

Toward Zero Deaths

A NATIONAL STRATEGY ON HIGHWAY SAFETY

STAKEHOLDER WORKSHOP SUMMARY

Highway safety stakeholders across the United States and from several other countries participated in a workshop to provide input to the development of *Toward Zero Deaths: A National Strategy on Highway Safety* (TZD). The workshop, held on August 25th and 26th, 2010, brought together a multidisciplinary group of highway safety experts to further identify and understand challenges and opportunities in reducing highway fatalities. Experts with background in highway infrastructure, law enforcement, driver education, emergency medical services (EMS), public health, research, safety culture, and other areas participated in plenary presentations and discussion and smaller, topic-based breakout sessions. The workshop was held both in-person and online.

In plenary sessions, considerations for the future of highway safety, international experiences with safety, and safety culture were discussed. These discussions, in addition to a presentation on other white papers developed for this effort, set the stage for the breakout sessions. These sessions focused on high payoff strategies for reducing highway fatalities and overcoming challenges. Summaries of the plenary sessions and breakout discussions are presented below.

Materials from the workshop, including read-ahead items, recordings of the plenary sessions, and presentation files, are available on the temporary TZD website: <http://safety.transportation.org/activities.aspx>. Recordings of the keynote address by Administrator Victor Mendez of the Federal Highway Administration (FHWA) and the closing remarks from Administrator Anne Ferro of the Federal Motor Carrier Administration can also be found on this site. The website also contains additional background on the TZD effort.

Plenary Sessions

Plenary sessions included discussions on several white papers developed as input to workshop discussions, and a summary of the white papers used as input to the breakout session discussions.

- **Welcome:** In his welcome to the workshop participants, Tom Sorel, Minnesota Department of Transportation,

discussed the need for addressing the many challenges and barriers related to improving highway safety, even with the recent significant decreases in highway fatalities. There are strategies and programs that have been contributing to the recent decreases, and we need to learn from these efforts.

- **Future of Highway Safety:** Alan Pisarski and Forrest Council, independent consultants, presented ideas on the future of highway safety. This session focused on population, demographics, travel, safety management needs, and other factors that will impact highway safety over the next 25 years.
- **Lessons Learned from Other Countries:** Forrest Council discussed the white paper on international progress in highway safety. He highlighted experiences and lessons learned from the countries, such as France, Norway, Sweden, Holland, and the United Kingdom.
- **Safety Culture:** Joe Toole, FHWA, and Nicholas Ward, Western Transportation Institute, presented ideas on traffic safety culture and including how beliefs and norms are created, and how safety culture factors into the decision-making process while driving.
- **Summary of Other Focus Areas:** Hugh McGee of Vanasse Hangen Brustlin, Inc. (VHB) provided an overview of the white papers developed for this workshop, including information on safer drivers, safer vehicles, safer vulnerable road users, safer infrastructure, emergency medical systems, data systems, and analysis tools.

Breakout Sessions

The discussions of the breakout groups are summarized below and will be used for the development of the national strategy.

Safety Culture

The Safety Culture breakout group, moderated by Ian Grossman, American Association of Motor Vehicle Administrators, discussed the need for a significant shift in safety culture through a grassroots movement. Examples

of successful grassroots movements display strong national leadership, with champions at all levels, both political and non-political. Key strategies for addressing safety culture include:

- Additional research to better understand safety culture and the effects on driving behavior decisions, for example, why do drivers choose unsafe options?
- Early education in schools and throughout communities to teach young people how their decisions will affect others.
- Public health programs for outreach to educate people on the impacts of poor traffic safety choices, through positive and strategic media messaging that is sustained over time.

Strategies for changing safety culture can follow two parallel paths. One path involves small scale activities with short implementation timeframes. One example is workshop participants reaching out to their own organizations to share information from the workshop, and incorporate a positive safety culture throughout the organization. The second path is a strategic planning effort to assemble relevant knowledge to help understand behavior, values, and culture and to develop a long-term path for shifting the safety culture in the United States.

Safer Vulnerable Road Users

The participants in the breakout group, led by Richard Ashton, International Association of Chiefs of Police, and Andy Clarke, League of American Bicyclists, focused on pedestrians, bicyclists, motorcyclists, and older road users. The group expanded the category of vulnerable road users to include children, minorities, who do not use occupant protection devices, and impaired and/or speeding motorcyclists.

The group discussed needs for additional research, for updated guides, such as AASHTO's *Guide for the Planning, Design, and Operation of Pedestrian Facilities*, dissemination of existing information, as well as local officials familiarization of guides, such as the *Manual on Uniform Traffic Control Devices*. While training courses may be available, they need to be improved. Attendance should not be limited, and attendees should be more broadly assigned.

An integrated approach—not one limited simply to pedestrians—is needed, e.g., improved technology to better identify pedestrians along the road, or walking behind vehicles. Improved data on bicycling (such as the length of trips and the reason for taking them) are required. While the visibility

of bicyclists and pedestrians during the hours of darkness is problematic, they should not be required to do anything more than buy safety equipment, e.g., retro-reflective pedals and sneakers. Instead, street lighting (although expensive) should be increased, and safety education should be increased. The location and design of bus stops need to be considered more fully, e.g., those between intersections promote jaywalking.

Voluntary participation in refresher driving/riding training should be promoted; participation should not be mandatory because establishing an age for retesting is problematic. Such training should be aimed at the effects of aging and/or illness, encouraging self-identification of difficulties as they arise. The potential cost savings related to not driving should also be considered, however, reasonable alternatives to driving must be available and advertised.

Furthermore, medical advisory boards to evaluate drivers should seek uniformity and consistency across jurisdictions: currently, two-thirds of the states have such advisory boards, but they differ in operation and focus.

The long-term goal for safety should be *complete* road design for *all* users, however reasonable speed limits—supplemented by automated speed enforcement—should be established in the interim. Since two decades have passed since the previous study was conducted, a new on crash type study is certainly warranted. Involving local transportation committees, monitoring transportation plans, exploring ways to achieve goals without increasing costs, are initiatives the planning process should recommend.

“Best practices” already exist in many areas, but they need to be disseminated more effectively and widely, such as inserts in local newspapers, messaging applicable to all demographics, educating children at an early age (passing the torch), school calendar competitions, couch as a public health issue in educational settings (kindergartens, secondary schools, and colleges), and strive to keep efforts and decisions local (multi-disciplinary and multi-agency).

Safer Drivers

The Safer Drivers breakout group, led by Barbara Harsha, Governors Highway Safety Association, discussed several strategies. The main issues discussed were impaired driving, occupant protection, speed and aggressive driving, and distracted driving.

The breakout focused on near-term strategies as well as longer-term strategies to improve driver behavior. Among the near-term strategies were: greatly increased use of automated enforcement to reduce speed and aggressive driving; ignition interlocks, particularly for first-time impaired driving offenders; legislation, enforcement, and technology to address the issue of distracted driving; and technology to encourage greater seat belt usage. Longer-term strategies that were discussed included new technology that can monitor driving (particularly speeding, fatigued, and distracted driving), technology that would provide greater surveillance of drivers in and out of the driver licensing system, and advanced technology to detect driver impairment. There was also discussion on developing technology that could detect and test drugged drivers.

The participants acknowledged that technology or legislation alone would not solve the problem of unsafe drivers. Enforcement and marketing would continue to play key roles. Community involvement was also critical to program success. Tools, such as peer assistance teams, should also be developed to help states implement the most effective driver behavior plans and programs.

Members of the breakout group also acknowledged the key role that data would continue to play in the development and implementation of new behavioral strategies.

Safer Vehicles

The Safer Vehicles breakout group, led by Steve Keppler, Commercial Vehicle Safety Alliance, discussed a white paper's top five vehicle safety strategies from the perspective of vehicle crashworthiness and crash avoidance, with an emphasis on the latter because of its potential for future safety gains. While there is more work to do, there has already been significant progress in the area of crashworthiness.

- **Alcohol Detection Interlock:** An industry standard must be developed for access to the transmission interlock and a certification program developed for the aftermarket industry. Also, the original equipment manufacturer of the vehicle should provide access to the vehicle "data bus" for purposes of conveying whether the passenger has cleared the alcohol test and can operate the vehicle. Public domain links to the "data bus" are needed for aftermarket interfaces. The "data path" on most vehicles is proprietary in nature. Some state and local laws could inhibit the use of the interlock systems.

Judicial outreach is necessary to promote alcohol detection interlocks as a viable option during the sentencing process.

- **Driver Monitoring Systems:** Fatigue and fitness for duty are key issues. This technology holds much promise for teen drivers and commercial vehicle drivers although with differing challenges for each group regarding cost, liability, and privacy. Additional research is needed on these systems. The commercial vehicle industry (mostly buses) is adopting on-board camera systems resulting in significant crash reductions due in large part to train operators performance improvements.
- **Electronic Stability Control:** These systems hold great promise in improving safety. To be more effective, this technology needs higher-quality mapping, more accurate land boundary definitions (better striping and marking), and roadway curve-speed warning systems.
- **Lane Departure Warning Systems:** Current systems are largely designed for major highways rather than rural roads where the majority of crashes occur. Remedies require better lane markings, more funding to counties, and better initial design of the systems to ensure proper construction and maintenance of these roads.
- **Side-Impact Protection:** Far-side impact protection needs more research and data, as they are different from driver side needs. Redesign of seat belts may be necessary to make sure additional injuries do not occur.

Issues Common to All of These Safety Strategies

Implementation of these technologies requires a commitment from the safety community and from the private and public sectors for seat belt and drunk driving campaigns.

Potential glitches/performance problems with these technologies have to be resolved proactively. With the iPhone, these inconveniences were relatively easy to overcome. With these safety systems, performance problems can be a life-and-death situation, and failure is not an option. Initially, the public may not be in agreement with these safety technologies and not as tolerant regarding glitches or performance problems.

Incentives and marketing tools should be considered for these systems, such as working with IIHS and NHTSA to not award a vehicle a five-star rating, unless it is equipped with one or more of these technologies.

Third-party evaluations like *Consumer Reports* may be necessary so the public will realize the benefits of their purchase.

Infrastructure

The Towards Zero Deaths (TZD) Infrastructure breakout session was made up of a cross section of professionals representing government (locals, state, and federal), researchers, and consulting engineers. The Infrastructure breakout was facilitated by Tony Kane and Tony Giancola, AASHTO and NACE, respectively. The objective of the breakout session was to: identify existing infrastructure strategies that have been successfully implemented; brainstorm new approaches that are untried but have potential; identify marketing strategies to increase the use of the current or future successful infrastructure strategies; and suggest future research needs to identify new infrastructure strategies that are feasible, practical, and deliverable.

Successful infrastructure strategies characteristics include: use of existing countermeasures (i.e., the FHWA 9-Proven Safety Countermeasures); use successful processes (i.e., *Highway Safety Manual*, Model Inventory of Roadway Elements [MIRE], and SafetyAnalyst); new Intelligent Transportation System (ITS) technologies; and the integration of data systems, particularly data on the local roadway networks.

Potential overriding marketing strategies identified in the breakout with a high probability of success included: educating and training government administrators at all levels on the best practices for TZD funding, streamlining of the federal-aid safety projects processes and best practices; targeting elected officials at the state and local levels to champion and provide resources; having state DOTs develop, adopt, and implement a TZD program and incorporate it into their Strategic Highway Safety Plans (SHSPs) such as Minnesota's program; understanding the benefit/cost of the overall TZD program, including the reduction in public health care costs that are possible with declined injuries and fatalities; reinforcing the need for collaborative efforts to include structure, champions, accountability, and process in implementation plans; and, the incorporation of ITS technologies in the infrastructure to improve safety.

Possible research needs identified in the breakout to support the infrastructure and marketing strategies above included: development of or revisions to agency policies for design and access management; cost of counter measure implementation vs. benefits; aging population impacts; future truck travel and appropriate counter measures; safety-based maintenance strategies; and the elimination of left-hand turns.

Emergency Medical Services

The Emergency Medical Services (EMS) breakout group, moderated by Dia Gainor, Idaho Emergency Medical Services Bureau, focused discussion on four top strategies: universal implementation of the National EMS Information System, with compliance by all states and territories; implementation and sustainability of Next Generation 9-1-1 for EMS applications; evidence-based and regulated approaches to EMS transport safety; and regionalized trauma/emergency care system implementation and sustainability.

The group discussed activities that will be key to the implementation of the national strategy, specifically:

- Market the concept that EMS is a system itself, within the transportation system.
- Develop an EMS-specific implementation guide to help highway agencies and EMS find opportunities for partnering.
- Distribute the national strategy outside of the highway industry, for example to public health, EMS, and national medical and emergency care organizations.

Summary

Discussions from the workshop, as well as other input received from highway safety stakeholders through webinars held in June 2010 and other meetings and conferences, will be used as input to the revised outline of the national strategy. Additional input will continue to be solicited from stakeholder organizations and individuals.

National Cooperative Highway Research Program projects will develop the national strategy document based on the outline and stakeholder input, along with a marketing and communications plan. This is scheduled to be completed in Spring 2011. A commitment to adopt and implement the national strategy will be crucial to further uniting highway safety efforts nationwide.

A stakeholder group has been formed to provide input throughout the process and review materials as developed. Stakeholders are asked to discuss the TZD effort with their organizations, provide additional comments, and promote adoption and implementation activities within their organizations. To join the group, contact Kelly Hardy, AASHTO, at khardy@aaasho.org.