

**Montana Department of Transportation Pooled Fund Meeting (TRB)
5:45 PM, January 13, 2014**

Marriott, Washington B4

Attendees:

AAA Foundation for Traffic Safety – Peter Kissinger

Caltrans – Joe Horton

Florida DOT/University of Florida – Richard Long

Idaho Transportation Department – Brent Jennings

Iowa DOT – Linda Narigon

Steve Gent

Iowa State University – Chris Albrecht

LADOTD/LTRC – Kirk Zeringue

Montana DOT – Sue Sillick

Lynn Zanto

Montana State University, Western Transportation Institute – Steve Albert

Wes Lum

Nic Ward

New Hampshire DOT – Tim Harmon

Texas DOT – Wade Odell

TRB – Lori Sundstrom

Utah DPS – Kristy Rigby

TODS Lab, University of Wisconsin-Madison – Andrea Bill

Opening and Background

After introductions, Lynn Zanto, MDT, presented an overview for the meeting and covered the following:

- “Traffic safety culture” is a growing paradigm and an interest among states as part of our Strategic Highway Safety Plan (SHSP) process that may help us reach our traffic safety goals (SHSP).

- It's not new – we've been dealing with this through our SHSP but we all recognize that serious and fatal injuries from traffic crashes are a critical public issue and understanding cultural influences is an important step to reducing these behavior caused crashes.
- Many of us have adopted a vision and strategy of zero fatalities (Toward Zero Deaths, TZD) – and the role of culture is critical in TZD effectiveness. One of the biggest challenges to reducing the number of fatal and serious injury crashes is changing driver behavior and creating a culture of safety.
- Many of our traditional traffic safety strategies remain effective, but we also need to consider innovative culture-based paradigms to reduce fatal crashes.
- Through our SHSP efforts, many states have made progress in reducing fatal and serious injury crashes but we are also starting to flatten out in our trends and it's the behavioral aspects that we need to break through. Research on this topic is difficult with few examples of applied strategies. As a result, there may be a need to develop and evaluate strategies to transform traffic safety culture in our communities.
- Recognizing these challenges, MDT is seeking to develop a pooled fund program that would fund research into methods to transform traffic safety culture.
- This pooled fund would involve a “program” of evolving and connected research projects rather than a pre-specified project.
- This program should complement and not duplicate the current research activities including:
 - 1). [NCHRP 17-69 project](#), **A Strategic Approach to Transforming Traffic Safety Culture to Reduce Deaths and Injuries** by researching the gaps noted and applying the strategies developed in that project (2 year effort),
 - 2). NCHRP 20-24 focused on a safety organizational culture (1 year effort),
 - 3). NCHRP 20-68A The Domestic Scan of Toward Zero Death States (programmed November, 2013). There is also guidance for implementing TZD underway and research related to factors contributing to the decline of traffic fatalities in the U. S. Timing of the proposed pooled fund should be considered in the context of these other efforts.
- This type of program could provide the funding longevity to develop and evaluate a rationale sequence of projects to expand knowledge in this area.
- The program of projects will be determined by the funding partners in the pooled fund.
- Partners will meet annually to decide on the overall research agenda and specify studies to be funded that year.

- In this collaborative way, projects will address the overall needs of partners to apply traffic safety culture to their priority safety areas.
- Jointly, the program will represent a coherent and substantial effort to systemically advance the knowledge necessary to develop and apply effective strategies to transform traffic safety culture.
- The goal is to research and develop strategies to change our culture so that safety is the priority in all our decisions, both personal and professional.

Defining the State of the Culture

Nick Ward, WTI presented a more detailed description of the traffic safety culture and events leading to the need for a comprehensive research program to address research needs for the nation. His PowerPoint Slides are attached as Appendix A and comments for each slide follow:

1. Welcome
2. Traffic safety as a significant public health issue.
3. Driver behavior is the largest cause of crashes.
4. Currently, the common approach to dealing with these behaviors is an engineering approach where the environment is designed to restrict behaviors (e.g., speed bumps) or minimize injuries when these behaviors lead to a crash (e.g., crash barriers). But in all cases, the reasons people choose to speed (motivation) remains.
5. "Traffic safety culture" is a new paradigm that tries to understand and transform the social reasons for such behaviors in our culture.
6. Slide 6 to 12 shows how interest in the topic of traffic safety has grown with NCRHP 17-69 being the first dedicated RFP.
13. There are several ways that safety culture is being used in this context. *Organization safety culture* refers to the values, beliefs, and attitudes of managers and staffs in traffic safety organizations and the policies and procedures they use to prioritize safety as a goal and criteria for decision making.
14. The *Traffic safety culture paradigm* is a new perspective on the analysis and response to driver behavior. It instead focuses on the social influences from culture on individual driver decisions to behave in ways that increase the safety of themselves and other road users. Note that a positive organization safety culture is necessary but not sufficient for the adoption of the traffic safety culture paradigm. It is necessary because a positive organization safety culture is necessary to generate the resources necessary to develop strategies in this paradigm and the patience to recognize that transformation within this paradigm operates over a much longer time frame than traditional methods that seek to change behavior in specific locations (e.g., slower speeds on roadway with automated

speed enforcement). For example, publicizing moving road blocks over the holidays will quickly reduce drunk driving during the period of that enforcement campaign, whereas it has taken many years to have our culture accept and widely adopt the idea of using a 'designated driver' because drunk driving is seen as less acceptable. But it is not sufficient, because a positive organization safety culture could be directed toward more investment in traditional traffic safety methods such as education, enforcement, and engineering. The additional necessary step is for innovation in exploring and adopting new paradigms for traffic safety.

15. *Traffic safety culture strategies* are specific programs design to transform the social factors in a culture that influence driver behaviors based on model(s) of human decision making in social contexts. Like education and public safety messages, these strategies rely on social media and other channels of communicating in society. However, traffic safety culture strategies focus on changing perceptions about the social factors that influence decisions rather than on knowledge (education) and hazard information (public safety). So, a speeding program based on education may communicate how speed affects stopping distance and a program based on public health may focus on the fatal outcomes of speeding. In contrast, a program based on traffic safety culture may challenge the culturally determined perspective amongst male teen drivers that speeding is fun and cool and masculine.
16. "The goal is to develop a process for changing values and attitudes so that safety is a part of every transportation decision, whether individual or organizational."
17. The process to achieve this goal must start with traffic safety organizations because they have the resources (and obligation) to improve traffic safety. This requires a positive organization safety culture. Many transportation organizations have already achieved this culture (e.g., TSD Vision). For those who have not, there is a need for transformational leaders and transformation programs directed at the level of the organization. With this achieved, organizations can then adopt and integrate the traffic safety culture paradigm into their planning (e.g., SHSP). Effective programs based on this paradigm will then transform the traffic safety culture in society – over time. As this transformation reaches critical mass, the prevailing positive traffic safety culture will then motivate society to seek additional efforts from their traffic safety organizations. And so we begin a self-reinforcing cycle to sustain traffic safety improvements. This pooled fund focuses on methods to support the grown of positive safety cultures in traffic safety organizations and developing strategies to transform traffic safety culture.
18. To move this paradigm forward, we need to explore new ways of funding research and collaborating amongst stakeholders. The pooled fund is necessary because of a lack of other funding sources and the need for a longer funding cycle to accommodate the longer time frame of strategies within the traffic safety culture paradigm.

19. The pooled fund would operate as a community with its members deciding on annual research goals. These would be revised and extended each year to develop an evolving and comprehensive program of research.

20. Questions?

Open Discussion of Needs

- Peter Kissinger was delighted that this program is getting started with so many having interest in it. He said we cannot get close to zero deaths unless we change the culture. Chris Albrecht, Kristy Rigby, Andrea Bill, Tim Harmon, and Brent Jennings also voiced a need for traffic safety culture research and a program.

Wade Odell expressed concern for differing demographics -- not one size fits all, for example New Jersey and California would have different cultures for drink/drive. How will the research address these different cultures? It was commented that there won't necessarily be a "one size fits all" solution. Likely, tools will be developed that will need to be adapted to particular demographics. In addition, if some of the participants wanted to participate in a project, but many others did not, a separate project could be initiated with just those interested in participating contributing funding, either under the umbrella pooled-fund study or a separate pooled-fund study.

- To help make this program more concrete, some wanted to know what research would be conducted. Although the thought is to have the partners eventually (and annually) decide on the research to be funded, one offered the list of potential topics that was included as an appendix in the initial (larger) description of the pooled fund program(Appendix B, page 12).
- It was stated that a standard evaluation protocol would be extremely useful.

Joe Horton said the organization structure and rules of this pooled fund program is important to Caltrans. The research will need to produce usable products and final reports within reasonable time frames. Several others expressed interest in developing the organizational structure of the pooled fund program, including the voting rules. One expressed interest in how to hire researchers. The group expressed an interest in a finite program (3-5 years) where the books are closed in the final year and, if further research is desired, a new pooled fund study could be initiated. Sue will gather some

example documentation from current pooled fund studies that function more like a program. The core group of interested individuals will work together to prepare the guidance documents.

- Joe also said the program also needs to have funds to support travel. At least one meeting a year was offered. The Western ITE will take place in North Dakota this July 1. Nic is presenting. This will have representation from half the nation and would be a possible meeting place for this pooled fund program. It was commented that FHWA Technology Transfer funds may be available to assist with travel.
- Tim Harmon said the pooled fund solicitation for this would require language to convince the DOT safety folks of the need and benefits from this program. Others discussed how to communicate the traffic safety culture knowledge out to those in DOTs who are not psychologists. They recognized the difficulty of communicating between transportation engineers and other disciplines such as public health professionals. The National State Highway Safety Plans will help to get those stakeholders involved.
- It was noted there is a safety culture subcommittee of the TRB Transportation Safety Management (ANB10) Committee. Nic Ward and Peter Kissinger are members.
- Wes Lum noted that more states may be interested since the voting for the NCRHP 17-69 project voting had about 25 states with votes of 4 or 5. He added that other agencies at the federal and local levels might be interested. With this level of interest, there may be a wide range of expectations; this will need to be considered as we proceed.
- When asked who would be interested in being in this pooled fund program all raised their hands.

Next Steps

Sue Sillick will complete and send notes from this meeting, update the description of the Traffic Safety Culture Pooled Fund Program, and advertise it on the TPF Web site. A meeting and teleconferences with interested parties will follow first to develop the guidance document(s) and, then, discuss research topics.

Appendix A – State of Traffic Safety Culture Presentation



TRP TSC Pooled
Fund Introduction His

Appendix B - Partnership for the Transformation of Traffic Safety Culture Transportation Pooled Fund (TPF) Program

Objectives:

This program is a cooperative effort of participating state DOTs and other (traditional and non-traditional) organizations with a vested interest in traffic safety. This long-term partnership will support an evolving and integrated project portfolio developed and revised each year by the partners, and complimentary to other related research activities, such as NCHRP 17-69: A Strategic Approach to transforming Traffic Safety Culture to reduce Deaths and Injuries. Together, these projects will accelerate the development and delivery of tools and services to transform the national, state, and community level traffic safety culture. The goal of this transformation is to support the Toward Zero Deaths (TZD) vision with sustainable traffic safety solutions.

Background:

The National Towards Zero Deaths (TZD) Safety Initiative is a cooperative and coordinated effort amongst state highway safety agencies and stakeholders. The transformation of the traffic safety culture is a primary element of the TZD strategy. Only through the growth of a positive safety culture can significant and sustainable reductions in crash fatalities and serious injuries be achieved. Such transformation would not only support traffic safety goals by reducing risky behaviors and increasing protective behaviors, it would also increase public acceptance of other forms of effective traffic safety programs.

As a starting point, the proposed pooled fund program will direct action research to measuring, analyzing, and transforming the cultural factors that influence the most common behavioral risk factors at the national and state level (see Figure 1).

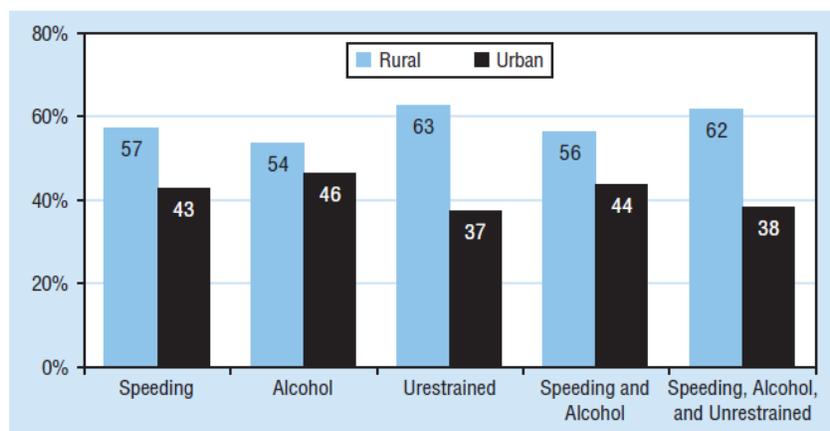


Figure 1. Common behavioral risk factors at national and state level (DOT HS 810 812).

Specific projects related to each risk factor may focus on driver type (e.g., subcultures), contributing factors (e.g., driving experience), and environment context (e.g., rural). These projects will also examine the various origins of cultural influences that may exist from the different levels of society (groups) with which people may identify (see Figure 2).

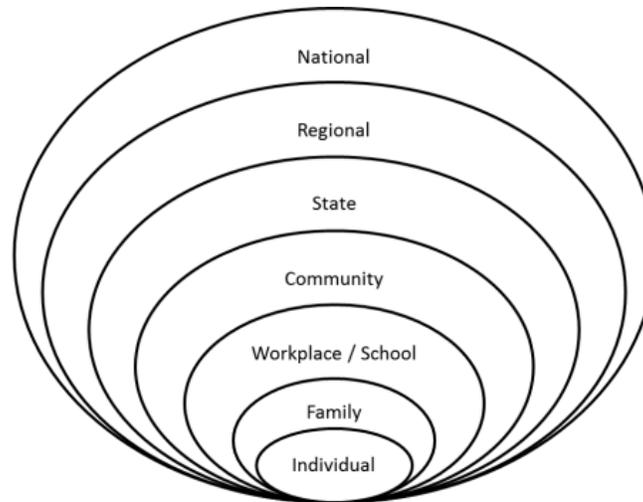


Figure 2. Illustration of multiple levels of cultural influence.

Structure:

In this context, the Montana Department of Transportation is partnering with the Center for Health and Safety Culture (CHSC) within the Western Transportation Institute (WTI) at Montana State University to (1) conduct research to solve specific culture-based traffic safety problems, (2) create training and education materials to enhance workforce understanding and application of traffic safety culture methods, and (3) provide technology transfer of best practices in traffic safety culture methods to all stakeholders. Together, these efforts will support the transformation of traffic safety culture within the families, communities, and organizations of participating states.¹

This partnership will support an integrated and multiyear program of research in a long-term effort to support the transformation of state and national traffic safety culture. Partners will determine the priority issues in each year. A work plan will then be developed for the selected priority issues. These work plans are expected to have three levels of scope. This funding model is intended to provide a sustainable program of research to support highway safety partners to transform traffic safety culture in order to achieve sustainable traffic safety goals.

¹ CHSC has been a leader in traffic safety culture in terms of co-founding the National Summit for Rural Traffic Safety Culture (<http://wirtsco.montana.edu/index.html>), producing a FHWA white paper to discuss the relevance of traffic safety culture to the national highway safety strategy (www.westerntransportationinstitute.org/documents/reports/4W3048_Final_Report.pdf), outlined an action framework to transform traffic safety culture (www.westerntransportationinstitute.org/documents/centers/culture/ACTION_Framework_for_Traffic_Safety_Culture_v5_2012-12-31.pdf), and has presented and published on the paradigm and research supporting the transformation of traffic safety culture (<http://mediasite.yorkcast.com/webcast/Viewer/?peid=e7c0cd5aebc040ceba1beda48c6b82321d>).

First, the partnership may generate ideas for general “services and tools” within the general “action framework” developed by the CHSC to meet the traffic safety goals of most partners.² For example, stakeholders participating at the recent National Roadway Safety Culture Summit identified a number of common needs to support the transformation of a positive safety culture for the driving public and traffic safety organizations:³

- Develop online courses for workforce development in the understanding and application of traffic safety culture transformation methods.
- Explore, synthesize, and define noteworthy practices both within and outside the transportation industry for developing and sustaining an organizational safety culture.
- Identify strategies, develop transformational leadership training, and develop supporting materials to help leadership promote traffic safety culture.
- Develop standardized survey tools, administration protocols, and analysis methods to assess impacts of efforts to transform traffic safety culture.
- Create repository of relevant literature and case studies of best practice relevant to the transformation of traffic safety culture and the formation of safety culture partnerships.
- Create an online forum to which professionals (professional societies and other stakeholder groups) can collaborate to promote safety culture.

Second, this program could conduct research directed to traffic safety problems that have a common cultural component shared by many communities and jurisdictions across the participating partners. For example, Figure 1 includes common behavioral risk factors that are evident both at the national level and identified in many state Strategic Highway Safety Plans (SHSP).

Third, this program can also be used to implement a limited number of demonstration projects of specific traffic safety culture transformation studies within a few selected communities. Examples of possible types of projects are listed in Appendix I. These projects may also be identified from the parallel and complementary NCHRP 17-69 research effort to develop a strategic plan for transforming traffic safety culture. These efforts could then be applied to every state that develops a strategic highway safety plan (SHSP) with an interest in transforming safety culture among the agency and driving population. Depending on the results, these projects can then be modified and expanded for implementation within other partner communities. This could be done either within the current program or as a separate pooled fund project amongst participating partners.

² www.westerntransportationinstitute.org/documents/centers/culture/ACTION_Framework_for_Traffic_Safety_Culture_v5_2012-12-31.pdf

³ <http://www.cvent.com/events/roadway-safety-culture-summit/event-summary-39eba6b60c964968ad46ba91a85866d4.aspx>

Scope of Work:

The partnership will develop an appropriate method of scoping and managing the scope of work for this pooled fund program. As an example, the following method has been successful in a current program (TPF-5(081)); this is just an example and the process to be followed would be developed by the TPF Technical Advisory Committee (TAC).

1. Board of Director (BOD) members solicit and develop problem statements.
2. BOD prioritizes problem statements.
3. Program administrator prepares Request for Proposals and collects proposals from researchers in partnering states.
4. BOD prioritizes proposal topics.
5. BOD reviews, discusses, and prioritizes submitted proposals.
6. Proposal are scored and ordered based on priorities collected in item 5 and weighted values that are based on state partner commitments that year.
7. Annual work plan is prepared by the program administrator who also facilitates contracts between the selected researcher(s) and the Iowa DOT.
8. State DOTs form and lead the individual project TACs for projects awarded to a university or entity in their state (other members can request to serve on the TAC).
9. Projects are tracked quarterly.
10. Draft final reports are reviewed by the home state as well as by the BOD.
11. Final reports are posted to the program webpage and sent to national research report repositories.
12. Implementation and technical transfer opportunities are discussed by the BOD.

Benefits:

The benefits from this pooled fund project include a wide variety of tools and services including completed tools for implementation and deployment, workforce development and training delivery, best practice case studies, and traffic safety culture project development and evaluation. These benefits will be of mutual interest and benefit to pooled fund partners.

Requested Funding:

The proposed funding model is intended to support an evolving partnership to support a long term and integrated program of research. A minimum of 4 contributing partners is desired. The typical commitment amount is \$50,000 per state, per year, although a commitment range from \$10,000 to \$80,000 per year is expected. All participants will have an equal say with regards to project votes. A minimum total of \$200,000 per year in commitments is desired.

Appendix I – Individual Project Concepts (examples)

Previous work by the CHSC indicates that bystander engagement (especially in response to strangers) is a powerful predictor of efforts to discourage others from driving while impaired. This study will extend this research to develop media campaigns and supporting knowledge to reduce impaired driving through bystander engagement.

- Can a universal media campaign based on local messaging increase bystander engagement to reduce impaired driving?
- How can local stakeholders support increased bystander engagement?
- How can state agencies support and foster traffic safety improvements at the community level?

Previous work by the CHSC indicates that the culture of the workplace – especially for jobs that include professional driving – can have broad influence on adult driving behavior, even outside the boundaries of the workplace. As such, the safety culture of the workplace can represent an important social influence on the transformation of traffic safety culture across other levels of the social ecology (including the family and community connected to the worker and workplace).

- Which norms are most predictive of increasing bystander engagement in the workplace to increase safe driving behaviors?
- What tools and resources are most important for workplace leaders to implement processes to increase bystander engagement and increase safe driving behaviors?

Traffic crashes are the largest cause of death amongst teenagers. Novice teen drivers have an increased crash risk that can be attributed to decision making affected by the teen culture and social interactions with passengers. As they emerge as new drivers, there is an opportunity to transform their developing traffic safety culture. Indeed, preparations for a positive safety culture could begin earlier as children and be nurtured in family and youth recreation settings.

- What aspects of the teen culture impact traffic safety culture and unsafe driving decisions (e.g., distracted driving) amongst novice teen drivers?
- What phases of the developmental path can be used to instill positive values in children that can prepare them for adopting a positive traffic safety culture as teens?
- What type of program or driver education curriculum can transform the developing traffic safety culture of novice teen drivers?

Focus on family level to gain an understanding of the cultural determinants of seat belt non-compliance and develop interventions based on this understanding to increase usage. Attention within social ecology will focus on rural adults, families, law enforcement, local leaders, and youth.

- Which norms (across the social ecology) are most predictive of improving seat belt usage among rural drivers?
- How are these norms developed, learned, and perpetuated within families?

Conflicts between motorized vehicles and vulnerable road users such as pedestrians and bicyclists are a significant safety issue. Many of these conflicts may reflect different culture between groups in using the road system. This study will examine the culture of each of these user groups in terms of the beliefs, norms and attitudes regarding (a) how to interact with other user groups, and (b) how other user groups are perceived to interact. By examining the separate cultures and the (mis)perceptions each may have of the other groups, it will be possible to better understand and improve interaction scenarios that typically result in conflicts.