

EMS Safety Foundation,
at a PC/Laptop near you, December 11th, 2007
Interdisciplinary R. & D., Knowledge Transfer and Policy

The EMS Safety Foundation – What it is, what it can do for you, and what you need to know to participate

Nadine Levick, MD MPH
Research Director, EMS Safety Foundation
CEO, Objective Safety
New York, NY

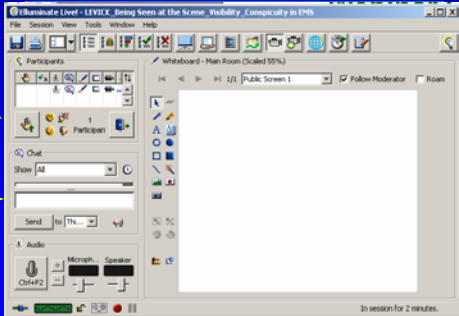
Welcome to your introduction to
the EMS Safety Foundation

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 in the Participants panel)
- 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 in the Audio panel)

**..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.EMSSafetyFoundation.org
web site within 24 hours

Today's Webinar

- ▶ This is an introductory Webinar to share in what the EMS Safety Foundation can do and how you can be involved

Background:

- ▶ EMS Safety Foundation has been established to fill a gap in
 - ♦ technical knowledge transfer
 - ♦ practical interdisciplinary R & D
 - ♦ evaluation and implementation of system safety enhancements for EMS and Medical Transport
- ▶ It is a not-for-profit institute

Mission

- ▶ This is a team of like minded innovators across EMS Medical Transport and a number of technical disciplines, who share the common mission of enhancing the safety of EMS delivery for all involved.

- ▶ To quote Steve "Sid" Caesar – Director IHS ES

"We want everyone to get home safely each day"

And who are you all?

- ▶ EMS services
 - ♦ Large and small, volunteer and paid
- ▶ Technical Experts
 - ♦ Automotive safety expertise
 - ♦ Ergonomists
 - ♦ Public health researchers
- ▶ Industry
 - ♦ Insurers
 - ♦ Manufacturers
- ▶ Policy
 - ♦ Local, regional and national

Goals

- ▶ The primary goals of bringing this unique group of folks together are to:
 - ♦ Share pooled best practices
 - ♦ Integrate key technical expertise to address common challenges
 - ♦ Advance new multidisciplinary research projects
 - ♦ Translate safety technology from appropriate related technical areas to EMS
 - ♦ Knowledge transfer from research to practice

What's in it for you??
As part of the Innovation Consortium..

- ▶ Data driven answers to the questions you need answers to now
- ▶ Rapid access to state of the art safety information
- ▶ Myth busting of the myriad of fixes out there
- ▶ Practical access to the experts in the fields beyond what we do
- ▶ AVOID REINVENTING THE WHEEL

What's in it for you??
As part of the Technical Expert Panel..

- ▶ Collaborate in a unique knowledge transfer environment
- ▶ Direct access to the issues that warrant your expertise
- ▶ Unique opportunities for R & D

Real world answers to real world questions -

- ▶ What features will enhance safety of my new vehicle purchase?
- ▶ What color scheme do I want on my vehicle to make it safest?
- ▶ Do I need a helmet, and if so which ones?
- ▶ What policies offer the safest system?
- ▶ How do I get my team to address safety issues?

Benefit of Safety

- ▶ Any cost of addressing these issues is dwarfed in contrast to the huge burden of not doing so - in financial costs let alone the personal, societal, ethical and litigation costs

Plan to ...

- ▶ Save lives, time and money

R & D

Ripoff and Duplicate



Big issues are

- ▶ Transport
 - ◆ Vehicle
 - ◆ Vehicle operations
 - ◆ Scene
- ▶ Patient handling
- ▶ Equipment
 - ◆ Protective and other

EMS Transport Safety

- ▶ 'patient safety'
- AND also
- ▶ 'provider' and 'public safety'

Problems

- ▶ Absent Standards
- ▶ Unique safety and hazard protection needs
- ▶ A number of less than appropriate 'solutions' out there

Project Areas

- ▶ Vehicle design and safety
- ▶ Vehicle operations safety
- ▶ Scene Safety
- ▶ Protective devices
- ▶ Patient handling
- ▶ Equipment
- ▶ Policy

Hot topics

- ▶ Vehicle design and safety
 - ◆ Crashworthiness and Occupant protection
 - ◆ Ergonomics
- ▶ Vehicle operations safety
 - ◆ Driver feedback
 - ◆ Hours of service
- ▶ Scene Safety
 - ◆ Visibility and conspicuity
- ▶ Protective devices
 - ◆ Head protection
- ▶ Patient handling
 - ◆ Stretchers and lifting devices
- ▶ Policy
 - ◆ EMS Z.15

A few basic ground rules

- ▶ The access to this innovation consortium is limited by the available technology and by what is a realistic and manageable group size.

Participation and membership

- ▶ Basically three dimensions
 - ◆ Innovation Consortium
 - ◆ Technical Expert panel
 - ◆ Affiliate membership

How it works

- ▶ Participation in and membership of the Innovation Consortium and the Technical Expert Panel is by invitation and EMS Safety Foundation Board approval only
- ▶ Open membership is available for a general Affiliate membership of the EMS Safety Foundation as of 2008
- ▶ Corporate sponsorship, involvement and participation is subject to Board approval

Passwords are NOT transferable

- ▶ Any participants utilizing or providing a transferred password without the authorization will be excluded both from the EMS Safety Foundation Innovation Consortium, Technical Expert Panel
- ▶ There are no exceptions to this rule.

IC What's involved

- ▶ Register interest
- ▶ Complete service profile form
- ▶ Once approved - Get login for membership software
- ▶ Membership annual dues
- ▶ Get a passport to prepare for May field trip
- ▶ Give and take

Technical Expert Panel What's involved

- ▶ Register interest
- ▶ Forward resume
- ▶ Once approved - Get login for membership software
- ▶ Dues only for corporate members
- ▶ Get a passport to prepare for May field trip
- ▶ Give and take

Corporate involvement

- ▶ Register interest
- ▶ Complete online profile of their company
- ▶ Demonstrate a corporate focus on safety issues
- ▶ Once approved - Sponsorship plan negotiated
- ▶ Get login for membership software

- ▶ All participants will be required to share some basic information regarding their professional or operational environment so that their priorities can best be addressed

Time line

Dec 2007-June 2008

- ▶ Gathering of membership information and profiles
- ▶ Review of project areas and timelines
- ▶ Follow up Webinar pre – TRB meeting and then at ~ 2 monthly intervals
- ▶ Jan 16th TRB meeting, DC
- ▶ Rettmobil site visit May 14-17th 2008
- ▶ Proceed down project timelines

Major events for innovation sharing – but regional and often language isolation

<http://www.rettmobil.org/>



Vehicle Occupant Safety design

2007 European design
Safety technology is a
key focus



Ergonomic design



Ergonomic layout and equipment



Interface

- ▶ Primarily via the Webinars, with email exchange
- ▶ TRB and related EMS meetings annually, face to face or virtual
- ▶ International best practice delegation

Intellectual Property

- ▶ What happens should we invent something clever?

Knowledge transfer and information sharing

Use proven safety tools



Learn from existing best practices

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

Home | Rules & Regulations | Registration & Licensing | Forms | Safety & Security | Facts & Research | Crisis Center | About FMCSA

Home » Facts & Research » Research and Technology Forum - January 6, 2005

Research and Technology Forum - January 6, 2005

Description	Speaker	Download File	Related Links
Opening Remarks	Warren Hoemann	PPT PDF	Conferences
Keynote Speaker	David Osiecki	PPT PDF	2005 Forum, FMCSA Safety & Security Accomplishments
5-Year Strategic Plan Overview	Doug McKeavey	PPT PDF	
Research Accomplishments	Martin Walker	PPT PDF	
Technology Accomplishments	Doug McKeavey	PPT PDF	
Large Truck Crash Causation Study	Ralph Craft	PPT PDF	
On-board Vehicle Recording	Deborah Freund	PPT PDF	
Hazard Safety and Security Operational Test	Joe DeLorenzo	PPT PDF	
Vehicle Infrastructure Integration	Tim Johnson	PPT PDF	
Pilot Test of Fatigue Management Technologies	David Dingus	PPT PDF	

WEMSA Leadership

Emergency Vehicle Operations

October 2007

Data and research show that the liability of emergency vehicle operators is among the highest of all emergency services. WEMSA members have identified and filed more lawsuits each year relative to the cost of emergency vehicle operations than any other emergency service. Currently, Wisconsin state does not require any specialized or additional training to operate an emergency vehicle. While the laws and regulations are in place, WEMSA has continued to lobby for national standards since 1990. The Wisconsin EMS Association believes that emergency vehicle operations should be addressed by each state EMS service in Wisconsin. Services should evaluate their operations as an effort to implement an emergency vehicle operations policy for their organization. To aid Wisconsin EMS Association members, the Wisconsin EMS Association has implemented the following position statement.

1. All emergency medical services should draft, implement and enforce a policy with regard to emergency vehicle operations. The policy should be made available to anyone involved with the EMS service and will stand as a benchmark for emergency vehicle operations within the organization. EMS service leaders must ensure that the emergency vehicle operations policy is followed and adhered to by everyone on the service.

2. All emergency vehicle operators should undergo specific training prior to driving an emergency vehicle. A formal training course, such as the Emergency Vehicle Operations Course (EVOC), should be used whenever possible. If a formal course is not available, training should be provided to all individuals who will be operating emergency vehicles. This training should include, but not be limited to, the principles of EVOC or other standardized emergency vehicle operations training. Training should include both classroom and behind-the-wheel education. A final evaluation by a department officer other than their providing instructor should be completed.

3. Emergency vehicle operators use to driving an ambulance or other response vehicle should complete a periodic refresher training which shall include: refresher training of transportation laws, driver license renewal, the proper use of emergency lights, sirens, signaling, and emergency response and safety strategies.

4. Whenever possible, emergency vehicle drivers should voluntarily be between the ages of 21 and 26. All vehicle crash data clearly shows a significantly increased risk for the driver of an emergency vehicle for those beginning at age 21. Beginning at age 21, emergency vehicle crash data shows the same results. Individuals older than 26 are at a higher risk for injury. Whenever possible, emergency vehicle operators should voluntarily be employed by the state with the 25-to-30 age bracket.

5. Data and research clearly show that the most dangerous location for an emergency vehicle is an intersection. All emergency vehicle operators should be trained to drive safely at an intersection. In which the right of way is not already provided by a green traffic signal or the lack of a stop sign. Whenever red lights and sirens are used, emergency vehicle operators should make visual contact with the driver of each vehicle in the intersection before proceeding.

6. The use of red lights and sirens should be reduced as much as possible including during normal operations on the roadway. Emergency operators should be taught using red lights and sirens should be reserved only for the most critical situations where a life-saving or continuing intervention is to be performed or the destination hospital within minutes of the patient's arrival. Most ambulance services should be able to drive from one light and siren during emergency situations to 90% or less. During the response phase, EMS organizations should take every opportunity to disengage their response to non-emergencies. Whenever possible, drivers should be trained to respond to the situation. When multiple vehicles are responding to the same location, the first vehicle on scene should attempt to provide emergency services to other responders as soon as possible. A non-emergency response should be completed for all calls in which the patient is transported by ambulance other through transport information or information relayed from first responders on the scene.

7. EMS organizations should continue to monitor emergency vehicle operations including the conditions service and improvements of their operations. The conditions and use of state or vehicle record review and updates to emergency vehicle operations and drive for the continued improvement of emergency vehicle operations. Training should include both classroom and behind-the-wheel education. A final evaluation by a department officer other than their providing instructor should be completed for all calls in which the patient is transported by ambulance other through transport information or information relayed from first responders on the scene.



21001 Tilden Rd. Potosi, WI 53403-0200 1-800-755-0200 www.wisconsinems.com



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WEMSA – October 2007

1. Emergency Vehicle Operations Policy
2. Vehicle operations training and evaluation
3. A program of graduated driver responsibility
4. Drivers only age 25 and over
5. Complete stop at an intersection
6. Restricted use of Red Lights and Sirens
7. Monitoring of emergency vehicle operations

WEMSA covered some key and important policies and procedures But...

- ▶ What about hours of service?
- ▶ What about visibility at the scene? For providers and the vehicles...?
- ▶ What about protective equipment?
- ▶ What about ambulance design safety?
- ▶ What about reporting of adverse events?

September 11, 2007

U.S. Department of Labor
Occupational Safety & Health Administration
www.osha.gov

Unified Agenda Prerule Stage 1218-AC17 - 1827. EMERGENCY RESPONSE AND PREPAREDNESS

1827. EMERGENCY RESPONSE AND PREPAREDNESS

Priority: Other Significant. Major status under 5 USC 801 is undetermined. Unfunded Mandates: Undetermined. Legal Authority: 29 USC 655(b); 29 USC 657. CFR Citation: 29 CFR 1910. Legal Deadline: None Abstract: Emergency responder health and safety is currently regulated primarily under the following standards: the fire brigade standard (29 CFR 1910.150); hazardous waste operations and emergency response (29 CFR 1910.120); the respiratory protection standard (29 CFR 1910.134); the permit-required confined space standard (29 CFR 1910.146); and the bloodborne pathogens standard (29 CFR 1910.1030). Some of these standards were promulgated decades ago and none were designed as comprehensive emergency response standards. Consequently, they do not address the full range of hazards or concerns currently facing emergency responders. Many do not reflect major changes in performance specifications for protective clothing and equipment. Current OSHA standards also do not reflect all the major developments in safety and health practices that have already been accepted by the emergency response community and incorporated into National Fire Protection Association (NFPA) and American National Standards Institute consensus standards. OSHA will be collecting information to evaluate what action the agency should take.

Worker visibility Act: Help is on the way !! November 24th 2008

PART 634 - WORKER VISIBILITY

4024.2 Rule.

All workers within the right-of-way of a Federal-aid highway who are engaged in any activity that poses a risk to or construction equipment within the work area shall wear high-visibility safety apparel.

Workers must wear people on foot when close to them within the right-of-way of a Federal-aid highway, such as highway construction and maintenance crews, survey crews, utility crews, inspectors, or in the hours within the

There are grants to assist you..

Federally-Mandated Worker Visibility Regulation Summary

Summary Provided by Act Barton
H&E Consulting Group, Inc.

In addition, wearing green, yellow, or orange high-visibility vests, and also have to wear the high-visibility clothing to be in compliance with the rule. The only exception will be for maintenance personnel during maintenance, repair, and similar work.

A Federal grant is available to help agencies purchase the required safety clothing. It is the State and Community Highway Safety Grant Program, Section 402, Chapter 4 of Title 23.

More details about the grant program are available at: <http://www.vhss.dot.gov/grant/section402.htm>

The new DOT rule requires all workers on the right-of-way of a Federal-aid highway to wear high-visibility safety apparel when working within the right-of-way of a Federal-aid highway.

Science not, next best guess

UMTRI
UNIVERSITY OF MICHIGAN
TRANSPORTATION RESEARCH INSTITUTE

Research on Nonblinding Emergency Vehicle Warning Lighting Systems
Sponsor: Society of Automotive Engineers International
Investigator: Michael J. Flannery
360-726-1100/2008

UMTRI is performing this work under a subcontract with the Society of Automotive Engineers (SAE). The work is sponsored by the Department of Homeland Security's Federal Emergency Management Agency (FEMA), United States Fire Administration (USFA), and the Department of Transportation (DOT) Intelligent Transportation Systems (ITS) Joint Program.

The operation of emergency vehicles is inherently more risky than most other types of road use. One of the major ways in which this additional risk has been addressed is by the use of warning lamps on emergency vehicles. These lamps are believed to be of considerable safety value. However, because these lamps are strong stimuli to other drivers (in terms of reaction, light output, and flash programmed) there has also been concern about possible negative effects in which the lamps may distract or disorient drivers. This research is intended to investigate this possibility and assess ways in which the design and use of warning lamps might be improved to reduce any negative effects.

UMTRI will perform four tasks as part of this project: (1) analyze real and reported crash data for emergency vehicles in a state crash database; (2) analyze field crash data for emergency vehicles in the Federal Emergency Management Agency (FEMA); (3) collect additional information for crashes in which emergency vehicles are struck or involved in crashes; and (4) evaluate the effectiveness of current emergency vehicle equipment in use and assess possible changes in equipment or practices that may mitigate safety problems associated with warning lamps on emergency vehicles.

Human Factors - Industry Affiliation Program (IAP)
Industry Affiliation Program for Human Factors in Transportation Safety

GOAL: Perform basic applied research that will contribute to the advancement of the industry.

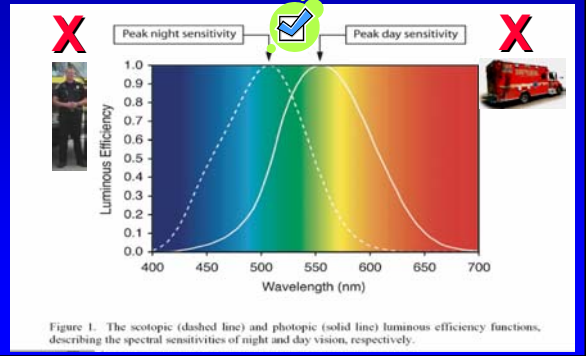
EDUCATIONAL OPPORTUNITIES: PARTNERSHIP OPPORTUNITIES

TOPICAL AREAS: Vision, Lighting, signaling, and visibility.

APPROACH: Involvement of UMTRI staff, the University of Michigan faculty, and domestic and international experts.

GROWTH: The Program began in 1987 with 3 affiliates. There are currently 36 affiliates in the Program.

Policy and practice ignorant of existing technical safety data

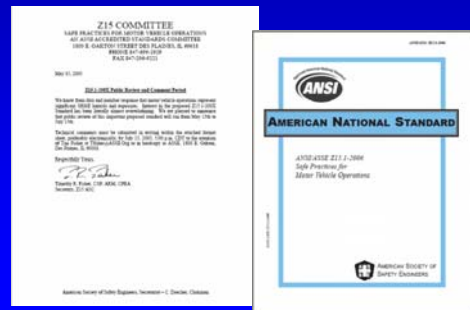


Coming Soon! Traffic Incident Management Systems (TIMS)

- ▶ USFA report to be released any day
- ▶ Research and writing by IFSTA
- ▶ Covers setting up safe roadway incident work areas and using unified command at these incidents
- ▶ Will be available in a downloadable format



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



Valuable information from the transportation industry



ASSE Transactions, Fall 2007

International Leading Practice in Ambulance Vehicle Safety Testing

What is the importance of ambulance vehicle safety testing? The ASSE Transactions, Fall 2007, features an article on the importance of ambulance vehicle safety testing. The article discusses the challenges of ambulance vehicle safety testing and the need for international leading practice in ambulance vehicle safety testing.

Transportation Safety to the Rescue in 2007

Emergency medical services (EMS) transport safety has seen some major developments this year. In addition to the establishment of a new forum for EMS transport at the National Academies Transportation Research Board (TRB), Subcommittee on EMS Transport Safety (ANSI 183), many new initiatives have taken place to advance EMS transport safety.

EMS is a unique transport environment that bridges public health and safety, acute health care, emergency transport and disaster management. It is performed in a spectrum of environments—rural, urban and suburban—aided by both volunteers and professionals. Thus, EMS has its own set of transportation safety challenges.

Data were presented on crash and injury rates involving EMS vehicles with comparisons discussed with other carriers. The ASSE/ANSI Z15.1 standard, Safe Practices for Fleet Motor Vehicle Operations, was highlighted as a major advance for supporting enhanced EMS fleet safety across the nation. Many new initiatives for enhancing safety performance were presented with recent research demonstrating off-accident safety and equipment—care, emergency transport and performance and safety enhancement, with real-time driver train-of-events—rural, urban and suburban—aided by both volunteers 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.

Optimizing practice and policies at intersections to improve safety and minimize risk was also discussed.

Ambulance Vehicles
There are essentially two methods approaches to building ambulance vehicles. One is a series of an existing OEM commercial van, as in the test vehicle described here, the other is the building of a dedicated "box" that is then attached to a standard light or heavy-duty truck vehicle chassis.

ASSE Transactions

Breaking News!! National Academies TRB EMS/Medical Transport Safety Subcommittee – Jan 16, 2008



Next Steps

- ▶ Communicate your interest to participate by completing the online registration of interest at www.EMSSafetyFoundation.org
- ▶ To be considered for participation in IC
 - ♦ Complete short online form about your service
- ▶ To be considered for participation in TEP
 - ♦ Forward your bio or resume
- ▶ For Corporate interest – complete online form
- ▶ General Affiliate Membership software portal open by late January 2008

Summary

- ▶ EMS Safety Foundation is a not-for-profit, multidisciplinary, virtual think – tank and test bed for EMS safety innovation and knowledge transfer
- ▶ It is a virtual network integrating the end users and the technical experts
- ▶ A tool to enhance the safety of delivery of EMS services

Thank you! Any Questions??

an electronic recording and a .pdf handout of this presentation awaits you online

www.EMSSafetyFoundation.org



Happy Holidays to all!!!