere in the world," said summit organizer Nicole Lewick, MB, of the University of New South Wales in Australia, TRB Transportation Safety Committee Research Firm, University of Maryland Baltimore County, Chief of Assessor Professor Kurt Knoppenberg and Phoenix Assistant Fire Marshal Kevin Roache, among others. Opening remarks will be presented by Washington, DC, Fire & EMS Medical Director James Augustine, MD, FACEP.

"The summit will be the first exposure for many emergency services leaders to cutting edge ambulance safety research," Lewick said, because most of the research is published in transportation engineering journals that are unfamiliar to fire and

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2008-NTSB's "Most Wanted List"

NTSB MOST WANTED LIST
Transportation Safety Improvements
Actions Needed by Federal Agencies

AVIATION
The Federal Aviation Administration should:

- Improve Safety of Emergency Medical Services Flights
 - Conduct all flights with medical personnel on board in accordance with restrictive aircraft regulations.
 - Develop and implement flight risk evaluation programs.
 - Require restricted dispatch and flight following procedures including up-to-date weather information.
 - Mandate better avionics and warning systems on aircraft.
- Require Safety of Helicopter Operations
 - Require rotor carriers from operating if they put vehicles with mechanical problems on the rotor carrier.
- Prevent Medically Unqualified Drivers from Operating Commercial Vehicles
 - Establish a comprehensive medical oversight program for interstate commercial drivers.
 - Enhance oversight and enforcement of medical certificates.
 - Provide mechanisms for reporting medical conditions.
 - Track all medical certificate applications.

Highway
The Federal Motor Carrier Safety Administration should:

- Prohibit cellular telephone use by commercial drivers of school buses and motorcoaches, except in emergencies.
- Require On-board Electronic Recorders
 - Require all interstate commercial vehicles to use electronic on-board recorders to collect data on both driver hours of operation and accident conditions.

The National Highway Traffic Safety Administration should:

- Prevent Distraction by Using Distraction-Resistant Safety Technology
 - Require adaptive cruise control and collision warning system standards for all new passenger and commercial vehicles.
- Enhance Protection of Motorcoach Passengers
 - Mandate comprehensive vehicle emergency exits on all motorcoaches for newly opened.
 - Issue standards for stronger bus roofs, require them to use motorcoaches.
 - Require new standards to protect motorcoach passengers from being thrown out of their seats.

2008
Critical changes needed to reduce transportation accidents and save lives.

October 28, 2008 - Air EMS on NTSB's Most Wanted List...



FOR IMMEDIATE RELEASE: October 28, 2008 SB-08-49

NTSB ADDS RESTRICTED CELL PHONE USE, EMS SAFETY TO 2009 MOST WANTED LIST OF SAFETY IMPROVEMENTS; POSITIVE TRAIN CONTROL REMOVED AFTER 18 YEARS ON THE LIST

Washington, DC—The National Transportation Safety Board today issued its 2009 Federal Most Wanted List of safety improvements. Newly added to the list of 18 areas of concern were Improve Emergency Medical Services (EMS) Flight Operations, Restrict the Use of Cell Phones by motorcoach drivers, and require Electronic On-Board Recorders by all motor carriers.

Among the issues removed from the list were positive train control, which has been on the list since its inception in 1990, fatigue in the railroad industry and aircraft fuel tank flammability.

"Our Most Wanted List, which was created in 1990, was designed to raise the public's awareness and support for transportation safety issues," said NTSB Chairman Mark V. Roemer. "The safety issues on this list are critical to improving transportation safety. When acted upon, these recommendations will reduce accidents and save lives."

2009 Most Wanted List

AVIATION

The Board added Improve the Safety of Emergency Medical Services (EMS) Flights. The Board believes that a concerted effort must be made to improve the safety of emergency medical services flights. In 2006, the Safety Board issued a special investigation report addressing the safety issues involved in these operations. Although the Board has issued recommendations to improve EMS safety, the Federal Aviation Administration (FAA) has not implemented the changes. In the last 11 months, there have been 9 EMS accidents resulting in 35 fatalities.

A Simple Question....

Volume 23, Issue 2 • April 2006

WINGS, WHEELS & ROTORS

Air & Surface Transport Nurses Association

A Simple Question

Nadine Levick, MD, MPH

We have all been most fortunate to have just seen the very positive side of the way in which our society works to protect its members. The recent NTSB inquiry into the safety of air EMS transport is such an example. But just step back for a moment, and ask a simple question, "Were those 54 lives lost over three years of any more value than the approximately 54 lives lost over a single year in ground EMS (when many work both air and ground), is that enough of a reason for them to have such quality safety scrutiny and support? And how does it feel to know that of those ground EMS fatalities, two-thirds to three-quarters of those who died had nothing at all to do with the transport, but were only bystanders who just happened to be in the wrong place at the wrong time? Or, in air EMS, where those involved do the transport knowingly take on the and we care for the lives of the sick and injured. We value your oversight to optimize the safety of the clearly dangerous work we do.

I challenge all of you to think about this, and then to act in two ways: to optimize the safety of your ground EMS practice, and to do whatever is the best and right action to have the NTSB address both ground and air EMS safety. It is after all the National Transportation Safety Board. We owe it to

Friday July 20th 2007

The worst ambulance crash in USA history

Five Killed in Crash of Ambulance and Semi

July 21, 2007 08:20 AM EDT

VAN WERT, OHIO (AP) -- The Ohio State Highway Patrol continues to investigate the crash of an ambulance that killed five people Friday night, including three emergency medical technicians. Troopers say the ambulance was broadsided by a semitrailer in Crane Township, about 65 miles southwest of Toledo.

The ambulance, with four Antwerp Emergency Medical Services workers aboard, was taking two victims from an earlier car crash to a hospital. Troopers say it was broadsided by a tractor-trailer at the intersection of County Road 176 and County Road 87. The ambulance then burst into flames.

The Highway Patrol says three EMS workers were killed. They were identified as 64-year-old Sammy Smith, 21-year-old Heidi McDougall and 25-year-old Kelly Rager. The two patients were also killed. They were identified as 64-year-old Robert Wells 60-year-old Arnolda Wells of Hicksville.

Another emergency medical technician, Matt McDougall, and the truck driver, Gerald Chapman, Jr. of Indiana, were both taken to the hospital. It's not yet clear whether they suffered any injuries.

Authorities have not said who had the right of way at the rural intersection nor have they said if the ambulance's emergency siren and lights were turned on.


ARD
DENVER

Antwerp fire chief says, 'They were doing what they loved..'

Lisa Nicely
July 22, 2007

By LISA NICELY
lnicely@denverpost.com

ANTWEP-101 - They used hammers until the end



Emergency personnel throughout the region are also shocked and mourning their own.

"That's one of our worst scenarios when it's one of our own," said Con Shuherk of the Payne Fire Department.

"Everyone is a brotherhood," said Friend. "Everybody looks after everybody."


Randy Shaffer, director of Paulding County Emergency Management Agency, said the accident has had a deep impact.

"It has affected every emergency personnel in the county," he said. "We know it could happen at any time. We read about it in our newsletter. We just don't think it's going to happen to us."

Shaffer said when a call came in that an ambulance was involved in an accident Friday, "I think every squad in the county activated."

Path Forwards

- Disseminate technical information
- Enhance understanding of technical transportation issues
- Facilitate sharing of information as standards are developed
- Interdisciplinary Collaboration


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