

Transportation Research Board 87<sup>th</sup> Annual Meeting,  
National Academies Washington, DC, January 16th, 2008  
"Partnerships for Progress in Transportation"

## The National Academies Transportation Research Board (TRB) *What is it, what does it do – and what can it do for EMS/Medical Transport?*

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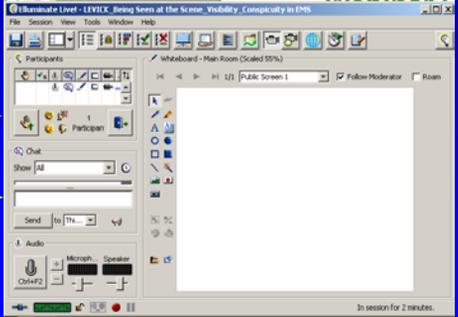
Welcome to the inaugural National  
Academies –  
Transportation Research Board  
(TRB)  
EMS Transportation Safety  
Subcommittee meeting in  
Washington, DC  
Being held during the 87<sup>th</sup> Annual  
TRB Symposium

## So what is a Webinar?

A Webinar is:

- ▶ Real time interactive web technology
- ▶ No other hardware is necessary aside from a computer connected to the internet and a microphone- if you choose to speak
- ▶ These interactive seminars can also be stored for later asynchronous use

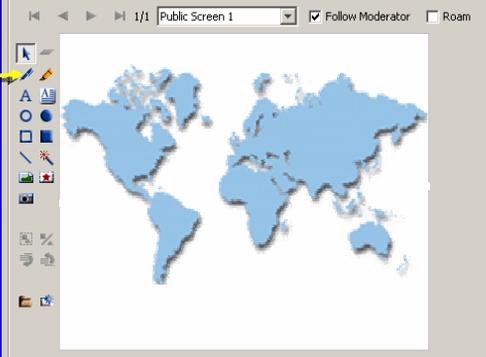
## Webinar Basics



Annotations for the webinar interface screenshot:

- Raise Hand (points to the Raise Hand icon)
- Text messaging (points to the Chat window)
- Type in your name and location (points to the text input field in the Chat window)
- The 'mic' (points to the microphone icon)

..use white board tools to mark your  
location.....



Annotation: Line tool (points to the Line tool icon in the whiteboard toolbar)

Today's Webinar is recorded!

The presentation  
and  
*all comments typed in the text box*



will be available for viewing via the  
[www.objectivesafety.net](http://www.objectivesafety.net)  
web site within 24 hours

## This morning's Webinar

- ▶ Will cover:
  - ♦ An overview of the TRB and opportunities for EMS
  - ♦ Some automotive and transportation safety dimensions
  - ♦ EMS/medical aviation and ground transport safety challenges and opportunities
  - ♦ Some practical perspectives from the field
  - ♦ Research directions

## The TRB

## TRB MISSION

- ▶ To provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal.

## TRB

- ▶ One of 6 major divisions of the National Research Council a private, nonprofit institution
- ▶ principal operating agency of the National Academies in providing services to government, public, and scientific and engineering communities.
- ▶ The National Research Council is jointly administered by:
  - ♦ National Academy of Sciences
  - ♦ National Academy of Engineering
  - ♦ Institute of Medicine.
- ▶ Engages >7,000 engineers, scientists, and other transportation researchers and practitioners from public and private sectors and academia
- ▶ Supported by state transportation departments, federal agencies including U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

## TRB Goals

1. Anticipate future transportation challenges and provide leadership in promoting and conducting research and policy analysis to prepare the United States for meeting those challenges.
2. Conduct and promote knowledge creation and dissemination, especially on innovative practices and technologies in the transportation sector.
3. Provide timely and informed advice on transportation and transportation-related issues to decision makers and others who are responsible for the nation's multimodal transportation system.
4. Act as an effective and impartial forum for the exchange of knowledge and information, including transportation and its relationship with social, economic, environmental, and other issues.

## TRB Goals

5. Promote collaboration on transportation research, education, and technology transfer at international, national, regional, state, and local levels; across public and private sectors; and with transportation providers, customers, and other stakeholders.
6. Contribute to the professional development of individuals currently working in transportation and to the education and enhanced diversity of the pool of individuals who will work in the field in the future.
7. Conduct and promote communications efforts to enhance the awareness of transportation research and its contributions to innovation and progress in transportation.
8. Contribute to the public's understanding of transportation and its significance to the nation.

## TRB divisions

- ▶ Technical Activities supports standing committees and task forces.
- ▶ Studies and Special Programs convenes specially appointed expert committees to conduct policy studies and program reviews, maintains the TRIS database, provides library services, prepares synthesis reports on behalf of the Cooperative Research Programs, and manages the Innovations Deserving Exploratory Analysis (IDEA) programs.

## Structured Transportation research programs and agendas

## TRB research programs

- ▶ Cooperative Research Programs manages
  - National Cooperative Highway Research Program
  - Transit Cooperative Research Program
  - Airport Cooperative Research Program
  - National Cooperative Freight Research Program
  - Hazardous Materials Cooperative Research Program.
- ▶ Strategic Highway Research Program 2 manages a targeted, short-term, results-oriented program of contract research designed to advance highway performance and safety for U.S. highway users.
- ▶ Administration and Finance provides financial, information technology, and other administrative support, including financial oversight of the contracts and grants that support the work of TRB, administration of publications sales and distribution, and maintenance of benefits and services for sponsor and affiliate organizations.

## TRB SERVICES

- ▶ A resource to the nation and to the transportation community worldwide
  - Opportunities for information exchange on current transportation research and practice,
  - Management of cooperative research and other research programs,
  - Analyses of national transportation policy issues and guidance on federal and other research programs, and
  - Publications and access to research information from around the world.

## Special role for EMS at TRB

- ▶ One of the Key 4 E's
  - ◆ Engineering
  - ◆ Education
  - ◆ Enforcement
  - ◆ Emergency Medical Services

## SAFETEA-LU

### Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

- ▶ Highway Improvement Program (HIP)
- ▶ Strategic Highway Safety Plans (SHSP)

## State Strategic Highway Safety Plans

- ▶ Required as part of the SAFETEA-LU legislation
- ▶ Effective October 1<sup>st</sup> 2007
- ▶ Focus is the 4 'E's
- ▶ EMS is a core theme



## State SHSP EMS Focus\*

STATE SHSP	AREA of EMS FOCUS
New York EMS Section 6 of 43 pages	<ol style="list-style-type: none"> <li>1. Emergency Medical Services Dispatch Services</li> <li>2. Emergency Medical Services Partnerships</li> <li>3. Pre-hospital Training Programs</li> <li>4. Road Condition and Incident Response</li> <li>5. EMS Responder Crash Prevention</li> </ol>
Montana EMS Section 4 of 36 pages	<ol style="list-style-type: none"> <li>1. Establish EMS Legislation and Regulation</li> <li>2. Provide EMS Funding</li> <li>3. Enhance Capabilities for Medical Response to Disaster</li> <li>4. Expand EMS Human Resources</li> <li>5. Enhance EMS Education System</li> <li>6. Expand EMS Services</li> <li>7. Facilitate EMS Communications</li> <li>8. Conduct EMS Public Education and Information Programs</li> <li>9. Conduct Injury Prevention Public Awareness Efforts</li> <li>10. Enhance Medical Direction</li> <li>11. Provide Enhanced Trauma System and Facilities</li> <li>12. Establish an EMS Information System</li> <li>13. Evaluate and Monitor EMS Programs</li> </ol>
Alabama EMS Section 8 of 47 pages	<ol style="list-style-type: none"> <li>1. Identify and Analyze Performance Data</li> <li>2. First Responders</li> <li>3. Identify Crash Location</li> <li>4. Statewide assessment and Plan</li> <li>5. Improve EMS Rural Access</li> </ol>

\*Cordi H. Levick N. Strategic Highway Safety Plans –Where is EMS?, Jan 2008

## Strategic Highway Safety Plans

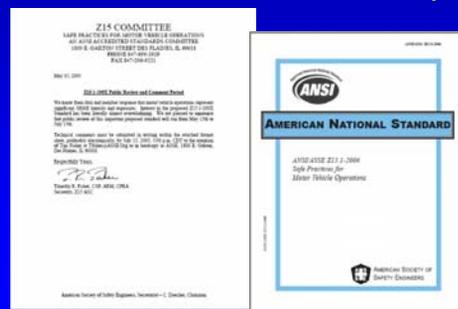
- ▶ Background info



## Valuable information from the transportation industry



## American National Standard ANSI/ASSE Z15.1-2006 Safe Practices for Fleet Motor Vehicle Operations



## International Approaches ASSE Transactions, Fall 2007

### International Leading Practice in Ambulance Vehicle Safety Testing

While the US Department of Ambulance Vehicle Safety has several international members in other parts of the U.S., Europe and Australia, ASSE

dynamic crash testing activities are conducted for ambulances vehicles in the U.S., Australia



European countries must the EN13000

World in total, some while

performance simulation.

Many Australian ambulance vehicles meet that

A 4575 1999 standard. Although the

crashworthiness testing requirements

to between Europe and Australia,

which testing is more stringent and

performance, with a range of crash test

scenarios required from 1990 onwards to

1990 prototype and higher impact

tests. The importance of ensuring the

ity performance of the design of these

tests is clear from published data on

emergency vehicle crashes.

continued on page 10

Transactions

### Ambulance Vehicles

These are essentially two

types, depending on whether ambulance

vehicles. One is a variety of an existing OEM

commercial van as in the one vehicle described

here, the other is the building of an alter-

nated "box" that is then attached to a

standard light- or heavy-duty truck

chassis.

### Transportation Safety to the Rescue in 2007

Emergency medical services (EMS) transportation safety has seen some major developments this year. In addition to the establishment of a new branch for EMS transport at the National Academies Transportation Research Board (TRB),

TRB's National Academies Transportation Research Board (TRB) will continue to focus on EMS transportation safety.

TRB is a unique transportation organization that bridges public health and safety, acute health care, emergency services, and disaster management.

It is performed in a variety of contexts—rural, urban and suburban—and is staffed by health care providers and professionals. Thus, EMS has its own set of transportation safety challenges.

### It has been an important year for EMS transportation safety.

National interest in infrastructure and research issues related to ambulance transport safety has increased.

renewing and feedback information. Optimizing practice and professional education to improve safety and minimize risk was also discussed.

## TRB Annual Symposium

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

87th Annual Meeting  
January 13-17, 2008  
Washington, DC

TRB 87th Annual Meeting

## Multidisciplinary research

- ▶ Encompassing all aspects of transportation
- ▶ The expertise that EMS needs to address transportation safety challenges
  - ◆ Systems design
  - ◆ Human factors
  - ◆ Vehicles
  - ◆ Vehicle operations
  - ◆ Impaired drivers
  - ◆ Highway Hazards

## What is ANB 10 (5)?

- ▶ Transportation Safety Management Committee ANB 10
  - ◆ Emergency Medical Services Safety Subcommittee, ANB 10 (5)

## How do TRB Subcommittees work?

## Who is attending the general TRB meeting

## Who is here in this EMS Subcommittee meeting this year

## What is the plan for today

- ▶ This brief introduction re: the TRB
- ▶ A presentation from Prof Raphael Grzebieta – Chair of Road Safety UNSW
- ▶ Presentation on the achievements and milestones of aviation medical Transport Safety – Eileen Frazer
- ▶ An overview of EMS transport safety issues and research – Nadine Levick
- ▶ Policy perspectives
- ▶ An update on some research underway
- ▶ Some perspectives from an EMS Medical Director – John Russel MD
- ▶ Discussion and workshop on research perspectives and needs

## Who oversees safety performance and safety research for EMS/Medical Transport

- ▶ Aviation - FAA, NTSB,
- ▶ Ground - .....

## Ambulance Transportation Safety (ATS) Task Force

- ▶ Ad Hoc Committee from across EMS/Medical Transport practice and operations
- ▶ Officially appealing to the NTSB:
  - ♦ to investigate the July 20<sup>th</sup> Antwerp Ohio crash
  - ♦ To investigate serious ambulance crashes

## Prof. Raphael Grzebieta BE, M.Eng.Sci., PhD – Technical Expert Panel

- ▶ Automotive Safety and Crashworthiness Engineer
- ▶ Professor & Chair of Road Safety, Injury Risk Management Centre, University NSW
- ▶ Published over 160 papers in structural crashworthiness research, accident investigation, failure analysis, numerical modeling and experimental crash testing.
- ▶ Team has carried out dozens of crash tests and numerous computer modeling and theoretical studies investigating and mitigating injuries in truck under-run, far-side impact, roll-over and roadside barrier crashes, and numerous accident reconstruction analyses for insurance companies, legal firms, and for criminal and coronial inquests.

