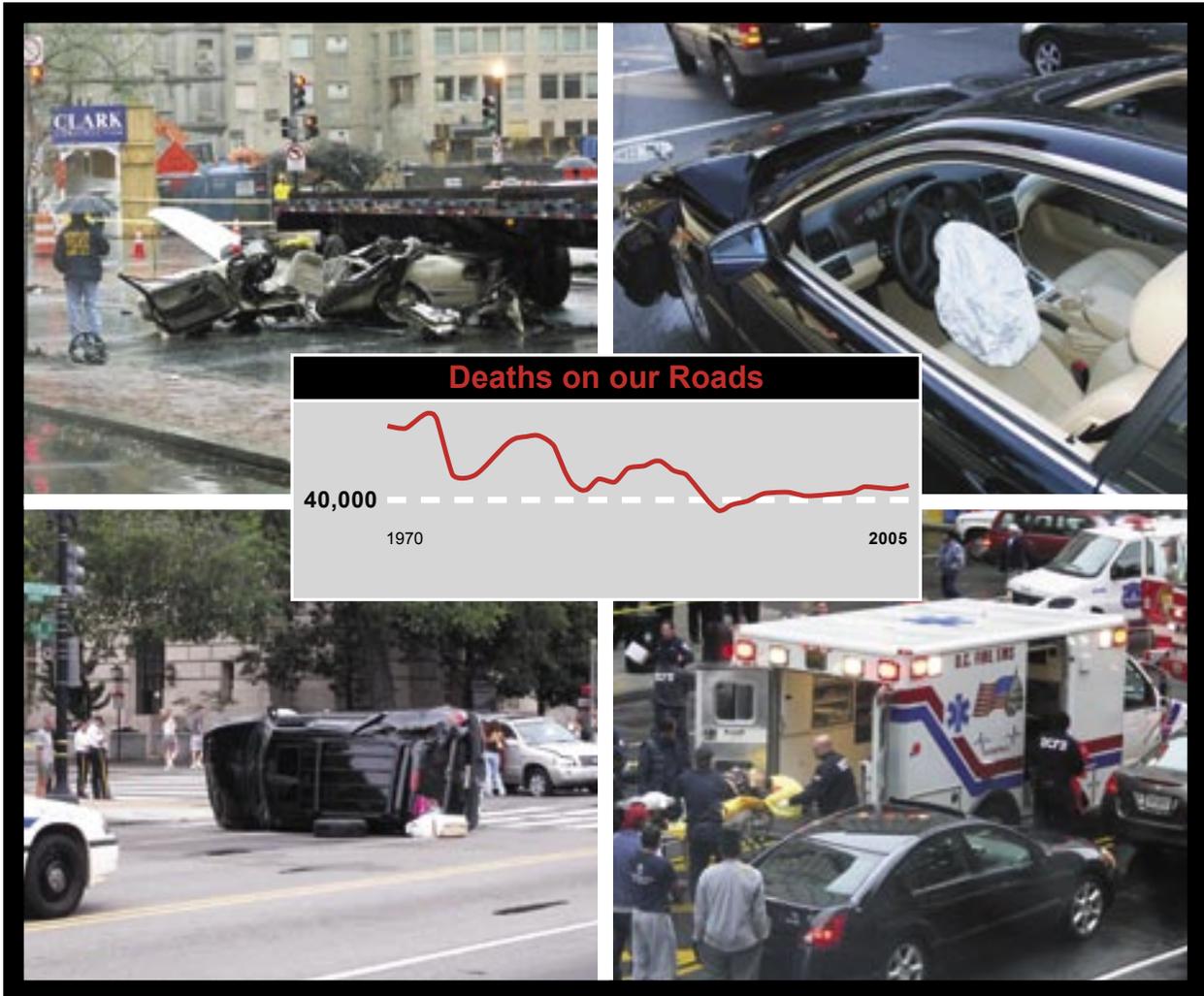


# Improving Traffic Safety Culture in the United States

## *The Journey Forward*



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# Improving Traffic Safety Culture in the United States: The Journey Forward

## Summary and synthesis

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In 2006, the AAA Foundation for Traffic Safety made a long-term commitment to address the “safety culture” of the United States, as it relates to traffic safety, by launching a sustained research and educational outreach initiative. The overarching goal of this initiative is to transform what we believe is the current “culture of complacency” or a “culture of indifference” by igniting and sustaining serious public dialogue about traffic safety.

Recognizing that affecting cultural change was outside of our experience, the first step on this journey was to commission a series of articles addressing this nebulous concept of “safety culture” from the diverse perspectives of more than 20 top researchers from fields including public health, public policy, social psychology, and civil engineering. Published in April of 2007, *Improving Traffic Safety Culture in the United States: The Journey Forward* contains many insightful observations and recommended practices, highlighting examples that might be worth following, mistakes to avoid repeating, and avenues yet unexplored. This collection of papers can be downloaded from the AAA Foundation’s Web site at <http://www.aaafoundation.org/projects/safetyculture>.

Owing to both the wisdom contained within this compendium of papers, and also its physical size, we commissioned Dr. James Hedlund to summarize and synthesize its 22 articles and 378 pages into this more succinct and reader-friendly format.

We are extremely gratified that several major transportation and traffic safety conferences have added “safety culture” to the agendas for their 2008 meetings.

Based on the recommendations of several of the contributors to our compendium, the AAA Foundation has initiated a program of conducting periodic surveys of public knowledge, attitudes, and behaviors related to traffic safety: an established practice in Canada, Australia, and several other countries. We intend to use information gained from the surveys to assess public knowledge of traffic safety issues and support for countermeasures, investigate where additional public education efforts may or may not be needed, and identify significant trends in public opinion that may be cause for concern in the safety community — in short, to assess the “safety culture” within the United States. Our first national telephone survey of the American public will be released in early 2008. In addition, we expect to begin other research and educational efforts under our “safety culture” initiative in 2008 and beyond.

-J. Peter Kissinger, President and CEO, AAA Foundation for Traffic Safety

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### **Introduction**

In 2006, 42,642 persons died in traffic crashes in the United States. That’s 116 every day, almost 5 every hour, one every 12 minutes. And 2006 was a good year: the toll was 868 higher in 2005. Each year since 1962 has produced more than 40,000 traffic fatalities, with the exception of 1992 when the total dipped to 39,250.

For every traffic death in 2006 there were about 60 injuries: more than 7,000 every day, almost 300 every hour, one every 12 seconds.

There certainly has been progress: traffic fatalities in 2006 were 22% lower than the all-time high of 54,589 in 1972. The 2006 fatality rate of 1.42 per 100 million miles of travel was 67% lower than 1972’s rate of 4.33. But 42,642 deaths are far too many.

Each individual death and injury is sudden, shocking, unpredictable. They strike young and old, rich and poor, in all seasons and at all hours. Everyone who drives or rides in a motor vehicle or walks or bicycles on or across a road is at risk. Collectively, though, traffic crashes, injuries, and deaths are all too predictable and preventable. They could be reduced by implementing known methods to increase seat belt use, to reduce speeding and alcohol-impaired driving, to incorporate additional safety features into vehicles, and to improve our roadways. They could be reduced further by investigating, developing, and implementing creative new strategies. Some progress is made every year, but far more could be done.

The United States has a strong culture of safety in many areas. We expect – we demand – that our food is safe to eat, that our medicines are free from harmful side effects. We are not willing to accept a single commercial airline, train, or subway passenger fatality. But we seem not to care about more than 40,000 deaths and 2,500,000 injuries each year from traffic crashes, or at least we don't care enough to take serious action to reduce the toll. The best descriptions of our current traffic safety culture may be "indifference" or "complacency."

In 2006 the AAA Foundation for Traffic Safety sponsored a workshop to develop a long-term traffic safety research agenda [a]. While participants proposed an extensive list of specific research topics, they raised the broader issue that real progress in traffic safety depends far more on changing this culture of indifference than on developing or implementing any specific countermeasure.

In response, the Foundation commissioned 22 papers on traffic safety culture in the United States. The collected papers [b] range from the general to the specific, from broad discussions of social culture and individual behavior to specific recommendations on methods to change the current traffic safety culture.

This brief overview attempts to capture the main threads of the 22 papers' somewhat daunting and occasionally contradictory 378 pages. In a sense it serves as an executive summary for the whole volume. However, its views are those of the overview's author and do not claim to be endorsed by any of the individual papers' authors or by the AAA Foundation. It necessarily omits much and simplifies much more. It cites some papers and quotes some authors directly but does not attempt to be complete – the same thoughts may appear in other papers as well. It invites you to read specific papers

for more information on any topic, to think further about their ideas, and to develop and implement your personal strategies for changing our traffic safety culture of indifference.

## **Culture, safety culture, and traffic safety culture**

### *Culture*

Before attempting to understand traffic safety culture it's useful to consider briefly the meaning of culture without the adjectives. While the broadest definitions include all human thought and activity, culture, as it relates to safety, encompasses "the beliefs, values, norms, and things people use, which guide their social interactions in everyday life." [4] So culture is inherently social, providing the structure "through which we come to understand ourselves and our relationship to the world" [4] and upon which we base our interactions with others or actions that may affect others.

Different groups have different cultures. We all belong explicitly or implicitly to many groups defined by geography, ethnicity, gender, education, profession or occupation, religion, political views, interests, and the like. Each group can be considered to have its own culture, consisting of the common or dominant beliefs, values, and norms of its members.

### *Safety culture*

Safety culture is thus "the implicit shared values and beliefs that determine the way in which the society organizes and acts" [1] in matters that affect safety. Here, "society" may refer to the entire United States, to a smaller unit such as a state or city, to a formal organization such as a corporation or a law enforcement agency, or to an informal group. Safety may refer to a specific setting such as traffic safety or to a broader context that considers other risks of injury or of disease. Safety culture can be assessed by observing what value and priority the society gives to safety through its policies and actions, [7] by the society's commonly-accepted behavioral norms, [8] and by the society's actions toward individuals who violate these behavioral norms.

### *Traffic safety culture*

With this as background, what are the key characteristics of the traffic safety culture in the United States in 2007? Four features stand out.

1) Complacency and indifference: As noted in the introduction, we accept more than 40,000 traffic fatalities and 2,500,000 injuries each year. [0] Traffic crashes are the leading cause of death for America's children, adolescents, and young adults but they are not seen as a major public health problem. [3] "The relative stability and predictability of the number of highway deaths gives an aura of being under control, suggesting there is no crisis to which we must respond." [5] While there are National Institutes of Health dedicated to kidney disease, hearing disorders, and dental research, there is none for traffic safety. [8] "Road traffic injuries are the only public health problem for which society and decision-makers still accept death and disability ... on a large scale ... as a justifiable externality of doing business." [5]

2) Safe vehicles and roads or safe drivers: In the first half of the last century, the common view of traffic crashes was that they were accidents, acts of God, or resulted from human error by "the nut behind the wheel." A more sophisticated understanding emerged in the 1960s. The famous Haddon matrix classified factors affecting crashes and injuries by time (pre-crash, crash, and post-crash) and by the three physical agents of driver, vehicle, and roadway environment. [3, 5] Ralph Nader's book *Unsafe at Any Speed* led directly to the formation of the agency that would become the National Highway Traffic Safety Administration and to a host of vehicle safety regulations aimed at producing safer cars. [1] Some roadway safety improvements also had been implemented, most notably the Interstate Highway System. These developments produced the dominant traffic safety paradigm over the past 50 years: "vehicle-occupant protection through vehicle and infrastructure technology." [1]

Measures to improve driver safety were lower priority but were not ignored. Indeed, in the last 30 years, we have seen substantial improvements in several areas including increased child safety seat and adult seat belt use and reductions in alcohol-impaired driving. These have been achieved largely by deterrence: passing laws to require actions such as belt use and prohibit other actions such as alcohol-impaired driving, publicizing and enforcing the laws, and punishing the offenders. This deterrence strategy is the logical successor to the "nut behind the wheel" mentality: individuals are responsible for their own driving behavior, they must conform to the professed norms of wearing belts

and not driving while impaired, and they can expect to be detected and punished if they do not.

3) Strategies not based on science: Traffic safety strategies far too often are based on "wishful thinking instead of science." [6] This is especially true for behavioral strategies directed to drivers, passengers, pedestrians, and cyclists. Many programs intended to alter their behaviors to improve safety "are based on overly simplistic notions of the determinants of human behavior. As a result, these efforts all too often fail." [9] Roadway traffic safety strategies are not much better: "The prevailing culture is to think that while one must apprentice in carpentry, road safety can be delivered on the basis of opinion, folklore, tradition, intuition, and personal experience." [20] Only vehicle safety follows the scientific model that proceeds from theoretical principles to experiments, prototypes, testing, modifications, implementation, and evaluation.

4) Safety culture varies: There is no single traffic safety culture in the United States. Rather, the previous observations are generalizations across all areas of traffic safety and all the country's inhabitants and organizations. Exceptions abound. To mention just three:

- Infant and toddler safety seat use is now an integral part of the whole country's safety culture. Hospital policies require newborns to ride home in a child safety seat. NHTSA's 2006 survey reported that 98% of infants under the age of one and 89% of toddlers age one to three were riding in child safety seats. [c] There's no indifference here: parents understand that they must properly secure their infants and toddlers in a scientifically-designed seat on each trip.
- Traffic safety culture differs in rural and urban areas. Rural residents on the whole are more conservative, more independent, and less willing to accept new ideas than urban residents. This may explain why seat belt use typically is lower in rural than in urban areas. [3, 15]
- Normal traffic behavior differs across the country. For example, in much of the country pedestrians cross any street at their peril (even during a Walk cycle at a controlled intersection). But in California, vehicles rou-

tinely stop the moment a pedestrian steps into a roadway.

### **Other safety cultures**

Some safety cultures are far more concerned, active, and successful. Examples come from other transportation modes in the United States, from corporations and organizations, and from other countries.

#### *Other transportation modes*

The expected standard for commercial air transportation in the United States is “zero defects” – no fatal crashes; indeed, no crashes at all. Performance almost meets this goal. In the past five years there have been only eight fatal commercial air crashes that claimed a total of 107 lives, an average of fewer than 22 fatalities per year compared to the more than 40,000 annual traffic fatalities. [d] Each commercial air crash triggers an extensive investigation to determine its causes and recommend measures to prevent its recurrence. Commercial rail transportation is held to similar “zero tolerance” standards for passenger and crew fatalities. [5]

#### *Corporations and organizations*

Some organizations, especially in high-risk industries such as nuclear power and aviation, have strong safety cultures. These are characterized by the organization’s commitment to safety through its words and actions; the priority given to safety as reflected in the organization’s time and resources; the involvement of management at all levels in safety; the formal safety systems of requirements, monitoring, and reporting; and the informal system of rewards and punishment for safe and unsafe actions. [7, 11] The challenge is to adapt and apply the safety culture principles and practices developed in these structured work environments to the entire population of the United States, through the federal and state governments, and to all the businesses, organizations, and informal groups involved in vehicular travel and traffic safety. “While the concept of safety culture has been fundamentally applied to organizations or groups, it has yet to be systematically applied to the population at large.” [7]

#### *Other countries*

The United States is no longer the world leader in traffic safety. [0] While traffic fatalities were dropping 19% in the United States from 1970 to 2004

they dropped 46% in Canada, 57% in Great Britain, 58% in Australia, 63% in Sweden, and 75% in the Netherlands. [18] The traffic fatality rate per population is now almost 50% lower in Australia than in the United States. [5, 19]

In 1997, the Swedish parliament adopted a traffic safety vision called “Vision Zero,” with the long-term goal of zero traffic fatalities and zero serious injuries. [22] Other countries, including Australia, Canada, the Netherlands, and the United Kingdom, have similar policies: that traffic fatalities and serious injuries are not “an unavoidable side effect of road transport” [18] but that the transport system must be designed so that “a simple mistake or error of judgement” by a law-abiding driver in a safe car cannot cause a fatal crash. [19] Implementing these policies requires an overall road safety strategy, clear goals and performance measures, strong leadership, and coordination across the organizations involved. [19] A few states have adopted similar long-term goals, but the United States as a whole and the key traffic safety organizations have not followed their lead.

Several factors may contribute to the different safety cultures in these countries: governments that are more willing to intervene to protect an individual’s safety, a more scientific approach to selecting countermeasures, support and funding for these measures from legislatures, easier implementation due to fewer decision-makers, and a public that is more accepting of government interventions. [5]

### **Obstacles to improving the traffic safety culture in the United States**

An improved traffic safety culture likely would be characterized by changes in three broad areas. The country as a whole would raise the priority of traffic safety and would increase the resources devoted to it. Organizations and persons who influence traffic safety or who are directly responsible for it would think broadly and would implement the most effective scientifically-proven strategies. Individual drivers, passengers, cyclists, and pedestrians would act more safely in many ways, from wearing seat belts to obeying speed limits. But there are many obstacles to change in each area.

#### *Individuals*

Individual drivers, passengers, cyclists, and pedestrians cannot take safety on the roads for granted, as something guaranteed in the sense that safe food or medicines are essentially guaranteed. Rather, each individual’s actions contribute sub-

stantially to the individual's traffic safety. "When you get right down to it, traffic safety is largely the responsibility of individual drivers. [11]

One price of this responsibility is restrictions on individual actions through laws, policies, and cultural norms. These restrictions may not be welcome: "Citizens favor health and safety but not restriction of freedom or comfort." [1] However, everyone recognizes that some restrictions on individual actions are legitimate to prevent harm to others. [10, 19] The issue becomes one of balancing individual freedom and mobility against the risk of crashes and injuries. Again, different cultures have different positions on where this balance should be set. As one example, "The notion that individual behavioral freedoms should outweigh risks to other road users ... is increasingly unacceptable in Victorian [Australia] society." [19]

Part of the difficulty in convincing the public that additional restrictions are warranted – wearing seat belts or obeying speed limits, for example – is general apathy to the risks of traffic crashes and injuries. Other obstacles include:

- A sense of individual invulnerability. A fatality rate of 1.42 per 100 million vehicle miles means one fatality every 70 million miles: that's more than 4,500 years of driving 15,000 miles annually.
- A sense of individual control. "The overwhelming majority of drivers consider their skills to be above average." [8] Crashes, though, are caused by bad drivers – someone else. [11] Therefore, most drivers see no need to change their perceived skilled and safe behavior to make it even safer.
- A sense of anonymity on the road. Safe driving is "a cooperative social experience that requires respect for other road users and observance of traffic-control devices, traffic laws, and cultural norms." [13] But drivers are isolated in their vehicles, unable to interact personally with other road users, anonymous in many senses. And "people behave differently when they are anonymous." [13] The same driver who routinely waits until the last opportunity to join the travel lane when two lanes merge into one would never attempt to cut into a line in a face-to-face encounter at a checkout line or ATM machine.

- A sense of privacy in the car. Many drivers do not want to be observed, monitored, or recorded in their vehicles. These privacy concerns have been used to oppose automated red light and speed enforcement using cameras. [1]

#### *National priorities, values, and resources*

Three interrelated reasons explain the limited priority and resources devoted to traffic safety at the national level. The first is that traffic safety is not seen as a high-priority social problem, in part because "traffic crashes lack outrage-evoking characteristics." [8] They occur in a familiar setting – the roads on which we all travel every day – and appear to be largely under our control as drivers, cyclists, or pedestrians. Crashes, injuries, and fatalities occur one or two at a time, but very regularly, so that a crash must involve a celebrity or other unusual circumstances to be newsworthy. [17] Contrast this setting with commercial air travel: passengers are in a strange environment, sealed inside a plane, completely under the pilot's control. A crash likely kills dozens or hundreds of people and makes headlines across the country.

A second reason is the common understanding of the proper role of government in traffic safety and the circumstances in which government intervention is legitimate. In the United States, it has long been understood that government at all levels is responsible for providing efficient and safe roads. Over the past 40 years it's also come to be understood that the government can and should assure that vehicles are safe to drive.

Government control of individual actions has been considered legitimate to prevent harm to others, preserving individual freedoms as much as possible. [10] Thus the government can establish and enforce the basic traffic laws to control road users. With the partial exception of speed limits and speed control, discussed subsequently, the public generally understands and accepts these laws: there's little objection to requirements to drive on the right side of a two-lane road, to stop for a red light, or to use headlights when driving at night, and these behaviors are embodied in the road user culture.

In contrast, restrictions perceived as affecting only a person's own safety, and compliance with these restrictions, have come slowly and with some difficulty. Forty years after seat belts were standard equipment in all passenger vehicles, and thirty years after the first seat belt use law, belt use is only 81% (during daytime hours, and lower at night). Only 20 states have motorcycle helmet laws

covering all riders and in 2005 only 48% of motorcyclists nationally wore helmets. [e] Many people do not understand or acknowledge the fact that a person who injures only himself in a traffic crash often generates substantial costs to society for his medical care, rehabilitation, and unemployment benefits. [10]

Finally, of course, traffic safety must compete for resources with a host of other issues from national security to health care to unemployment. Within transportation, highways nationwide need billions of dollars just for maintenance. Of course, resources always can be found for the top priority issues. So the argument of resources returns to the issue of priority.

### *Organizations and the traffic safety establishment*

Many organizations share authority and responsibility for traffic safety, and for the component parts of producing safe roads, vehicles, and drivers, with no single organization having the lead. What's more, many traffic safety organizations and disciplines lack the solid base of knowledge and the trained professionals to implement this knowledge into effective traffic safety strategies. [20]

Vehicular safety is most firmly based. For over 40 years, vehicle manufacturers have conducted extensive research on ways to improve vehicle safety. The federal government also has conducted research on vehicle safety, issued vehicle safety standards that must be satisfied by all new vehicles, and monitored compliance with these standards. The government investigates potential safety-related vehicle defects and can require manufacturers to recall vehicles and fix or replace defective components. The system is based on scientific principles; decisions usually are based on sound science.

Roadway safety is more problematic. Individual specifications for features such as roadway width, pavement characteristics, and bridge heights follow well-established standards. Yet these standards are, "by and large, the embodiment of opinion and personal experience – not of scientifically supportable fact." [20] The implications of broader roadway design decisions on safety frequently are not well understood, or perhaps even considered: "Civil engineers graduate from a four-year program and enter practice without being taught about the link between the design decisions they will make and the crash frequency and severity that will follow." [20]

Driver and pedestrian safety is even less scientific, even more influenced by "common sense nonsense." [9] States have the lead because states establish and enforce traffic laws and license drivers. But there are no real standards for states to follow. There is substantial research on the effectiveness of many traffic safety laws but no requirements or, with few exceptions, no strong incentives for states to enact and enforce effective laws. Similarly, while research strongly supports certain enforcement techniques, such as sobriety checkpoints to deter alcohol-impaired driving and high-visibility seat belt law enforcement, again there are no standards or requirements for state programs. "We need to ask why we require rigid compliance with performance standards on the part of auto makers, while leaving drivers and the governments that regulate them to be largely self-regulating." [1]

An additional obstacle to effective state behavioral traffic safety programs is the political nature of state highway safety offices and the lack of trained behavioral traffic safety professionals. There is no behavioral traffic safety profession comparable to the mechanical and civil engineers who study and develop methods to improve the safety of vehicles and roads. Many disciplines are needed – epidemiology, sociology, psychology, communications, to name a few – and a highway safety office should have expertise in all. Behavioral change is difficult, so highway safety offices need to plan strategically, for the long term, using a broad and systematic approach, choosing strategies based on sound science. They must stick with these plans despite pressures from within and without to address the latest "flavor of the month." And they must resist the temptation to follow the politically easy route of basing programs on education, simply telling road users how to act safely. "Despite readily available evidence [to the contrary] in our everyday dealings with friends, family, and coworkers, humans cling tenaciously to the belief that individuals can be persuaded to engage in any behavior simply by being told that they should do so." [9]

Resource limitations have substantial effects. Law enforcement agencies across the country are understaffed at the same time that homeland security has added additional responsibilities. As a result, traffic enforcement has declined. [1, 6] Prosecutors and judges face the same overload. Jails are overcrowded; probation offices frequently have unmanageable workloads. The deterrence system of traffic laws, enforcement, and sanction is seriously weakened when enforcement is minimal and punishment is uncertain.

## How to change the traffic safety culture in the United States

Changing the traffic safety culture – the values, beliefs, and actions that affect traffic safety – is difficult and problematic. There's no formula for cultural change. But there are some general principles and there are some strategies that may succeed. And there's no reason why the culture could not be changed: "It is difficult to imagine why the United States could not be one of the safest countries in the world if it wanted to be." [18]

### *What should happen*

The goal is to "make traffic safety normative." [12] For many individuals, this means "a reordered set of values, ... beliefs, and ... altered norms for appropriate behavior" [9] in traffic. The most important value change would be to raise the demand for and expectation of traffic safety substantially, perhaps to the same level as for safe air travel, food, and medicines. The most important behavior change would be for individuals to regularly obey all traffic laws – stop at stop signs and red lights, obey speed limits, use turn signals – and be considerate of other road users. For private sector organizations this means both formal commitment to traffic safety through policies, practices, and rewards and also informal norms of safe behavior on the road. [7] For government, at all levels from municipal to national, this means increasing the priority of traffic safety, developing long-term strategic plans using strategies based on sound science, and providing the resources to implement these strategies [5, 9, 20]. Together, actions in all three arenas can produce "safer drivers, in safer cars, on safer roads." [6]

### *How to make it happen*

No single action or strategy can hope to produce such a cultural change. Rather, many actions and strategies at different levels, some quite broad and some quite specific, may combine to change values and norms. Each of the compendium's 22 papers contains useful ideas, to which the following list provides an introduction. If enough are implemented, they may "irritate authorities and the public sufficiently to start change." [1]

Information, communications, and media:

- Track traffic crashes, injuries, fatalities, and costs; report the toll regularly in the media. [1, 17] Put faces on the numbers to counteract the anonymity of statistics. [13]

- Use surveys to measure public knowledge and attitudes, generate media and public interest, help establish priorities, and measure program effectiveness. [6]
- Use communications and education methods to influence the traffic safety agenda and build support for countermeasures rather than in largely futile attempts to change individual behavior. [9, 10]
- Create and use communications plans based on solid information on how messages are delivered, received, and remembered. [17]

Programs:

- Build programs on sound scientific principles rather than on intuition or political expediency. [4, 8, 9, 20]
- Improve driver feedback to provide real-time information on unsafe driving practices. [14]
- Tailor programs to the geographical, cultural, or institutional context: cultural and driving norms differ. [15]

Research:

- Conduct more basic research on the fundamental issues underlying safer roadways, vehicles, and drivers. "It is research that generates knowledge and knowledge is the engine of progress." [20]
- Study how to get things done, not just what should be done; topics include performance management, effective leadership, [19] and effective communication strategies. [17]
- Learn from other countries, such as Australia, the Netherlands, Sweden, and the United Kingdom. [5, 19, 22]
- Establish an infrastructure to encourage the implementation of effective countermeasures. [21]

Management:

- Provide strong, consistent, and coordinated national leadership for traffic safety [16, 19, 20]. Use this leadership to encourage citizens to become involved in improving traffic safety.

- Establish national and state traffic safety goals and strategic plans. For states, build on the safety management plan requirements of SAFETEA-LU. [18, 19, 22]
- Build the demand for trained highway safety professionals by appropriate federal and state requirements and incentives, for example by requiring a traffic safety review for community and roadway planning and construction decisions. [20]
- Establish performance goals with regular measurement, reporting, and accountability at national, state, and municipal levels. [18, 19]
- Raise the priority of traffic safety in law enforcement agencies and the courts. [1, 5]
- Involve the public health and medical communities in national, state, and local traffic safety initiatives. [3]
- Involve the research community more closely in traffic safety program planning and implementation, to encourage strategies based on sound science. [4, 9]
- Start locally: municipalities and states can lead by implementing strategies to address their specific traffic safety problems. [4, 16]

### *Speeding: an example*

Speeding provides an excellent test case. All roads have speed limits, but they are routinely ignored. United States culture encourages speeding in many ways, from roads and vehicles designed for high speeds to media that encourage speed. Most drivers habitually speed. Speed limits traditionally are set at the 85<sup>th</sup> percentile travel speed: this means that speeding drivers may help raise speed limits even higher. The consequence is not surprising: speeding was documented in almost one-third of all fatal traffic crashes in 2005 and probably was involved in many more. [16] But with speeding so entrenched in driving culture, there's little perceived legitimacy in efforts to control speeding. [10] The speeding culture can be changed by efforts at national, state, and local levels to make speeding control a national priority with effective funding, communications, data, and research and to implement speeding control programs in selected target areas with strong public support, again built on solid data. Speeding already has been controlled in some specific locations. [16]

## **Conclusion**

Changing an entire culture of safety is a daunting task. It will require individuals to change their values and behavior, organizations to change their policies and practices, and government at all levels to change priorities and resource allocations. The ideas and actions outlined above are indeed difficult and in many instances uncomfortable. But they can be implemented and the traffic safety culture can be changed. The successes already achieved in increasing seat belt and child safety seat use and reducing alcohol-impaired driving can serve as examples and motivation, as can the change in United States norms, attitudes, and behaviors regarding smoking and recycling. [2, 3, 10, 16]

We have a choice. If we do nothing, and, if the casualty rate per mile of travel remains at the current level, we can expect over 70,000 traffic fatalities annually by 2030. If we continue making small gains we likely will continue the results of the past decade, with "only" 40,000 to 45,000 fatalities each year. But if we change the culture we can reduce fatalities and injuries substantially, as other countries have done: "Any community can have the level of road trauma it is prepared to accept." [19] The only question is whether individually and collectively we have the necessary commitment and will. "The challenge for society has been and remains whether we are prepared to take action to reduce casualties." [10]

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