

Welcome to the National Academies, TRB 89th Annual Meeting,
"Investing in Our Transportation Future –
BOLD Ideas to Meet BIG Challenges"

**The National Academies
Transportation Research Board
(TRB)
EMS Transport Safety
January 2010 Subcommittee
Meeting**



Transportation Research Board 89th Annual Meeting,
National Academies Washington, DC, January 13th, 2010
"Investing in Our Transportation Future –
BOLD Ideas to Meet BIG Challenges"

**Emergency Medical Services Transport
Safety Subcommittee ANB 10 (5)
2010 January Meeting:
The next steps**

Nadine Levick, MD MPH
Chair Emergency Medical Services Subcommittee ANB10 (5), TRB
CEO, Research Director, EMS Safety Foundation
Eileen Frazer RN
Executive Director of Commission on Accreditation of Medical
Transport Systems (CAMTS) – Co-Chair ANB10(5)



**Emergency Medical Services Safety
Subcommittee ANB10(5)
of the Transportation Research Board
Wednesday January 13, 2010
10.15 am – 12.00 pm
also via Webinar, Washington DC**

Chair – Nadine Levick MD, MPH
Co-Chair – Eileen Frazer RN
Sponsored by Transportation Safety
Management Committee (ANB10) –



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

Raise Hand

Text messaging

Type in your name and location

The 'mic'

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

Line tool

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
web site within 72 hours

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This morning's Webinar

- Will cover:
 - Background on EMS Transport Safety
 - An overview of the TRB and opportunities for EMS
 - Research funding pathways and processes via the TRB
 - Synopsis of TRB EMS Safety Subcommittee's activities
 - Research Agenda Discussion

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What is EMS?

- Emergency Medical Services – (EMS)
- Emergency medical care, public health, public safety and patient transport
- Bridge between the community and the hospital
- Volunteer – professional
- Urban – rural
- Disaster response
- Majority of transports NOT critical or life threatening – (<3% are critical)

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Transport related aspects of EMS

- dispatch of EMS vehicles
- transport policies and protocols
- vehicle fleets and vehicle design
- vehicle purchase standards
- Intelligent Transportation Systems technology
- driver training
- driver performance monitoring
- roadside and road design
- integrated traffic safety technologies
- scene safety and visibility
- safety data capture
- safety oversight

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Some odd facts

- Ambulances are generally not built by the automotive industry
- Intelligent Transportation Systems (ITS), transportation safety engineering and transport systems engineering are not generally integrated into EMS systems
- Although all EMS systems have medical direction and oversight, it is rare for there to be transportation expertise oversight

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A “Fleet” to many in Emergency Medical care means....



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Why now?

- Operating optimally in a transportation environment that is largely devoid of specific safety standards for the hazards and risks present
- Opportunities for increasing the profile of EMS transportation safety research needs within the transportation industry

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Emergency Medical Service (EMS) transport

- What are the transport safety issues that pertain to this important public service and public safety industry?
- What do we know of the risks and hazards and how can we measure these ?
- How can the safety of this transport system be optimized?

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EMS Transport Safety

- ‘patient safety’
AND also
- ‘provider’ and ‘public safety’

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A serious problem...

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In the USA there are more safety standards for moving cattle than for moving patients

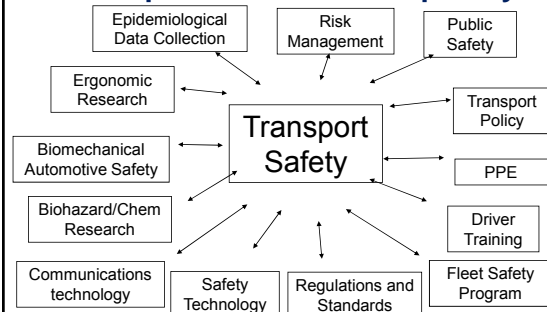


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Negative impact on system performance...

- A medical error may kill a patient
BUT
- An EMS crash can kill all those involved AND wipe out a rural EMS system AND negatively impact a regions response capacity.....

Ambulance Transport Safety IS Complex AND Multidisciplinary



How bad is the problem

How are we counting these events?

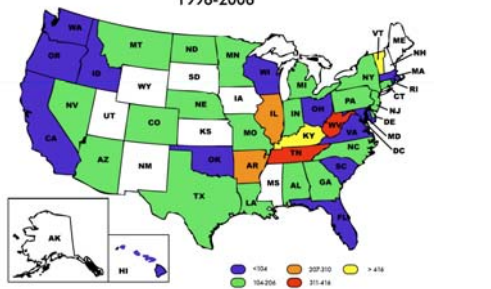
What/Where are the relevant data bases?

- FARS
- NASS/CDS
- GES
- State Traffic Records
- FMCSA
- BLS
- NEMSIS
- Other

FARS – A National Data Set?

Small numbers – but NO data captured from 20% of the nation in 10 years

Total Fatalities Per 100 Million Population
1996-2006



and what is an EMS crash?

- Definition of an EMS crash
- Definition of Emergency Response Mode

USA EMS transport safety data estimates

- ~ 50,000 vehicles
- ~ 9,000 crashes a year
- ~ One fatality each week
 - ~ 2/3 pedestrians or occupants of other car
- ~10 serious injuries each day
- Cost estimates > \$500 million annually

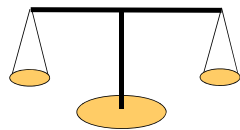
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Ambulance transport a serious USA transport safety problem...

- the most lethal vehicle on the road both per mile travelled and per vehicle
- is exempt from federal commercial fleet safety oversight (FMCSA)
- 2/3 fatalities not in the ambulance
- Exempt from most FMVSS standards

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Balance of concerns and risk during transport



- Response and transport time
- Clinical care provision
- Occupant safety/protection
- Public Safety

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Haddon/Baker/Runyan Phase-Factor Matrix as applied to EMS Transport Safety

FACTOR	Paramedic/patient (host)	Vehicle (agent)	Environment (physical/regulatory)	Sociocultural	
pre crash (pre event)	driving history, driver education, speeding, abiding road laws	collision avoidance, anti lock brakes, vehicle weight, speed	tiered dispatch, EVOC implemented, road design, markings & surface	EMS image (scoop & run), public/paramedic awareness, disorientation from L & S	<ul style="list-style-type: none"> • Effectiveness • Cost benefit • Ethics • Social acceptability • Societal need
crash (event)	seat belt, restraint use, child safety seat use	Non-hostile interiors, restraint design bumper & crumple zone design	collision speed, road side hardware	it can and does happen	
post crash (post event)	gender, severity, age, underlying morbidity	ease of extrication, burn resistant fabrics	EMS system quality, trauma care, traffic management system	rehabilitation, documentation and data collection	

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New Information/Technical Developments Jan 2006- Jan 2010

- SAFETEA-LU, 2006 – EMS identified as one of the 4 E's – (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users)
- International Ergonomists Association (IEA) – publication June 2006
- Enhanced Safety of Vehicles (ESV) - publications June 2007, 2009
- American Society Safety Engineers (ASSE) – publications June 2006, 2007
- National Academies TRB – Inaugural EMS Safety address, Jan 2007
- NEMSAC established – April 2007
- AMD Engineering Public Comments, July 2007
- KKK-F, August 2007
- OSHA September 11, 2007 EMS safety in Federal Register
- State Strategic Highway Safety Plans, October 2007
- Sporadic State EMS Council Transport Safety Policies
- APHA EMS Safety technical abstracts - Nov 2007, 2008, 2009
- EMS Safety Foundation established – Dec 2007
- National Academies TRB – Inaugural EMS Safety Subcommittee meeting Jan 2008
- National Academies TRB – first EMS Safety Publication Jan 2008
- Transportation Safety Advancement Group (TSAG) – Feb 2008
- Society for Automotive Engineers (SAE) – publications Oct 2007, 2008, 2009
- Worker visibility Act - Nov 2008
- SAE Ambulance Standards development – April 2009
- NFPA Ambulance Standards Committee – June 2009
- National Academies TRB EMS Safety Summits – Nov 2008, Oct 2009

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Today's AGENDA

1. Introductions and Review of 2009 Minutes
2. Synopsis of ANB10 (5)'s second year of activity
3. Subcommittee organizational structure
4. Research funding pathways and processes via the TRB
5. NTSB and FMCSA Jan 2010 recommendations
6. Sub-committee work program updates:
 - a. Ambulance Transport Safety Summit - October 29, 2009
 - b. Research Topics Database/Problem statements
 - c. Liaison organizations
 - d. Communications/Website
 - e. Membership/Recruitment
7. Research Agenda Discussion/Workshop
8. Mid-year meeting planning
9. 2011 TRB Session Topics and Calls for Papers
10. Summary of action items for follow-up
11. Other business
12. Adjourn

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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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What is ANB 10 (5)?

- ▶ **Emergency Medical Services Safety Subcommittee, ANB 10 (5)**
 - Subcommittee of the Transportation Safety Management Committee ANB 10, of the Transportation Research Board of the National Academies

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EMS Safety Subcommittee ANB10(5)

- Subcommittee supported by Transportation Safety Management ANB10
- Established July 2007
- First Subcommittee meeting – Jan 2008
- Chair, Nadine Levick MD, MPH
- Co-Chair, Eileen Frazer, RN
- Scope – Medical Transport Safety

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ANB10 (5) TRB EMS Subcommittee Mission

- *'Bridging the gap between what we do and what is known - Enhancing ambulance transport safety through shared knowledge of technical data'.*

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Subcommittee structure

- Chair
- Co-Chair
- Administrator
- Secretary
- Project Manager
- Technical Sections
- Liaisons

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Subcommittee Activities, Jan 2008-2010

- EMS Safety Summits 2008, 2009
- TRB Presentations:
 - Automotive safety perspectives - *Prof Raphael Grzebieta, Chair of Road Safety UNSW*
 - Achievements and milestones of aviation medical transport safety – *Eileen Frazer, Executive Director of Commission on Accreditation of Medical Transport Systems (CAMTS) – Co-Chair ANB10(5)*
 - Overview of EMS transport safety issues and research – *Nadine Levick MD, MPH – Chair ANB10(5)*
 - Safety perspectives from an EMS Medical Director – *John Russell MD, CCPA*
 - Ambulance Transportation Safety Summit: Analysis and Future Directions (P09-0625) *Nadine Levick MD, MPH – Chair ANB10(5) and Eileen Frazer, Executive Director CAMTS – Co-Chair ANB10(5)*
 - Knowledge Transfer in EMS Transportation Safety: How Does This Technical Information Translate at an Operational Level–*Perspectives from Diverse Services (P09-0628) Kevin Peters, Carilion Clinic Patient Transport, Roanoke, Virginia and Jim Swartz, Careflite, Rapid Response Air & Ground Ambulance, Texas*
- Policy perspectives
- Problem statement development
- Workshop on research perspectives and needs
- E-circular under development

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Problem statement development in progress from 2008-2009

- Development and application of standardized definitions to capture EMS transport data across all agencies.
- Identifying ambulance fleet mix by state
- Determination of current state based emergency vehicle crash data capture and analysis; police, fire and EMS.
- Identifying the regional essential and optional equipment payload for ambulances
- Evidence for ambulance visibility and conspicuity
- Effectiveness and cost effectiveness of real time driver monitoring feedback devices for EMS services

DETERMINATION OF CURRENT STATE BASED EMERGENCY VEHICLE CRASH DATA CAPTURE AND ANALYSIS, POLICE, FIRE AND EMS

- I. PROBLEM TITLE**
Description of current state based emergency vehicle crash data capture and analysis, police, fire and EMS.
- II. RESEARCH PROBLEM STATEMENT**
Support for the capture of these three types of emergency vehicle crash data are consistent across all of the 50 states... (text continues)
- III. OBJECTIVE**
To identify the valid record data fields related to each state to include a time, location, and other information (text continues)
- IV. RESEARCH PROPOSED**
Provide a statement of the specific research proposed, how it relates to the general problem statement in Section II and, if possible, the research approach and the data involved.
- V. ESTIMATE OF THE PROBLEM FUNDING AND RESEARCH PERIOD**
Research Period: Include an estimate of the total amount to complete the research stated in Section II. As a range, provide the start and end dates (month/year) for the proposed research. (text continues)
- VI. URGENCY AND PAYOFF POTENTIAL**
Include a statement concerning the urgency of the problem research. Identify and, if possible, quantify the potential and magnitude of the benefits and consequences of the problem statement, such as national, regional, environmental, human, and transportation. (text continues)
- VII. RELATIONSHIP TO FTA STRATEGIC GOALS AND POLICY INITIATIVES AND TRB STRATEGIC PRIORITIES**
Compare the problem statement using the FTA strategic initiatives and the TRB Strategic Priorities.
- VIII. RELATED RESEARCH**
Identify, provide citations to other research completed in progress, or published that is closely related to the proposed problem.
- IX. PERSONS DEVELOPING THE PROBLEM STATEMENT**
Provide the specific (i.e., name, title, address, telephone, and fax number) for the person(s) who developed the problem.
- X. PROCEED TO DEVELOP PROBLEM STATEMENT**
The TRB Safety Subcommittee will discuss and evaluate.
- DATE AND SUBMITTED BY**
Provide the specific (see Section IX) of the person(s) who submitted the problem and the date of submission.

How do TRB Subcommittees work?

Multidisciplinary research

- Encompassing all aspects of transportation
- The expertise that EMS needs to address its transportation safety challenges includes:
 - Systems design
 - Transport systems safety
 - Human factors
 - Vehicles
 - Vehicle operations
 - Air medical transport safety
 - Impaired operators
 - Road design and egress and access
 - Highway and operational hazards

The Transportation Research Board (TRB)

- History
TRB was established in 1920 as the National Advisory Board on Highway Research to provide a mechanism for the exchange of information and research results about highway technology.

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 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.

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TRB research programs

- Cooperative Research Programs manages
 - National Cooperative Highway Research Program - NCHRP
 - Transit Cooperative Research Program - TCRP
 - Airport Cooperative Research Program – ACRP
 - National Cooperative Freight Research Program - NCFRP
 - Hazardous Materials Cooperative Research Program -HMCRP
- Strategic Highway Research Program 2 (SHRP-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.

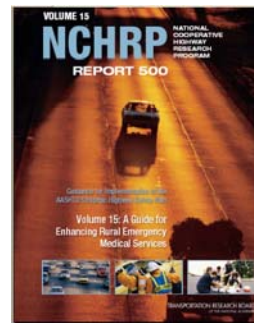
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Special role for EMS at TRB

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

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



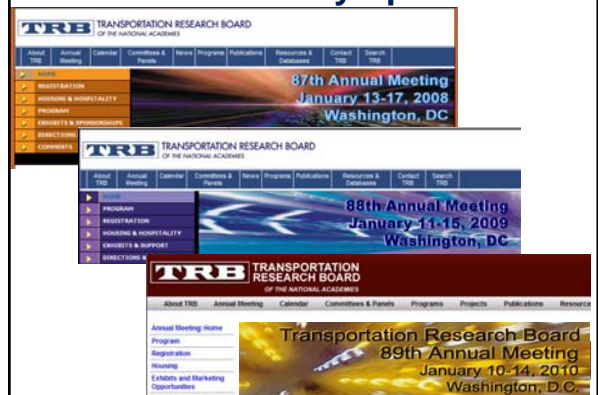
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In Summary TRB Services

- 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
 - Publications and access to research information from around the world.

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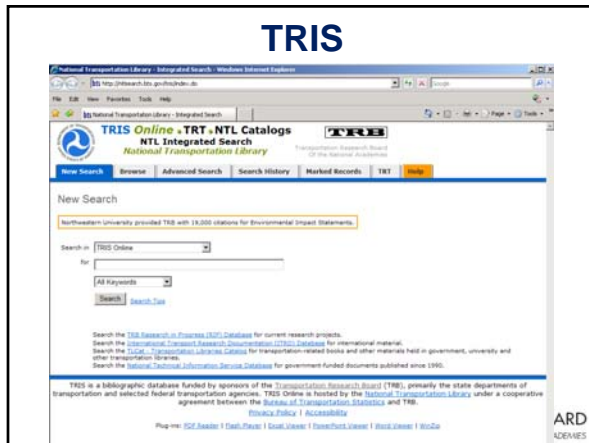
TRB Annual Symposium



Who is attending the general TRB meeting

TRB Structured Transportation Research Programs, Agendas and Resources

TRIS



Transportation Research Information Services (TRIS)

- Online Research Information
- TRB produces and maintains the Transportation Research Information Services (TRIS), the world's largest and most comprehensive online bibliographic database of published and ongoing transportation research.
- Through a cooperative agreement with the Bureau of Transportation Statistics, the TRIS Database is available on the Internet through the website of the National Transportation Library. This service, TRIS Online, can be accessed through the TRB homepage at www.TRB.org. TRIS is also available through two fee-based services, Dialog and Silverplatter's TRANSPORT CD-ROM.

Other TRB Online Resources

- Research in Progress (RiP) Database
- RiP provides access to more than 9,500 descriptions of current or recently completed transportation research projects from federal and state transportation agencies, universities, and international organizations
- The TRB Publications Index is a searchable index of the Board's papers and reports.

Synthesis Program

- Reports on current knowledge and practice
- Synthesize fragmented, scattered, and unevaluated existing information
- Initiation of ~ 12 syntheses per year
- Selection process for synthesis topics:
 - widespread enough to generate broad interest
 - timely and critical for expediting delivery, improving the quality, or lowering the cost of transportation programs
 - current practice is non-uniform or inconsistent from agency to agency, or if the validity of some practices appears to be questionable
 - a need to organize and compress that which has already been learned and written on the topic
 - ongoing research or other activities in progress should not render the synthesis obsolete shortly after completion

National Cooperative Highway Research Program (NCHRP) Synthesis

- New NCHRP Synthesis topics submissions due February, 2010

Strategic Highway Research Program (SHRP 2)

- Congress established the second strategic highway research program (SHRP 2) in 2006 to investigate the underlying causes of highway crashes and congestion in a short-term program of focused research. Focus areas:
 - **Safety:** Significantly improve highway safety by understanding driving behavior in a study of unprecedented scale
 - **Renewal:** Develop design and construction methods that cause minimal disruption and produce long-lived facilities to renew the aging highway infrastructure
 - **Reliability:** Reduce congestion and improve travel time reliability through incident management, response, and mitigation
 - **Capacity:** Integrate mobility, economic, environmental, and community needs into the planning and design of new transportation capacity

IDEA Program

Research Approaches

- Submission avenues:
 - Synthesis topic - NCHRP
 - SHARP 2 – Safety
 - Research questions/Problem statements

TRB EMS Subcommittee Summits 2008 and 2009

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VOL. 11 NO. 11 NOVEMBER 2008

EMS, FIRE
RESCUE
HAZMAT
DISASTER
MANAGEMENT

BEST PRACTICES

IN EMERGENCY SERVICES

Maryland Modifies Air Medical Fly Guidelines

Acting swiftly in the wake of a recent fatal helicopter crash in the state, Maryland EMS officials now are requiring paramedics on certain calls to consult with the receiving trauma center prior to transporting a patient via helicopter.

According to a letter to all EMS providers from MEMMS Executive Director Robert Bass, MD, effective October 5, "All air scene medical requests for trauma patients (that have only category C or category D triage indicators) will require medical consultation with the receiving trauma center for helicopter dispatch."

Bass explained that the new requirement is not intended to "imply or indicate concerns or criticisms" of existing helicopter triage protocols, but rather is

Ambulance Safety Finally Gains National Attention

Researchers and experts in transportation safety will convene later this month in Washington, DC, for the first-ever 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 assemble through the meeting proceedings a reference document of all currently available, but heretofore disparate, published scientific research on ambulance safety.

"I don't believe that this has ever happened anywhere in the world," said summit organizer Nadine Levick, MD,

Walter Injury Risk Management Research Center of the University of New South Wales in Australia, TRB Transportation Safety Coordinator Richard Pata, University of Maryland-Baltimore County Clinical Assistant Professor Kurt Knurzman and Phoenix Assistant Fire Marshal Kevin Roche, among others.

Opening remarks will be provided 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, Levick said, because most of the research is published in transportation engineering journals that are unfamiliar to fire and

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

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Conferences and Workshops | Panel Conferences and Workshops | Committee Meetings | A Sessions | Conference Recordings

TRB Conferences and Meetings

November 2008

November 7, 2008
TRB WEEDING: EMS Safety Subcommittee Mid-year Meeting and Safety Summit
Washington, DC

EMS Safety Subcommittee Mid-year Meeting and Safety Summit

Friday, November 7, 2008 1:00 PM - 5:00 PM EST

The summit will be Webcasted, with transcription. The organizing sponsor invites participants to send TRB questions and suggestions, which will be addressed from the summit if appropriate.

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TRB Ambulance Transport Safety Summit Conceptual Outline

- Systems Safety Engineering
- 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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Path Forwards

- Disseminate technical information
- Enhance understanding of technical transportation issues
- Facilitate sharing of information as standards are developed
- Interdisciplinary Collaboration
- Support the formulation of a transportation focused research agenda

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National Academies Transportation Research Board's Ambulance Transport Safety Summit October 29, 2009

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October 29, 2009
Ambulance Transport Safety Summit and Midyear Meeting
Washington, DC

The summit will be Webcasted, with transcription. The organizing sponsor invites participants to send TRB questions and suggestions, which will be addressed from the summit if appropriate.

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<http://www.objectivesafety.net/TRBSummit2009.htm>

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2009 EMS Safety Summit

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National Academies Transportation Research Board Ambulance Transport Safety Summit – October 29, 2009

- Bridging the gap between what we do and what is known
- Enhancing ambulance transport safety through shared knowledge of technical data
- Open access, outreach to all EMS related organizations, and beamed to EMS Expo!

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2009 Summit Scope

- The realm of burden and benefit
 - measuring the safety of the system
 - determining the economic, ethical and risk benefit challenges
- Transport System Management
 - fleet safety and oversight technologies and policies
 - operations management – dispatch, congestion routing, deployment of resources, benchmarking
- Vehicle safety
 - occupant protection design and testing
 - Vehicle performance safety
 - vehicle and personnel human factors issues
- Dissemination and Policy
 - Knowledge transfer
 - Standards, specifications and policy

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October 29, 2009 TRB Summit

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TRB EMS Safety Summit October 29, 2009

- Technical experts, operational EMS providers and the government agencies

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2009 TRB Summit Participants

<http://www.objectivesafety.net/TRBSummit2009.htm>

- Technical experts
 - Automotive safety engineering, occupant protection
 - Automotive and EMS operational ergonomics and human factors
 - Transportation systems safety engineering
- Government agencies
 - National Highway Traffic Safety Administration (NHTSA)
 - Department of Transportation ITS (DOT)
 - National Transportation Safety Board (NTSB)
 - Federal Highway Administration (FHWA)
 - Federal Motor Carrier Safety Administration (FMCSA)
 - Bureau of Labor and Statistics (BLS)
 - Department of Homeland Security (DHS)
- EMS State Directors
- EMS Services
 - private and municipal from across North America
 - Fire/EMS
 - Volunteer EMS
- Industry partners
 - EMS Equipment
 - Vehicles, both OEM and aftermarket
- Academics

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Please do go and access this information, it comes from technical and operational experts and it is gratis




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Its out there NOW

- TRB 2009 Summit – addressed the key and interdisciplinary issues, in one day – please seek that information out.
- TRB Summits held, 2008, 2009 and both with vehicle engineering and transportation systems technical expertise
- For the Summit archives:
www.objectivesafety.net/TRBSummit2008.htm
www.objectivesafety.net/TRBSummit2009.htm

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EMS Safety Summit Wrap Up

Prof. Art Cooper

- Burden/Benefit
 - Safety Data
 - Multiple datasets – not interoperable, huge holes
 - Inconsistent definitions, incomplete collection
 - Economics
 - Vehicles: small fortune; crashes: many fortunes
 - Data-driven business and insurance case is strong
 - Ethics and Risk/Benefit
 - Decision rules ↓ crashes, but few use them
 - Technology also ↓ crashes, but few have it

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EMS Safety Summit Wrap Up

- Transport System Management
 - Fleet/Vehicle Operations Safety
 - Safety program/culture – crashes ↓ 60%
 - “Trust, but verify” – in vehicle feedback device “telematics”
 - Align rewards with safety, not profit
 - Operations Management
 - EMD ↓ hot responses, hence crashes
 - ITS: great promise in ↓ crashes
 - Dynamic deployment, visual systems ↓ crashes

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EMS Safety Summit Wrap Up

- Vehicle Safety – Assessment and Design
 - Vehicles
 - Our engineering colleagues are way ahead of us
 - Special Populations – Pediatric to Bariatric
 - Special populations → illustrative solutions
- Information Sharing and Research Priorities
 - Knowledge Transfer/Dissemination
 - The world is large...our “worlds” are small, and insular
 - Standards/Specifications/Policy
 - For vehicles, not patients or providers...must change!

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Solutions?

- National Incident Management System
 - *Unified ICS* (potential partnership with DHS)
- **T**ogether **E**veryone **A**chieves **M**ore
 - TeamSTEPPS (AHRQ/TriCare) may help
- Government can’t (and shouldn’t) do it alone
 - Interdisciplinary professional collaboration needed
- We all know what needs to be done
 - TRB White Paper → interdisciplinary NAs panel

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Thoughts To Ponder

- Public Health Answering Points
 - Health advice for patients at home
- No substitute for the human touch
 - Mid level providers/advanced practice medics
- PC based telemedicine in rural areas
 - Skype™ has shown us how to do it
- Fossil fuels will be prohibitively expensive
 - Medical transport only a last resort



EMS Safety: Turning Ideas Into Action

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Biologue, Inc. and The Chertoff Group, LLC
January 5, 2010

Framework for Approaching Big Problems

- Understand the problem
 - ✓ Quantify
 - ✓ Identify root causes
 - ✓ Identify risk factors, susceptibility, consequences, and cost
- Understand and agree what "success" looks like
- Identify needed capabilities and potential actions
- Identify barriers and impediments
- Identify stakeholders and champions
- Identify roles and responsibilities for actions
- Specify timelines with accountability for results

Data...

- What is your transport safety record in your service?
- How can you improve if you don't have a meaningful measure of safety performance?
- Transport safety is not guesswork, it is a science

Science behind Policy

- "For successful technology, reality must take precedence over public relations, for Nature cannot be fooled."

Richard P. Feynman 1988

Discussion

State Strategic Highway Safety Plans

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

 TRANSPORTATION RESEARCH BOARD
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State SHSP EMS Focus*

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

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