NASEMSO Safe Transport of Children (STC) Ad Hoc Committee

MEETING RECORD

April 6, 2016
8:00 – 10:30 am EDT
Hyatt – Bethesda

Committee Members Attending – Eric Hicken, Chair (NJ), Katherine Schafer, Vice Chair (NM), Mary Hedges (NASEMSO), Dr. Brian Moore (NM), Carolina Roberts-Santana (RI), Tom Winkler (PA), Cindy Wright-Johnson (MD), Dan Sjoquist (Serenity Safety Products), Dr. Marilyn Bull (Riley Children's Hospital), James Green (NIOSH), Sailesh Tangirala (Ferno), John McDonald (GSA), Theresa Morrison-Quinata (HRSA EMSC), Dave Bryson (NHTSA OEMS), Sandy Sinclair (NHTSA Office of Occupant Protection), Katrina Altenhofen (by teleconference), Stephanie Busch (VT) by teleconference, Sue Morris (OH) by teleconference

Other Federal Partners Attending – Tom Barth (NTSB), Aria Flowers (NHTSA Office of Chief Counsel), Diedre Fujita (NHTSA Office of Chief Counsel), Lorenzo Daniels (NHTSA NCSA Data), Tonya Lindsey (NHTSA NCSA Data), Cristina Echemendia (NHTSA Rulemaking), Linda McCray (NHTSA Rulemaking)

Other NASEMSO Members Attending - Michael Berg, AVL Committee (VA), Keith Wages (GA), Mel House (OH), Jay Bradshaw (NASEMSO), Wayne Denny (ID), Steve McCoy (FL), Tracy Cleary (KS), Tia Dickson (UT), Dave Edwards (VA), Martha Gohlke (NY), Janet Houston (NH), Kjelsey Polzin (MN), Patrick George (NMI), Daniel Suel (NMI), Morgan Skaggs (KY), Cynthia Lightfoot (DC), Karen Moore (SD), Billie Collier (MS), Alisa Williams (MS), Dr. Ken Williams (RI), Justin Allen (MI), Aaron Rhone (PA), Dr. Bill Fales (MI), Robert Norlen (MN), Dr. Joe Nelson (FL), by teleconference

Others Attending - Dave Jonas (PEHSC), Mark Van Arnam (CAAS), Jeff Krueger (USSC Group), Anthony Gilchrist (EMSC NRC), Randy Sakowitz (First Line Technology)

Call to Order, Welcome, Introductions – Eric Hicken, Chair, called the meeting to order at 8:10 AM. Members and Guests introduced themselves.

Approve Agenda and March 23rd Meeting Record – The agenda and March 23rd meeting record were approved without changes.

NHTSA Risk Control Innovations Program (RCIP) - Dave Bryson, NHTSA Office of EMS, explained that the NHTSA Administrator, Dr. Mark Rosekind, recently initiated the Risk Control Innovations Program (RCIP). He acknowledged Dr. Marilyn Bull for bringing the issue to the attention of Dr. Rosekind. The RCIP members, many of whom are attending the meeting today, are from several different offices of NHTSA. They have met four times since convening in January, and it has been a learning curve for many of those on the Committee who are new to

EMS. They are examining how to provide evidence-based information in order to revise NHTSA's 2012 *Best Practices for Safely Transporting Children in Ambulances*. By summer they intend to have a strategic plan to submit to Dr. Rosekind.

SPECIAL PRESENTATIONS

Ambulance Safety for Children: A Perspective and a Goal - Dr. Marilyn Bull is a neurodevelopmental pediatrician whose passion has been child passenger safety. She runs the Center for Safe Transportation of Children with Special Needs at Indiana University. She first presented a paper in 2001 on the issue of child passenger safety in ambulances at the proceedings of the Association for Advancement of Automotive Medicine. She was involved in the development of the *2012 NHTSA Best Practices for Safely Transporting Children in Ambulances* document on Child Passenger Safety. Dr. Bull provided an overview of some of the efforts to date and what remains to be done to improve safety for children being transported. Her presentation is available at https://www.nasemso.org/Committees/STC/Resources.asp

Safely Transporting Kids: What We Know & Don't Know – Dan Sjoquist, Serenity Safety Products, is chair of the Ambulance Manufacturers Division (AMD) Seating and Restraints Committee. He acknowledged that without Jim Green's program at NIOSH, they would not have had the science to develop the standards they have recently created. According to NHTSA data (1992-2011) there is an average of 4500 ambulance crashes annually. NHTSA's Federal Motor Vehicle Safety Standards (FMVSS) # 213 is the basis for most everything they have done. Ambulances have basically been exempt from most FMVS Standards, which exempt vehicles over 10,000 pounds from many of the standards. He explained crash test pulse is the amount of energy contained in the moment. The pulse of the ambulance is much greater than passenger cars upon which child safety seat standards are based. The Society of Automotive Engineers (SAE) is the agency that houses the standards. SAE J2917 is based on the higher pulse of the ambulance. AMD has partnerships with crash testing facilities. SAE J3027 *Litter Integrity, Retention & Restraint* addresses the issue of child passenger safety on the ambulance cot. He noted that the new standard does not require the purchase of the $30,000 cot produced by Ferno. SJ3026 *Seat and Occupant Restraint* is a new standard which addresses seating in the ambulance, including the squad benches. Head Injury Criteria (HIC) Score is addressed. SAE J2917 *Frontal Impact, Forward and Rear Facing Seating* is another new standard for ambulance seating which addresses full frontal impact crashes. Dan stated that the new SAE ambulance crash test standards can be used for pediatric considerations. The biggest issue is that the car seat manufacturers are testing their equipment to FMVSS 213, which is based on passenger cars. While this is good for cars, we do not know if this is good enough for ambulances. Because the number of children being transported by ambulance is small relative to the number of all transports, it does not get the attention it deserves. Dan answered questions. His presentation is available at https://www.nasemso.org/Committees/STC/Resources.asp

Safely Transporting Kids: The Journey Ahead - James Green, an engineer from NIOSH who has been extensively involved with ambulance crash testing, said they have created a new test method to test the cot, the occupant seating, equipment mounting, cabinet containment, and the ambulance body structure itself. The goal is to move the test method into the GSA

specifications and also address pediatric transport. Some of the questions that need to be addressed include: what kind of devices, and what size children should be tested? He said the ambulance manufacturers are important to the team (their knowledge and to gain buy-in), as are the medical experts and paramedics. This committee needs to determine what type of devices to test, the pass-fail criteria, and the pulse rate. Jim presented his recommendations for child size to test based on what size crash test dummies are available (12 months, 3 years, 6 years). Steps include creating a true test procedure (a repeatable test method – almost like a recipe). Once the test criteria are developed, the test needs to be validated. The ambulance crash testing NIOSH (Jim) conducted was funded predominantly by the Department of Homeland Security as well as the ambulance manufacturers. He estimated the process would take at least two years before it would be ready for publication. A lead organization needs to be identified. NASEMSO would be a likely candidate. The problem needs to be bounded. Partnerships need to be created. Funding needs to be identified. Results must be disseminated. The federal funding of patient cot testing was approximately $200,000 which did not include engineer time, committee meeting time/costs and more. Some manufacturers have suggested they may be interested in partnering with this effort. Dr. Bill Fales pointed out that the Michigan EMS data shows that most of the pediatric transports are for children who are under one-year of age. Jim explained that due to the limitations, we are unable to base the criteria on smaller infants. Tom Barth (NTSB) noted that much of what the committee is experiencing is similar to what the aviation industry experienced two decades ago. The presentation is available at https://www.nasemso.org/Committees/STC/Resources.asp

Adjourn – The meeting adjourned at 10:38 am. The next meeting will be May 25.

The meeting record was respectfully prepared by NASEMSO Program Manager Mary Hedges.