KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

SAFEKAN

Road to Zero Fatalities

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CHAPTER 1: WELCOME

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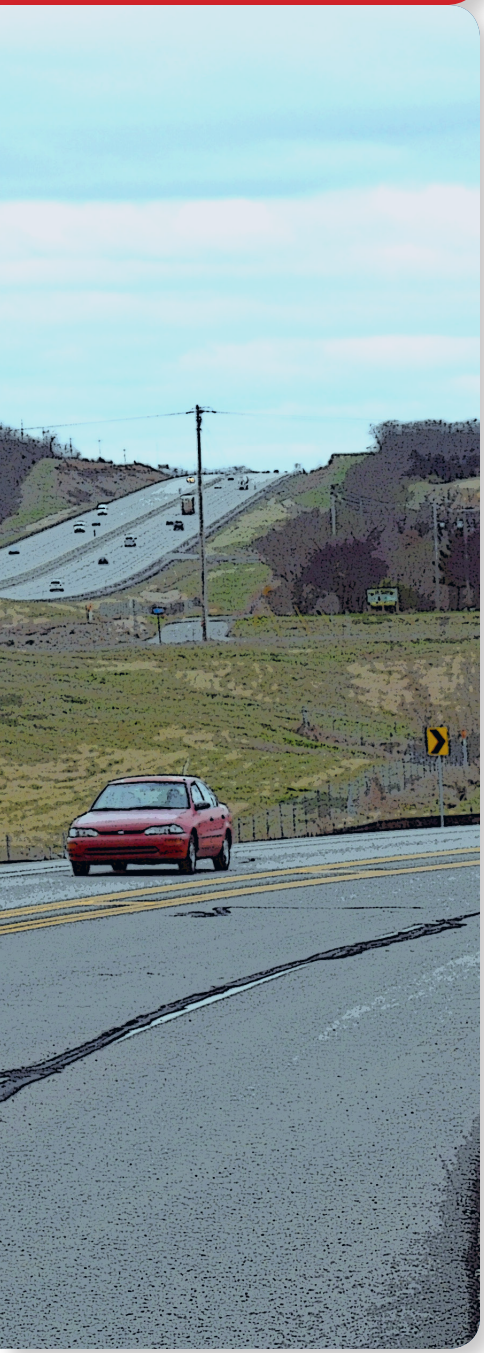


INTRODUCTION

Why Plan?
A strategic highway safety plan is a coordinated and informed approach to reducing highway fatalities and disabling injuries on all public roads.

By *coordinated*, we mean that many agencies staffed by people with a variety of skills take part – including engineers, planners, educators, persuaders, law enforcers and medical care providers.

Informed refers to a need for crash data. It also means using research results in the deployment of proven safety countermeasures to make travel safer.

All public roads include the 10,000 miles of road within the Kansas state highway system and the 130,000 miles of road outside of that system.

On average, 2,055 people die, or suffer disabling injuries in crashes, on those roads each year.

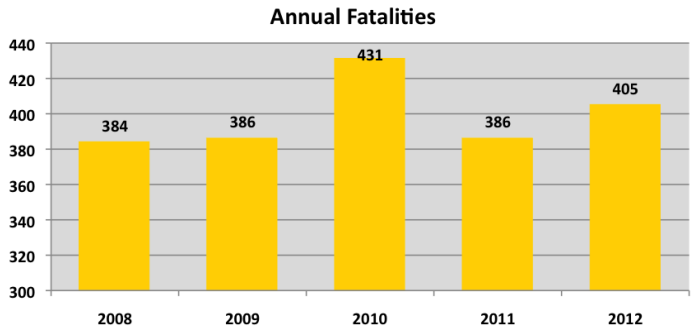
Some people call those events "accidents." ***We don't.***

The word "accidents," implies such events are unavoidable. ***They're not.***

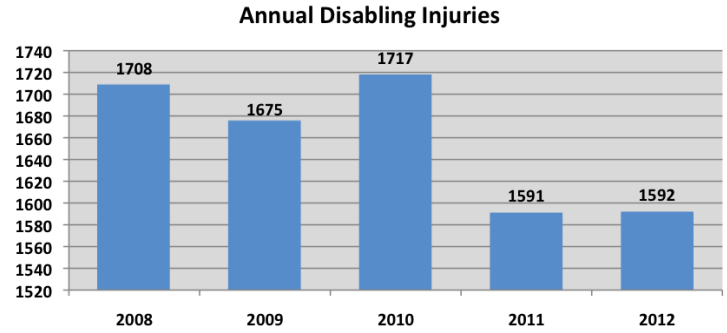
Their number can be – must be – reduced.

Traffic Crashes: Down but Not Out
The number of fatal crashes has fallen in recent years, both in Kansas and the nation. The fatality *rate*, the number of fatalities per mile driven, has also dropped. Part of the credit for the decline belongs to highway departments. They've worked for decades to make roadways safer, installing rumble strips to keep drivers in their lanes and engineering shoulders and adjacent spaces for those who leave them. Part of the credit goes to vehicle manufacturers and their introduction of such advances as air bags, safety belts and anti-lock brakes. Finally, drivers themselves have taken more personal responsibility. More are buckling up and fewer are driving drunk.

Yet this stark fact remains: Between 2008 and 2012 in Kansas, 1,992 people took the last drive of their lives.



On average, from 2008 – 2012, in Kansas, 398 people a year died in crashes between 2008 and 2012.



On average, from 1,657 people a year suffered permanent or temporary disability in Kansas road crashes.

The effects of the 2,055 people a year who were disabled or killed in crashes are radiant. These losses touched many other lives.

In addition, every Kansan is economically impacted by these events. The first Kansas Strategic Highway Safety Plan, or SHSP, published in October 2006, estimated the economic loss resulting from traffic crashes in Kansas to be about $1.9 billion annually – or about $680 per Kansan.

INTRODUCTION

Driving Force: 2006
In February 2006, Gov. Kathleen Sebelius announced the creation of the Driving Force Task Force. The task force was charged with developing recommendations to reduce the number of fatalities and injuries on Kansas roadways. More than 20 leaders from around the state were involved.

The task force was convened after a campaign led in 2005 by then Secretary of Transportation Deb Miller, Kansas Highway Patrol Col. William Seck and Secretary of Health and Environment Roderick Bremby. Six community forums were organized as the first step in that effort, called the Safer Driving, Safer Roads campaign, to raise awareness about the number of fatalities and injuries on Kansas roads. The task force continued these conversations and formulated a three-year plan to implement recommendations related to 11 crash causes it had identified.

One result of this effort has been the enactment of laws in Kansas aimed at some of the significant causes of crash injuries and fatalities such as:

- 2006 - A booster seat bill became law,
  - Children who outgrow a harness child safety seat must ride in a belt positioning booster seat until they are 8, unless the child weighs more than 80 pounds or is taller than 4'9"; at that point children must use adult seat belts. Studies show that booster seats, properly used, are 59 percent more effective in preventing injuries to children during crashes than seat belts alone.
- 2009 - Passage of a graduated driver's license law,
  - The purpose of this law is to help reduce the risks for teenagers learning to drive.
- 2010 - Passage of a primary seat belt law allowed law enforcement officials to stop cars in which occupants aren't buckled up, without needing another cause to pull these vehicles over; and
  - Fortunately, the number of Kansans buckling up had already risen from 61 percent in 2001 to 81 percent in 2013.
- 2010 - A texting law made it illegal to send or read electronic text while driving, except in a narrow range of circumstances.

Many other activities (see Appendix A) have resulted from the work of the task force, from the first SHSP and from other initiatives.

SHSP 1: 2006
As the Driving Force Task Force effort was unfolding, Kansas began work on a state highway safety plan. At a safety summit convened February 2 and 3, 2006, representatives of 17 agencies with an interest in transportation safety drafted the first SHSP.

The stated mission of that plan was to "reduce deaths, injuries, and economic costs resulting from motor vehicle crashes in Kansas." Its goal was fatalities would not exceed 400 in 2008 or 365 in 2010 and disabling injuries would not exceed 1,600 by 2008 or 1,400 by 2010.

The plan focused on six causes for crashes or means to prevent them. Among the causes were driver and passenger behaviors, driver demographics and crash locations, including the following:

- impaired driving because of alcohol or drugs,
- occupant protection (use of seatbelts and child safety seats),
- lane departure (crossing the center line or going off the shoulder),
- intersections,
- inexperienced/novice/teen drivers and
- driver behavior and awareness (as it is affected, for example, by use of electronic devices).

Each of these causes was designated an "emphasis area," and strategies to address them were formulated during planning sessions at the safety summit.

But Kansas did not meet its goals related to injuries and fatalities. The reasons for this can't be known, but one explanation may be that the strategies in that plan weren't prioritized and their implementation wasn't mapped out. Three years later, a new planning process began.

SHSP 2: 2009 to Present
The ESC first met on May 14, 2009. It is comprised of administrators, engineers, planners, medical care providers, trainers/educators and law enforcement personnel. The council has championed transportation safety on all public roads in Kansas by developing an SHSP that will drive the formulation and implementation of safety-related programs. Mike Floberg, of the Kansas Department of Transportation, or KDOT, and Jim Hanni, of the Automobile Association of America, are co-chairs. A complete list of ESC agencies and representatives can be found in the Partners, Roles and Process Chapter. The ESC's challenge is to take charge of the new plan's results and encourage participation in implementation. The ESC identifies statewide goals and emphasis areas based on data and statistics, recruits stakeholders to direct and serve on emphasis area teams and supports implementation by the appropriate agencies of the strategies the teams developed.

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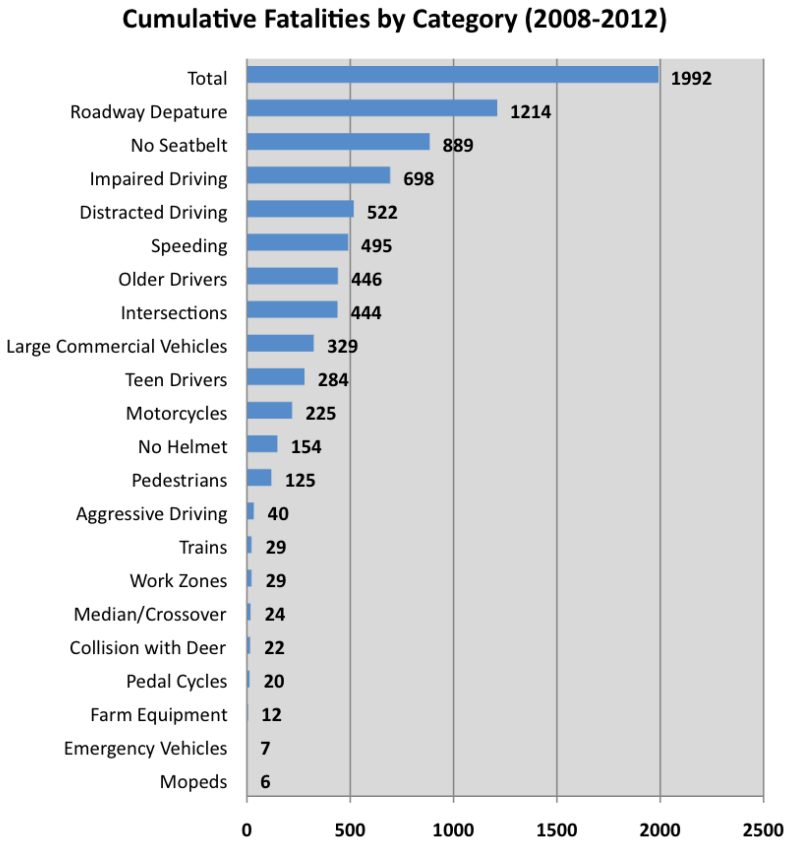

A variety of factors led to disabling injuries or fatalities in Kansas between 2008 and 2012. The total number of fatalities is less than the sum of the factors because crashes sometimes result from a combination of factors. For example, a fatal crash at an intersection involving a teen driver who had failed to fasten his/her seatbelt would appear in three places on the chart.

Mission

The mission of the Kansas SHSP is to drive strategic investments that reduce traveler casualties and the emotional and economic burdens of crashes, utilizing the 4E's (education, enforcement, engineering and emergency medical services) in a collaborative process.

The key ideas here are those of strategic investment and statewide collaboration.

Strategic Investment

Kansas could make a wide range of investments in order to lessen fatalities and disabling injuries resulting from crashes. The ESC focuses on these investments. It attends first to the variables most frequently involved in crashes that kill or disable drivers and passengers in Kansas. As indicated in the chart below, from 2008 – 2012, crash data variables indicates the following:

- Roadway departure, such as when vehicles cross the centerline, was the leading cause of fatalities and disabling injuries,
- Failure to use seatbelts was the second most frequent cause; and
- Completing the list of the top five causes were these: drivers impaired by drugs or alcohol, distracted driving and speeding.

Statewide Collaboration

A 2010 Federal Highway Administration document, "Noteworthy Practices: Addressing Safety on Locally-Owned and Maintained Roads - A Domestic Scan," states that "collaboration between different organizations, including engineers, planners, educators, community leaders, activists, law enforcement and emergency medical services can bring diverse safety expertise to existing programs and produce ideas for innovative approaches."

Aware of this dynamic, the ESC staffed the emphasis area teams with persons possessed of the requisite skills in the 4E's. It also formed support teams to develop data that would support the work of the emphasis area teams.

Current and future emphasis area teams are as follows:

- Current Teams
  - Roadway Departure
  - Occupant Protection
  - Intersections
  - Impaired Driving
  - Teen Drivers
  - Older Drivers

- Future Teams
  - Large Commercial Motor Vehicles (CMV)
  - Emergency Medical Services (EMS)

Current support teams are as follows:

- Current Teams

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- Data Support
- Local Roads
- Education

- Future Teams
  - No future teams identified at this time

Creating a safe transportation system can't be purely a top-down or bottom-up proposition. In addition to the ESC, regional/local safety coalitions will serve as a platform to keep traffic safety conversation flowing in both directions. Besides the safety coalitions, Kansas has a number of organizations dedicated to research and training that can support SHSP implementation. A partial list of these organizations and description of their work appears in Appendix B.

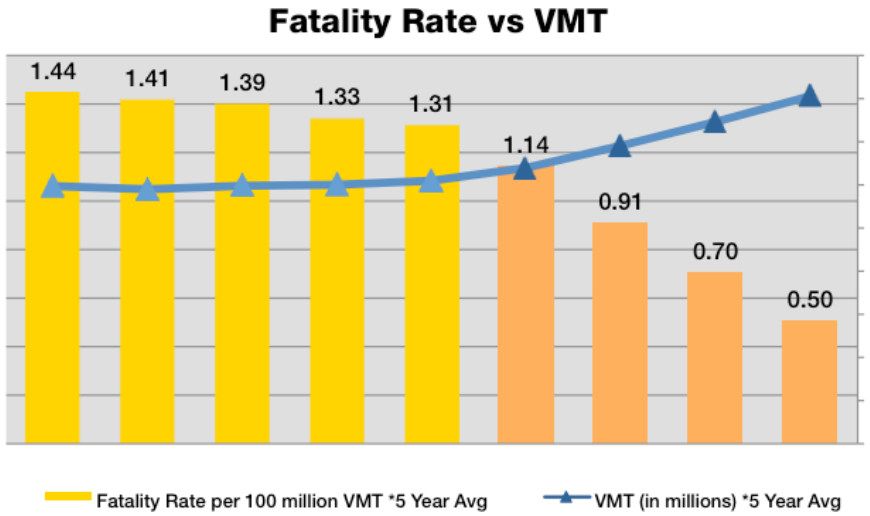
Dialogue and partnering are mandatory, not elective. And given the unforeseeable shifts in future modes of transportation and energy sources, as well as other unknowns, it's important to note that when we use the phrase "planning process," the emphasis is on the second word as much as the first. This document will be available primarily on the Internet and annually with a major revision every 5 years.

Goal: Cut Injuries and Deaths by Half
In October 2009, the ESC established this goal: to reduce fatalities and disabling injuries by half in 20 years (base period 2005 – 2009).

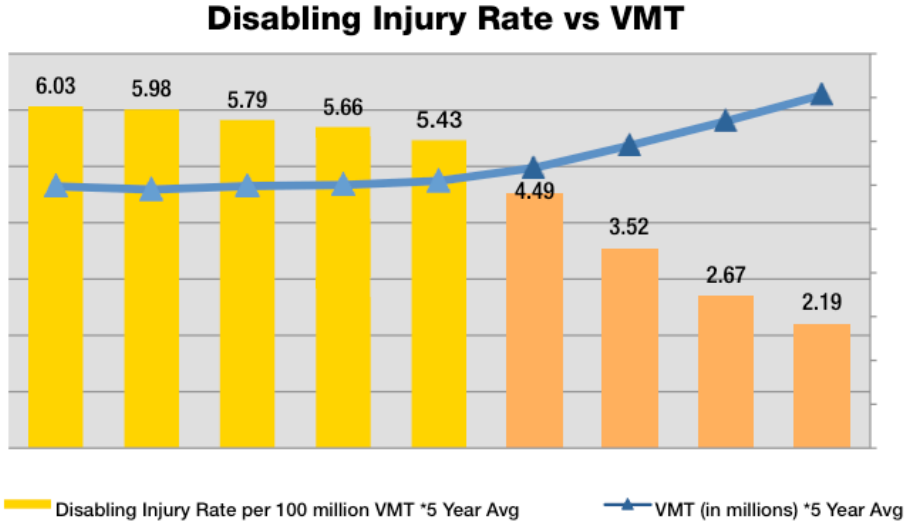
Cutting in half the five-year average of fatalities and injuries for 2005-2009 by 2025-2029 won't be easy, given projected increases in traffic volume during the 20-year period. Those increases mean that for the goal to be met, the crash rate will have to be reduced by 63 percent, not 50 percent, during the 20 year period.

Vision: 0 Deaths
The executive committee's vision is that a day will come when no life will be lost, no person disabled, in a traffic crash. In its words:
Vision Zero — Every One Matters

The Challenge of System Complexity
Some of the complexity of the roadway system in Kansas derives from sheer bulk: about 140,000 miles crisscross Kansas.



In 2009, the total of all miles driven within the state is estimated at just over 35 billion. If the vehicle miles traveled, or VMT, were unchanged over the next 20 years, cutting fatalities and disabling injuries in half would be a less daunting goal than it is given projected rises in VMT over that span.



Moreover, there are streets, roads and highways classified and managed according to their function and their location in areas of greater or lesser population density.

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Another complication derives from the large impact of the relatively few miles of state highway. Constituting a mere 8 percent of the 140,000 total, they nevertheless carried 43 percent of all the state's traffic from 2005 to 2009. More crucially, they accounted for 49 percent of all the disabling injuries and 57 percent of the fatalities.

Yet if we were to focus attention largely on the state highway system, what would happen to crash totals on the 130,000 miles of non-state roads? A lack of focus on those roads – where 43 percent of all fatalities and 51 percent of all disabling injuries occur – would be shortsighted.

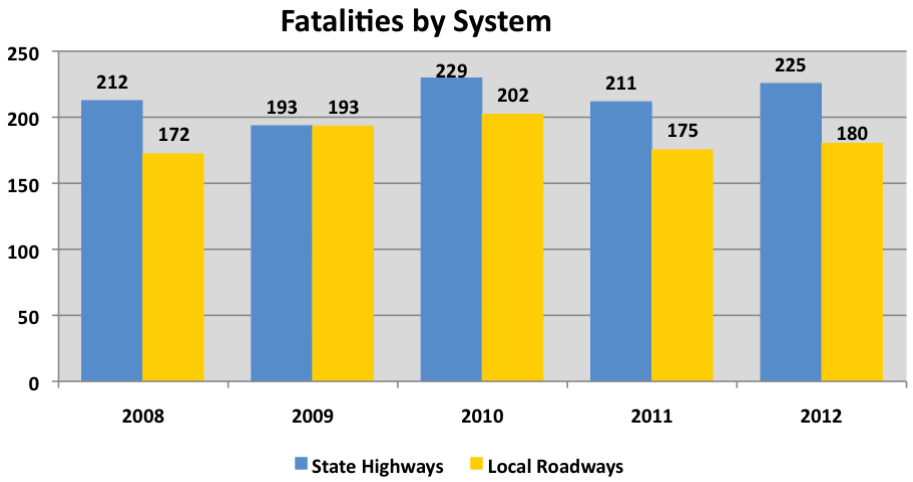
Performance Measures
The charts above reflect the base year data. Performance data regarding these goals are updated on an annual basis. Please see the individual emphasis area team chapters in order to review annual progress.

The Management Challenge
Managing state highway safety may be easier than managing off-system safety. That's because the 10,000 miles of state highway have only two owners: KDOT and the Kansas Turnpike Authority. Statute enacted during the 2013 KS legislative session joins KDOT and KTA together in a partnership. The purpose of this partnership is to identify efficiencies that will ultimately lead to a safe, reliable and cost-effective transportation network. Moreover, the state highway system has extensive roadway and crash data that are easier to access than data on local roadways and the crash patterns on state highways are more predictable than those on local roads. Finally, the highway system's design sometimes requires expensive improvements, such as converting an intersection to an interchange or converting 2 foot turf shoulders into full-width paved shoulders; at other times it lends itself to inexpensive improvements such as centerline rumble strips.

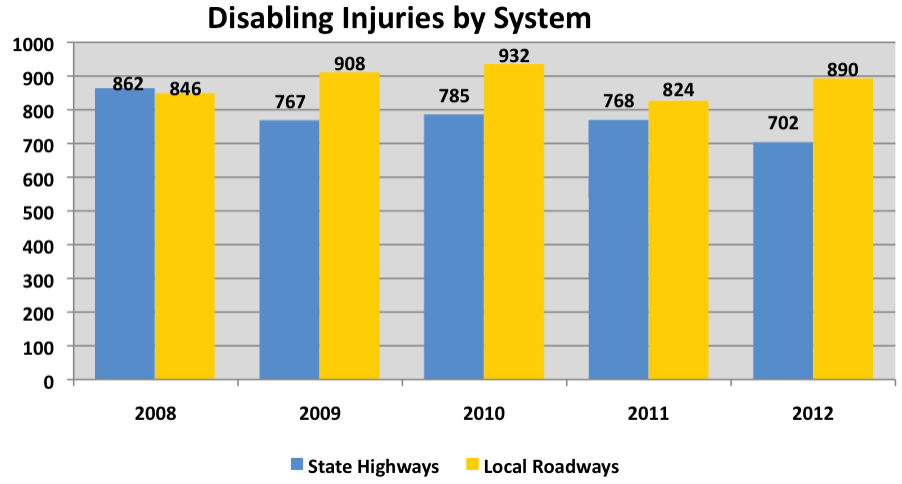
Managing safety off-system is more difficult given that there are more owners managing many more miles of road. The ability to map crashes is more problematic, and roadway data, such as lane and shoulder width and traffic volume, are limited. Crash data are good but crash patterns are less predictable. Here, less expensive systemic improvements, like pavement markings and rumble strips, may have an impact.

Finally, randomness makes management difficult on every kind of road and highway. Few serious crashes occur at the same location from one year to the next.

Complexities aside, we have no choice but to work both together and as individuals to reduce the number of crashes on our roads. We must also work at safety as individual drivers and passengers.



These tables show the relative contributions of state highways and local roadways to disabling injuries and fatalities between 2005 and 2009.



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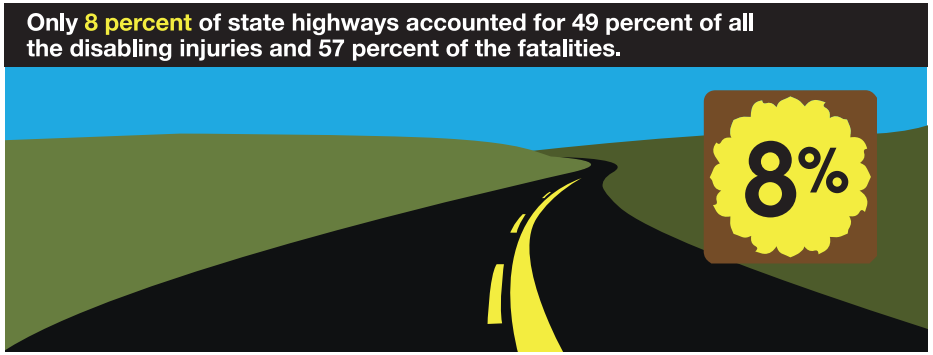
The Chapters Ahead

There is no shortage of ideas on how to address crashes. The challenge for each emphasis area team has been to identify realistic strategies for reducing crashes; prioritize those strategies; and implement those most likely to help us meet the goal of halving the number of fatal and disabling crashes within a 20 year timeframe.

Discussion of the eight emphasis areas – occupant protection, roadway departure, impaired driving, teen drivers, older drivers, intersections, commercial motor vehicles and emergency medical services – is presented separately in the chapters ahead.

Each chapter begins with an introduction to the emphasis area, relevant data and performance measures. Next comes a statement of the desired outcome or outcomes in the emphasis area. Each outcome is supported by a strategy or strategies. "New" strategies are research-based innovations for which there is an action plan; these may be entirely new or revisions of current strategies. These strategies are expected to be implemented within 5 years. "Future" strategies are ideas we believe merit further consideration yet no action plan or implementation timeline has been established.



Within the discussions of strategies, readers will find reference to some or all of the following:

- Background,
- Method (implementation concerns such as program, project, policy/ practice, research, training or other),
- Costs,
- Lead agency and contact,
- Challenges; and
- Target date.

As mentioned earlier, the SHSP also includes three support chapters - data support, education and local roads, along with a partner, roles and process chapter and various appendices. Performance measures and strategy implementation information will be updated on an annual basis. A major update, which will include new strategy identification, performance measure relevancy discussions, etc., will be completed every 5 years.

The reasoned approach that informs this plan is important to its success. But success also depends on paying attention to the results that flow from it and on making adjustments as circumstances change. As the road opens before us, what we discover *in fact* will shape our journey.

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CHAPTER 2: PARTNERS, ROLES AND PROCESSES

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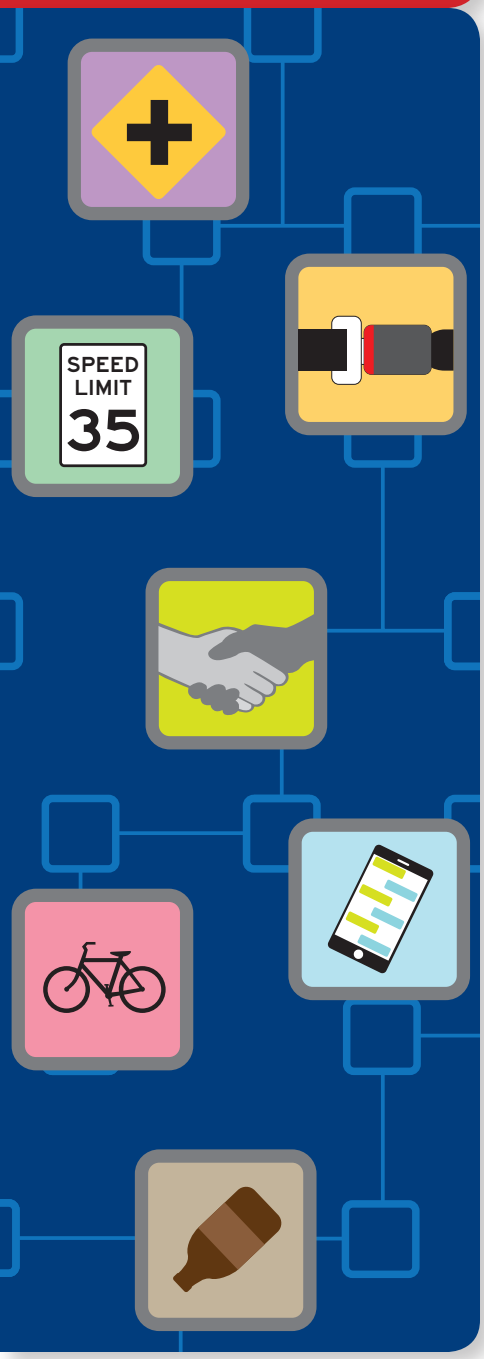
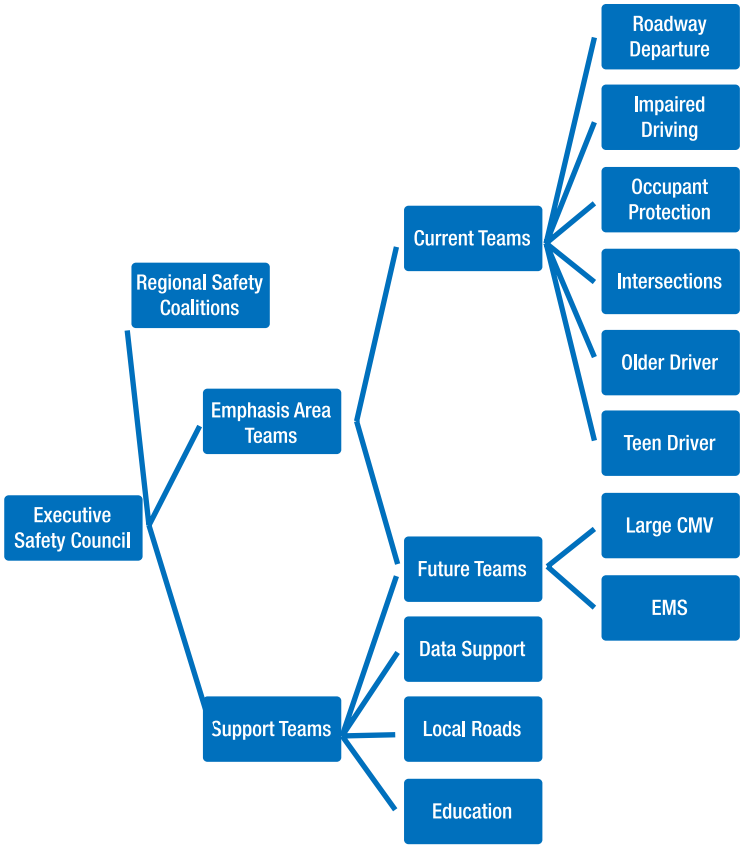


OVERVIEW

As we developed this plan, we realized we were creating a process, too – one that will outlive the plan. Success depends on ongoing cooperation and communication among a variety of teams – local, regional and statewide – as they react to the changing world of surface transportation and anticipate its safety needs in a timely way. This chapter focuses on the role of the groups that appear in the flow chart below.



Executive Safety Council

The ESC will tap the skills of many agencies to champion transportation safety on all public roads in Kansas by developing and maintaining the SHSP.

The ESC will:

- analyze data in order to identify statewide goals and emphasis areas,
- recruit stakeholders for emphasis area teams,
- direct the teams; and
- support strategy implementation by the appropriate agencies.

The ESC is currently made up of representatives from 20 agencies.

- Kansas Department of Transportation
- Kansas Turnpike Authority
- Federal Highway Administration
- National Highway Traffic Safety Administration
- Kansas Association of Counties
- AAA Allied Group
- LTAP Center at the University of Kansas
- Stormont-Vail Trauma Services
- Mid America Regional Council
- Kansas Association of Chiefs of Police
- Kansas Department of Revenue
- The League of Kansas Municipalities
- Kansas Department of Health and Environment
- Kansas Legislature
- American Traffic Safety Services Association
- Federal Motor Carrier Safety Administration
- Kansas Motor Carriers Association
- Kansas Emergency Nurses Association
- Kansas Highway Patrol
- Kansas Board of EMS

The ESC meets four times a year, generally on the third Thursday of February, May, August and November. Agencies other than those listed may be invited to participate in meetings.

OVERVIEW

Emphasis Area Teams

Reporting to the ESC, the emphasis area teams will develop action plans, including safety-related programs and projects, to implement the SHSP. The teams will:

- select and prioritize strategies,
- develop performance measures; and
- identify resources, including funding, legislation, staffing and lead agencies, to support programs and projects.

These groups will meet two times a year - in January and July.

Emphasis Areas

Every crash touches many lives. Yet the ESC realized that it couldn't focus equal attention on every potential source of crashes. Instead, it focused on those circumstances and conditions that kill or disable the largest numbers of drivers and riders. It queried a KDOT crash database to do so. The following table lists the areas considered for emphasis and groups them by category.

POTENTIAL EMPHASIS AREAS	
Category	**Area**
Driver Behavior	Impaired Driving
	Distracted Driving
	Aggressive Driving
	Speeding
Preventive Measures	Seat Belts
	Helmets
Demographic	Teen Drivers
	Older Drivers
Crash Types	Intersections
	Roadway Departure
	Median/Crossover
	Collision with Deer
	Pedestrians
	Work Zones
Vehicle Type	Large Commercial Vehicles
	Motorcycles
	Trains
	Farm Equipment
	Emergency Vehicles
	Mopeds
	Pedal Cycles

In the end, the ESC decided that emphasis area teams should focus on six crash variables linked to large numbers of fatalities and disabling injuries: roadway departure, occupant protection, impaired driving, teen drivers, older drivers and intersections. In addition, the ESC identified two other areas for attention as this document is updated: emergency medical services and large commercial vehicles.

Support Teams

In addition to the emphasis area teams, three support teams will report to the ESC. These teams consist of a data support team, an education team and a local roads team.

The support teams function in the same way as the emphasis area teams, selecting strategies, developing performance measures and identifying resources to support programs and projects. The difference is that the emphasis area teams will focus on specific crash variables, while the support teams supply them with data, educational resources and other tools. They will meet two times a year – in January and July.

Regional/Local Safety Coalitions

Safety is not just a State responsibility. It must be promoted at a regional and local level as well in order to see real change. Regional/local coalitions will be organized to represent the state's regions. They will promote communication among local transportation safety partners as they develop and implement regional traffic safety plans. Prior to 2014, there were two regional safety coalitions and one local safety coalition in Kansas. The regional coalitions were Destination Safe in the Mid-America Regional Council (MARC) area and another in the Wichita Area Metropolitan Planning Organization (WAMPO) area. The local coalition, Drive Wisely Wyandotte, covers Wyandotte County, Kansas. see Appendix C, Safety in Numbers.)

OVERVIEW

KDOT began creating a new network of regional safety coalitions in 2014. The ultimate goal is to successfully create an additional seven regional safety coalitions in order to facilitate traffic safety discussions and implement safety strategies around the state. These coalitions will be a sub-committee of the current Kansas Department of Health and Environment health care coalition structure.

Once fully implemented, every part of the state will be represented in a regional safety coalition. The first new regional safety coalition was formed in the northwest portion of Kansas in 2014. KDOT staff is currently working to analyze data and resources available in order to determine the logical part of the state to establish the next regional safety coalition. Additional local coalitions will be the next natural step after more regional coalitions are formed.

The regional/local coalitions will:

- analyze data to identify regional/local goals and emphasis areas,
- facilitate communication between local law enforcement officials and public works personnel,
- recommend safety-related projects and programs to KDOT and others,
- promote access by local decision makers to KDOT crash data to help in the identification of roads with high crash rates for possible safety improvements,
- recommend systemic safety improvements that are eligible for High Risk Rural Roads Program funding or moneys from other sources; and
- promote timely and relevant safety training for 4E personnel at the local level.

Revisions

The reality of change demands flexibility. Therefore, the SHSP will be updated annually, with a major revision every 5 years, under ESC guidance. Resources may be reallocated in response to change, for example, in state or federal transportation laws and funding.

The annual update should take into account the following factors:

- a review of fatal and disabling injury crash data in the KDOT database from the previous five calendar years,
- a report from each emphasis area team on the measurable results of the implementation of strategies,
- a report from each support team on the progress toward implementation of specific strategies and related performance measures; and
- a report from each regional safety coalition on the impact of safety spending (if applicable) on local performance measures.

The 5 year revision will include updates from the points above as well as:

- a look at progress made and lessons learned from the previous 5 years,
- a review of strategies to look to potentially move current future strategies to the short-term strategies category; and
- a review of strategies to identify additional future strategies.

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CHAPTER 3: IMPAIRED DRIVING

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Road to Zero Fatalities

INTRODUCTION

During the years 2008-2012, the decision *not* to buckle up killed more motorists in Kansas who are involved in vehicle crashes than any other choice they made.

In second place came the choice some Kansans made to drive when their skills were impaired by alcohol or drugs – or to ride in a vehicle with an impaired driver.

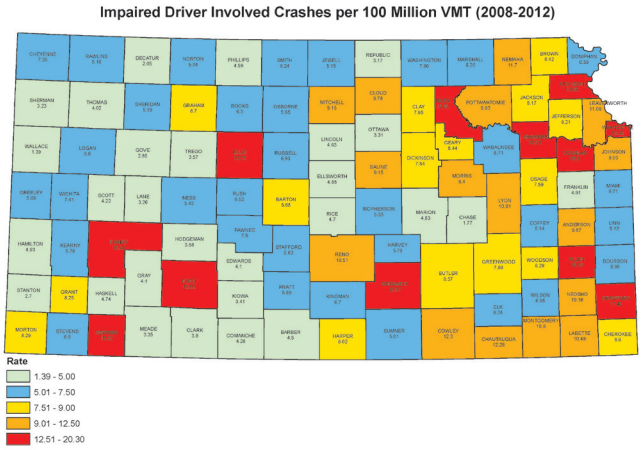
The difference between failing to fasten a seatbelt and driving while impaired is unbelted motorists in general only threaten their own lives. Impaired drivers – and especially drunk drivers – are highly toxic not just to themselves and their passengers but to everyone with whom they share the road.

Between 2008 and 2012, just one of 20 crashes was caused by an impaired driver – but almost one in five disabling injuries and one in three fatalities involved an impaired driver. Think of the bigger picture: Two in five Kansans are involved in an alcohol-related crash at some point in their lives.

Who dies? The overwhelming majority are between ages 18 and 35 (82 percent). Who's driving? Eight-five percent are men. Where? On blacktop roads in rural areas. When? After dark. From 2 to 3 a.m. is the deadliest hour.

Alcohol alone is by far the likeliest cause of impaired-driving crashes, disabling injuries and fatalities. Crashes, injuries and fatalities that can be attributed to drugs alone – both legal and illegal – fall in the 5 to 7 percent range.

Solving the impaired driving problem takes more than simply recognizing the effects of alcohol and drugs on driver behavior. Many issues were considered by members of the Impaired Driving Emphasis Area Team, particularly in regard to how to support those charged with addressing the problem at the street level. Here are some of the questions that were raised:



- What can law enforcement do when someone refuses to take a blood alcohol test after a crash or when they're pulled over?
- How can officers cope with those who offend repeatedly – and, as a consequence, learn strategies to avoid arrest?
- What strategies do law enforcement officers have to deal with fit young people who are able to pass sobriety tests despite testing over the legal blood alcohol limit?

YOU DRINK YOU DRIVE YOU LOSE

The Kansas Department of Transportation

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- How can test results be accelerated to cut down the lag time between drug and alcohol test administration and results? *As recently as June 2012, the Kansas Bureau of Investigation had only two toxicologists to do screening; those two had a backlog of 2,000 cases*.
- Given the fact that deceased drivers are not automatically tested for alcohol and drugs in their blood, how do we fully determine the scope of impaired driving in order to help solve this problem?
- How do we determine the contribution of drugs, both prescribed and illegal, to these crashes, when drivers who are found over the legal blood alcohol limit aren't screened for other drugs by oral fluid roadside testing?
- How do we address the demoralization of officers who make arrests only to discover that charges are later dropped by prosecutors?

Strategies developed by the EAT team from the questions above include passing new laws and revising existing ones; public outreach through educational institutions and media; in-service training of those who must deal with impaired driving and drivers; increased interagency and interdisciplinary cooperation with the goal of sharpening the ability of law enforcement to gather evidence needed for successful prosecutions; awareness and deployment of up-to-date technology and treatment opportunities for those charged with drunk driving.

The Impaired Driving EAT comprised the following members:

- *KDOT Bureau of Transportation Safety & Technology*
- *KDOT Law Enforcement Liaisons*
- *Kansas Traffic Safety Resource Prosecutor*
- *Kansas Highway Patrol (KHP)*
- *Sedgwick County Sheriff's Office*
- *Riley County Police Department*
- *KHP - Breath Alcohol Unit (BAU)*
- *AAA of Kansas*
- *Kansas Bureau of Investigation*
- *Kansas Department of Revenue Division of Motor Vehicles*
- *Mothers Against Drunk Driving (MADD)*
- *NHTSA*

It is important to note that addressing the questions and implementing the strategies above must be a team effort; it takes effort from not only the EAT members but also partners from multiple law enforcement agencies, legislators, toxicologists and other experts.

DATA POINTS

When Is a Driver "Impaired"?

The method of determining whether a driver who was fatally injured while impaired varies across the country. In Kansas, drivers are considered impaired when blood alcohol content (BAC) exceeds .08. If a driver has a BAC above .15 there are different legal consequences than a driver above .08 but below .15.In addition, a driver under the age of 21 cannot have a BAC of .02 or above. But if you're driving a commercial motor vehicle, your BAC must be below .04. BAC is not routinely tested on all motor vehicle fatalities.

The system used by NHTSA, however, yields different statistics on impaired drivers than those who simply tested over the legal BAC limit. That's because the federal reporting system permits educated guesses about alcohol's likely contribution to a death (for example, that of a 22-year-old male whose car, apparently without cause, slams into a tree at midnight). Kansas doesn't make those assumptions.

Another problem is determining whether drugs – prescription or otherwise – contributed to the impairment. At present, the main focus of law enforcement in Kansas is on alcohol.

DIFFERING DEFINITIONS OF "IMPAIRED CRASHES"	
KDOT "Alcohol Related" Definition	**KDOT "Drug Related" Definition**
"Alcohol related" is defined as motor vehicle crashes where the reporting officer indicates "alcohol contributed" to the cause of the crash and/or BAC is recorded (>.00) and relates to driver only.	"Drug related" is defined as those motor vehicle crashes where the reporting officer indicates "illegal drugs contributed" to the cause of the crash and/or a positive drug screen result is recorded and relates to driver only.

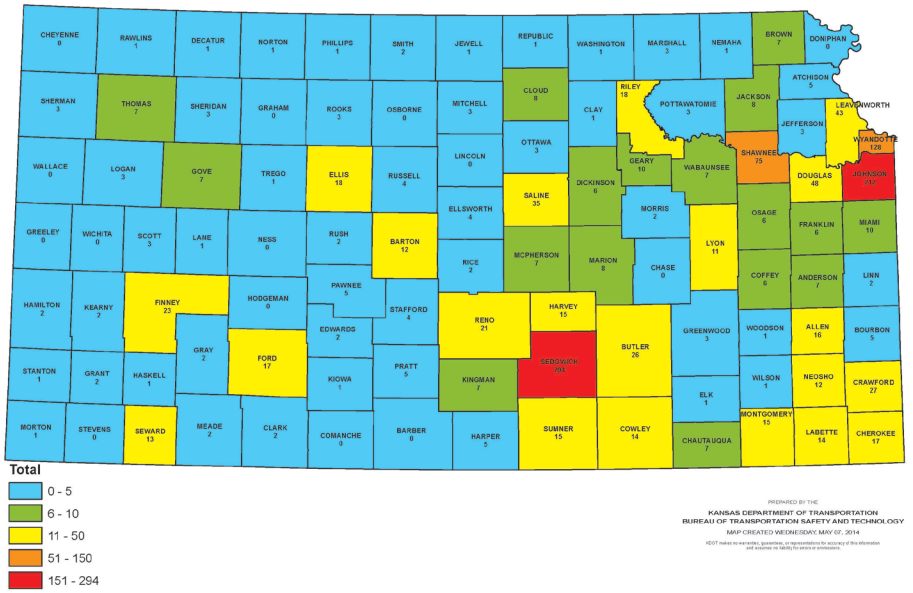
1. Impaired Driving Contributes Disproportionately to Injuries/Fatalities

Impaired driving was implicated in only one of 20 crashes between 2000 and 2010. Yet it accounted for a far larger proportion of those severely injured or killed in crashes during that decade.

Impaired Drivers cause:

- 5% of all crashes
- 19% of all disabling injuries
- 32% of all fatalities

Total Drug-Related Crashes (2008-2012)

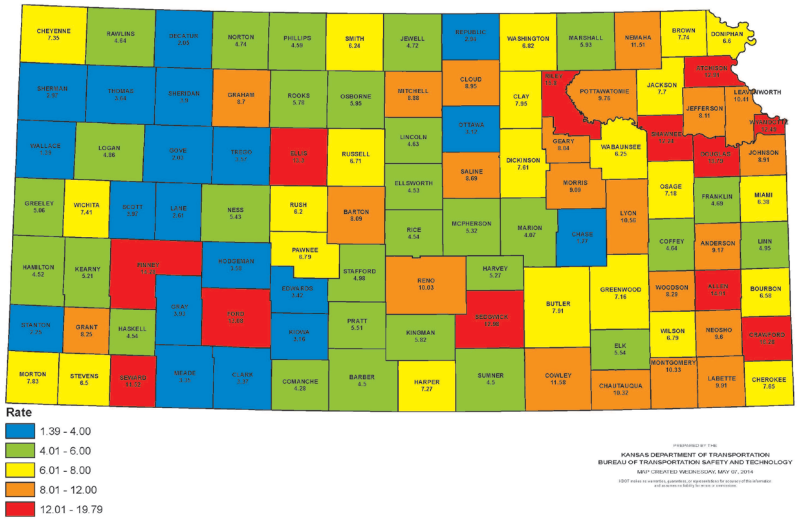


Impaired Driving Crashes, Disabling Injuries and Crashes by Year

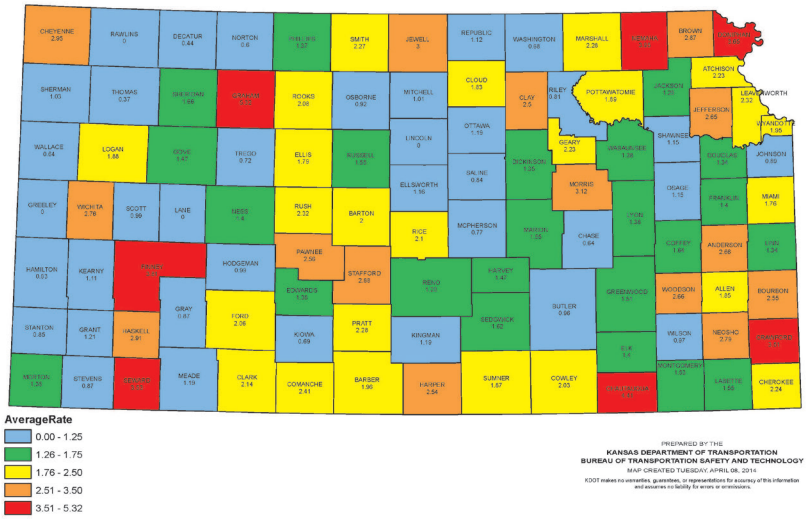
Year	Crashes	Disabling Injuries	Fatalities
2000	3685	365	88
2001	3865	369	105
2002	3898	340	135
2003	3655	377	111
2004	3523	284	130
2005	3250	324	128
2006	3419	337	132
2007	3477	317	121
2008	3583	340	132
2009	3296	319	132
2010	2944	333	154

DATA POINTS

Alcohol-Related Crashes per 100 million VMT (2008-2012)



Average Impaired Driver Fatalities and Serious Injuries per 100 Million VMT (2008-2012)



INVOLVING DRIVERS AGE 15-20									
Year	Total Fatalities	Young Driver Alc-Cited Fatalities	% of all Fatalities	Total Fatal Crashes	Young Driver Alc-Cited Fatal Crashes	% of all Fatal Crashes	Total Crashes	Total Young Driver Alc-Cited Crashes	% of Total Crashes
2006	84	15	18%	78	15	19%	18178	611	3%
2007	83	23	28%	76	21	28%	18606	587	3%
2008	67	18	27%	63	18	29%	16996	557	3%
2009	82	20	24%	65	17	26%	15496	468	3%
2010	75	17	23%	65	16	25%	14423	378	3%
2011	67	9	13%	62	8	13%	13483	340	3%
2012	75	17	23%	67	17	25%	12691	374	3%
2006-2010 5-yr Avg	78.2	18.6	24%	69.4	17.4	25%	16739.8	520.2	3%
2007-2011 5-yr Avg	74.8	17.4	23%	66.2	16	24%	15800.8	466	3%
2008-2012 5-yr Avg	73.2	16.2	22%	64.4	15.2	24%	14617.8	423.4	3%

DATA POINTS

2. Impaired Drivers Are Most Often Men Under 35

Age

Even without alcohol or drugs, the teenage years are dangerous for drivers. According to the Johns Hopkins School of Public Health, a 16-year-old male with three or more of his friends in the car is seven times more likely to be involved in a fatal crash than a middle-aged driver. Kansas data show that nearly one in four impaired-driver crashes occurred when a driver under 21 was at the wheel – despite the fact that those drivers represent less than 10 percent of all drivers. Only one in three Kansas drivers is under age 35, but this group accounts for more than 80 percent of all impaired-driving crashes.

Gender

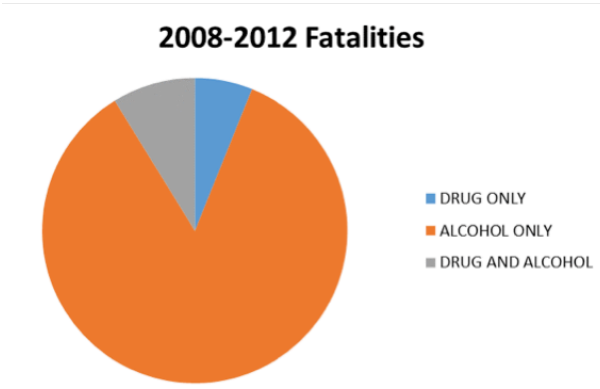
- 73% of impaired driver crashes are caused by male drivers
- 77% of impaired driver disabling injuries are caused by male drivers
- 85% of impaired driver fatalities are caused by male drivers

3. As the average population age goes down, the occurance of Impaired Driving Crashes goes up

The three Kansas counties with the highest numbers of impaired-driver crashes are home to the University of Kansas (Douglas), Kansas State University (Riley) and Pittsburg State University (Crawford).

4. Alcohol Is Deadliest – But That Could Change

Some young adults abuse sedatives like oxycodone and hydrocodone or drugs used to treat attention deficit disorder -- Adderall, dextroamphetamine and amphetamine salts. Those trends, along with a trend toward the legalization of marijuana for medical purposes, or outright, are expected to shift the relative contribution of drugs and alcohol to impaired driving.

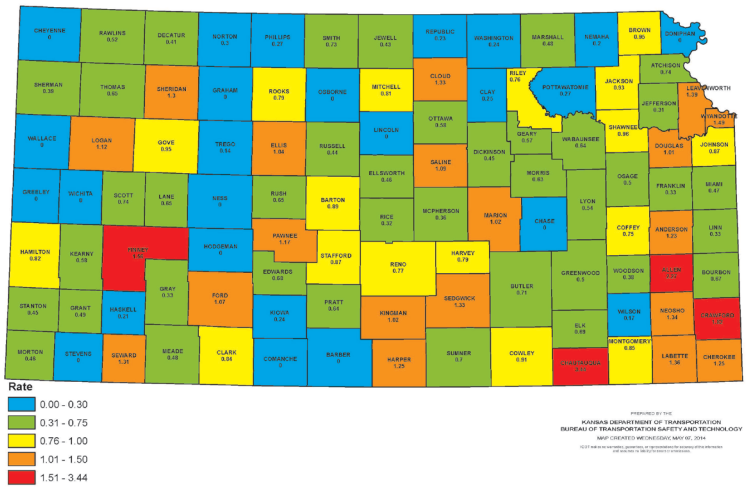


5. The Average BAC for an Impaired Driving arrest in KS is .15

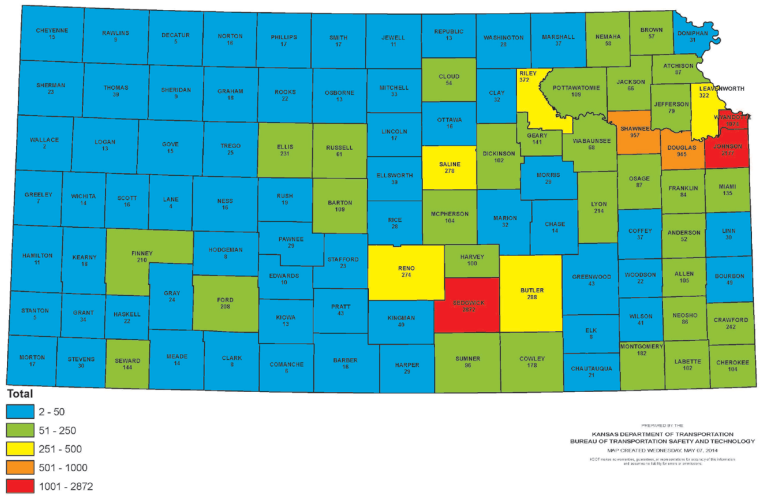
Although driving or riding in a car with someone who's tipsy (with a blood alcohol content of less than .08) is dangerous, riding in a car with a driver who's smashed (.15 and above) is more often fatal.

Those with a BAC greater than .15 are responsible for half of all the fatalities that result from impaired driver crashes.

Drug-Related Crashes per 100 Million VMT (2008-2012)



Total Alcohol-Related Crashes (2008-2012)



DATA POINTS

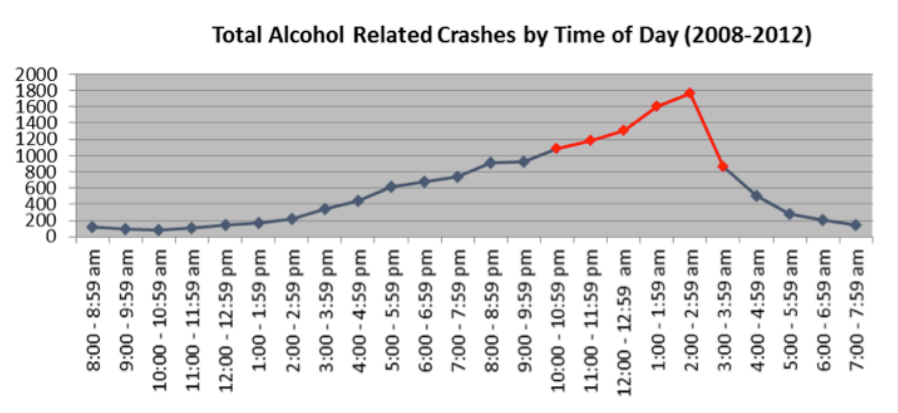
6. Dusk to Dawn Are the Most Hazardous Hours

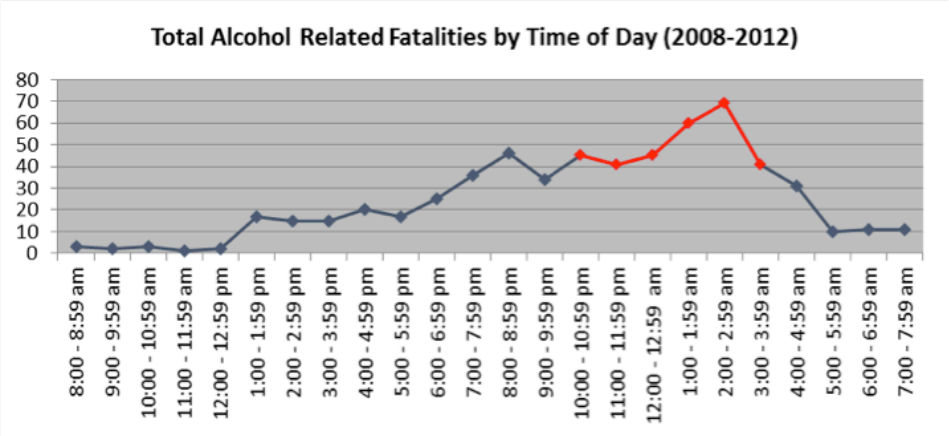
Just one quarter of all impaired driving crashes, disabling injuries and fatalities occur in the daylight hours.

MOST HAZARDOUS HOURS 2008-2012

Light Conditions	% Crashes	% Disabling Injuries	% Fatalities
Daylight	23%	26%	24%
Dawn	1%	1%	1%
Dusk	2%	3%	3%
Dark: no street lights	48%	33%	24%
Dark: street lights on	25%	37%	47%
Unknown	0%	0%	1%

Impaired driving crashes, disabling injuries and fatalities peak in the early morning hours - between 1 a.m. and 3 a.m. The second most hazardous period - 8 p.m. to 11 p.m.





7. Most Impaired Driving Crashes occur on Blacktop (mainly rural) Roads

More than 6 of 10 crashes, disabling injuries and fatalities resulting from impaired driving happen on blacktop roads.

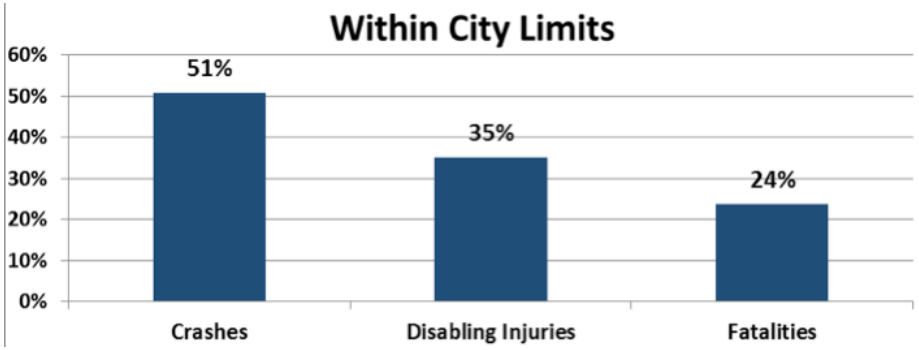
Crashes, Disabling Injuries and Fatalities by Road Type 2008-2012

Surface Type	% Crashes	% Disabling Injuries	% Fatalities
Concrete	26%	24%	18%
Blacktop	62%	60%	62%
Gravel	8%	12%	14%
Dirt	3%	3%	5%
Brick	1%	0%	0%
Other	0%	1%	1%
Unknown	0%	0%	0%

The number of impaired-driving fatal and disabling injuries in rural areas are higher than in more-traveled urban areas. There are many reasons for this. A few reasons include the fact that rural miles outnumber urban miles in Kansas, the higher speed limits on rural roads and the time delay of treatment for a rural crash victim versus an urban crash victim due to the distance of the crash scene from the treating medical facility.

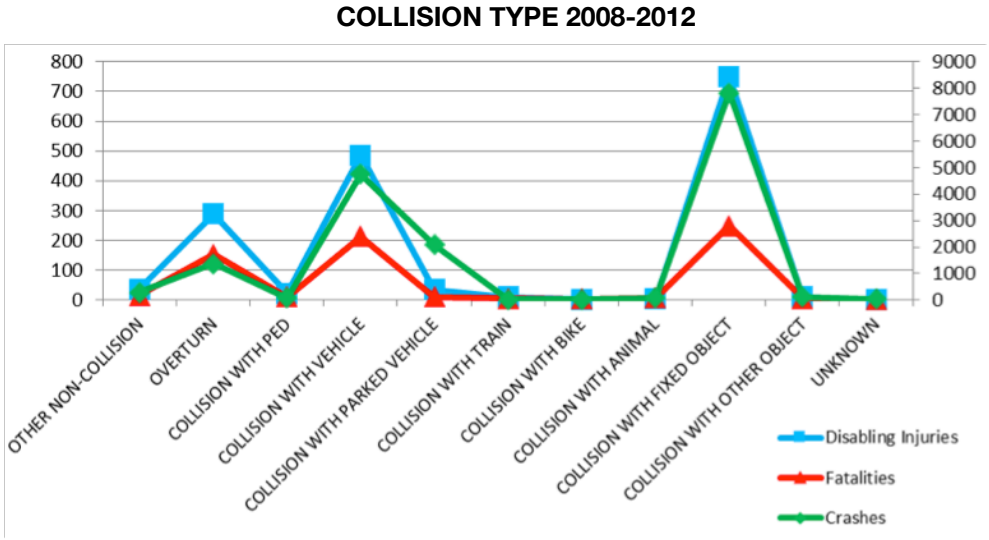
DATA POINTS

- 74% of impaired driver crashes occur on local roadways
- 59% of impaired driver disabling injuries occur on local roadways
- 56% impaired driver fatalities occur on local roadways
- Higher rates of impaired fatal and disabling injuries in rural areas



8. A Toxic Mix: Resistible Force Meets Immovable Objects

A third of all impaired driver fatalities involve a collision between motor vehicles.



Nearly half of all fatalities, disabling injuries and crashes happen when a vehicle strikes a fixed object - such as a ditch, curb or tree. (Above graph)

Performance Measures

The Impaired Driving Emphasis Area Team has determined KDOT's SHSP goal of halving alcohol and/or drug related fatalities within 20 years is an achievable measure. Through the work of education, enforcement, and social norming, it is possible to significantly reduce fatalities related to the choice of driving while under the influence of alcohol and/or drugs. The most challenging statistic for impaired driving fatalities is that no matter how many fatalities occur in Kansas, the same percentage involve impairment (About 30%). While the actual number of fatalities involving impairment decreased in recent years, the percentage of involvement remained static. Concentrated efforts to reduce the percentage of impaired drivers in traffic fatalities is underway in Kansas.

GOALS AND STRATEGIES

The problem of impaired driving must be addressed through new legislation or revised laws already on the books, public outreach through education, training of those who must deal with impaired driving and drivers, technology, interagency cooperation and treatment opportunities for those charged with drunk driving.

While there are many safety issues related to impaired driving that could be addressed with goals and strategies in this chapter, the impaired driving EAT chose those that had the best potential to significantly reduce the number of fatal and serious injury crashes in Kansas. The impaired driving EAT has chosen the following goals:

1. Influence policymakers to pass new and/or enhance existing laws that will decrease the incidents of impaired driving in Kansas,
2. Build a stronger relationship with educational / media outlets to enhance the delivery of information related to impaired driving,
3. Improve training for law enforcement agencies, not only the technical aspects of detection, but also focusing on the societal importance,
4. Expand upon the collaboration of state and local law enforcement agencies to promote a strong impaired driving deterrence through consistent, statewide enforcement of Kansas' DUI law,
5. Create a partnership with the medical community that promotes awareness and training in the collection of evidence used in the prosecution and adjudication of suspected impaired drivers,
6. Encourage collaboration among state agencies to provide reliable resources that enable the state to gather evidence needed in the prosecution of impaired drivers,
7. Improve training for prosecutors and judges in order to promote a fair, consistent and confident judicial process to respond to those who have been arrested and charged with impaired driving; and
8. Expand upon treatment opportunities, whether voluntary or court ordered, that are available to citizens across the state that address underlying issues that lead to impaired driving.

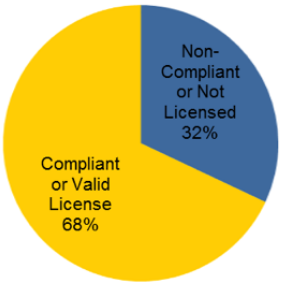
GOAL 1: Influence policymakers to pass new and/or enhance existing laws that will decrease the incidents of impaired driving in Kansas

New Strategies:

- Enhance DUI law with provisions to enable prosecutors to charge offenders with Aggravated Battery DUI in DUI cases involving serious or great bodily harm to others
  - + Background: Aggravated battery in Kansas is described as: recklessly causing great bodily harm to another person or disfigurement of another person; or recklessly causing bodily harm to another person with a deadly weapon, or in any manner whereby great bodily harm, disfigurement or death can be inflicted.

    The Kansas Supreme Court has determined an impaired person driving, in and of itself, is not reckless behavior. A crash caused by an impaired driver, which results in great bodily harm to another person should be considered aggravated battery by definition. Therefore, the law should be modified to include the charge of aggravated battery DUI so as to bring upon the convicted driver a more serious consequence for causing said harm to another person.
  - + Method: Legislation
  - + Costs: Additional bed space in detention facilities.
  - + Lead agency: Kansas County District Attorney Association (KCDAA) / Attorney General (KTSRP)
  - + Challenges: Generating legislative support for expanding law
  - + Target date: FY 2015

License Status of Impaired Drivers involved in Fatal Crashes



- Examine DUI fee structure and distribution
  - + Background: DUI enforcement, prosecution and adjudication costs are enormous. Treatment programs designed to address the underlying issues of alcohol and drug abuse are equally expensive. At the present time, fines and costs are distributed according to statutory schedule. This schedule has not been evaluated for a number of years. Kansas must constantly evaluate the fine structure and distribution of fines associated with DUI adjudication for efficient distribution of strategic investments designed to reduce incidences of impaired driving.
  - + Method: Legislation
  - + Costs: TBD (minimal)
  - + Lead agency: Attorney General (KTSRP)
  - + Challenges: Generating legislative support for expanding law
  - + Target date: FY 2015

- Enhance existing Kansas Ignition Interlock program to enable the state to be able to monitor the specific violations that are logged by the devise

GOALS AND STRATEGIES

- Background: About 30% of all impaired driver crashes involve an impaired driver who is not complying with license restrictions or does not have a valid license (32% of Fatalities). The current ignition interlock program in Kansas does not include the monitoring of the individual units throughout the duration of their use by offenders. By monitoring the units and tracking any attempt to drive after consuming alcohol, the state can be in a position to apply sanctions designed to discourage offenders from repeating dangerous behavior while consuming alcohol.
- Method: Legislation
- Costs: TBD
- Lead agency: Kansas Department of Motor Vehicles / KDHE
- Challenges: Generating legislative support for expanding law
- Target date: FY 2015

- Establish a "Per Se" DUI law for drugged impaired drivers
  - Background: This law would make it illegal for those who consume a specific named substance to operate a vehicle when the substance is detected in their system within three hours of driving. Current state law includes a Per Se violation for alcohol whereas individuals tested within 3 hours of driving are considered DUI if their BAC is .08 or above with or without visible signs of impairment. A similar "Per Se" law should be passed concerning impairing substances found in a person's breath or bodily fluid(s). Many states are in the process or have passed comparable laws.
  - Method: Legislation
  - Costs: TBD (testing fees, county detention bed space)
  - Lead agency: Attorney General (KTSRP) / KHP - BAU
  - Challenges: Generating legislative support for expanding law, finding sound, reliable technology to assist in detection
  - Target date: FY 2015

- Change existing law to clarify jurisdiction of consumption of alcohol for minors
  - Background: For the charge of minor in possession/ consumption of alcohol under the current law (KSA 41-727), a person less than 21 years of age shall not possess, consume, obtain, purchase or attempt to obtain or purchase alcoholic liquor or cereal malt beverages. In many jurisdictions, when a minor has admitted or been found to have consumed alcohol, BAC of 0.02 or greater, the minor would claim he consumed the alcohol in another jurisdiction. In most instances, law enforcement would not be able to prove otherwise. The Court, in these instances, determines they lack jurisdiction to hear the matter and dismisses the charge. In other words, they find the "crime" did not occur in their jurisdiction. The law needs to be changed to reflect that "the offense of consumption occurred in the jurisdiction of consumption or the jurisdiction where the offender is arrested."
  - Method: Legislation
  - Costs: Minimal
  - Lead agency: Attorney General (KTSRP)
  - Challenges: Generating legislative support for expanding law
  - Target date: FY 2015

Future Strategies:
No future strategies identified at this time

GOAL 2: Build a stronger relationship with educational / media outlets so as to enhance the delivery of information related to impaired driving

New Strategies
- Work with media outlets to emphasize the dangers of impaired driving
  - Background: Mass/local media has a tremendous ability to increase the perception of risk for those who choose to drive impaired. By advertising upcoming enforcement events and reporting on productivity of completed events, the public is informed of the seriousness of the problem and the efforts to remove impaired drivers from Kansas roadways.
  - Method: partnership
  - Costs: Minimal
  - Lead agency: KDOT, AAA of Kansas
  - Challenges: Changing the culture of the local media outlets to make impaired driving a larger priority
  - Target date: FY 2015

- Seek the involvement of the insurance industry to get more proactive in the education process through the development of impaired driving public service announcements (PSAs)
  - Background: The insurance industry pays out hundreds of millions of dollars each year for claims related to impaired driving crashes. As part of a broad educational program, the insurance industry can take a more proactive approach to reducing the incidence of impaired driving in Kansas, utilizing a variety of educational tools such as PSAs.

GOALS AND STRATEGIES

- Method: Partnership
- Costs: TBD, depends on scope of PSAs
- Lead agency: KDOT, AAA of Kansas
- Challenges: Funding allocations from insurance companies
- Target date: FY 2016

- Expand the Fake ID 101 program
  - Background: The Kansas Traffic Safety Resource Office has promoted a university community based program in Lawrence, KS that is designed to educate the community on high-risk drinking activity and associated harms. The only University to currently participate in the Fake ID program within the State of Kansas is the University of Kansas. Three of the top five impaired driver counties are college towns. The Top 5 Counties by Impaired Crash Rate:
    - Douglas (Kansas University)
    - Norton
    - Cowley
    - Crawford (Pittsburg State)
    - Riley (Kansas State)
  - Method: Program
  - Costs: Approximately $180,000 - $200,000 for a statewide program
  - Lead agency: Kansas Traffic Safety Resource Office (KTSRO)
  - Challenges: Funding, managing the expansion of existing program
  - Target date: FY 2016

- Expand driver education to bring more emphasis to the issues related to prescription and over-the-counter medications
  - Background: While alcohol related car crashes are the most prosecuted of all impaired driving cases, prescription/over-the-counter drug use and related crashes are on the rise. Educational campaigns for the consumer should be developed to draw more attention to the impairment issues related to prescription/over-the-counter drug use.
  - Method: Program
  - Costs: TBD
  - Lead agency: KDOT
  - Challenges: Costs associated with production and distribution of educational material.
  - Target date: FY 2015

Future Strategies:
No future strategies identified at this time

GOAL 3: Improve training for law enforcement agencies, not only the technical aspects of detection, but also focusing on the societal importance

New Strategies:

- Work with law enforcement agencies across the state to emphasize the importance of continuation of traffic enforcement
  - Background: Upon graduating and receiving their Law Enforcement Certificate, officers are usually heavily involved in traffic enforcement. When these officers become supervisors, their emphasis areas change. These supervisors must be constant advocates of traffic enforcement within their agency. Supervisors must hold high expectations of their subordinates and support aggressive enforcement techniques for detection of impaired drivers.
  - Method: Partnership
  - Costs: Minimal
  - Lead agency: KLETC, KHP - BAU, LE Associations
  - Challenges: Buy-in from LE Leadership
  - Target date: FY 2015

- Create a program to improve report writing / courtroom testimony skills of law enforcement officers to reduce the incidents of dismissals and acquittals due to poor reports and testimony
  - Background: The most commonly utilized tactic for defense in a DUI case is to find fault in the law enforcement officer's report. Many acquittals are based on a technical error in the report, which is emphasized in cross-examination of the officer in court. Improving the quality of the officer's DUI reports and establishing confidence in the courtroom setting will reduce/eliminate acquittals in an otherwise solid DUI case.
  - Method: Program
  - Costs: Minimal
  - Lead agency: KHP - BAU, KTSRP
  - Challenges: Development/distribution of program
  - Target date: FY 2015

- Expand the Drug Recognition Expert (DRE) program to encourage more law enforcement to participate in the detection of the drug impaired driver
  - Background: A DRE is a law enforcement officer who has received specialized training and has been certified by the International

GOALS AND STRATEGIES

Association of Chiefs of Police (IACP) to evaluate individuals who are suspected of being impaired by a drug other than alcohol. As of 2012, there were 87 DRE officers certified in the State of Kansas.
  - Method: Program
  - Costs: Picked up by participating law enforcement (LE) agencies
  - Lead agency: KHP – BAU
  - Challenges: Finding qualified/motivated LE officers to train. Also requires support from LE administration.
  - Target date: FY 2015

- Encourage all law enforcement academies to implement "wet workshops" when training officers in the skills of Standardized Field Sobriety Testing (SFST)
  - Background: Although SFST training can be conducted utilizing videos of impaired persons to demonstrate physiological clues to impairment, a "wet lab" approach allows each student the opportunity to apply SFST's to a live subject who is impaired, while in the presence of instructors in a controlled setting.
  - Method: Program
  - Costs: TBD
  - Lead agency: KHP - BAU
  - Challenges: Resistance to the logistics of a wet workshop, such as recruitment of volunteer drinkers.
  - Target date: FY 2015

- Educate law enforcement agencies / officers on changes in impaired driving laws ("happy hours," criminalization of refusals) and environmental changes within the community (Casinos, dance clubs, pubs)
  - Background: The Kansas Traffic Safety Resource Prosecutor has been producing and distributing a newsletter that outlines the latest changes to the DUI law and relevant case law. Distribution of this information needs to be expanded to all LE agencies.
  - Method: Program
  - Costs: Minimal
  - Lead agency: Kansas Attorney General (KTSRP)
  - Challenges: None
  - Target date: 2015

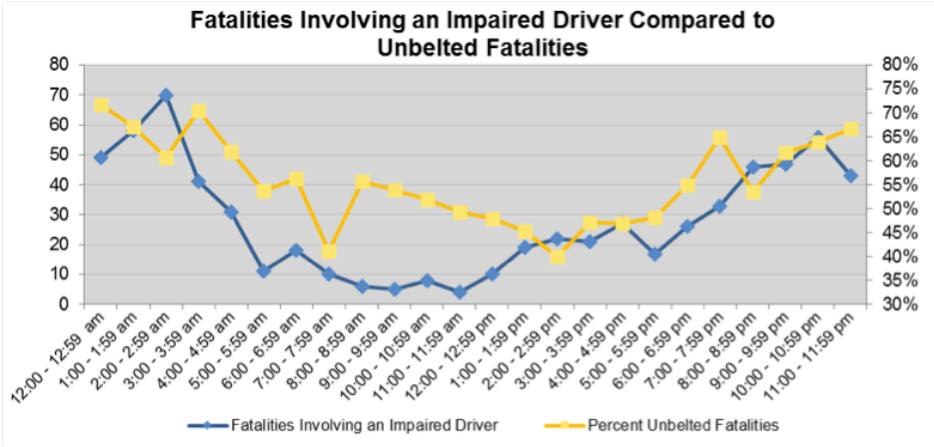
Future Strategies:
No future strategies identified at this time

GOAL 4: Expand upon the collaboration of state and local law enforcement agencies to promote a strong impaired driving deterrence through consistent, statewide enforcement of Kansas' DUI law

New Strategies:

- Expand the Nighttime Seatbelt Enforcement Program (NSEP) to increase contact with the traveling public during peak impaired driving hours of the day
  - Background: Statistically 69% of fatalities involving an impaired driver were unbelted. In 2012, KDOT's traffic safety section conducted a nighttime seatbelt enforcement pilot program to demonstrate the effects of dedicated nighttime seatbelt enforcement. The four participating agencies (Arkansas City PD, Pittsburg PD, Topeka PD, Wichita PD) where very successful, each conducting nine enforcement events resulting in 1,266 public contacts. The expansion of this program, operated during peak alcohol consumption hours, will ultimately result in additional contacts with impaired drivers and their removal from Kansas roadways.
  - Method: Program
  - Costs: $136,000.00 in FY 2015
  - Lead agency: Kansas Department of Transportation
  - Challenges: solicitation of participation from targeted agencies
  - Target date: FY 2015 and Beyond

- Increase the use of search warrants to obtain evidence from a suspected alcohol or drug impaired driver



GOALS AND STRATEGIES

- Background: Rice County, Ks was the first county back in 2008 to employ this method of obtaining evidence in cases where the suspected impaired driver refused a breath test. Since that time, several other counties have implemented the "no refusal" model for designated enforcement periods.
- Method: Program
- Costs: TBD
- Lead agency: Kansas Attorney General (KTSRP)
- Challenges: Bringing judges, prosecutors and law enforcement together to implement the strategy
- Target date: FY 2016

- Implement Alcohol Safety Action Program (ASAP) in strategically located areas that lack sufficient manpower to conduct high-staffing enforcement activities
  - Background: ASAP is designed to allow low law enforcement manpower staffing areas to give the perception that impaired driving enforcement is taking place. One officer from each of department (KHP/ Sheriff's Office and Police Department) is assigned to DUI enforcement on routine duty. Combine this with a strong media message and the public is given the perception of high-visibility enforcement within a community that has a small police force.
  - Method: Program
  - Costs: Minimal
  - Lead agency: Kansas Department of Transportation
  - Challenges: Getting LE command to commit resources to the program.
  - Target date: FY 2015

- Encourage citizen academies to enhance their curriculum to include the importance of impaired driving deterrence through citizen detection and reporting
  - Background: Many larger communities have active citizen academies that enhance community policing by increasing the number of people familiar with the problems and challenges of law enforcement and how law enforcement are meeting those challenges. The curriculum of these academies should include the importance of enforcing the impaired driving laws and how to aid law enforcement in the removal of impaired drivers from Kansas roadways
  - Method: Program
  - Costs: Minimal
  - Lead agency: KHP – BAU, Active citizen academies
  - Challenges: Development of material for distribution to local agencies
  - Target date: FY 2015

Future Strategies:
No future strategies identified at this time

GOAL 5: Create a partnership with the medical community that promotes awareness and training in the collection of evidence used in the prosecution and adjudication of suspected impaired drivers

New Strategies:

- Develop an educational program for the medical community which details the importance of gathering evidence that can be used by law enforcement to prosecute and adjudicate DUI offenders in Kansas
  - Background: In some instances, medical personnel have declined to draw blood for evidential purposes in DUI cases. This refusal usually stems from the medical communities lack of understanding their role in the collection of this evidence. The inability to gain access to vital evidence in a suspected DUI case can lead to the case being dismissed.
  - Method: Program
  - Costs: Minimal
  - Lead agency: Kansas Hospital Association, Kansas Attorney General
  - Challenges: Establishing cooperative effort
  - Target date: FY 2015

- Develop a statewide program that partners EMS with their local law enforcement agencies to obtain blood samples in a timely manner
  - Background: In specific cases of suspected DUI, where blood is the preferred specimen for determining blood alcohol or drug content, a partnership with EMS can facilitate obtaining blood samples in certain cases in a timely manner, eliminating the risk of losing valuable evidence to the passage of time following a crash.
  - Method: Program
  - Costs: TBD
  - Lead agency: KHP - BAU
  - Challenges: Establishing cooperative effort
  - Target date: FY 2015

- Establish a Kansas law enforcement phlebotomy program
  - Background: The KHP – BAU has started development of a program

that trains law enforcement officers to be phlebotomist. Phlebotomists are authorized by law to draw blood. This would enable law enforcement officers to obtain the evidentiary blood sample. As Kansas moves towards a "no refusal" policy for DUI testing, having police phlebotomists available to agencies will prove invaluable. With due considerations of the cost of blood draws at medical facilities, the availability of medical personnel, and, the handling of prisoners, police phlebotomists offer an effective alternative.
  - Method: Program
  - Costs: TBD
  - Lead agency: KHP - BAU
  - Challenges: Establishing Kansas standards for LE phlebotomy program
    - Target date: FY 2015 for pilot program with KHP-BAU troopers

Future Strategies:
No future strategies identified at this time

GOAL 6: Encourage collaboration among state agencies to provide reliable resources that enable the state to gather evidence needed in the prosecution of impaired drivers

New Strategies:
- Keep up-to-date on new technologies in breath alcohol instrumentation
  - Background: Kansas Department of Health and Environment's (KDHE) breath alcohol section has been researching trends in breath instrument technology. KDHE is exploring the possibility of implementing new instrumentation. New technologies would allow KDHE to interact with instrumentation across the state on a routine, real-time basis to achieve timely reporting to law enforcement and the court system. Updating these instruments will eventually reduce costs in travel and testimony of KDHE personnel.
  - Method: Program
  - Costs: TBD (over $1 million)
  - Lead agency: KDHE
  - Challenges: Funding
  - Target date: FY 2015

- Expand staffing for the KBI toxicology section to address workloads
  - Background: The Kansas Bureau of Investigation toxicology section has identified the need for retention and expansion of staffing. The staff has recently been hit with the departure of qualified toxicologists lured to other places of employment by improved pay. These positions need to be filled at a competitive rate. An administrative assistant position is also needed to relieve current staff toxicologists from duties involving general office procedures.
  - Method: Program
  - Costs: TBD
  - Lead agency: Kansas Bureau of Investigation
  - Challenges: Funding
  - Target date: FY 2015

- Establish a KBI satellite laboratory in Great Bend, KS
  - Background: The KBI would like to establish a satellite office in Great Bend. This office would be equipped with a testing instrument and toxicologists. This would effectively split the state into two geographical sections, thus reducing travel for testimonial appearances in court.
  - Method: Program
  - Costs: TBD
  - Lead agency: Kansas Bureau of Investigation
  - Challenges: Funding
  - Target date: FY 2015

- Establish a statewide repository for tracking and monitoring DUI offenders
  - Background: The state is in the process of creating a repository known as RAPID (Record and Police Impaired Drivers)
  - Method: Program
  - Costs: $2.6 Million
  - Lead agency: Kansas Bureau of Investigation
  - Challenges: None
  - Target date: FY 2015

Future Strategies:
No future strategies identified at this time

GOAL 7: Improve training for Prosecutors and Judges in order to promote a fair, consistent and confident judicial process to respond to those who have been arrested and charged with impaired driving

New Strategies:
- The KTSRP is developing a DUI "Bench" book, designed to provide judges

with current DUI law at their fingertips
- Background: Currently there is no formal training for judges' to reference the complicated laws related to impaired driving. Impaired driving laws continue to change (yearly); therefore judges need a reference to apply the laws correctly. The KTSRP has already developed a similar reference for prosecutors, which is in its 10th edition. This book provides prosecutors with the latest changes in the law and case law as it applies to impaired driving.
- Method: Program
- Costs: Minimal
- Lead agency: Kansas Attorney General (KTSRP)
- Challenges: None
- Target date: FY 2015

- Work with Kansas Department of Revenue (KDOR) as it relates to the driver's license hearings for a fair, consistent and confident quasi-judicial process pertaining to driver's license revocation
  - Background: Currently KDOT funds a position with the Wichita DUI Impact Center that provides Driver's License Hearing monitoring. Persons dealing with the DL revocation process in Kansas would agree there are flaws in the system. With some review and changes to the system, most agree it could improve and provide a swift, fair, consistent and confident process to deal with impaired drivers' privilege to operate a vehicle in Kansas.
  - Method: Program
  - Costs: TBD
  - Lead agency: KDOT
  - Challenges: Resistance to change to the current system
  - Target date: FY 2016

- Hire a (part time) state judicial liaison to help coordinate training and education for judges
  - Background: Just as the traffic safety resource prosecutor program has been successful in providing education and training on DUI prosecution to prosecutors across the state, a state judicial liaison can coordinate training and educational opportunities to court judges to educate judges on Kansas' impaired driving laws.
  - Method: Program - This would require a Request for Proposal for a current or retired Judge to encourage fair and uniform judicial action on impaired driving cases.
  - Costs: TBD
  - Lead agency: Kansas Attorney General, Kansas Department of Transportation
  - Challenges: None
  - Target date: FY 2016

Future Strategies:
No future strategies identified at this time

GOAL 8: Expand upon treatment opportunities, whether voluntary or court ordered, that are available to citizens across the state that address underlying issues that lead to impaired driving

New Strategies:
- Establish a true DUI Court(s)
  - Background: DUI courts use substance-abuse interventions and treatment plans to address the problem of recidivism in DUI convictions. DUI Courts use a team approach to modify the behavior of the offender. Proven benefits of a DUI court are lower costs through limited incarceration and fewer repeat offenders.
  - Method: Kansas Judiciary (program)
  - Costs: TBD
  - Lead agency: KDOT / Attorney General (KTSRP)
  - Challenges: Generating support for establishing court system
  - Target date: FY2015

- Implement the "24/7" program in Kansas
  - Background: Developed in South Dakota, the 24/7 Sobriety Program is designed to work with chronic DUI offenders to change behavior and prevent additional DUI arrests. It requires participants to abstain from using alcohol and illegal drugs. Vigorous daily monitoring, using state-of-the-art technology , to attempt to break the cycle of alcohol and illegal drug use, leading to a reduction of DUI recidivism.
  - Method: Program
  - Costs: TBD
  - Lead agency: Kansas Attorney General
  - Challenges: Large scope of the program
  - Target date: FY 2015

Future Strategies:
No future strategies identified at this time

KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 4: INTERSECTIONS

SAFEKAN
Road to Zero Fatalities

INTRODUCTION

The FHWA defines an intersection as "a planned point of conflict in the roadway system." In this plan, we define an intersection as two or more public roads crossing at grade (or at the same level). There are five types of intersections, two with traffic signals, three without.

- Signalized
  - pre-timed traffic signals
  - traffic-actuated signals

- Unsignalized
  - uncontrolled (no stop or yield signs and no assignment of right-of-way)
  - controlled (stop or yield signs assign right-of-way and may include flashing beacons)
  - roundabouts

Given the FHWA definition of an intersection above, it is important to point out what is not counted as an intersection crash. The meeting of a private driveway with a public road won't be treated as an intersection although we recognize the value of well-designed access, especially near intersections. Kansas averages about eight fatal crashes per year at driveways and parking lot accesses.

Another type of crash that will not be treated as an intersection crash is one which occurs at grade-separated interchanges (where roads cross at different levels) such as merge areas and ramps. Therefore, the only crashes reported here will be those that occur where two or more public roads cross at the same level or be directly related to those crashes.

The purpose of the Intersections EAT is to develop data-driven action plans that reduce the potential for and severity of intersection crashes. The plan establishes performance measures and goals and proposes implementation strategies. These strategies are based on the 4E's of traffic safety: engineering, education, enforcement and emergency medical services. The Intersections EAT will help implement the SHSP by recommending safety-related programs and projects. These programs and projects may include low-cost safety improvements deployed systemically, high-cost safety improvements deployed via safety programs or projects, policy changes, and research initiatives. The Intersections EAT first met October 14, 2009 and was represented by the following agencies:

- Mid-America Regional Council (MARC)
- City of Overland Park Planning and Development
- Shawnee County Public Works
- City of Manhattan Public Works
- City of Topeka Police Department
- Federal Highway Administration (FHWA)
- Kansas Department of Transportation (KDOT)

There is no shortage of strategies available to the highway safety practitioner. Our original SHSP, drafted in 2006, included a long list of potential strategies, but it did not prioritize them or plan for their implementation. In drafting the current plan, we have focused on implementation questions that will lead to more tangible outcomes.

Examples of these questions are as follows:

- How can this plan shape existing safety programs, including funding levels and project selection?
- What tools can KDOT provide local jurisdictions when the jurisdiction wants to submit potential safety projects?
- How can this plan influence large-scale reconstruction projects?
- How can this plan shape policy decisions?
- How can this plan shape legislative agendas?

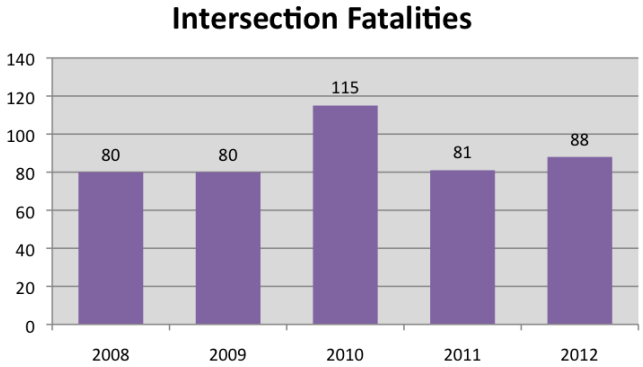
If we answer these questions correctly, the discovery of the findings will be an important step towards diminished numbers of fatal and serious-injury crashes. For instance, if we as a state reduce intersection-related fatalities by half from 2010 - 2029, over 500 lives will be saved during that period.

Analyzing intersection-crash data is essential to answering these questions. With input from the Data Support Team, the Intersections EAT will be able to select and prioritize strategies and make recommendations based on the problems the data will reveal.

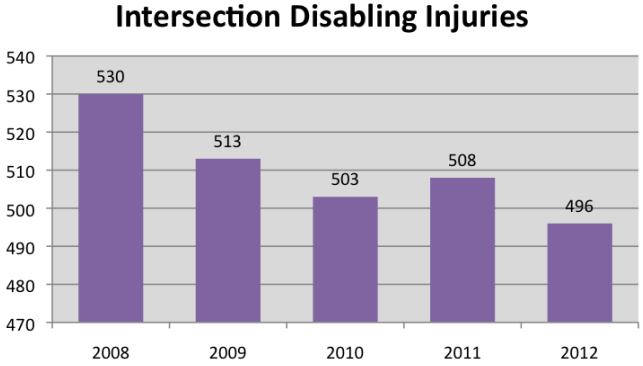
DATA POINTS

1. Almost one in four Kansas crash fatalities happens at an intersection

Intersection-related fatalities represent roughly 22 percent of all crash fatalities in Kansas. Between 2008 and 2012 there were 444 fatalities and 2,550 disabling injuries at intersections. In that span, intersection crashes accounted for 31 percent of serious-injury crashes statewide and 31 percent of all crashes.



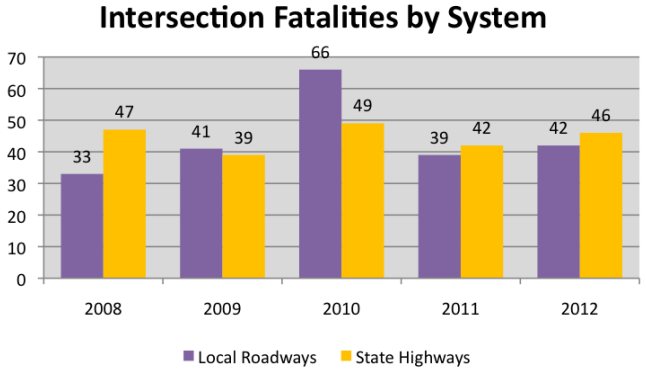
Increases and decreases in intersection fatalities tend to parallel the pattern of fatalities overall.

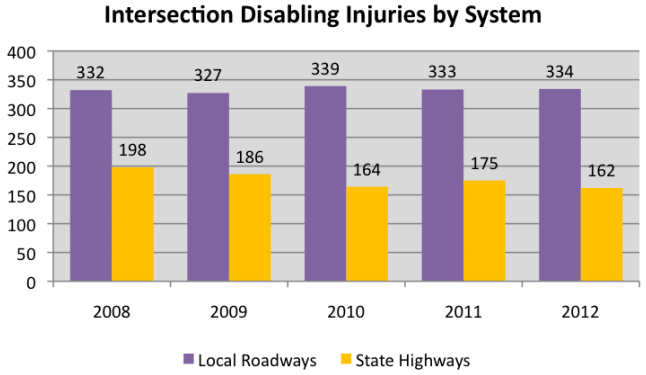


Intersection disabling injuries are trending in the right direction.

2. Controlled access reduces the potential for crashes

Between 2008 and 2012, 50 percent of intersection fatalities, compared to 54 percent of all fatalities, occurred on state highways. During the same time period, 35 percent of intersection-related disabling injuries, compared to 47 percent of all disabling injuries, occurred on state highways. It's likely that controlled-access policy along state highways save lives and prevent more serious injuries from happening. Interstates are made safer by having no intersections. On the contrary, locally-owned roads, particularly in urban areas, have more intersections with more conflict points and consequently a higher share of intersection crashes.





On local roads, disabling injuries resulting from intersection crashes have held steady in recent years. On state highways, there's been a decline in such injuries.

DATA POINTS

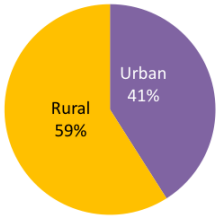
3. Crashes at rural intersections are more likely to be severe

Of the 140,614 miles of public roads in the state, 91 percent are located in rural Kansas. By that measure, it's not surprising there are more deaths caused by crashes on rural roads than on urban roads. Crashes at rural intersections account for 59 percent of all intersection fatalities.

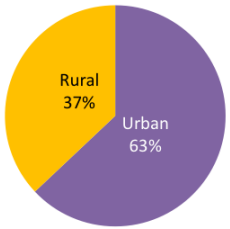
By another measure, though, the high fatality percentage in rural Kansas is a surprise. Less than half of all vehicle miles traveled in Kansas -- 49 percent – are on rural roads. With vehicle miles traveled on rural and urban roads nearly equal, why do intersection crashes on rural roads result more often in fatalities?
Three factors play a role.

- **Higher speeds:** Less traffic, intersections and driveways mean that drivers are more comfortable traveling at higher speeds.
- **EMS:** It takes longer for emergency vehicles in general and ambulances in particular to reach crash scenes and to deliver the injured to hospitals or trauma centers.
- **Health care facilities:** Patient needs may exceed the care capacity of rural health care facilities.

Intersection Fatalities by Urban/Rural Location



Intersection Disabling Injuries by Urban/ Rural Location

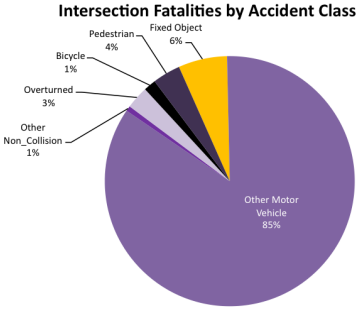


Serious injuries in a rural area are more likely to result in death compared to those sustaining the same type of injury in an urban area. Rural areas of the state experience fewer intersection disabling injuries compared to the urban areas. However, 59 percent of intersection fatalities occur in the rural areas. The challenges of health care in rural areas may help explain this difference. There are often longer discovery times after a crash, greater EMS response times, longer travel distances to a hospital and fewer hospital resources (e.g., trauma surgeons, emergency physicians, sophisticated diagnostic radiology, and blood bank reserves).

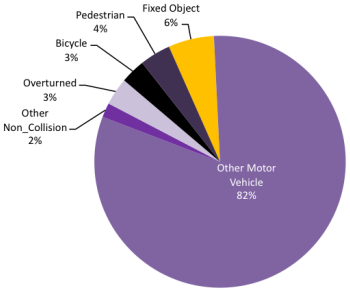
4. The most likely accident: collisions between vehicles

More than 80 percent of intersection crashes are collisions between vehicles. Rear-end and angle crashes are the most common types. The data indicate that our focus should be on reducing the potential for these conflicts. Reducing angle crashes begins with good engineering, but also depends on drivers' knowing who has the right of way – and enforcement of laws governing that. Reducing rear-end crashes requires managing traffic congestion by such means as timed signals and turn-lanes.

Intersection Fatalities by Accident Class (FHE)



Intersection Disabling Injuries by Accident Class (FHE)

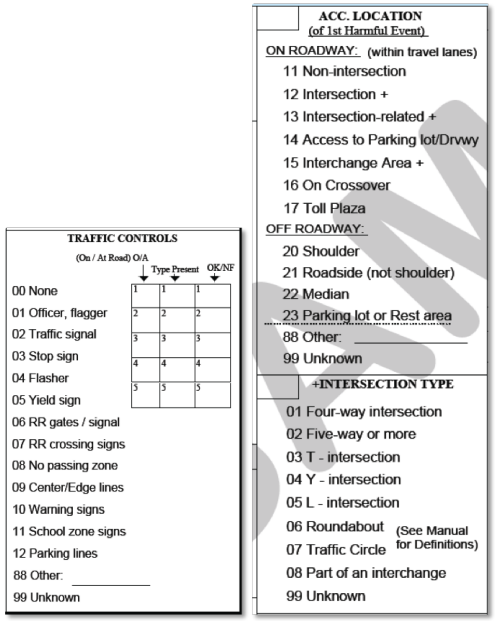


Between 2008 and 2012, collisions between motor vehicles accounted for 85 percent of the fatalities and 82 percent of the disabling injuries at intersections. Of these, 75 percent were angle collisions (left-turn and right-angle), 16 percent rear-end.

5. An improved crash reporting form enables detailed analysis

In 2009, a new crash reporting form allowed the collection of more detailed data about intersection types. Roundabouts, four ways, five ways, T's and Y's, for example, were assigned different numbers for coding purposes. Before 2009, the only information collected about intersections where crashes had occurred concerned traffic control measures such as signals, stop signs and yield signs. The causes and relief of intersection collisions will be analyzed in greater detail as additional data accrues.

DATA POINTS



TRAFFIC CONTROLS
(On / At Road) O/A
Type Present | OK/NF

00 None
01 Officer, flagger
02 Traffic signal
03 Stop sign
04 Flasher
05 Yield sign
06 RR gates / signal
07 RR crossing signs
08 No passing zone
09 Center/Edge lines
10 Warning signs
11 School zone signs
12 Parking lines
88 Other: _____
99 Unknown

ACC. LOCATION
(of 1st Harmful Event)

ON ROADWAY: (within travel lanes)
11 Non-intersection
12 Intersection +
13 Intersection-related +
14 Access to Parking lot/Drvwy
15 Interchange Area +
16 On Crossover
17 Toll Plaza

OFF ROADWAY:
20 Shoulder
21 Roadside (not shoulder)
22 Median
23 Parking lot or Rest area
88 Other: _____
99 Unknown

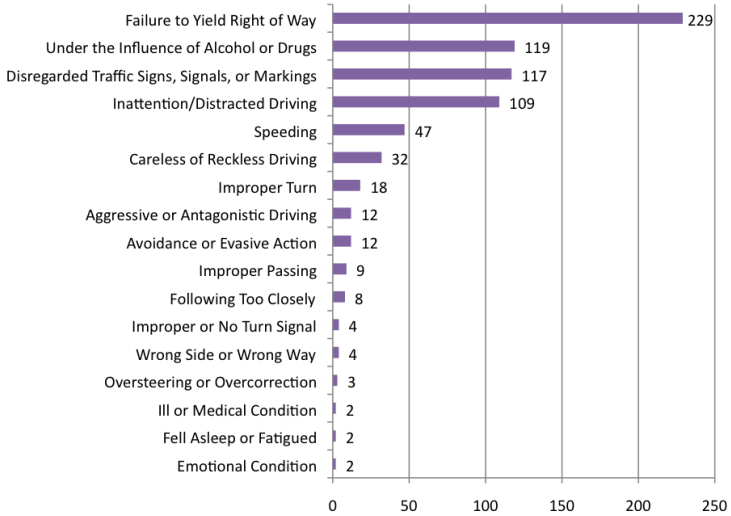
+INTERSECTION TYPE
01 Four-way intersection
02 Five-way or more
03 T - intersection
04 Y - intersection
05 L - intersection
06 Roundabout (See Manual for Definitions)
07 Traffic Circle
08 Part of an interchange
99 Unknown

The crash reporting form introduced in 2009 lists more options under "Traffic Controls" and "Accident Location" and adds a new category: "Intersection Type."

6. The contribution of driver behavior to intersection collisions

Most intersection fatalities are the result of a collision between two vehicles and most of those collisions occur between vehicles moving at 90 degree angles to each other. Given this information, it's not surprising "failure to yield right-of-way" and "disregarded traffic signs, signals or markings" represent two of the top three factors involved in collisions. Cell phone usage inside and outside of vehicles has skyrocketed within the last decade. Given this trend, it is not surprising that "inattention/distracted driving" is noted as the fourth largest contributor to intersection crashes, The remaining factor in the top four, driving while impaired by alcohol or drugs, is all too familiar. Additional information regarding this category of fatalities/serious injuries can be found in the impaired driver chapter of this plan.

Intersection Fatalities by Driver Contributing Circumstance (2008-2012)



Increased police presence could reduce many of the driver behaviors that lead to intersection fatalities.

Five types of intersections

Signalized

- ▶ pre-timed traffic signals
- ▶ traffic-actuated signals

Unsignalized

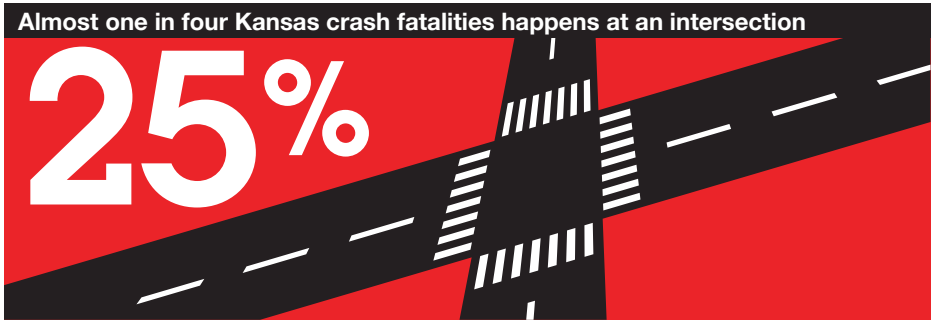
uncontrolled | controlled | roundabouts

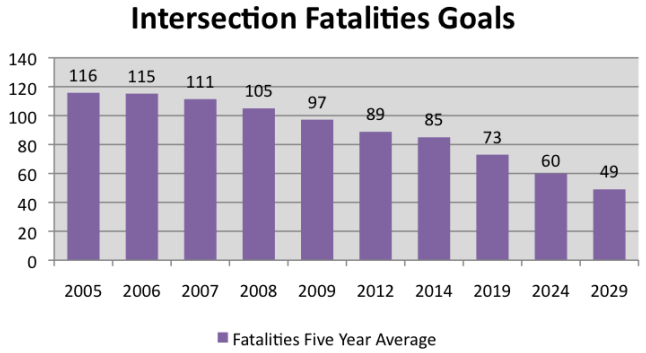
DATA POINTS

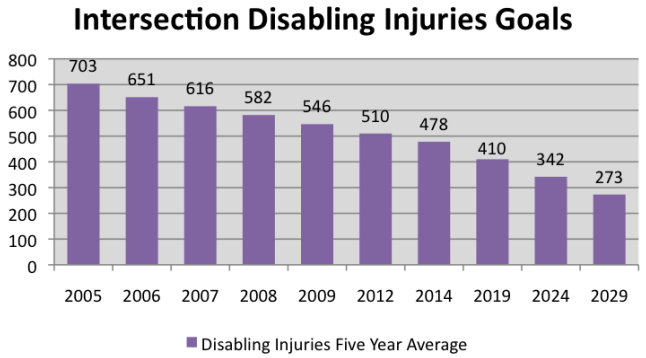
Performance Measures

Consistent with the overall SHSP goal, the Intersections EAT aims to halve intersection fatalities and serious injuries within 20 years. Focusing on serious injuries as well as fatalities makes sense, since serious injury crashes are often an indicator of potential fatal crashes. For the five-year period 2005 through 2009, Kansas averaged 97 intersection and intersection-related fatalities and 546 disabling injuries per year. In order to meet our goal, we must, on average, reduce fatalities during the 2025 to 2029 period by an average of at least 49 per year, and disabling injuries by at least 273 per year.

The SHSP is a key tool in accelerating the trend toward decreased intersection collisions seen in recent years. Interim goals will help us measure our progress. The Intersections EAT chose to use a straight-line projection to set interim goals – that is, to consistently reduce intersection fatalities by two or three a year. A straight line projection was made because the EAT felt most of the "simple" fixes have already been applied statewide. These include strategies such as all-red time intervals between green signals, 12" signal lenses, back-plates on signal housing, mast-arms that put signals over the lanes, and dilemma-zone protection for signalized intersections and pavement markings such as turn-arrows and stop lines. The next figure shows our interim five-year goals, in terms of fatalities.







Data thru 2012 indicates the actual number of fatalities; data for 2014 and beyond indicates our goal.

GOALS AND STRATEGIES

To reduce serious injury and fatal crashes at intersections on all public roads statewide, the Intersections EAT developed the following list of intermediate goals.

1. Create and manage data-driven safety programs that make the best use of safety dollars,
2. Make use of available traffic records, crash data and roadway data to identify projects designed to make intersections safer,
3. Experiment with innovative engineering countermeasures,
4. Promote proven engineering countermeasures,
5. Use law enforcement to encourage good driver behavior; and
6. Promote education campaigns that focus on the factors most often linked to intersection crashes.

Some techniques for reducing intersection collisions cost little or nothing. Examples of little or no cost countermeasures include timing traffic light changes so for a brief interval all signals show red, allowing an intersection to clear before right-of-way is reassigned. Other measures, such as the construction of roundabouts to reduce conflict points and lower vehicle speeds, are more expensive. The challenge for the Intersections EAT is to identify, prioritize and implement realistic strategies.

GOAL 1: Create and manage data-driven safety programs that make the best use of safety dollars

New Strategy:

- Recommend new distribution of Highway Safety Improvement Program, or HSIP, funding based on Kansas crash statistics. *See Roadway Departure chapter for action plan*

Future Strategies:

- No future strategies identified at this time

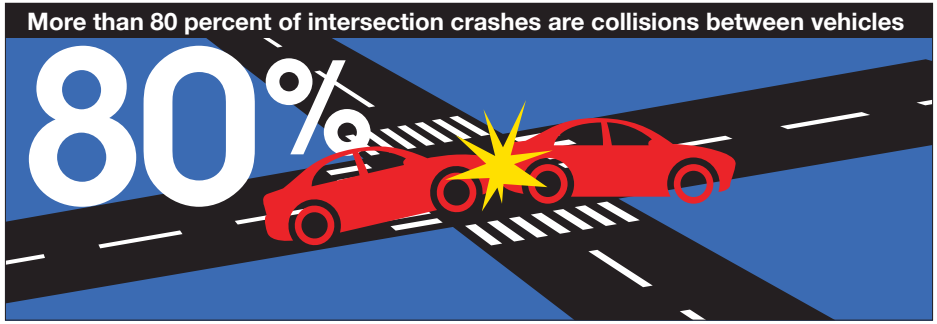
GOAL 2: Make use of available traffic records, crash data and roadway data to identify projects designed to make intersections safer

New Strategies:

- Develop a method to project the expected number of crashes based on intersection types and traffic volumes in order to identify intersections with the potential for improvement
  - Background: KDOT wants to utilize safety performance functions (SPF) and crash modification factors (CMF) as the basis for determining low-cost, system wide improvements and high-cost projects at specific sites. Both SPF and CMF are key elements of the Highway Safety Manual published in 2010 by the American Association of State Highway and Transportation Officials. KDOT is currently using a software tool called Safety Analyst to analyze crash, volume and roadway data. Safety Analyst was developed by the FHWA in cooperation with a number of states, including Kansas. Using this software will support a more sophisticated analysis of the Kansas highway system. KDOT will also develop an application that helps local jurisdictions predict crash frequencies at different types of intersections.
  - Method: research
  - Costs: $50,000 per year (estimated)
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: reliability of the data
  - Target date: begin integration into planning process in 2015
- Create an intersection inventory to aid crash analysis. *See Data Support chapter for action plan*

Future Strategies:

- Identify and analyze recurring variables related to intersection crashes
- Facilitate access by local jurisdictions to KDOT crash data
- Improve the quality and consistency of crash reporting by law enforcement
- Establish a grading system for intersections to rank them based on safety



GOALS AND STRATEGIES

GOAL 3: Experiment with innovative engineering countermeasures

New Strategy:

- Promote research into experimental low-cost countermeasures
  - Background: Specific countermeasures are often described as experimental, tried or proven. The effort here will be to promote research on experimental strategies that leads to proof of their viability. This will be accomplished by working through state programs like KTRAN and federal programs like the National Highway Cooperative Research Program. This strategy will also require working with organizations like the Local Transportation Assistance Program (LTAP) at the University of Kansas (KU) and the American Public Works Association to stimulate local participation.
  - Method: research
  - Costs: $100,000 per year (estimated)
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: finding locations for build-to-evaluate countermeasures
  - Target date: FY 2015 and Beyond

Future Strategy:

- Consider experimenting with rural intersection collision avoidance systems

GOAL 4: Promote proven engineering countermeasures

New Strategies:

- No new strategies identified at this time

Future Strategies:

- Promote advance street name signs at intersections
- Simplify the configuration of low traffic-volume, two-way, stop-controlled intersections
- Encourage signal pre-emption that gives right-of-way to emergency vehicles

GOAL 5: Use law enforcement to encourage good driver behavior

New Strategy:

- Develop a program to fund targeted enforcement programs at high-crash intersections
  - Background: Speeding contributed to at least 47 fatalities between 2008 and 2012. Disregard of signs, signals or markings contributed to at least 117 fatalities during this time period. It's widely recognized the presence of law enforcement improves driver behavior. The motorist is more likely to drive at a reasonable speed, drive defensively, and obey signs, signals and markings when a law enforcement officer is within sight. Less well-known is that enforcement of traffic laws appears to reduce crime rates overall. The retention of strong traffic enforcement units within law enforcement agencies, therefore, may be a benefit at many levels. We recommend the creation of a program (and the promotion of existing programs) that fund overtime law enforcement at specific intersections and the development of lines of communication between law enforcement and public works employees about "hot spots."
  - Method: program
  - Costs: TBD
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: identifying high-crash intersections and prioritizing those that receive increased attention if demand exceeds funding
  - Target date: FY 2015

Future Strategies:

- Use the media to promote awareness of the link between vigorous traffic-law enforcement and reduced crime
- Encourage law-enforcement agencies to concentrate more resources on traffic law enforcement

GOAL 6: Promote education campaigns that focus on the factors most often linked to intersection crashes

New Strategies:

- No new strategies identified at this time

Future Strategy:

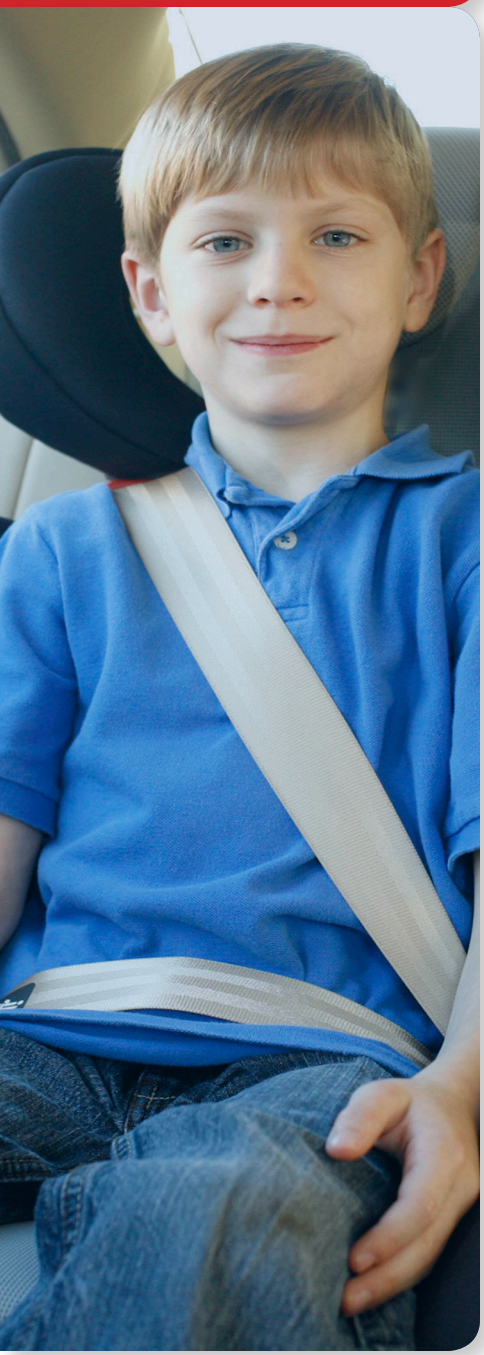
- Develop guidelines and procedures for consultants, state engineers and local engineers to complete traffic studies and intersection crash analyses

KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

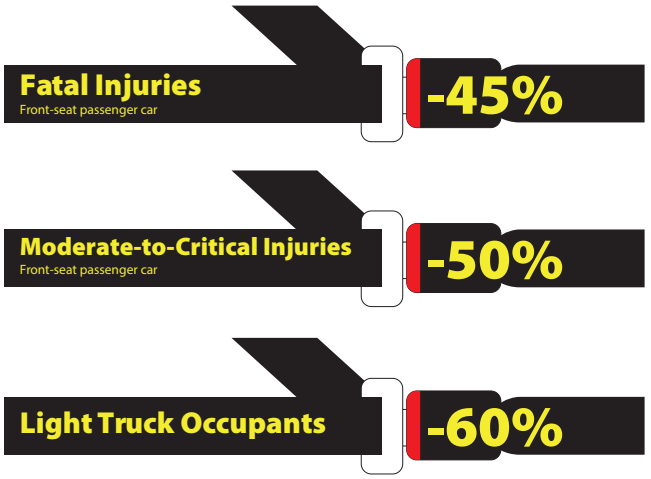
CHAPTER 5: OCCUPANT PROTECTION

SAFEKAN
Road to Zero Fatalities



INTRODUCTION

Buckling up – or being buckled in – is the most effective protection during a car crash. NHTSA estimates that lap/shoulder seat belts, when used correctly, reduce fatal injuries to front-seat passenger car occupants by 45 percent and moderate-to-critical injuries by 50 percent. See 2012 Traffic Safety Facts for details.



For light-truck occupants, the protection is even better: Seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.

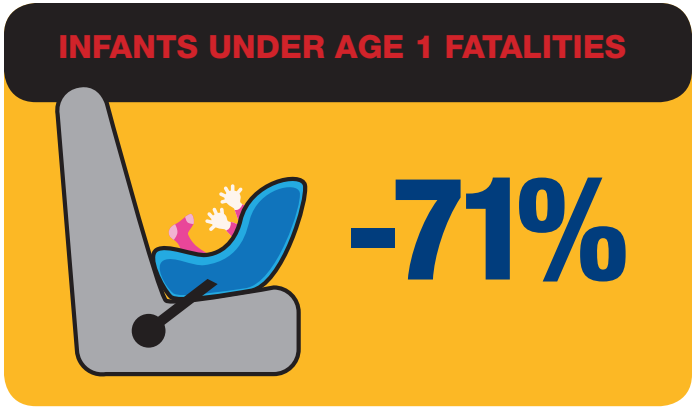
The greatest benefit, though, is for infants under age 1. When used correctly, child safety seats reduce their fatalities by 71 percent. For toddlers ages 1 to 4 in passenger cars, the reduction is 54 percent. For infants and toddlers in light trucks, the reductions are 58 percent and 59 percent, respectively. However, according to NHTSA, approximately 3 out of 4 car seats are not used properly, which is a tremendous risk to children.

Kansas has two seat belt laws which cover occupants in all passenger vehicles (cars, vans, pickup trucks and SUVs), plus federal regulations which require seat belt use in commercial vehicles. The Safety Belt Use Act (KSA 8-2501) requires all occupants ages 14 and older to “have a safety belt properly fastened” when a car is in motion.

The Child Passenger Safety Act (KSA 8-1343) requires drivers to provide for the protection of children under age 14 by properly using child passenger safety restraints or seat belts.

Kansas currently has more than 550 Child Passenger Safety (CPS) Technicians and nearly 30 instructors across the state to assist caregivers in the proper installation of CPS seats. They follow the latest NHSTA recommendations:

- Children under the age of one should always be in a rear-facing seat that is installed in the back seat. A rear-facing car seat is the best seat for your young child to use.
- Children should remain in a rear-facing seat until they reach the top height or weight limits stated by the seat manufacturer. Only then should a child move into a forward-facing seat with a harness that is installed in the back seat.
- Children should remain in a forward-facing seat with a harness until they reach the top height or weight limits stated by the seat manufacturer. Only then should a child move into a booster seat placed in the back seat.
- Keep children in a booster seat for as long as possible until the adult seat belt fits properly. Children are generally ready to use a seat belt when 1) they are tall enough to sit in the seat without slouching; 2) they



INTRODUCTION

can keep their back against the vehicle seat; 3) they can keep their knees naturally bent over the edge of the vehicle seat; and 4) they can keep their feet flat on the vehicle floor. To fit a seat belt properly, the lap belt must lie snugly across the upper thighs, not the stomach. The shoulder belt should lie snugly across the shoulder and chest, not across the neck or face. Keep your child in the back seat at least through age 12.

Kansas relies on two annual observational surveys to determine seat belt use in vehicles. The adult survey, conducted each summer, focuses on the drivers and front-seat passengers. Data released by KDOT in 2011 showed 83% of front seat occupants were using seat belts, a sizable increase from 77% in 2009. This increase may be attributed to the enactment of a primary seat belt law in 2010. However, in 2012, the survey's methodology was changed to be compliant with NHTSA's criteria using a fatality-based method versus a population-based method, and is now conducted in 35 of our 105 counties (up from 20 surveyed previously). This change may have contributed to a slight decrease in the seat belt rate from 83% in 2011 to 80% in 2012, but KDOT believes utilizing a fatality-based formula will provide a more accurate measure of the seat belt rate.

The annual child survey, which is not required by NHTSA, is conducted in early spring, and includes the same 20 counties that were originally observed in the annual adult survey. Four age groups are observed: 0-4, 5-9, 10-14, and 15-17. For purposes of data stability, the data from the two most recent years are combined to produce the state-wide estimate. The site pool is comprised of neighborhoods where children of these age groups are likely to be traveling, and can be easily observed, such as grocery and other stores, daycare/preschool areas, elementary school neighborhoods, middle-school/ junior high neighborhoods and high school neighborhoods. The good news in child passenger safety is that a majority of parents buckle their children in car seats, booster seats or seat belts.

The purpose of the occupant protection emphasis area team is to develop data-driven action plans that encourage drivers and passengers to wear seat belts at all times. Data in this chapter apply only to vehicles covered under Kansas seat belt laws: cars, pickup trucks, SUVs, vans (10 passengers or fewer), and commercial vehicles. Data related to pedestrians, bicycles, motorcycles, ATVs and other vehicles not included in Kansas law will not be included.

The occupant protection team develops performance measures, sets objectives, selects strategies and identifies resources needed, including funding, legislation, staff and lead agencies. Implementing the strategies will require various combinations of the 4E's: engineering, education, enforcement and emergency management.

The outcome sought by the occupant protection emphasis area team is the implementation of the SHSP through safety-related programs and projects. Implementation may depend on policy changes, media attention, education and awareness campaigns, enforcement mobilization and programs aimed at low seat-belt-use groups. Some efforts will be statewide; others will target geographic areas with low rates of seat belt use.

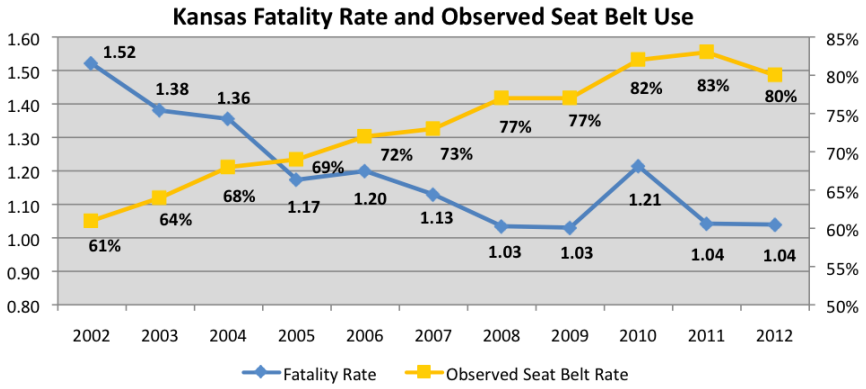
Members of the emphasis area team first met in 2009, and now include representatives from the following organizations:

- Kansas Department of Transportation (KDOT)
  - + Bureau of Transportation Safety and Technology
  - + Law Enforcement Liaisons
- National Highway Traffic Safety Administration (NHTSA)
- Kansas Highway Patrol (KHP)
- Children's Mercy Hospital
- DCCCA
- Office of Kansas Attorney General
  - + State Child Death Review Board
- Kansas Department of Health and Environment (KDHE)
  - + Trauma Registry
  - + Safe Kids Kansas
- AAA of Kansas
- Mid-America Regional Council (MARC)
- Kansas Traffic Safety Resource Office (KTSRO)
- Parsons Brinckerhoff

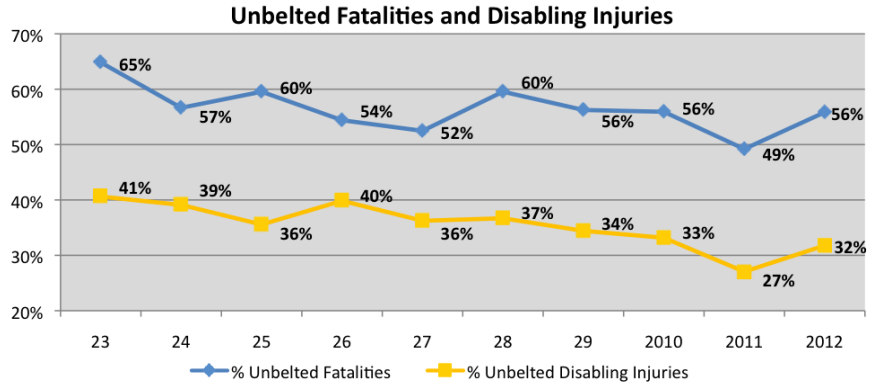
DATA POINTS

1. Buckling up saves lives.

It's easy to see: fatalities and serious injuries go down when drivers and passengers buckle up.



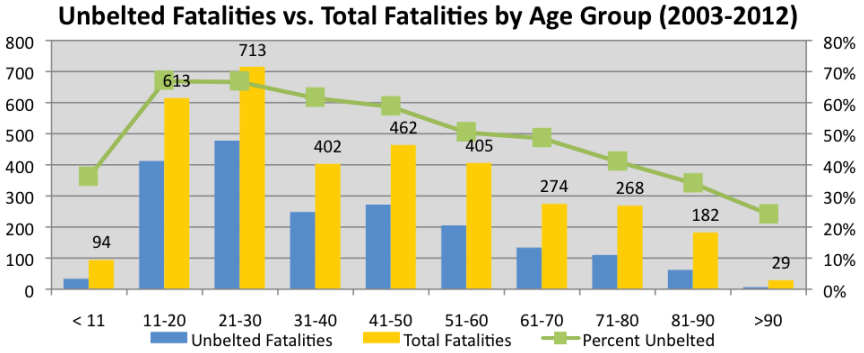
In the latest reporting year, there were 1.04 fatalities for every 100 million vehicle miles traveled in vehicles where seat belts can be used. Generally, as the rate of seat belt use increases, the fatality rate decreases.



The number of fatalities in vehicles dropped from 401 in 2003 to 317 in 2012, while the number of disabling injuries decreased from 1,704 to 1,196.

2. The highest risk-takers: teens and young adults.

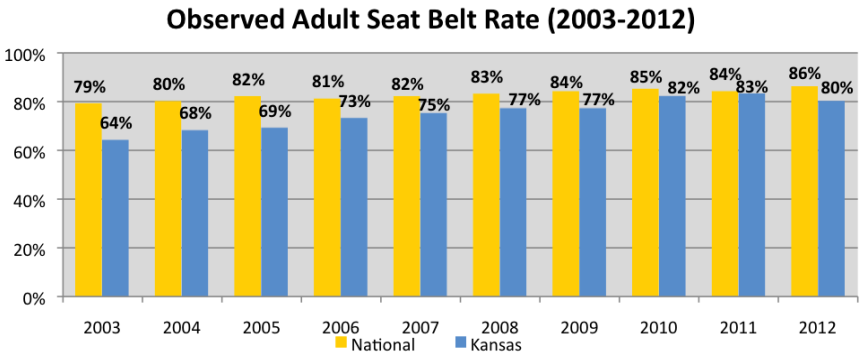
Not wearing seat belts is most prevalent among drivers and passengers ages 11-30.



After age 30, both the number of fatalities and the percent of unbelted fatalities decreased.

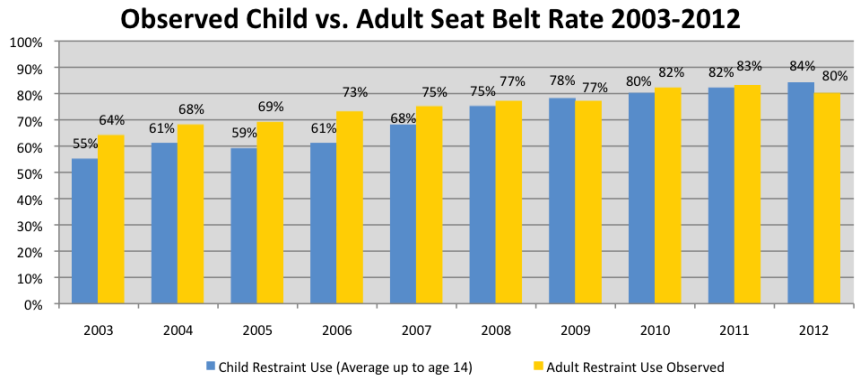
3. More Kansans are keeping themselves and their kids safe.

Kansas still falls below the national average in terms of adult use of seat belts, but the state gained ground between 2003 and 2012. Kansans are increasingly buckling their children into safety seats or getting them to buckle up.



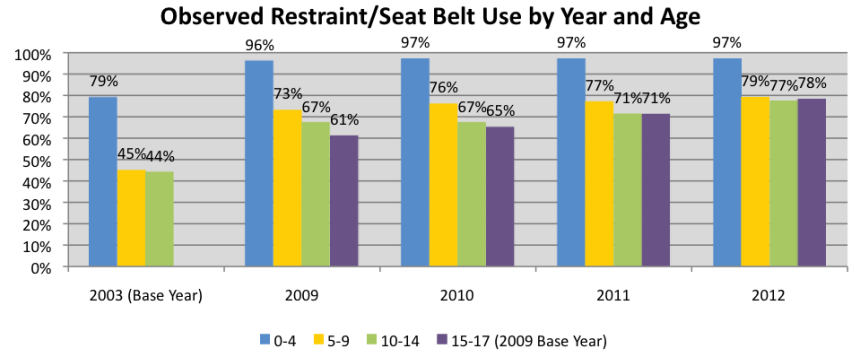
In 2012, Kansas ranked 39th in the nation in terms of observed seat belt use.

DATA POINTS

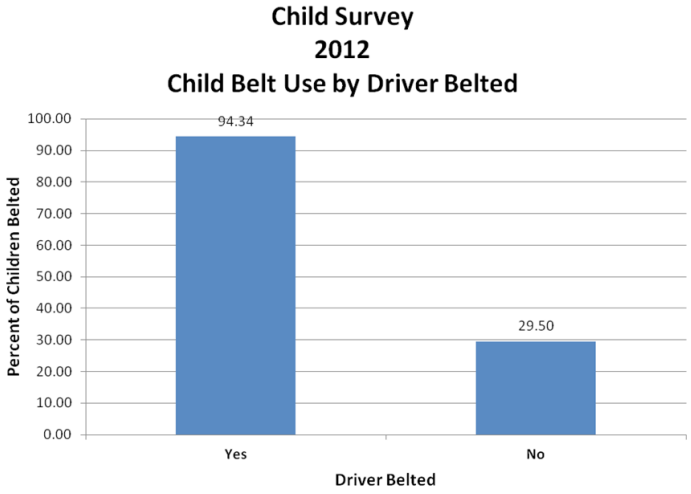


In 2012, children were observed to be restrained or wearing seat belts at a higher rate than adults for the first time.

4. Historically, children 0-4 are restrained at a higher rate than any other age group.



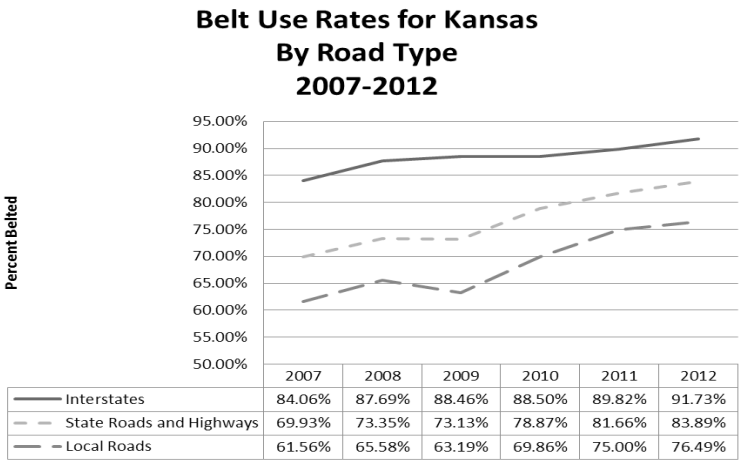
From 2003 to 2009, the percentage gains in seat belt use among children were greatest among children under 10, possibly due to passage of a Booster Seat Law in 2006. Use of restraints falls off sharply between the toddler and teenage years: from 97 percent to 78 percent in 2012. It should be noted that the child observational survey only measures whether the children are restrained. It does not show whether the restraints are correctly installed, or whether the type of restraint is appropriate for the age and size of the child.



Children are much more likely to be buckled up if the driver is also belted. If the driver is belted, about 94% of the children are also belted. If the driver is not belted, only about 30% of the observed children were also belted.

DATA POINTS

5. Still, on every type of road, more people are using seat belts.



	2007	2008	2009	2010	2011	2012
Interstates	84.06%	87.69%	88.46%	88.50%	89.82%	91.73%
State Roads and Highways	69.93%	73.35%	73.13%	78.87%	81.66%	83.89%
Local Roads	61.56%	65.58%	63.19%	69.86%	75.00%	76.49%

Seat belt surveys are conducted by trained observers. They occur in a representative sample of Kansas counties, based on fatalities. Among the findings: People are most likely to buckle up on interstates and least likely to buckle up on local roads. Yet between 2007and 2012, seat belt use increased on each of the three road types in Kansas. See the KTSRO Website for more details.

Performance Measures

The goal of the occupant protection emphasis area team is to help halve total motor vehicle fatalities and serious injuries within 20 years by increasing the use of safety restraints. Interim goals will help us measure our progress along the way. By doing so, we can adjust our strategies if they're not having the desired effect.

An annual survey in Kansas is conducted by trained observers to monitor vehicles and record seat belt use. Between 2005 and 2009, the average annual observed seat belt use was 75 percent. Our interim goal was to increase the five-year average to 80 percent by 2012. This goal was met. The next goal is to increase the five-year average to 86 percent by 2016. Statistics support that success in increasing proper seat belt use would naturally decrease the number of fatalities.

GOALS AND STRATEGIES

The occupant protection team has chosen six goals as the focus of its efforts. It seeks to:

1. Influence policymakers to pass laws that increase seat belt use in Kansas,
2. Create data-driven safety programs that promote, through media, education and law enforcement, the use of restraints by everyone,
3. Collaborate with state and local partners to promote a consistent message regarding restraint use,
4. Develop tactics to get all law enforcement officers to buckle up,
5. Provide funding and other forms of support for law enforcement officers to uphold occupant protection laws,; and
6. Use data to target areas of Kansas where restraint use is low.

The challenge is to identify the strategies, or combination of strategies, with the greatest impact on the behavior of drivers and passengers.

GOAL 1: Influence policymakers to pass laws that increase seat belt use in Kansas

New Strategies:

- Focus policy efforts on amending the seat belt fine in KSA 8-2504 to at least $60 plus court costs for ages 14 and older, and/or strike subsection (2) (d) which prohibits local authorities from enacting stricter fines. Also strive to amend KSA 8-2504 subsection (2) (b) for a seat belt violation to be reportable to the Department of Revenue as a moving traffic violation instead of a misdemeanor.
  - Background: Data from other states and NHTSA show that a substantial fine for seat belt violations has more effect than a small fine. Kansas law currently allows a $10 fine for adults, $60 for under age 18 with court costs for those under age 14, with no local ordinances for higher fines allowed. In addition, violations are not reportable to the Department of Revenue.
  - Method: legislation
  - Costs: minimal
  - Lead agency and contact: Buckle Up Education Coalition
  - Challenges: legislative support
  - Target date: FY 2015

- Focus policy efforts on amending KSA 8-1345 (a) to allow for multiple violations (and fines) if more than one child is unrestrained. Additionally, amend KSA 1345 (b) to waive the fine if the driver provides proof that they have purchased or acquired and installed the appropriate child passenger safety restraint.
  - Method: legislation
  - Costs: minimal
  - Lead agency and contact: Buckle Up Education Coalition
  - Challenges: legislative support
  - Target date: FY 2015

- Conduct study to determine comparative post-crash costs of hospitalization for belted and unbelted occupants
  - Background: Studies in other states show much higher medical costs for individuals in crashes who are not wearing seat belts, compared with those who are properly restrained. The findings of a Kansas study could be presented to the Legislature in order to help gain additional legislative support.
  - Method: research
  - Costs: $250,000 (estimated)
  - Lead agency and contact: KDHE, Kansas Trauma Program
  - Challenges: data access
  - Target date: Pilot study - FY 2016

Future Strategies:

- No future strategies identified at this time

GOAL 2: Create data-driven safety programs that promote, through media, education and law enforcement, the use of restraints by everyone

New Strategies:

- Provide model transportation policies to groups like churches, child care agencies and schools that regularly transport children
  - Background: Curriculum for child care agencies has been developed which will allow providers to get continuing education credits and will give general knowledge in transporting children safely.
  - Method: program
  - Costs: minimal
  - Lead Agency and contact: Kansas Traffic Safety Resource Office (KTSRO)
  - Challenges: Few
  - Target date: FY 2015

Future Strategies:

- No future strategies identified at this time

GOALS AND STRATEGIES

GOAL 3: Collaborate with state and local partners to promote a consistent message regarding restraint use

New Strategy:

- Require KDOT Traffic Safety grantees to have an enforceable seat belt policy in their agencies.
  - Background: Not all grantees have formal seat belt policies.
  - Method: Administrative
  - Costs: None
  - Lead Agency: KDOT Traffic Safety Section
  - Challenges: Few
  - Target Date: FY 2016

Future Strategies:

- No future strategies identified at this time

GOAL 4: Develop tactics to get all law enforcement officers to buckle up

New Strategies:

- No new strategies identified at this time

Future Strategies:

- No future strategies identified at this time

GOAL 5: Provide funding and other forms of support for law enforcement efforts to uphold occupant protection laws

New Strategy:

- Support Traffic Occupant Protection Strategies (TOPS) training
  - Background: Law enforcement officers are more likely to enforce occupant protection laws if they are trained in the importance of using safety restraints at every stage of life.
  - Method: program
  - Costs: $10,000 (estimate)
  - Lead agency and contact: KDOT, Traffic Safety Section, Law Enforcement Liaisons
  - Challenges: scheduling time for officers to attend training
  - Target date: FY 2018

Future Strategy:

- Support initiative for law enforcement agencies to have a Child Passenger Safety Technician on staff, with a minimum of 2 Technicians per county
- Promote Chief's Challenge award program

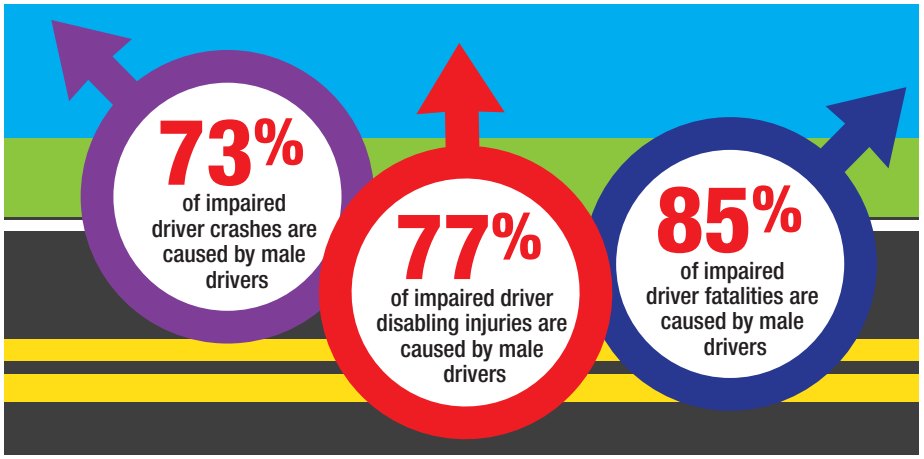
GOAL 6: Use data to target areas in Kansas where restraint use is low.

New Strategy:

- No new strategies identified at this time

Future Strategies:

- Evaluate effectiveness of changes to the graduated driver's license law
- Evaluate effectiveness of primary seat belt law



KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 6: OLDER DRIVER

SAFEKAN
Road to Zero Fatalities

INTRODUCTION

When NHTSA established its Older Driver Program in 1989, it defined older drivers as people age 65 and older. A 2004 study from the AAA foundation for Traffic Safety indicated drivers over the age of 65 are nearly twice as likely to die in car crashes when compared to drivers age 55 to 64.

According to the National Center for Health Statistics, in 1960, Kansans were expected to live an average of 69.7 years. US Census data indicated, just 11% of Kansans (240,269) were age of 65 or older.

The National Center for Health Statistics now indicates Kansans are expected to live 78.7 years. The 2010 US Census indicated 381,959 individuals over age 65 lived in Kansas, representing 13.3% of the state's population, with 1.9% of them being age 85 or older.

By 2030 forecasters anticipate 20% of the US population will be over age 65, with an average life expectancy of 86.6. Projections show Kansas general population growing a modest 9%, but the 65+ segment with an overwhelming 66% increase to 611,460. Twenty counties will see a 50-98% increase in this demographic from 2010-2030 with Johnson County predicted to see a 131% increase. That significant shift in demographics will make Kansas a different community than it is today. With respect to aging, challenges will intensify in the form of a less mobile population with a more socially and economically disadvantaged elderly population.

Older drivers have higher seat belt usage rates and a lower rate of alcohol-related crashes. They have fewer crashes but because a higher percentage is fatal, we must address older driver needs and survivability. Fatality rates for roadway users over 70 years old mirror teen driver fatalities. This is attributed to the normal fragility and frailty which hamper their likelihood to recover from a crash. This concern is amplified by the fact that nine Kansas counties do not have hospitals and 25% of the state's population lives more than an hour from Level 1 or 2 trauma centers.

Perhaps the biggest environmental barrier our aging rural residents face is the lack of transportation. When little or no public transportation in rural areas is coupled with few younger family members/neighbors to help out, it makes getting to medical care, the grocery store, or the visit to a spouse in a nursing home difficult. US Department of Agriculture data indicate currently 19% of Kansas seniors live in counties where the population is less than 20 people per mile.

Based on 2010 Census data, 14 counties have population ratio where there are between 42.7 and 52.7 older Kansans for every 100 adults under 64 years of age. Another 24 counties close behind at 34.3 to 42.6%. Simply put, in 38 Kansas counties over a third of their adult residents are over 65 years of age.

While Kansans are enjoying longer lives, driving later in life, and driving more miles than their ancestors, we must also address when they can no longer drive. Research indicates adults can expect to outlive their ability to safely drive by seven to 10 years. With this demographic group's expected 66% increase by 2030, it is clear transportation concerns must also address mobility options.

Losing the privilege of driving can have adverse public health consequences for seniors, such as depression, low quality of life, and loss of self-identity. Seniors are reluctant to stop driving as they believe it is crucial to their quality of life. Older drivers need assurance that policy changes will only restrict at-risk drivers, programs will be implemented to help them adapt their driving skills to their changing abilities and that when it is time to retire from driving, the State will help provide community support.

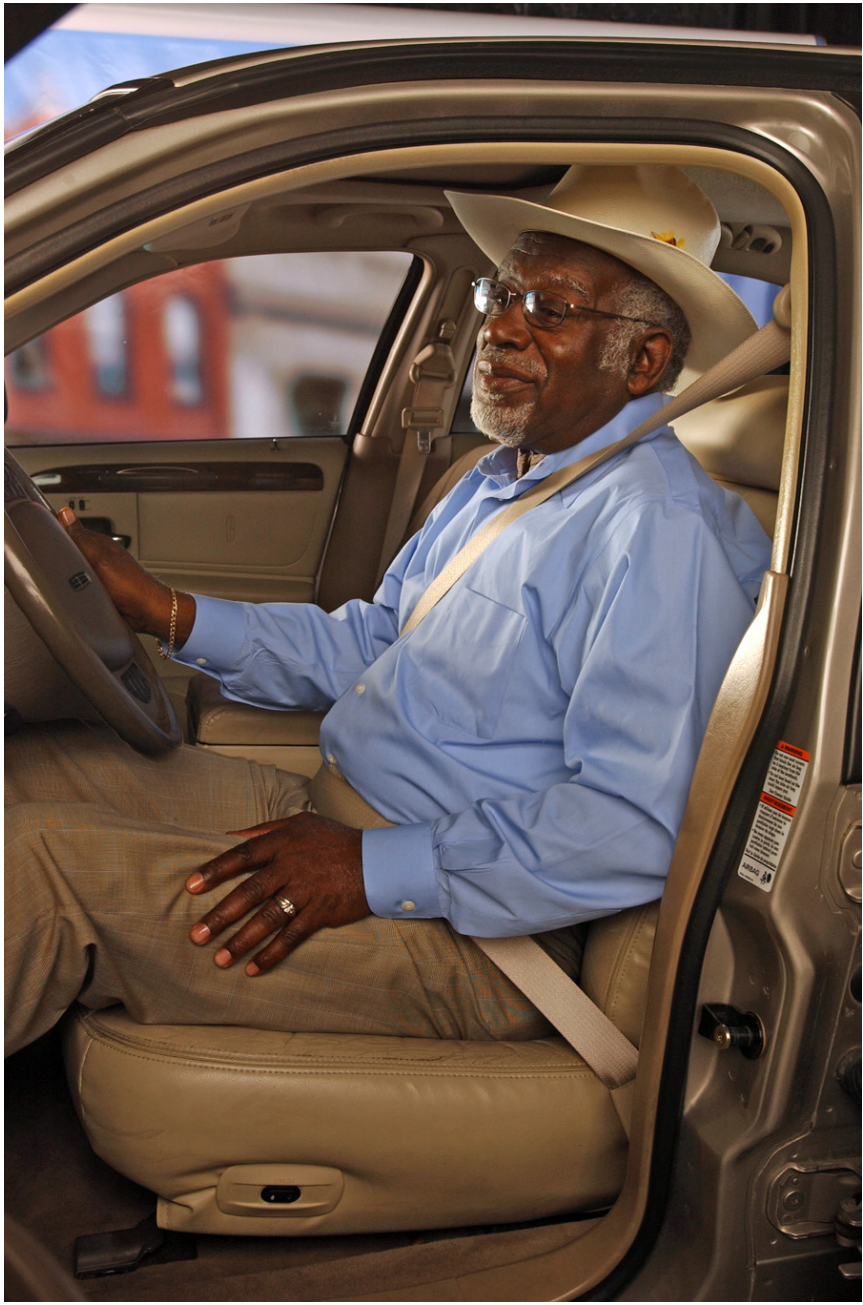
The Baby Boomer generation had yet to hit their 65th birthday when the 2010 Census data was gathered. The Kansas Older Driver team realizes the need to make safety plans before the tsunami of people born between 1946 and 1964 reach 'older driver' status. Those plans impact KDOT and the behavioral and engineering sides of traffic safety, as well as the services provided by our stakeholders and team partners.

INTRODUCTION

Team

The first team meeting for this emphasis area was held April 23, 2013. The multi-disciplinary group of highway, health, and safety professionals advocates that fatalities are reduced by focusing on some key, high-payoff areas. The team is made up of the following representatives:

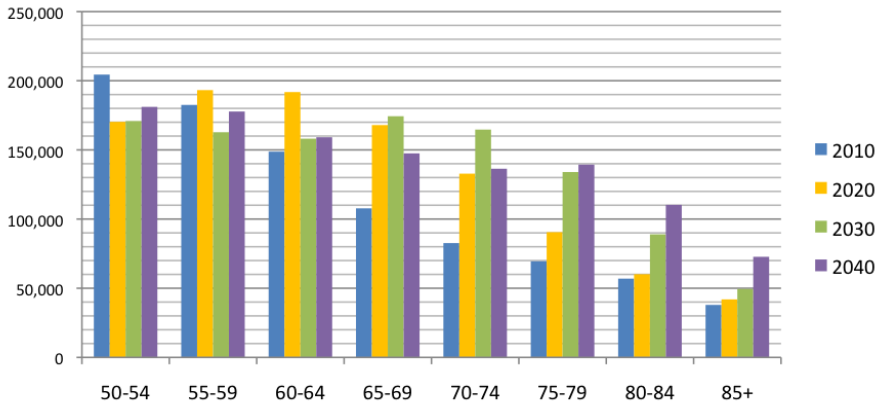
- AAA-Kansas
- AARP
- Americans for Older Driver Safety
- Coffey Health System
- Dotson Eye care
- Federal Highway Administration
- Kansas Department for Aging & Disability Services
- Kansas Department of Health & Environment
- Kansas Department of Revenue
- Kansas Department of Transportation
- Kansas Highway Patrol
- Kansas Transportation Safety Resource Office
- Kansas University Transportation Center
- North Central Flint Hills Area Agency on Aging
- Shawnee Mission Medical Center
- Stormont-Vail Regional Medical Center
- Topeka LULAC Senior Center



DATA POINTS

1. More Kansans reach age 65- and they're living longer

Projections by Wichita State University indicate the 65-69 age group will increase from under 105,000 in 2010 to nearly 170,00 in the span of a decade. The impact of Kansans living longer is more dramatic when comparing the 70-74 age group in 2010 at 80,000 and doubling to over 160,000 by 2030.

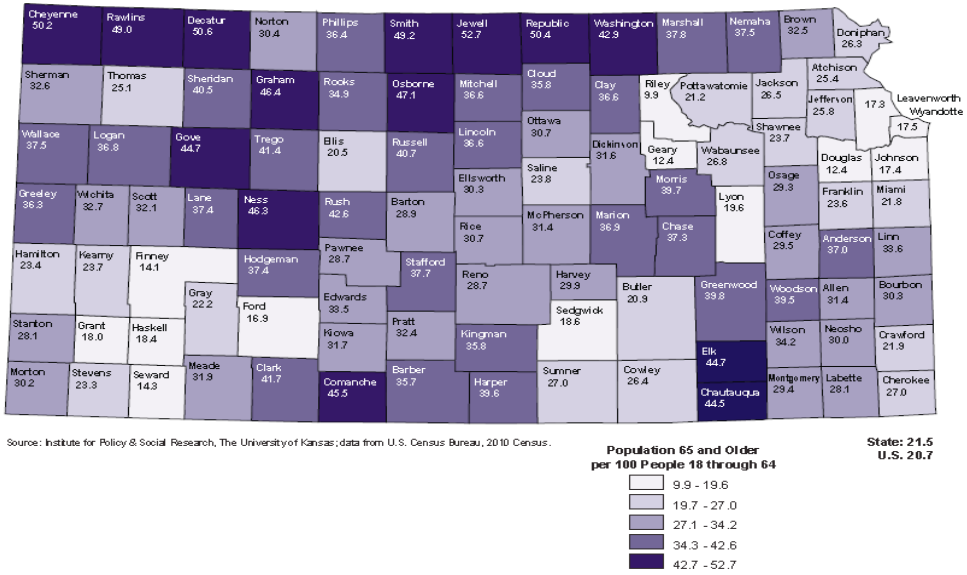


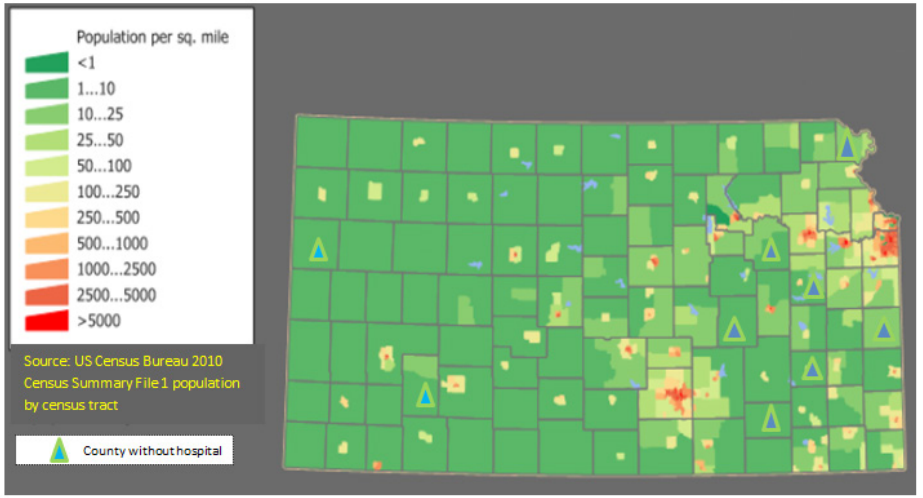
Source: 2010 Census data; population projections by WSU

2. It's not just about growth

The growth of the age 65 and older population is more dramatic when one considers the dependency ratio. A dependency ratio compares the population volume for the over 65 age group to the number of Kansas adults age 64 and under. Prior to the baby boom generation even reaching age 65, the 2010 data indicated 14 counties where there were 42 or more adults over age 65 for every 100 adults.

Older Population Dependency Ratio in Kansas, by County, 2010

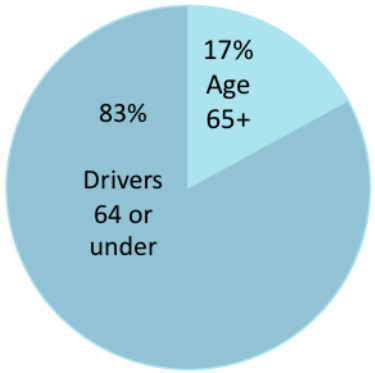




DATA POINTS

3. Licensed Drivers 65+ on the Rise since 2000

Licensed Kansas Drivers
Source: Kansas Dept of Revenue

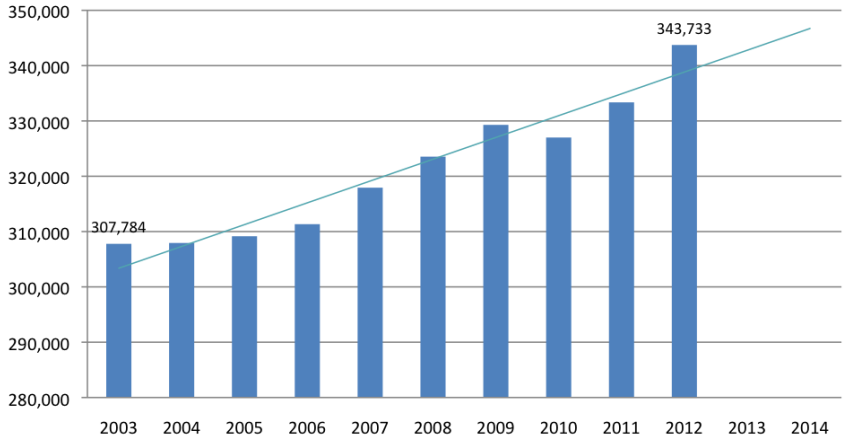


Age Group	# Registered Drivers in Kansas
65-69	116,659
70-74	82,051
75-79	61,697
80-84	45,789
85-89	26,695
90+	10,842

17% of all registered Kansas drivers are 65 or over per 2012 data (Figure 1) yet make up only 13% of total population. This percent has remained steady over the last 20 years.

*376,116 Kansans are 65 or older **and** 343,733 are registered drivers, meaning 87% have a license to drive.*

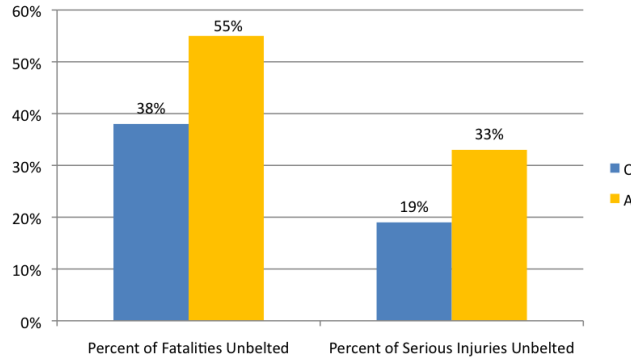
Kansas Registered Drivers age 65+
Source: Kansas Dept of Revenue



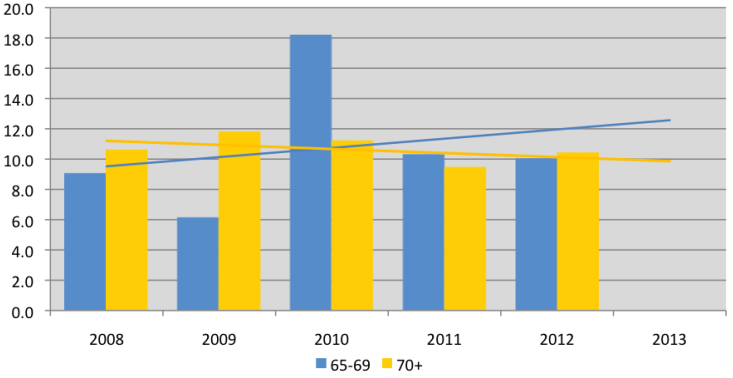
4. Older Drivers practice Safe Behavior

Areas which are traditionally the focus for improving driver safety don't appear to be issues for older drivers and passengers. The US Department of Health and Humans Services – Centers for Disease Control and Prevention reports 77% of older adults use seatbelts, compared to 63% of other adult occupants. They are highly unlikely to drink and drive: only 5% of older drivers in fatal crashes had a blood alcohol concentration of 0.08 g/dL or higher, compared to 25% of adult drivers. Older drivers tend to limit their driving during bad weather, at night, and drive fewer miles.

Fatalities and Serious Injuries Unbelted
(2008-2012)

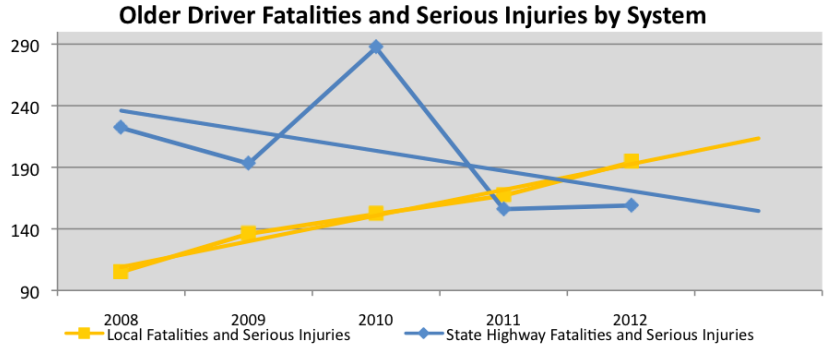


Rate of Fatalities and Serious Injuries
per 10,000 Registered Drivers by Age Group



The rising trend line (blue dashes) forecasts an increasing number of fatal and serious injuries for registered drivers age 65-69. The declining trend line (green dashes) forecasts a slight drop for the 70 and older age group.

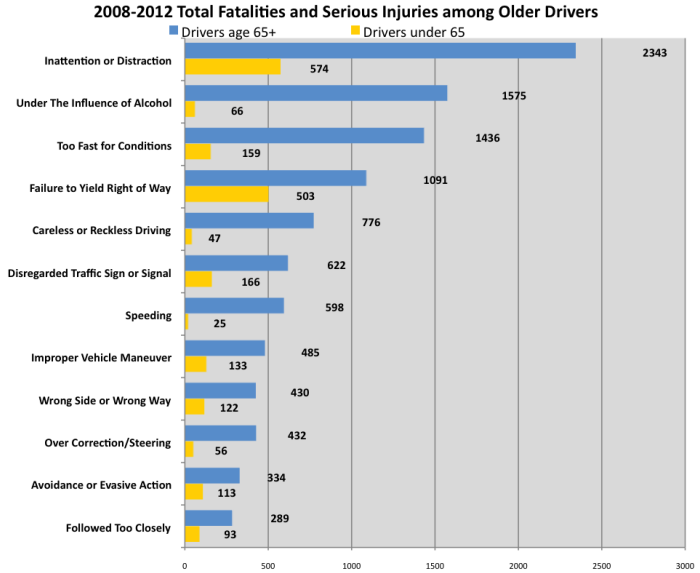
DATA POINTS



The trend lines above forecast a decline in the number of fatal and serious injury crashes on State highways but a steady increase in those same crashes on local roadways.

5. Contributing Circumstances Catch Older Drivers

From 2008 through 2012, there were 8,234 fatal and serious crashes in Kansas, with 15.6% involving older drivers. Out of *all* reported crashes in the same time period, only 13.6% involved an older driver. [NOTE: the crash data doesn't indicate an older driver 'at fault' but that an older driver was involved in a crash.]



Of the 12 most common causes in Kansas for fatal and serious injury crashes involving older drivers, two stand above the rest: inattentive/distracted driving and the failure to yield right of way. Each are three times more likely to occur than the third ranking cause, regardless of a traffic sign/signal.

Statewide, the majority of traffic fatalities involving older drivers occurred on a weekday (79%), during the day (77%), and involved other vehicles (75%). This compares to *all* drivers, with 67%, 53%, and 52%, respectively. Nationally, among two-vehicle fatal crashes involving an older and younger driver, the vehicle driven by the older driver was 1.7 times more likely to be the vehicle that was struck (58%).

Performance Measures

Performance measures not yet established

GOALS AND STRATEGIES

The Older Driver Team has been in existence for a relatively short period of time. Goals and Strategies are currently in the beginning stages of development. You can expect an expanded version of this section in future versions of this plan. At this time, the following goals and strategies have been developed:

1. Improve communication and coordination among partners at the state, regional and local levels to enhance safe senior mobility; and
2. Promote design and operation of Kansas roadways with features that accommodate older roadway users and pedestrians.

GOAL 1: Improve communication and coordination among partners at the state, regional and local levels to enhance safe senior mobility

New Strategy:

- Conduct research on senior access and mobility issues to help bridge the gap between driving retirement and mobility dependence.
  - + Background: A research project has been awarded for State Fiscal Year 2015 to Kansas State University. The proposed project scope is to identify issues/concerns/barriers related to travel by elderly Kansans and suggest improvement strategies based on Kansas conditions. The study should take 18-24 months to complete.

Future Strategies:

- Inform public of the importance & need to support policy/program initiatives to promote & sustain aging roadway user safety, access, & mobility *(Develop & implement public/private partnerships.)*
- Plan for aging mobility and transportation-dependent population and encourage options to maximize the effectiveness of programs and resources
- Provide recommendations related to senior mobility and safety legislation

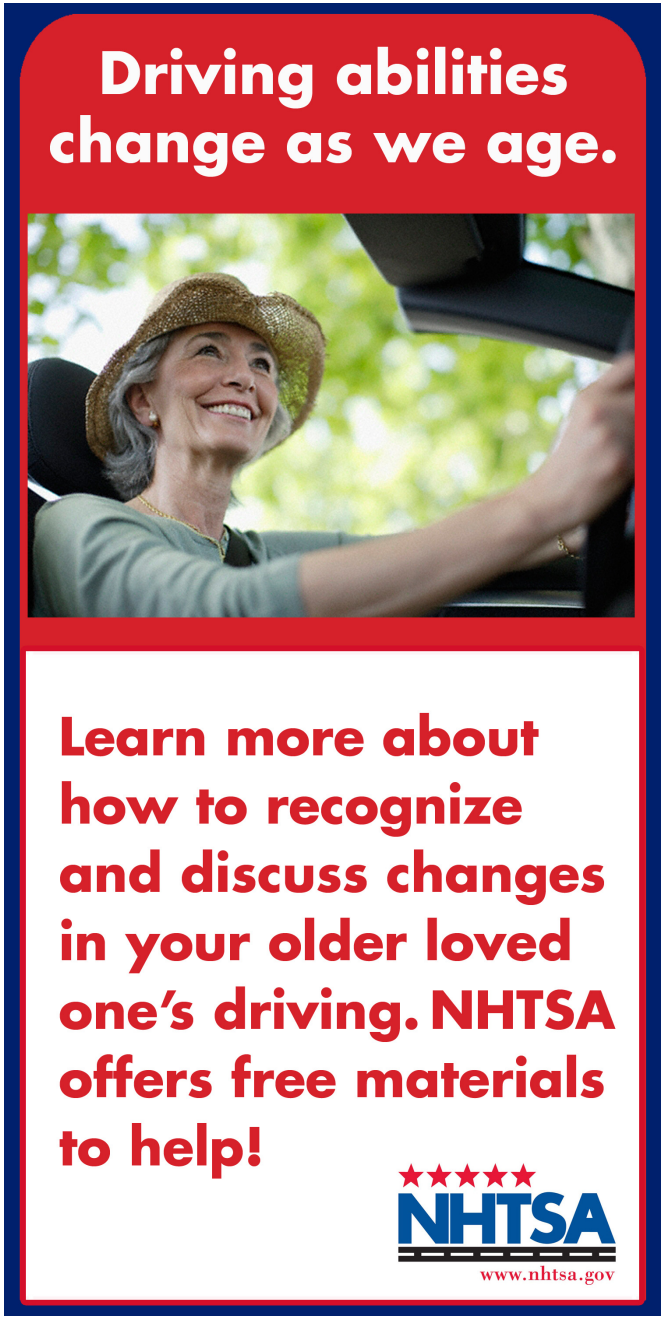
GOAL 2: Promote design and operation of Kansas roadways with features that accommodate older roadway users & pedestrians

New Strategies:

- No new strategies have been identified at this time

Future Strategies:

- No future strategies have been identified at this time



KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 7: ROADWAY DEPARTURE

SAFEKAN
Road to Zero Fatalities

INTRODUCTION

According to the FHWA, a *roadway departure crash* is a "non-intersection event that occurs after a vehicle crosses an edge line or center line, or otherwise leaves the traveled way." These departures can be voluntary (during passing maneuvers, for example) or involuntary (due to inattention). Multiple-vehicle crashes may be either head-on or sideswipes involving vehicles moving in the same or opposite directions. Single vehicles may collide with a fixed object or roll-over. Such crashes typically occur away from intersections, on shoulders, roadsides or medians.

One approach to reducing these crashes is prevention – keeping vehicles on the road and in their lanes. The other approach is devising a forgiving roadway - an engineering solution to reduce the severity of those incidents that do occur. We propose using both approaches.

The Roadway Departure EAT will develop data-driven action plans to reduce the number and severity of roadway departure crashes in Kansas. Relevant data include both crash statistics and quantifiable results from safety measures designed to reduce crashes. This EAT will develop performance measures, set goals, select strategies and identify resources, including funding, legislation, staffing and agency leadership, that are required to create safety-related programs and projects that lessen the number of roadway departure crashes.

Strategies will address the 4E's: engineering, education, enforcement, and emergency medical services. These could include, for example, low-cost safety improvements deployed systemically, high-cost safety improvements deployed via safety programs or construction projects, policy changes and research initiatives.

The Roadway Departure EAT first met October 15, 2009. These agencies were represented:

- American Traffic Safety Services Association (ATSSA)
- TranSystems
- Federal Highway Administration (FHWA)
- Kansas Highway Patrol (KHP)
- Kansas Department of Transportation (KDOT)

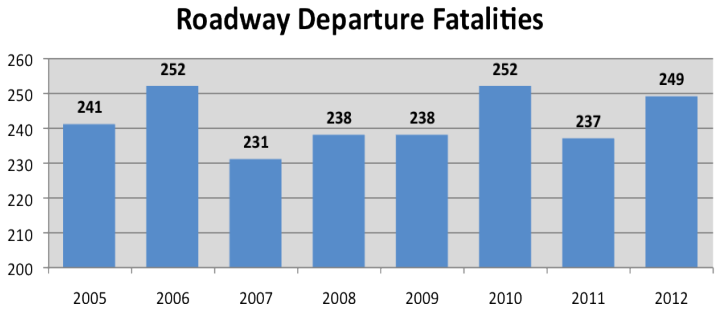
Identifying strategies and means of implementation are only part of the challenge. Deciding where, and to what extent, to apply a strategy is also critical. For example, when considering an engineering solution should we apply a low-cost strategy at 20 locations with a potential for crashes or apply a high-cost strategy at one location – seemingly similar to the 20 – that has a documented record of crashes?

A thorough understanding of the data related to roadway departure crashes is essential to answer these questions – and to the wise expenditure of our safety dollars. With input from the Data Support Team, the Roadway Departure EAT will have the tools to select strategies based on the actual causes of crashes.

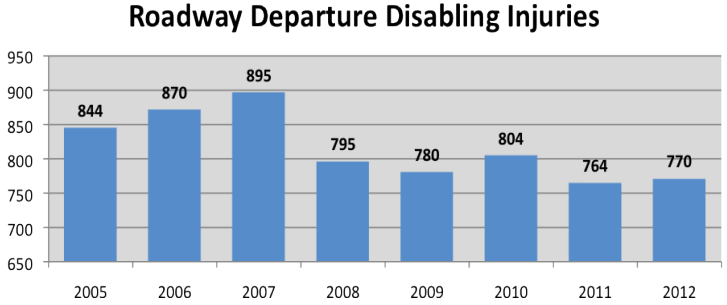
DATA POINTS

1. Roadway departure is the cause of less than a quarter of Kansas crashes but half the serious injuries and deaths

Between 2008 and 2012, 1,214 fatalities and 3,913 disabling injuries resulted from roadway departures, making these the No. 1 source of danger to drivers and passengers in Kansas. During these years, such crashes accounted for 24 percent of all those reported in Kansas; yet 50 percent of the serious injuries or deaths were associated with them. In sum, compared with other crash causes, the impact of roadway departures on drivers and passengers is likely to be more severe.



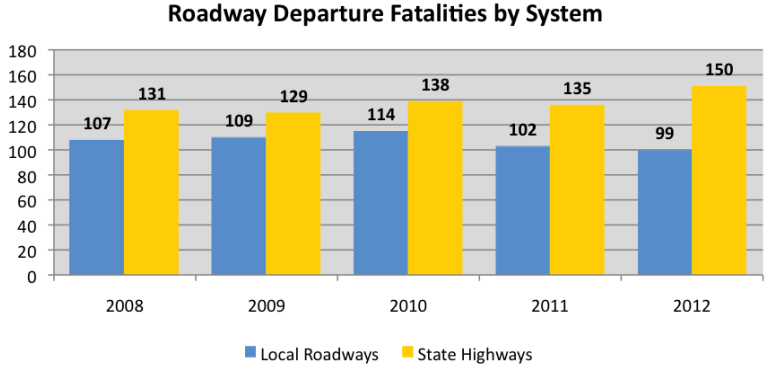
*Roadway departures can be deadly. They represent only 24 percent of **all** crashes but more than 60 percent of **fatal** crashes.*



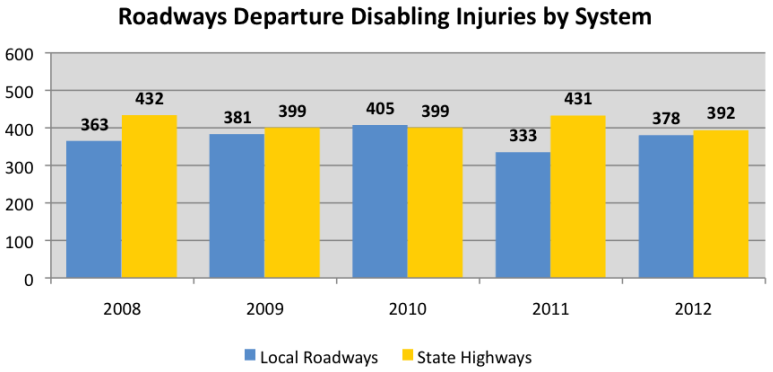
Similarly, roadway departure is the source of 47 percent of disabling injury crashes.

2. Roadway departures on state highways *and* local roads result in fatality and serious injury crashes

Between 2008 and 2012, 54 percent of **all fatalities** occurred on state highways and 56 percent of **roadway departure fatalities**. During the same period, 47 percent of **all disabling injuries** occurred on state highways and 52 percent of **roadway departure disabling injuries**. There are far more miles of local roads (92.5 percent,) but state roads carry more traffic (57 percent.)



Between 2008 and 2012, about 56 percent of roadway departure fatalities occurred on state highways, with the remaining 44 percent on local roads.



Disabling injuries are slightly more evenly distributed by system compared with fatalities.

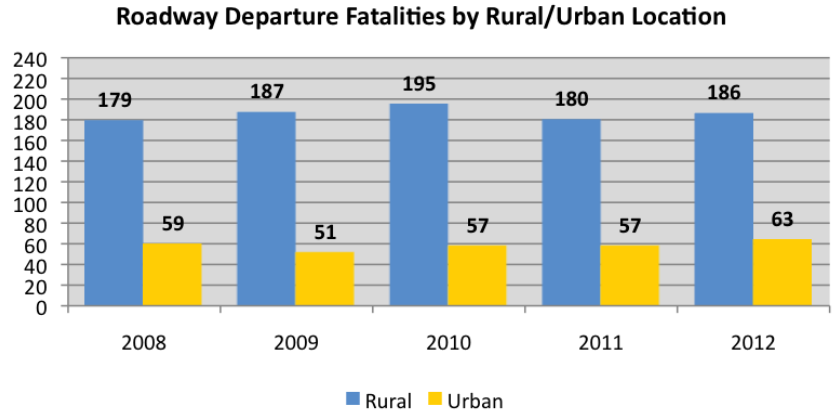
DATA POINTS

3. More than two-thirds of all roadway departure serious injuries and fatalities occur on rural roads and highways

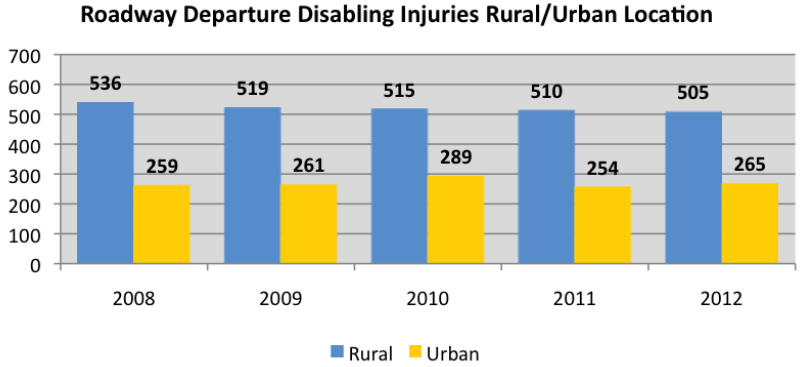
Between 2008 and 2012, 67 percent of roadway departure fatalities occurred on local roads and state highways in rural areas. This is slightly less than the figure for all fatalities: 70 percent occurred in rural areas. During the same period, 62 percent of roadway departure disabling injuries, and 51 percent of all disabling injuries, occurred in rural areas. In sum, statistics show roadway departure crashes on rural roads, compared with those on urban roads, result in more fatalities and serious injuries.

One contributing factor is obvious: Speed limits are higher on rural roads than most urban streets. Speeds are also higher on urban expressways and interstates, which account for 44 percent of roadway departure fatalities in urban areas.

These numbers explain why the Roadway Departure EAT will concentrate on strategies that address rural roads, urban expressways and interstates.



Sixty-seven percent of roadway departure fatalities occur on rural roads. That figure is striking given the level of use of Kansas roads: In 2012, the average daily vehicle-miles traveled on urban roads was about 42.3 million, on rural roads, about 41.2 million.



The gap between rural and urban locations as contributors to roadway departure disabling injuries has been closing slightly in recent years. But the fact that two-thirds of the injuries occur in rural areas is significant given that urban areas are more heavily traveled.

4. Rural Roadway Risks: High Speeds, Delays in Emergency Services

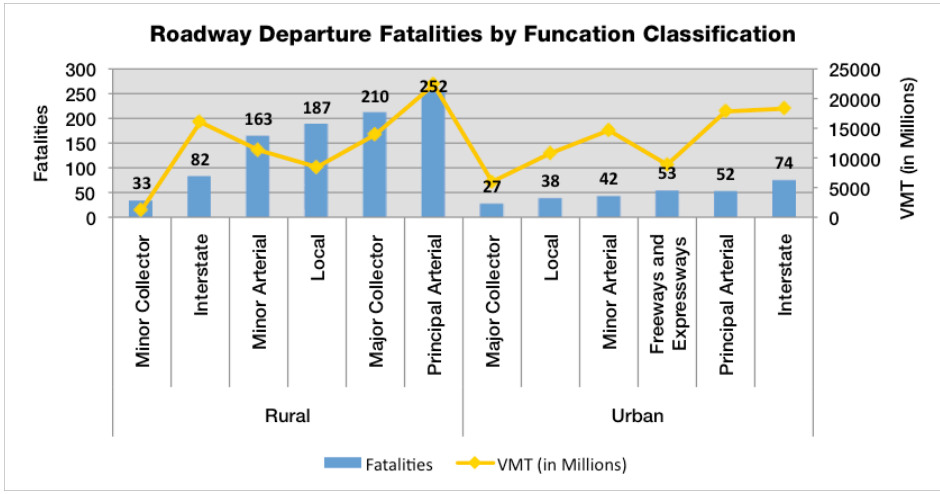
Urban boundaries are developed collaboratively by KDOT and local governments every 10 years, coinciding with the taking of the census, and often include unincorporated areas on the edge of town. As the charts below reveal, more crashes, resulting in more deaths and injuries occur on rural roads than on urban roads. Rural crashes account for 69 percent of all fatal crashes, but just 37 percent of the crashes in which property, alone, is damaged.

Of 140,614 miles of public roads in Kansas, 127,573 – 91 percent – are rural. On the other hand, only 49 percent of all vehicle miles traveled in Kansas are on rural roads. If the number of vehicle miles traveled on rural and urban roads is nearly equal, why do rural roadways experience more fatal and serious injury crashes as a result of roadway departure than urban roadways? There are a number of contributing factors:

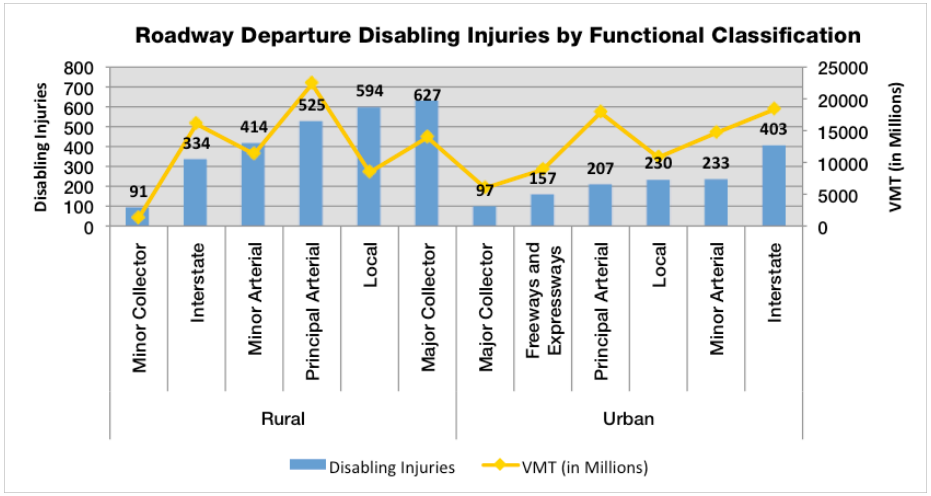
- Higher speeds: Less traffic and fewer intersections and driveways mean drivers are more comfortable traveling at a higher rate of speed. The posted speed limit reflects that reality,
- Discovery time: The length of time from when a crash occurs to when it is discovered and emergency services arrive has an impact on patient survival. This is especially true for single-vehicle crashes,
- EMS: It takes longer for emergency vehicles in general and ambulances in particular to reach the crash scene and longer to deliver the injured to the nearest hospital or trauma center,
- Health care resources: Depending upon the severity of the injury, a patient's needs may exceed the treatment capabilities of a rural health care facility; and

DATA POINTS

- Engineering standards: Many of our rural local roads were designed and built long before the development of modern safety standards.



The greater the separation between VMT and fatalities, the lower the fatality rate. (Information on functional classifications can be found in the Introduction Chapter of this Plan.)



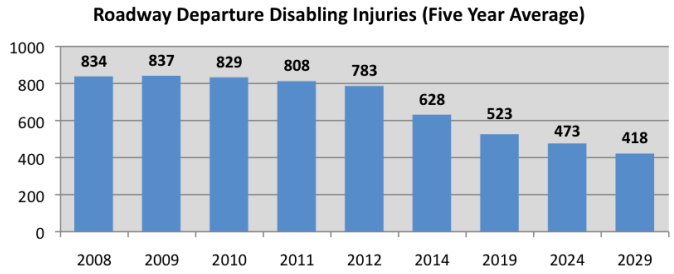
Urban disabling injuries are almost three-and-a-half times higher than urban fatalities, while rural disabling injuries are about two times higher than rural fatalities. This suggests urban crashes may be more survivable than rural crashes. But, rural interstate disabling injuries are almost four times higher than rural interstate fatalities. This indicates rural interstate crashes also have a high rate of survival. Therefore, in the case of single-vehicle crashes, rapid discovery of an accident, quick emergency response to it and swift delivery to care facilities contribute to patient survival rates.

Performance Measures

Consistent with this plan's overall goal, the Roadway Departure EAT seeks to halve roadway departure fatalities and serious injuries within 20 years. In the five years between 2005 and 2009, we averaged 240 roadway-departure-related fatalities and 837 roadway-departure-related disabling injuries per year. Meeting our goal will require reducing the average fatalities per year to no more than 120, and the disabling injuries to at most 418, by the years 2025 to 2029.

Interim goals will let us track our progress. The chart below shows our five-year goals. Our aim is to achieve 50 percent of our goal within five years, 75 percent within 10 years and 100 percent within 20. We were optimistic in the early years, the new primary seat belt law would reduce fatalities. As can be seen, however, the goal of halving these numbers by 2029 will not be met under current data trends. Roadway departure fatalities have remained steady, even as overall fatalities have dropped. Roadway departure disabling injuries have fallen, though not at a rate to get us below 628 by 2014, nor at a rate to get us below 418 by 2029.

Achieving this goal would save about 1,629 lives between 2009 and 2029



Data thru 2012 indicates the actual number of fatalities and disabling injuries; data for 2014 and beyond indicates our goal.

GOALS AND STRATEGIES

Articulating our objective – a radical reduction in the number of roadway departure crashes that kill or disable – is only a start. What goals and strategies will help us accomplish that objective? The roadway departure EAT has chosen the following.

1. Dedicate safety dollars to data-driven programs with the greatest potential to reduce the number of fatal and severe injury crashes on Kansas public roads,
2. Use available traffic records, crash data and roadway data to assist in safety program and project management,
3. Promote proven engineering strategies that focus on keeping drivers on the road and in their lanes,
4. Promote mitigation strategies that lessen the consequences of a crash,
5. Introduce experimental engineering strategies,
6. Promote enforcement campaigns that target locations and corridors with a higher-than-expected number of roadway departure crashes; and
7. Promote education campaigns that target over-represented factors in roadway departure crashes.

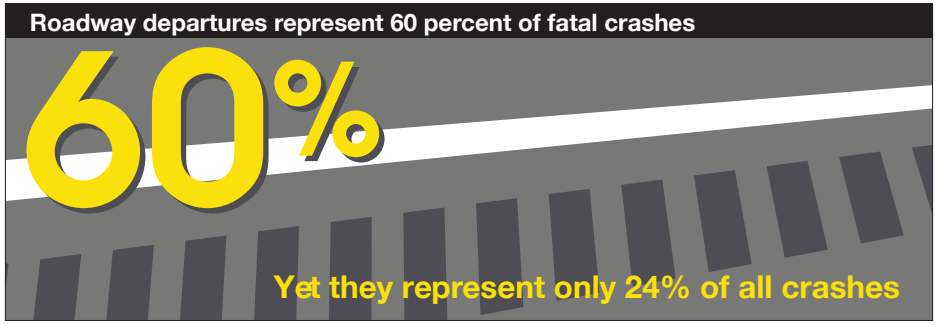
There is no shortage of ideas about achieving these goals using a 4E approach: *engineering* centerline rumble strips and keeping the roadside clear of fixed objects, *enforcing* impaired driving and distracted driver laws, *educating* drivers and passengers about seat belt use and improving *emergency medical service* coordination to reduce the human cost of crashes, for example. The challenge for the roadway departure team is to identify realistic strategies, prioritize them and seek implementation.

GOAL 1: Dedicate safety dollars to data-driven programs with the greatest potential to reduce the number of fatal and severe injury crashes on Kansas public roads

New Strategy:

- Recommend new distribution of HSIP funding based on Kansas crash statistics. (This is a strategy jointly recommended by the roadway departure and intersections EATs.)
  - + Background: HSIP is a federal-aid safety program, established under SAFETEA-LU in federal fiscal year 2006, "to achieve a significant reduction in traffic fatalities and serious injuries on all public roads." The program continues under MAP-21. Distribution varies year to year, depending on the needs of each program. In FY 2015, Kansas distributed $18 million to the following safety programs:
    - – Highway-Railway Grade Crossing Set-aside (11 percent)
    - – Intersection Safety (4 percent)
    - – Pavement Marking Set-aside (17 percent)
    - – Lighting Set-aside (6 percent)
    - – Signing Set-aside (44 percent)
    - – High Risk Rural Roads (18 percent)

    The purpose of this strategy is to reallocate the money based on the goals articulated in this document. KDOT will form a working group to review the history of fund distribution, review data and make recommendations. The working group will also explore ways to streamline federal and state spending by local jurisdictions.
  - + Method: policy
  - + Costs: minimal
  - + Lead agency and contact: KDOT, Bureau of Transportation Safety & Technology
  - + Challenges: changing existing programs and practices
  - + Target date: FY 2015 and Beyond



Future Strategies:

- No future strategies identified at this time

GOAL 2: Use available traffic records, crash data and roadway data to assist in safety program and project management

New Strategy:

- Develop a process to account for recommendations from traffic studies (such as road safety assessments and Traffic Engineering Assistance Program studies) to generate projects within existing safety programs and contribute to new and future projects in other programs
  - + Background: There is a need for further integration of safety data and analysis into road design, maintenance and local projects. For example, on a recent resurfacing (1R) project federal safety funds were added to the project in order to construct rock-wedge shoulders to reduce the potential for run-off-road crashes.

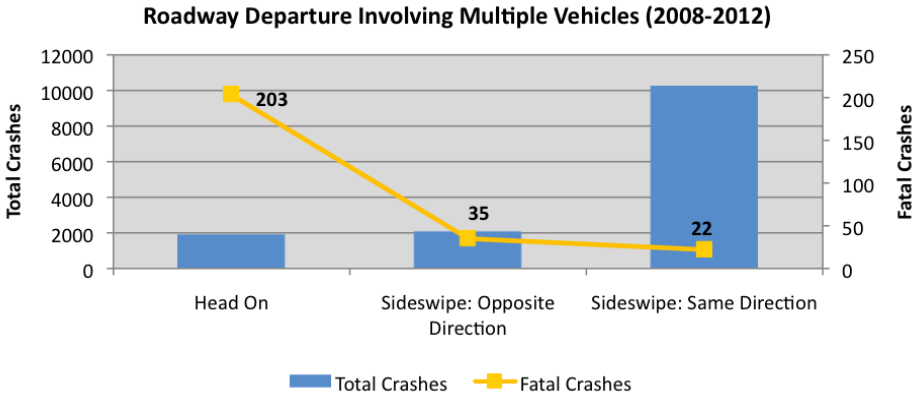
GOALS AND STRATEGIES

- Method: practice
- Costs: minimal
- Lead agency and contact: KDOT, Bureau of Transportation Safety & Technology
- Challenges: staff time and resources to conduct additional analysis; funding to pay for recommendations.
- Target date: FY 2015

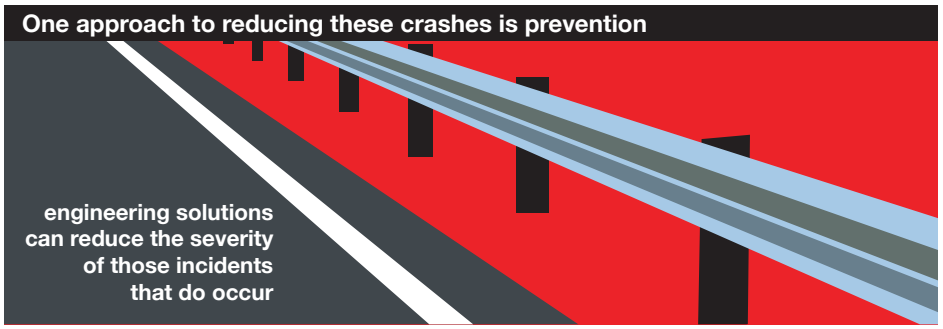
Future Strategies:

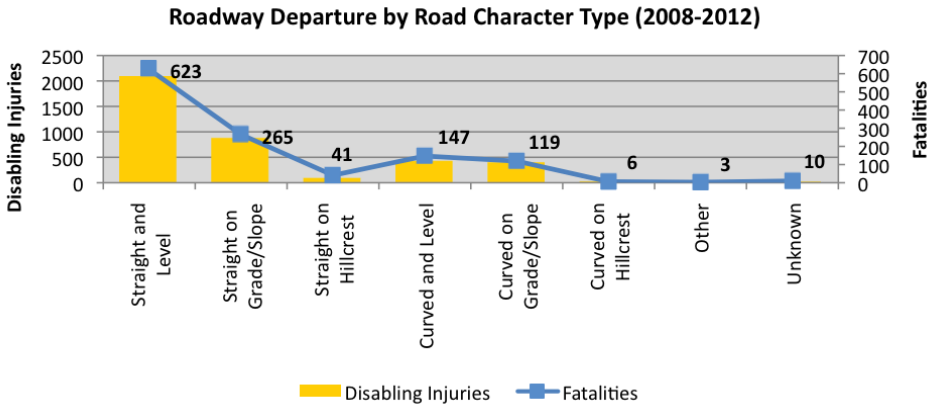
- No future strategies identified at this time

GOAL 3: Promote proven engineering strategies that focus on keeping drivers on the road and in their lanes



Roadway departure events involving two or more vehicles are most commonly the result of same-direction sideswipes, but head-on collisions result in the highest number of fatalities.





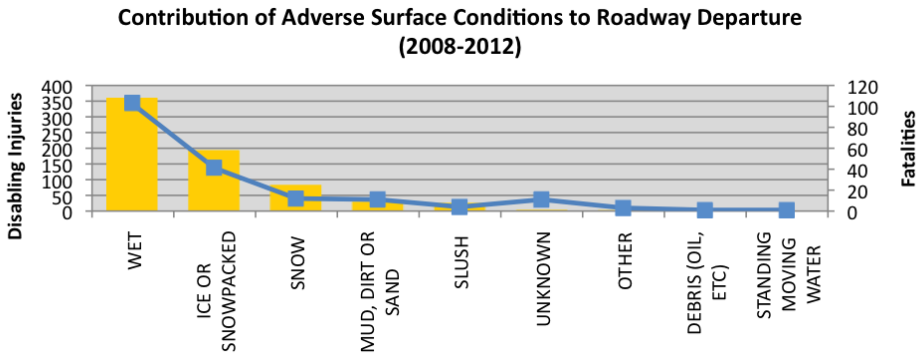
Adverse surface conditions are noted as a factor in about 15 to 20 percent of all crashes, depending on the year.

New Strategy:

- Expand the use of high-friction surfacing
  - Background: High-friction surface treatment is typically used at horizontal curves that exhibit a pattern of wet-weather run-off-road crashes. Kansas participated in a FHWA demonstration project in 2009 and began additional application in 2014. This low-cost safety measure is being promoted as part of the FHWA's Every Day Counts 2 initiative.
  - Method: practice
  - Costs: $25 to $40 a square yard
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: competing with other safety projects and programs
  - Target date: FY 2015

- Create a program that funds the deployment of low-cost safety improvements at rural or high speed urban horizontal curves
  - Background: It's estimated that on the Kansas state highway system, there are about 1,000 miles of curves – a tenth of the total roadway mileage. But about one in six fatal crashes in Kansas happen on horizontal curves. This program will take into account proven and experimental countermeasures to prevent crashes on rural horizontal curves and on urban high-speed curves. These would include, for example, adding high-friction materials to road surfaces and improving *delineation* (a term that refers to methods used by highway engineers to define roadway operating areas for drivers).
  - Method: program

GOALS AND STRATEGIES



The contribution of curves and hills to injury and fatality statistics exceeds the proportion of the entire Kansas road system they represent.

- Costs: $250,000 annually (estimated)
- Performance measures: number of curves treated and consequent reduction in crashes
- Lead agency and contact: KDOT, Traffic Safety Section
- Challenges: funding a new program and identifying curves where treatment would be likely to produce the best results
- Target date: FY 2016

Future Strategies:

- Promote wider edgeline pavement markings on local roads
- Experiment with edgeline rumble strips

GOAL 4: Promote mitigation strategies that lessen the consequences of a crash

New Strategies:

- No new strategies identified at this time

Future Strategies:

- No future strategies identified at this time

GOAL 5: Promote enforcement campaigns that target locations and corridors with a higher than expected number of roadway departure crashes

New strategy:

- Develop and implement a Safety Corridor Program
  - Background: Several states have developed successful safety corridor programs. This approach begins by identifying highway corridors with safety issues, including but not limited to high crash frequencies or rates, then using a 4E approach to identify treatments and strategies to improve corridor safety.
  - Method: legislation
  - Costs: none (supported thru increased fines)
  - Lead agency and contact: KDOT
  - Challenges: securing legislative approval
  - Target date: FY 2015 legislative session

Future Strategies:

- No future strategies identified at this time

GOAL 6: Promote education campaigns that target over-represented factors in roadway departure crashes

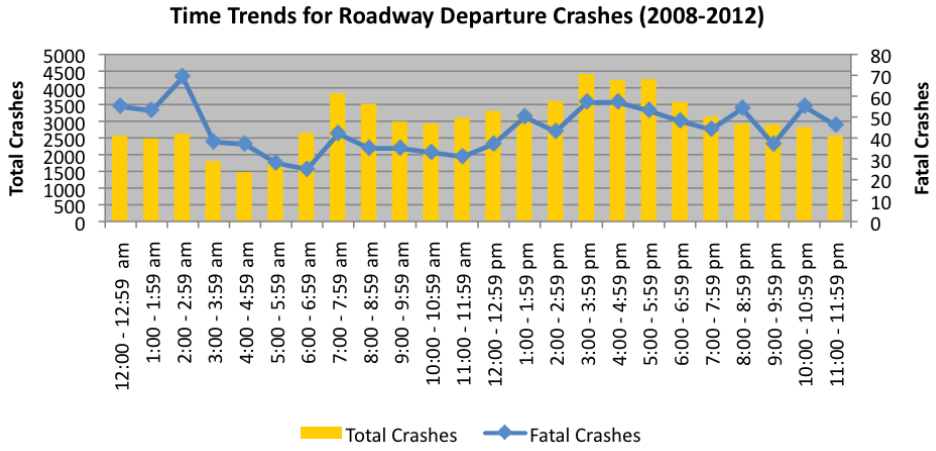
New strategies:

- No new strategies identified at this time

Future strategies:

- Raise public awareness of more and less safe times to drive

Total number of roadway departure crashes generally trends with traffic patterns throughout the day, and severity follows, especially between 4 a.m. and 9 p.m. At night however, particularly



between 9 p.m. and 4 a.m., the total crash rate increases significantly (less traffic, similar number of crashes) with a greater share of these severe or fatal.

- Educate motorists on pedestrian safety when standing outside of a disabled vehicle on or beside the roadway

KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 8: TEEN DRIVER

SAFEKAN
Road to Zero Fatalities

INTRODUCTION

Teenagers 14 to 19 years old who drive present a higher risk than other drivers. The number of persons who die or suffer disabling injuries because of crashes involving teen drivers each year exceeds their presence on Kansas roads. (See "Do the Math" below.) Between 2008 and 2012, 284 people died in 263 crashes in which a teen was a driver. Speeding, failing to yield, inattention, distracted driving and drinking were all major factors in the overrepresentation of teen drivers in crashes. According to the Kansas Department of Health and Environment, almost four out of five accidental deaths among teenagers and young adults result from motor vehicle crashes.

In 2006, Driving Force, a statewide safety task force, emphasized the problem of novice drivers. Research has shown two factors greatly increase the chances a teen driver will be involved in a life-changing crash: driving late at night and having teen passengers in the car. In 2009, Kansas passed a new graduated driver's license law that addresses these and other risk factors.

The fatality numbers have been trending in the right direction over the past decade. In fact, in 2011 Kansas teen-driver-related fatalities reached a record low of 40 which, though their number rebounded somewhat in 2012, still remained well under their 2009-10 numbers. Importantly, the trend is still down with a reduction of 70% over just an 11-year span.

The Teen Drivers Emphasis Area Team, or Teen Team, is developing data-driven action plans in an effort to reduce the numbers and severity of crashes involving teen drivers. Relevant data include both crash statistics and research results on safety measures that reduce crashes. This team will develop performance measures, set goals, select strategies and identify resources, including funding, legislation, staffing and agency leadership, to create safety-related programs and projects that may lessen the number of teen-driver-related deaths on Kansas roads.

The Teen Team first met August 4, 2011. These agencies were represented:

- AAA Allied Group
- Kansas Highway Patrol
- Wichita Area Metropolitan Planning Organization
- RRG Consulting
- Kansas Department of Education
- Safe Streets
- Kansas Association of Broadcasters
- Wichita State University
- Students Against Destructive Decisions
- Stormont-Vail HealthCare
- Think First
- Wyandotte County Health Department
- University of Kansas
- Kansas Department of Transportation

Identifying strategies to lessen the incidence of crashes involving teens, along with the means of implementing them, is only part of the challenge. Besides simple inexperience, other characteristics tend to set teens apart from other drivers, including risky behaviors, vulnerability to peer pressure, poor communication with parents and brain development. The capacity for judgment matures at around age 25, or 11 years after a child is old enough to begin driving. Teens are a likely group to be drawn to texting and other electronic distractions. Even so, some of these characteristics can be used to tailor strategies specific to teenagers, such as positive peer pressure.

Another consideration is the learning style of young drivers. Are they likely to pay more attention to their parents or peers? Are programs that emphasize teen-on-teen training more effective than those using authority figures such as teachers or other adults? Will we see an immediate impact of the relatively new graduated driver's license law? Or will initial results be skewed due to the "grandfathering" exception of the new law?

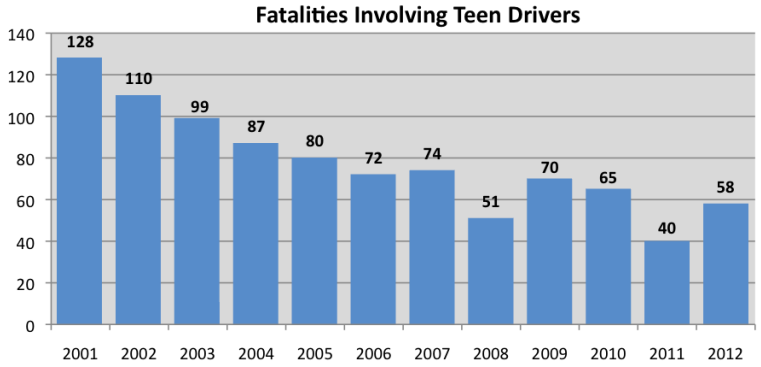
A thorough understanding of figures supplied by the Data Support Team can help the Teen Team recommend programs and projects that may address the causes of teen driver crashes.

DATA POINTS

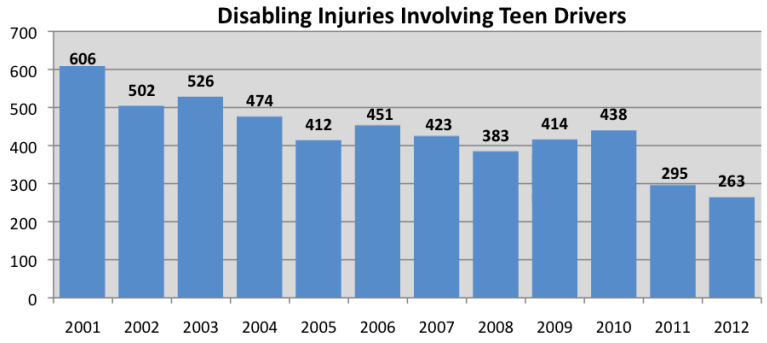
The numbers below reflect fatalities and disabling injuries when one of the drivers involved in a crash was between 14 and 19, even if the teen driver was not at fault. Only those crashes in which a teen was driving are included. They do not represent teenagers killed in car crashes. So, for example, if a 20-year-old was driving and an 18-year-old was killed, the crash is not included in the statistics. But if a 17-year-old who was driving did survive, and a 40-year-old passenger was killed, the crash is included.

1. A trend we can live with

Between 2008 and 2012, drivers ages 14 to 19 were involved in 64,516 Kansas crashes, or 14% of all crashes. These resulted in 284 fatalities, or an average of 57 per year and 1,793 disabling injuries, or an average of 359 per year. Compared to the early 2000s, that's a remarkable drop – but still no cause for celebration. These "numbers" are lives whose loss or injury ripples out to affect many other lives.

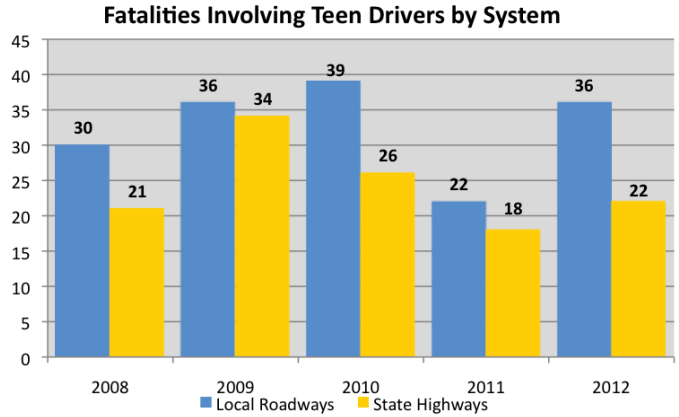


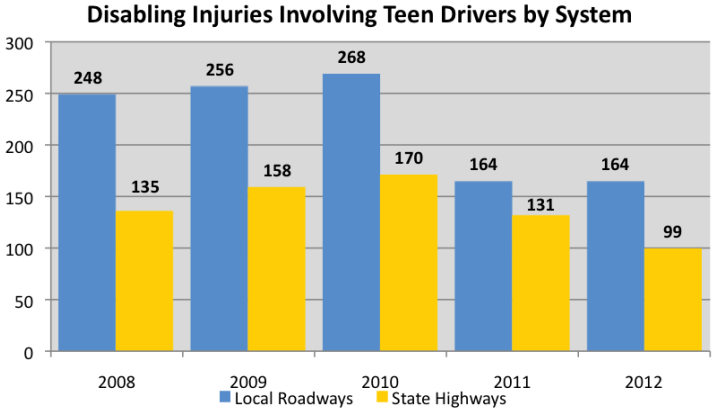
The Kansas graduated driver's license law took effect January 1, 2010. Only time will tell if the results seen in 2012 were a direct result of its enactment. Disabling injuries, seen below, also dropped, continuing the downward movement which began in 2011.



2. Hits close to home

Most teen trips—and related fatalities—happen close to home. Between 2008 and 2012, 54 percent of all fatalities happened on the Kansas State Highway System. Yet only 43 percent of teen driver-involved fatalities occurred on state highways. Similarly, only 39 percent of teen disabling injuries occurred on the state system compared with 47 percent overall.



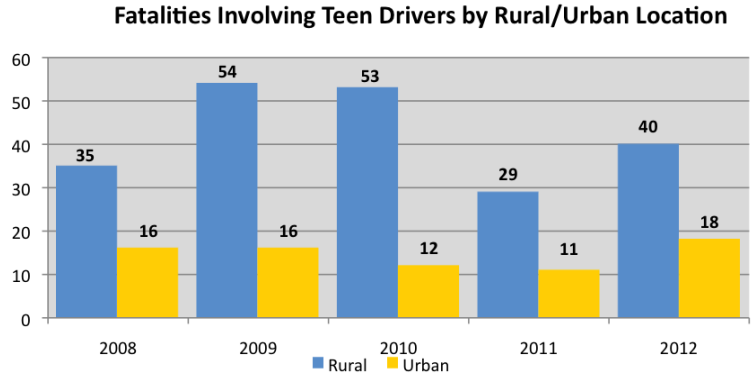


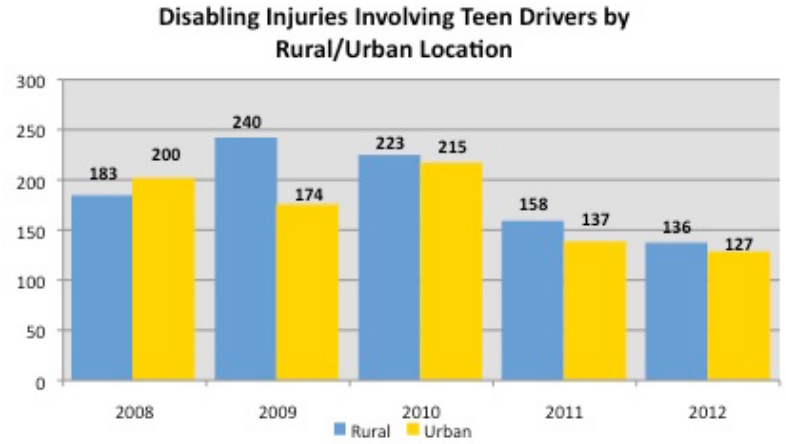
In crashes involving a teen driver between 2008 and 2012, 57 percent of fatalities and 61 percent of the disabling injuries occurred on local roadways.

DATA POINTS

3. At highest risk: teens driving on rural roads

Between 2008 and 2012, 70 percent of all fatalities and 51 percent of all disabling injuries happened on rural roads. At the same time, the proportion of teen fatalities and disabling injuries which occurred on these roads was 74 percent and 52 percent, respectively. In other words, teen drivers are overrepresented in fatalities and disabling injuries resulting from local roadway crashes.

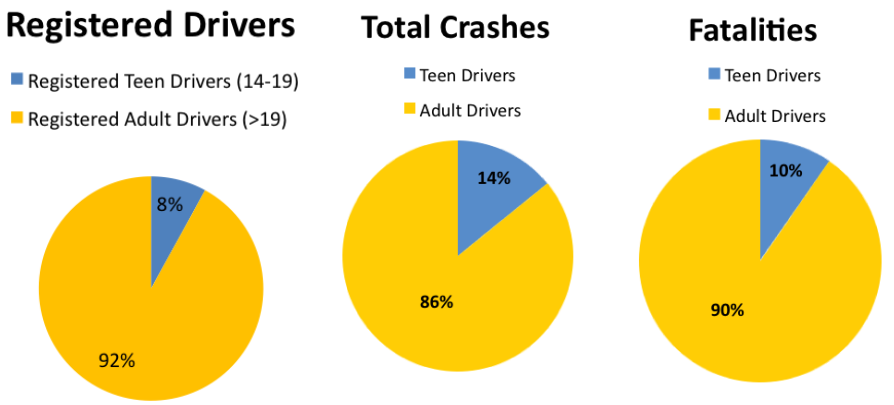




Disabling injuries involving teen drivers are divided more evenly by location than are fatalities. This is true for disabling injury crashes among the general public as well.

4. The above-average impact of eight percent

While teen drivers represent only eight percent of Kansas' licensed drivers, they are involved in 14 percent of all crashes and 10 percent of fatal crashes. These are down from 22 and 15 percent, respectively, in 2011 and may reflect the impact of the graduated driver law which first applied to teens entering the Kansas licensing system after January 1, 2010.

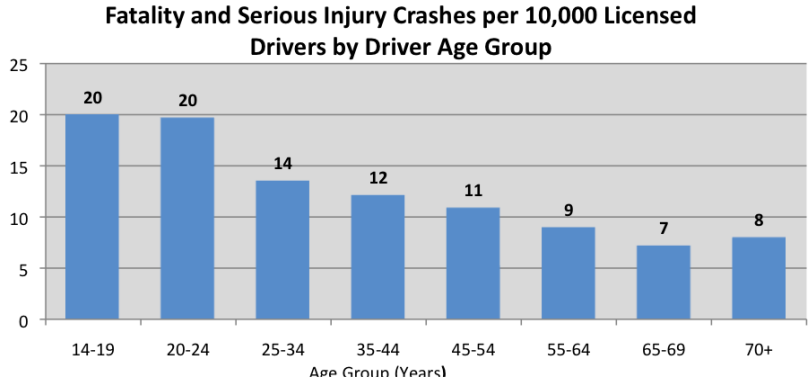


For every 10,000 licensed drivers between the ages of 14 and 19, about 20 are involved in fatal and disabling injury crashes. Crash involvement steadily declines until around the age of 70, when it begins to edge up.

DO THE MATH: THE ABOVE AVERAGE IMPACT OF 8%

Teen drivers are clearly overrepresented in motor vehicle crashes, including those crashes that result in a fatality or disabling injury. Between 2008 and 2012, drivers ages 14 to 19 made up approximately 8 percent of all registered drivers yet accounted for 20 percent of all motor vehicle crashes, 14 percent of all fatality crashes and 19 percent of all disabling injury crashes.

DATA POINTS



Two factors appear to influence the steady decline in involvement-rate as age increases: increased driving skill and a reduction in willingness to take a risk.

5. The where and the why

More than one factor can contribute to a single crash. Let's take a look at these factors. Four out of ten fatal and disabling injury crashes involving teen drivers occur at intersections; two to three in ten involve speeding; six in ten occur on local roadways; about five to six in ten occur on rural roads; and about three in ten at night.

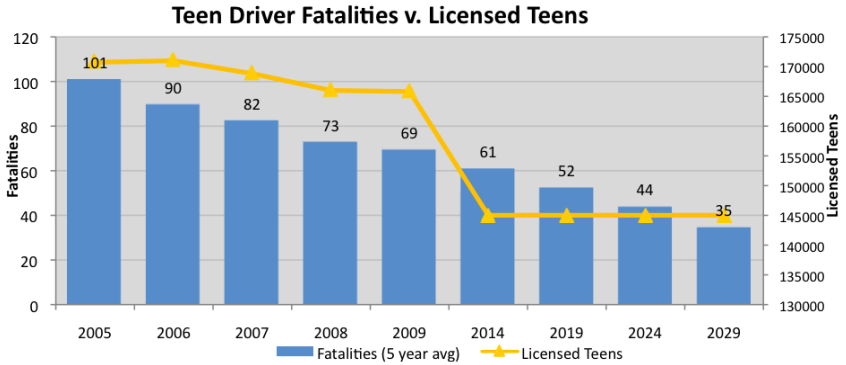
2008-2012 PERCENT OF FATAL & DISABLING INJURIES	
Category	**Involving Teen Drivers (All Drivers)**
Intersections	35% (29%)
Speeding	26% (22%)
Following too closely	6% (4%)
Involving another motor vehicle	56% (48%)
Rear End Collisions	14% (11%)
Local Roadways	61% (52%)
Light Condition (dark)	34% (34%)
Rural	55% (54%)
Inattention & All Distraction	32% (29%)

The where and the why for teen drivers generally tracks slightly ahead of that for all drivers. The problem, as seen in Data Point 4, is the where and the why happen at a much higher rate for teens.

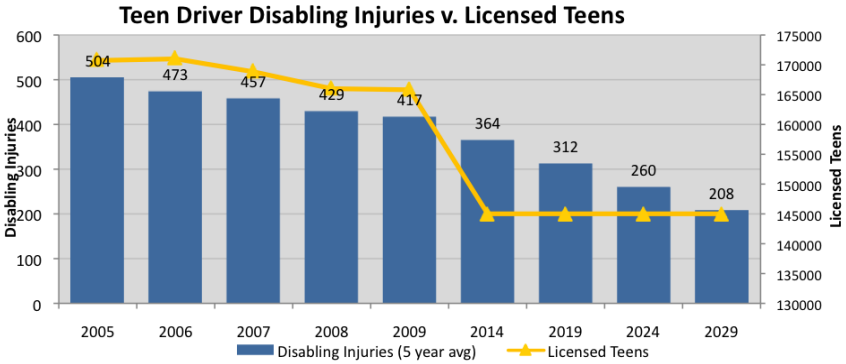
DATA POINTS

Performance Measures

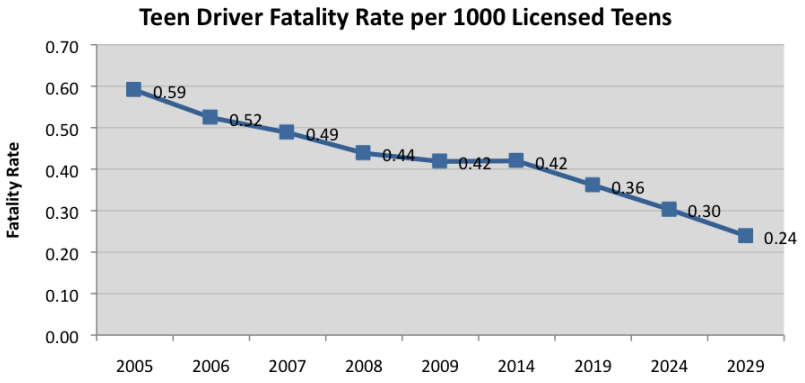
To be consistent with our plan's overall goal, the teen team seeks to reduce by half fatalities and serious injuries, within 20 years, in crashes involving at least one teen driver. In our base period, the five years between 2005 and 2009, Kansas averaged 69 teen-driver-related fatalities and 417 teen-driver-related disabling injuries per year. Therefore, our goal is to average fewer than 35 fatalities and 208 disabling injuries during the years 2025 to 2029.



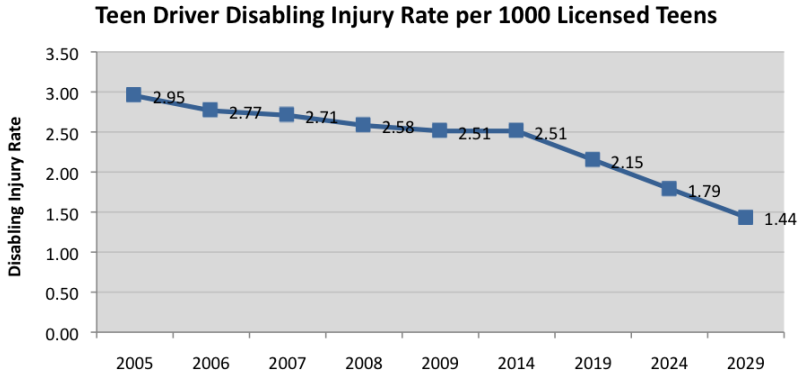
In 2005 there were 168,514 licensed teen drivers in Kansas; by 2012 that number had dropped by 14 percent to 145,017. (Projected data is not available.)

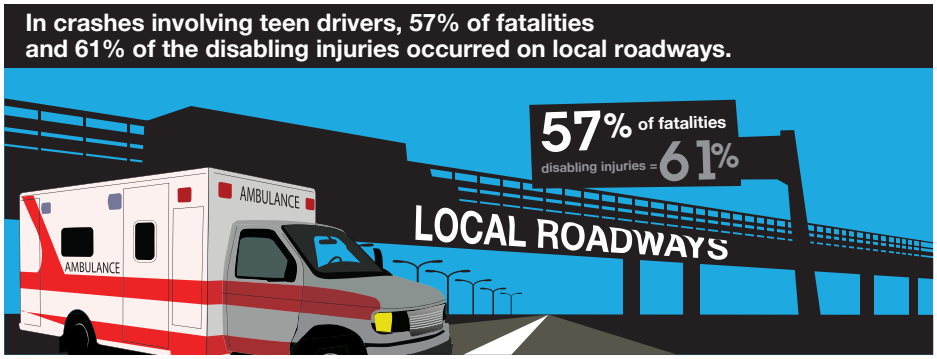


Another way to measure performance is by exposure, or rate. However, while we know eight percent of licensed drivers are teen-agers, we do not know how many miles they drive a year nor what percent of total vehicle-miles of travel they account for. The best available data, therefore, is exposure based on the entire pool of Kansas' licensed drivers.



If current trends continue the fatality and disabling goals may be achieved in fewer than twenty years.





GOALS AND STRATEGIES

Articulating our objective – a radical reduction in the number of teen driver crashes that kill or disable – is only a start. To accomplish it, the Teen Team has chosen the following goals:

1. Promote education initiatives that teach novice drivers how to operate vehicles responsibly,
2. Take the habits and maturity of novice drivers into account when considering signing and roadway design near schools or introducing technological advances,
3. Utilize law enforcement to encourage novice drivers to make smart driving decisions,
4. Tap into the power of peer training and counseling; and
5. Advocate for existing tools and laws.

There is no shortage of ideas about achieving these goals by deploying the 4E approach, including, for example, *engineering* good access to rural high schools, *enforcing* graduated driver's license laws, *educating* teens about seat belt use and improving *emergency medical service* coordination, especially in areas where medical services are sparse or absent. The challenge for the Teen Team is to identify realistic strategies, prioritize them and then stimulate their implementation.

KHP INITIATIVES

The "Convincer", simulates a crash of 5 to 7 mph in which a person can sit in a seat, secured by a lap and shoulder belt and slide down an incline and crash into a rubber bumper. The seatbelt locks up and keeps the individual safe and secure in the seat. The goal of the "Convincer" is to give the rider confidence the seatbelt will save them in a crash and convince them to wear a seatbelt while in a motor vehicle.

The "Rollover", utilizes a Chevy S10 pick-up cab mounted on a spindle that, when spun around simulates a 30-35 mph rollover crash. When rolling over, the unbelted occupants (a dummy) are ejected because they are not wearing seatbelts. When demonstrated with belted dummies wearing seatbelts, they remain safe and secure inside the vehicle. The safest place to be in a rollover crash is belted inside the vehicle.

The Teens and Trucks program, offered by the Kansas Highway Patrol, combines classroom instruction and hands-on experience for teens regarding large trucks. Teens get to sit in the driver's seat of a large truck and see what a driver of these vehicles can see and not see (i.e. "no-zones" and blind spots.) Classroom instructions include how to drive with and around these large trucks on the public roadways.

DRIVERS EDUCATION IN KANSAS

Kansas high school students are not required to take a driver's education course. Given other educational requirements, staff availability and insurance considerations, schools are finding it more difficult to offer. Many financially strapped districts have moved it to the summer, but it's often harder for kids to attend in the summer because they're working.

Students in the SAFE program informed the Teen Team that, if credit hours were offered to take driver education, more students would be attracted to it. Even so, more than 86 percent of Kansas school districts have a driver education program focusing on behavior and accountability. As many as 16,000 students a year pass the course. Upon certification, students receive a waiver from taking a written/driving test for licensure.

The districts receive little state funding for this activity. Schools have had to raise their course prices to pay for fuel, insurance and instructor fees. A portion of fees from driver's license renewals and endorsements are intended to underwrite the program. Each year, however, two-thirds of the money in the fund is swept into the State General Fund placing the cost burden back on the schools.

GOAL 1: Promote education initiatives that teach novice drivers how to operate vehicles responsibly

New Strategy:

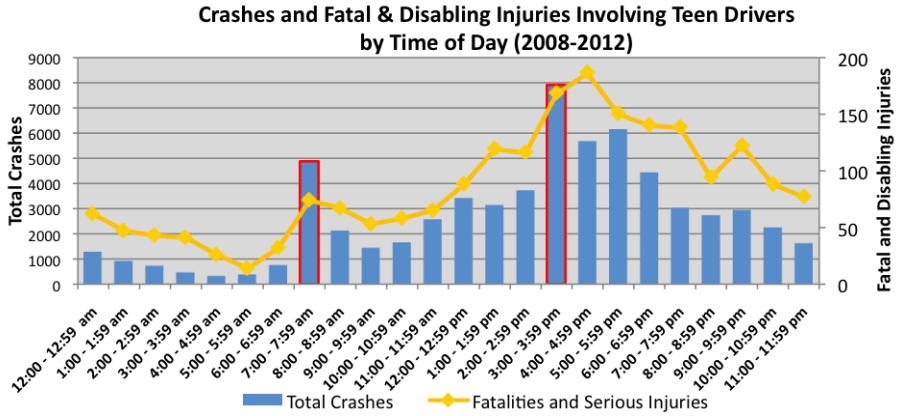
- Restore full funding to driver education programs in public schools
  - Background: Other states pay a flat rate towards, if not all of teen driver education fees. If the funding weren't swept into the general fund, it would provide about $320 per student for driver education.
  - Method: legislation
  - Costs: no new funds
  - Lead agency and contact: Kansas Department of Education, Joan Peterson
  - Challenges: convincing legislators this is the right thing to do
  - Target date: FY 2016

GOALS AND STRATEGIES

Future Strategies:
- Provide education to parents about driver responsibility and role modeling
- Encourage insurance companies to accept driver's education in exchange for rate discounts
- Utilize the Kansas Association of Broadcasters Public Education Partnership
  - + Background: This partnership is a radio and television outreach program for nonprofit initiatives statewide. Member stations provide airtime to nonprofits for a third of the cost private parties are charged.
- Provide additional driver safety education at the elementary school level
- Find new ways to reach middle school students

GOAL 2: Take the habits and maturity of novice drivers into account when considering signing and roadway design near schools or introducing technological advances

New Strategies:
- No new strategies identified at this time



Future Strategies:
- Research the possibility of using "black box" data so investigative agencies can determine a new driver's actions just before a crash
- Promote Teen road safety audits, which is a program that encourages teens to look at roads from a traffic safety perspective

GOAL 3: Utilize law enforcement to encourage novice drivers to make smart driving decisions

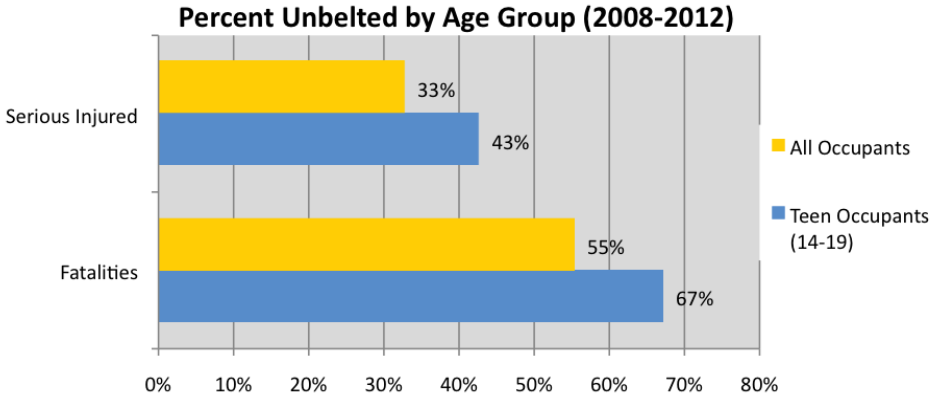
New Strategies:
- No new strategies identified at this time

Future Strategies:
- No future strategies identified at this time

GOAL 4: Tap into the power of peer training and counseling

New Strategy:
- Expand the SAFE program
  - + Background: The SAFE program launched in six Crawford County schools in 2008 has led to impressive increases in seatbelt usage among the teen population. It was successfully expanded to Cowley, Wyandotte, Montgomery and Neosho Counties in 2010. As of the 2013 – 2014 school year, it has expanded to 57 counties and 124 schools. Groups and organizations such as AAA, State Farm, KDHE, the Kansas Regional Trauma Programs and local communities have all supported the program. Recently, multiple programs have been supported through local diversion dollars. KDOT's annual state child and youth seatbelt survey found that the Kansas teen seatbelt rate has increased from 61% in 2008-09, when SAFE was implemented, to 81% in 2013.
  - + Method: program
  - + Costs: $135,235 (KDOT Funding provides $62,000)
  - + Performance measures:
    - – Maintain the SAFE program in schools now using it
    - – In the short term, establish SAFE in every county within the jurisdiction of KHP Troop B (NE Kansas) and Troop H (SE Kansas)
    - – In the long term, establish SAFE in every Kansas County
  - + Lead agency and contact: Kansas Traffic Safety Resource Office, Laura Moore
    - – Challenges: Curricular requirements leave schools little time to sponsor new programs. It is difficult to start the program in large school districts. Also, the program has proven to be less effective in communities with limited law enforcement participation.
    - – Target date: FY 2015 and Beyond

GOALS AND STRATEGIES



Compared to the general public, teens are less likely to be wearing a seatbelt in fatal and disabling injury crashes.

Future Strategy:

- Partner with youth organizations like Students Against Destructive Decisions (SADD), the National Organization for Youth Safety (NOYS), and Kansas Family Partnership, which sponsors the annual Kansas Youth Leadership Summit (KYLS), to find students who want to influence their peers to drive safely

GOAL 5: Advocate for existing tools and laws

New Strategies:

- Oppose actions to repeal or amend teen driving laws that are in place
  - Background: Much progress was made with passage of the Graduated Driver's License Law (GDL), such as the one-year instruction permit, nighttime restrictions, passenger limitations, non-sibling restrictions, and a ban on cell-phones. It is paramount these laws remain on the books.
  - Method: advocacy
  - Costs: none
  - Lead agency and contact: Executive Safety Council
  - Challenges: competing legislative priorities; concern that promoting or expanding current laws may have the opposite effect of repealing or weakening.
  - Target date: FY 2015 and Beyond
- Research the impact of the GDL
  - Background: The graduated driver's license law, which passed in 2009 and went into effect January 1, 2010, limits the number of passengers that novice drivers can transport, increases the amount of structured driving time with an adult, restricts nighttime driving and imposes penalties when crashes are caused by distracted driving behavior. Kansas currently has one of the nation's most rigorous GDL laws. National research on the impact of these restrictions is currently being conducted at the University of North Carolina. Resources to research the impact in Kansas are available and will provide opportunity to be accountable for the legislation and gain support for the law.
  - Method: research
  - Costs: $30,000
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: None anticipated
  - Target date: FY 2015

Future Strategies:

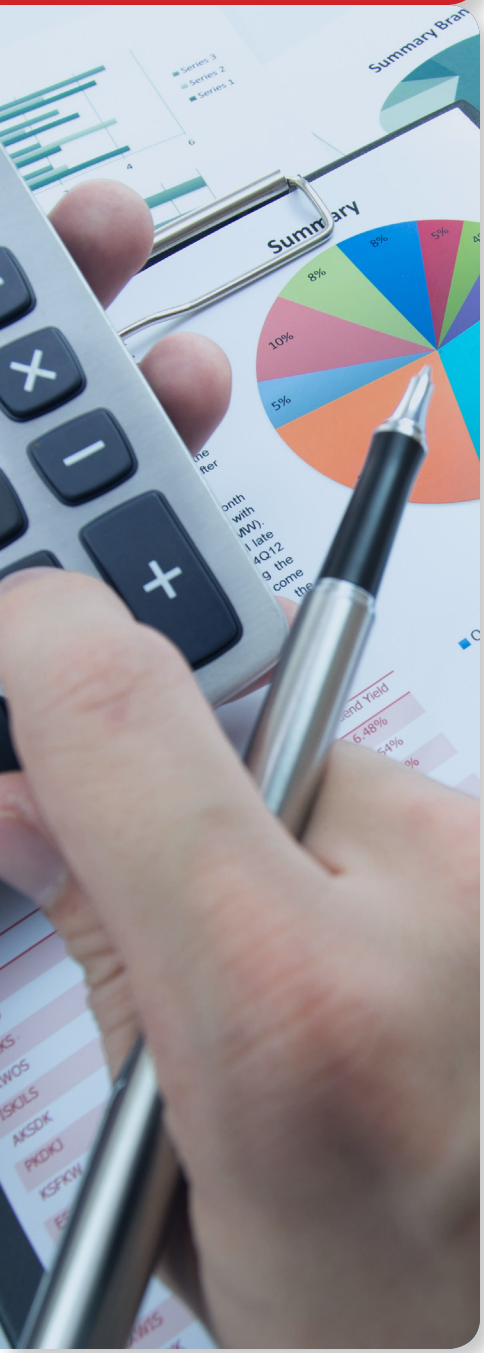
- No future strategies identified at this time

KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 9: DATA SUPPORT

SAFEKAN
Road to Zero Fatalities



INTRODUCTION

Good crash data are the backbone of road safety management. According to the American Association of State Highway and Transportation Officials (AASHTO) strategic highway safety plans should improve data collection and, as a result, decision making.

The data support team will provide the emphasis area teams and the ESC with the data required to craft an information-based Strategic Highway Safety Plan. The data team will

- gather and present data to the ESC,
- collect and organize data at the request of other emphasis area teams,
- assist the ESC in identifying data gaps, collection and reporting weaknesses,
- assist in deciding whether a need exists for additional emphasis area teams; and
- collect data from different agencies represented on the ESC.

The data team was created not only to assist in the mining and presentation of data on behalf of other emphasis area teams but also to develop performance measures, outcomes and strategies specific to data collection, storage, analysis and reporting.

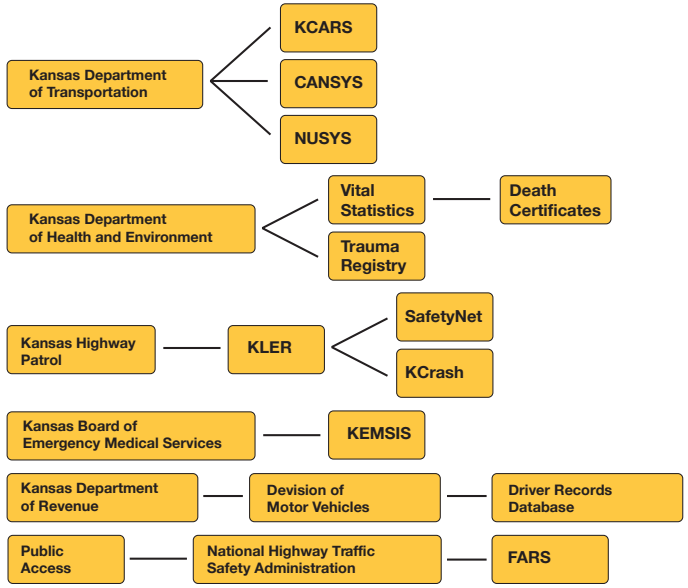
The team, which first met June 15, 2009, is represented by the following agencies:

- AAA Allied Group (AAA)
- DCCCA
- Mid-America Regional Council (MARC)
- Federal Highway Administration (FHWA)
- National Highway Traffic Safety Administration (NHTSA)
- Kansas Department of Health and Environment (KDHE)
- Kansas Department of Transportation (KDOT)

Data Collection and Storage

To address highway safety problems requires data of all sorts. There are roads of many kinds with twists and turns, rises and falls. There is an array of vehicles used by drivers young and old, impaired and sober, some with cell phones, some texting, some speeding and some fully attentive.

Those who design, construct and maintain the infrastructure work to make it safe. Law enforcement works at managing those who use the infrastructure and emergency services – and are called on when crashes occur. So “crash data” include roadway geometrics, vehicles, drivers, injuries and fatalities, emergency management and more. Because of the complexity of data and the need to keep it secure, it is housed in databases maintained by various agencies. The graphic below reflects this.



Below are outlines of these data sources.

- **CANSYS** - State Highway Network Data
  This KDOT database contains information about the geometrics, condition and extent of the 10,000-plus miles of road in the state highway system, as well as a small percentage of off-state system local roadways. It contains data on bridges, access permits and at-grade rail crossings and supports the work of various bureaus at KDOT, as well as of the FHWA and Kansas Legislature. CANSYS is maintained by the KDOT Accident Data Unit (ADU).

INTRODUCTION

- **NUSYS** - Non-State Classified Network Data
  This KDOT database contains information about roads classified as collector and above within the 40 areas in Kansas designated as urban by the U.S. Census Bureau. NUSYS is a central repository of geometric inventory information on off-state system local roadways and is used to produce required federal reports. It provides answers to questions posed by the FHWA, Kansas Legislature, KDOT personnel and other state agencies. NUSYS is also maintained by ADU.

- **KCARS** - Kansas Crash & Analysis Reporting System
  KCARS contains records of all reportable crashes in Kansas from 1990 to the present. The data in KCARS are provided to KDOT by law enforcement agencies. The data includes any field that is listed on the Kansas Motor Vehicle Accident Report and recorded by law enforcement. Like CANSYS and NUSYS, KCARS is maintained by ADU and provides answers to questions posed by the FHWA, Kansas Legislature, KDOT personnel and other state agencies.

- **Vital Statistics** - Death Certificates
  The Office of Vital Statistics within the KDHE supplies KDOT, at KDOT's request, with records that permit the coding of fatal crashes. The information helps researchers understand the cause and nature of injuries suffered in crashes and the time that elapses between injury and death. To query vital statistic data go to: http://kic.kdhe.state.ks.us/kic/death.html

- **Driver Records**
  The Driver Records database is hosted by the Kansas Department of Revenue Division of Motor Vehicles (DMV). It contains the records of all licensed drivers in Kansas. The database depends on many sources. For example, KDOT provides crash records to the database and the court system supplies adjudication information. At this writing, the DMV was replacing their database. When the database is finished it will provide those interested in traffic safety with a more complete picture of specific drivers. It is anticipated that this information will improve public safety and maximize the impact of traffic-safety resources.

- **eCitations** - Statewide Electronic Traffic Citations Program
  The Kansas Criminal Justice Information System (KCJIS) and the Kansas Traffic Records Coordinating Committee (TRCC) have identified the need for a design and plan for implementing a statewide electronic traffic citations program; commonly referred to as "eCitations".

Electronic Traffic Citations (eCitations) are the way of the future for the issuance of traffic citations, the storage of related information and the dissemination to numerous authorized users. It contemplates a near-paperless, seamless process from the time of the traffic stop through court disposition of the traffic citation.

Briefly, the law enforcement officer making the stop records information on the driver and the driver's vehicle, either through a scanner or manually, into a laptop or handheld computer. Driver and vehicle information is uploaded into a citation form on the officer's computer, either from information scanned from the barcodes and/or magnetic stripes on the driver's license and vehicle registration or an external source such as the KDOT, DMV, KBI or National Crime Information Center (NCIC).

Time and location information can be imputed through the use of drop down menus, search words or automatically populated from GPS or other location software. Officer and court information can be populated into the citation automatically from defaults pre-set by the officer at the start of the officer's shift. This leaves only a few pieces of information to be entered by the officer, such as the violation(s), code number(s) and fine amount(s).

A Complete Picture of Safety

Traditionally, traffic record data have been housed in isolated repositories. However, in June 2005, an interagency committee, the Traffic Records Coordinating Committee (TRCC) began developing a statewide traffic records system.

The statewide traffic records system will allow state and local agencies to access data by bringing together information that is now housed in KDOT, KDHE, the Kansas Department of Revenue (KDOR) the Kansas Bureau of Investigation (KBI) and the Kansas Board of Emergency Medical Services (KBEMS). The result will be a more complete picture of traffic safety in Kansas.

The data team would like to work with the TRCC to promote and expand use of:

- The Kansas Law Enforcement Reporting System (KLER)
- The Electronic Traffic Citation Program (eCitations)
- The Report and Police Impaired Drivers System (RAPID)

Each of these systems are discussed in more detail throughout the plan.

INTRODUCTION

An eCitation system provides a multitude of benefits to each of the agencies identified above and to the public at large including decreasing the time of traffic stops and issuance of traffic tickets, increasing the accuracy of the data collected, eliminating the need for the law enforcement agencies, the courts and the prosecutors' offices to each enter the same citation data into their record management systems and the automatic collection and analysis of data used to improve public safety and the roadways.

- **RAPID** - Report and Police Impaired Drivers
  In 2009, the Kansas DUI Commission, a multi-disciplinary state commission tasked with studying driving under the influence (DUI), recommended the creation of a tracking system to consolidate access to an offender's DUI history as well as modifications to existing systems to facilitate this tracking.

  The goal of the system to is to enhance available data sharing mechanisms and make improvements enabling a better and more efficient process for prosecutors, courts and law enforcement to prosecute and track DUI offenders from arrest through prosecution, sentencing, probation, and monitoring. This system must leverage existing criminal history repositories at KBI, resources available in the KCJIS and other existing state repositories to deploy a secure web-based system for improving DUI prosecution in the state of Kansas.

- **KLER** - Kansas Law Enforcement Reporting System
  The Kansas Highway Patrol (KHP) developed KLER, a field-based reporting system, which incorporates data from more than 15 reports, including KDOT crash forms, KBI incident forms and KDOR insurance forms. Law-enforcement officials use it to complete and view critical records on mobile laptop computers in their cars during traffic and crash stops. Eventually, KLER will include in its records a new statewide uniform traffic e-citation system. To learn more about the KLER System and its benefits, go to http://portal.kstrs.org/Shared%20Pages/KLER.aspx

  The SHSP data support team would like to work with the TRCC in promoting and expanding use of KLER. The expansion would require additional training and education for law enforcement officers and administrators emphasizing the importance of electronic crash reporting.

- **SafetyNet** and **KCrash**
  The KHP maintains SafetyNet and KCrash for federal reporting purposes and state use. KHP supplies data on inspections and collisions to SafetyNet. SafetyNet was developed, and is supported, by the Federal Motor Carrier Safety Administration (FMCSA). The KHP is the lead agency for state participation in the Motor Carrier Safety Assistance Program, which focuses on roadside inspections. The KHP is also required to document federally reportable collisions. There are three criteria for these: a fatality involving a commercial motor vehicle (CMV), an injury collision involving a CMV that requires immediate medical attention away from the scene or a collision with a CMV resulting in disabling property damage to at least one unit.

  The KCrash program has accelerated the filing of collision reports with FMCSA. It facilitates the electronic filing of SafetyNet reports, in place of paper forms. The KHP receives electronic copies of all collision reports involving a CMV to determine whether they meet federal reporting requirements. Paper copies of collision reports involving a CMV are converted to an electronic format by KDOT. KCrash screens all state highway system crash reports in order to populate the required SafetyNet fields before they are forwarded to FMCSA.

- **Observational Seat Belt Survey and Observational Distracted Driving Survey**
  Every year, KDOT Traffic Safety section and its partners collect data across the state on seatbelt usage rates and driver distraction rates.
  Methodology of Adult Survey - based on the federal guidelines in the Uniform Criteria manual. The Kansas survey is now performed at 544 sites on 3 different road types in 35 randomly selected counties which encompass 85% of the population of Kansas. The survey is conducted in June and July.

  Methodology of Child Survey - based on the guidelines used in the adult survey. The Kansas survey is performed at 398 sites where children are transported (i.e. day cares, department stores, elementary and middle schools) in 20 randomly selected counties which encompass 85% of the population of Kansas. The survey is conducted in March, April and May.

  View the survey results here: http://www.ksdot.org/burTrafficSaf/safblt/safbltusag.asp

INTRODUCTION

- **Trauma Registry**
  The trauma registry system is organized to facilitate a multidisciplinary response to those who suffer trauma related injuries during car crashes or other events. The trauma registry houses data on trauma patients from all Kansas hospitals. The data guide systemic improvements that reduce morbidity and mortality related to traumatic events. Registry data are used by emergency medical service personnel, hospital staff and the KDHE staff to identify injury trends, prioritize needs and implement and evaluate prevention strategies. For more information on KDHE's Trauma Program go to: http://www.kstrauma.org/

- **KEMSIS** - The Kansas EMS Information System
  KEMSIS is data system that captures the condition of patients and the treatments they receive before they arrive at a hospital. KEMSIS is a voluntary reporting system whose elements mirror those in the National Emergency Medical Service Information System dataset. Services utilize this information for quality improvements, equipment decisions, staffing adjustments, unit locations and treatment modalities. The system also provides an electronic patient care report for hospitals. As of 2012, 74 emergency medical services and 67 hospitals were filing reports with KEMSIS. For more information, go to: http://www.ksbems.org/ems/?page_id=1603

- **FARS** - Fatality Analysis Reporting System
  FARS is a database funded by the NHTSA and open to the public on its website. It contains records of all fatal crashes in Kansas. To be included in FARS, a crash must involve a motor vehicle traveling on a roadway customarily open to the public and result in the death of a vehicle occupant, or of a non-motorist, within 30 days of the crash. The FARS file contains descriptions of each fatal crash reported. Each case has more than 150 coded data elements that characterize the crash, the vehicles and the people involved. To view fatality data, go to:
  http://www-fars.nhtsa.dot.gov/Main/index.aspx

Data Analysis

Two tools are particularly useful for analyzing the data found in state and federal databases.

- *SafetyAnalyst*: Network Screening Tool
  KDOT and 20 other state transportation departments pooled funds to develop SafetyAnalyst, which is software that can analyze safety data. KDOT and many of its peers are now in the process of implementing the software, which includes a network screening tool, diagnosis tool, countermeasure selection and evaluation tools, economic appraisal tool and priority ranking tool.

  The Network Screening Tool identifies sites with potential for safety improvement. Network-screening algorithms are used to identify locations of the following types of sites with potential for safety improvement:
  + Sites with higher-than-expected crash frequencies which may indicate the presence of safety concerns that are potentially correctable in a cost-effective manner; and
  + Sites whose crash frequencies are not higher than expected, given the traffic volumes and other characteristics present at the site, but which nevertheless experience sufficient numbers of crashes that may potentially be improved in a cost-effective manner.

  In addition, the network screening tool can identify sites with high crash severities and with high proportions of specific crash or collision types. The network screening algorithms focus on identifying spot locations and short roadway segments with potential for safety improvement, but also include the capability to identify extended route segments. Network screening and all other *SafetyAnalyst* algorithms can consider specific crash severity levels (fatalities and serious injuries, fatalities and all injuries, property-damage-only) or all severity levels combined.

  At this time, SafetyAnalyst can only analyze safety data for the 10,000-plus miles in the state highway system.

- Local Roadway Analysis
  This is a method for discovering stretches of road off the state highway system with high crash rates.

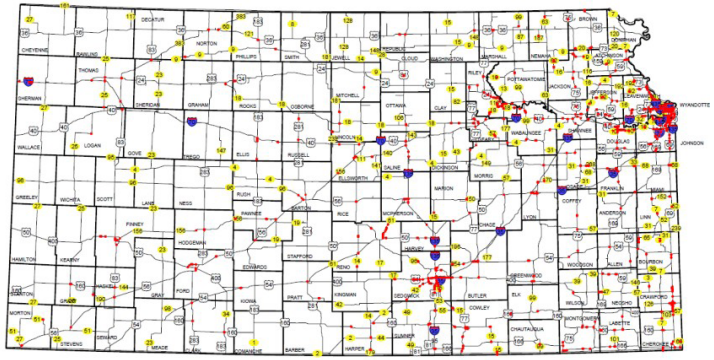
  KCARS supplies the data, and KDOT uses an analytical method that's compatible with the data available. The method has allowed it to rank counties in terms of the number of crashes from on the three rural functional classifications of road outside the state highway system.

INTRODUCTION

Barriers to a fine-grained analysis of crashes on local roads come from incomplete or inconsistent data. Mapping a crash location requires one of two data points: a linear referencing system (LRS) location or a latitude and longitude. KDOT is responsible for 10,000 miles of state highway. The state system's crash records include LRS data. Many of the 130,000 miles of local roads managed by individual cities, counties and townships lack locational data because they have neither county mile posts nor a geo-coded road inventory.

This results in the following challenges:

+ For the local roads that do not have a local referencing system, KDOT must assign each crash a latitude and longitude manually,
+ Through the years, many off-system roads have accumulated multiple names. Different agencies and local residents refer to roads by different names; and
+ New roads are added every year and it's a challenge to maintain a complete inventory.



GOALS AND STRATEGIES

The data support team has chosen five goals as the focus of its efforts. It seeks to:

1. Coordinate the data needs of the Kansas Strategic Highway Safety Plan,
2. Improve data analysis capability to better inform decision makers,
3. Train those who create, input and utilize crash data,
4. Map all crashes statewide using GIS tools; and
5. Systematic reporting of crash data.

The challenge is to identify the strategies that will have the greatest impact on improving the availability, accuracy and efficiency of data and data analysis.

GOAL 1: Coordinate the Data Needs of the Kansas Strategic Highway Safety Plan

New Strategies:

- Map crashes based on variables related to the responsibilities of the EATs
  - Background: The KDOT Traffic Safety Unit manages a variety of teams created to focus resources and attention towards the most pressing traffic safety concerns in the state. Providing mapping capabilities for these teams would allow them another tool to better focus their efforts on the areas of the state most in need of traffic safety improvements.
  - Method: research
  - Costs: none
  - Lead agency and contact: KDOT, Traffic Safety Section❖ Challenges: securing accurate and timely data
  - Target date: FY 2016

- Develop a tool that helps local jurisdictions and regional safety coalitions to access and analyze crash data and maps
  - Background: KDOT is a central location for crash data and analysis that many groups utilize to fulfill their data needs. However, with so many requests coming to one central location, the time to have those requests fulfilled can be long and the ability of the KDOT personnel fulfilling those requests to focus on data accuracy and data analysis can be reduced. A web-based tool that is accessible to our partners would reduce the demand on personnel to fulfill general requests and reduce the time required to receive basic crash data and maps.
  - Method: project
  - Costs: none
  - Lead agency and contact: KDOT, ADU Unit
  - Challenges: time
  - Target date: FY 2016

Future Strategies:

- Link crash data to the trauma registry
- Develop a methodology to identify high-frequency crash corridors on local roadways

GOAL 2: Improve data analysis capability to better inform decision makers

New Strategies:

- Create an intersection inventory to support crash analysis
  - Background: The FHWA defines an intersection as “a planned point of conflict in the roadway system.” A quarter of all crash fatalities in Kansas occur at intersections, but there is too little data on existing intersections. One problem is that there’s no identification system for individual intersections. Creating unique identifiers for intersections would allow better crash reporting and data collection.

    The goal is to identify and characterize all intersections on the state highway system in terms of more than 25 data elements, including the type of traffic control present at the intersection, the number of legs, directions of travel and pavement type. A Highway Safety Improvement Program (HSIP) project has been programmed to complete this work.
  - Method: project
  - Costs: $125,000
  - Lead agency and contact: KDOT, ADU/GIS Section
  - Challenges: finding reliable method of systematically coding crashes to specific location.
  - Target date: FY 2017

- Create a horizontal curve inventory to support crash analysis
  - Background: According to the FHWA, horizontal curves are those that change the alignment or direction of the road (as opposed to vertical curves, which change the slope). More than 25 percent of fatal crashes are associated with a horizontal curve, and the vast majority of these crashes involve roadway departure. The average crash rate for horizontal curves is about three times that of other types of highway segments.

However, available data on existing curves is not thorough. As with intersections, the problem is that there's no identification system for individual curves. Creating unique identifiers for curves would allow better crash reporting.

Once curves are identified in this way, data can be collected.

All the curves to be identified are part of the state highway system. Data collected will include curve location, length, advisory speed (if present) and radius. An HSIP project has been programmed to complete this work.

- Method: project
- Costs: $125,000
- Lead agency and contact: KDOT, ADU/GIS Section
- Challenges: determining specific calculations to define a curve for recognition
- Target Date: FY 2016

- Use SafetyAnalyst to couple data analysis with engineering solutions
  - Background: In addition to SafetyAnalyst's ability to scan the highway system for crash "hot spots" through the Network Screening Tool, SafetyAnalyst can use statistical techniques to perform detailed crash analysis and recommend possible engineering countermeasures for specific locations.

    KDOT has begun to use SafetyAnalyst to:
    - view detailed site analysis summarizing crash patterns and overrepresented crash variables,
    - view diagnoses that recommend engineering countermeasures,
    - suggest cost/benefit appraisals of proposed countermeasures; and
    - suggest project prioritization.

  - Method: software
  - Costs: annual license fees
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: importing, processing and calibrating Kansas crash, roadway and traffic volume data for SafetyAnalyst use
  - Target date: FY 2015

Future Strategies:
- No future strategies identified at this time

GOAL 3: Train those who create, input and utilize crash data

New Strategies:
- No new strategies identified at this time

Future Strategies:
- If additional funding were to become available, KDOT would like to offer live training to law enforcement around the state

GOAL 4: Map all crashes statewide using GIS tools

New Strategies:
- Complete and automate geo-coding (assignment of latitude and longitude) of crashes on local roads
  - Background: The Accident Data Unit at KDOT has been working to geo-code and geo-locate all crashes in Kansas. While CANSYS is able to support the geo-location of crashes on the state highway system, another method is being developed to automatically geo-code crashes located on locally administered roads. The geo-coding of crashes relies on information provided by crash reports. Unfortunately, at this time, longitude and latitude are not initially captured in crash reports and must be inferred or found indirectly. At the moment of the writing, geo-coding of all existing crashes on local roads has been completed and approximately 85% of all local crashes could potentially be automatically geo-located after the development of a locating tool.
  - Method: software
  - Costs: KDOT and KCI time and licensing costs
  - Lead agency and contact: KDOT, GIS Unit
  - Challenges: creating geocoding applications for use at KCI, training and providing law enforcement with field level geocoding tools
  - Target date: FY 2016

Future Strategies:
- No future strategies identified at this time

GOAL 5: Systematic Reporting of crash data

New Strategies:
- No new strategies identified at this time

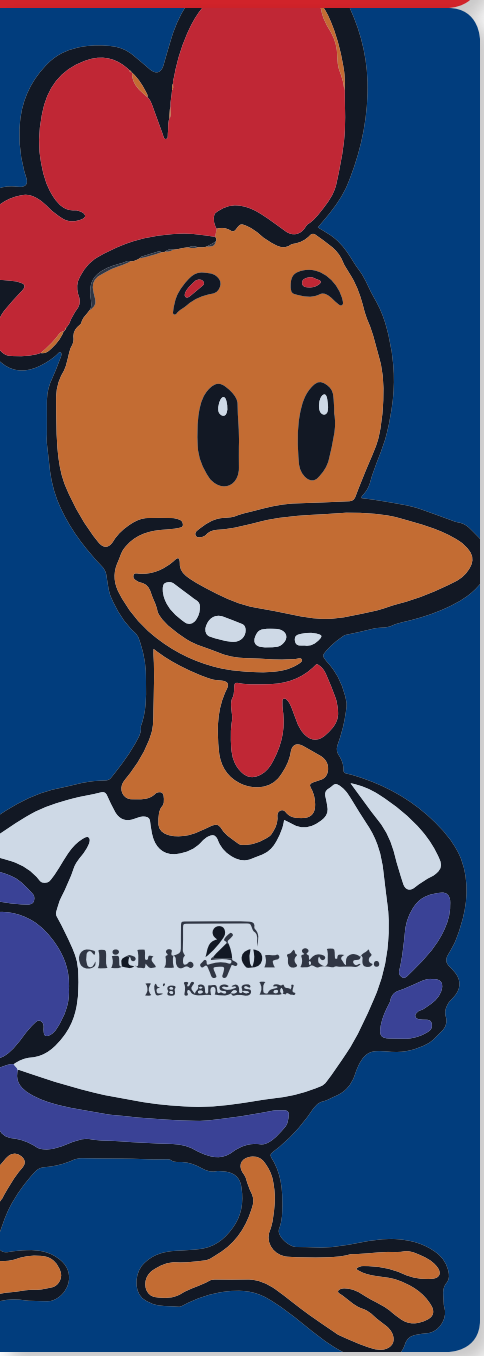
Future Strategies:
- No future strategies identified at this time

KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 10: EDUCATION

SAFEKAN
Road to Zero Fatalities



INTRODUCTION

Roadway engineering and driver behavior both affect crash statistics – so both are addressed in the SHSP. The SHSP will drive the highway and traffic safety activities of the Kansas Department of Transportation, and through it, we hope to influence our member agencies and the public at large. Our goal is to reduce fatalities by at least half over 20 years. If the goal is met, the five-year average of 417 fatalities a year between 2005 and 2009 would fall to 208 or fewer between 2025 and 2029.

The SHSP works within the frame of the "4E's" of highway (that is, all roadways) safety: engineering, enforcement, emergency medical services and education. Within this broad frame, each of the EATS will focus on a particular problem, risk or threat associated with roadway safety: roadway departure, occupant protection, intersections, impaired driving, teen drivers and older drivers. The EATs will ponder, for example, how to communicate to those opposed to centerline rumble strips that those grooves in the pavement actually save lives, how to convince a 28-year-old rural Kansan to wear a seat belt in his pick-up truck and how to teach parents the proper use of a booster seat. Education will be crucial to success.

The education support team was therefore convened to coordinate and support the educational efforts required to help the SHSP succeed. Creation of this team followed the convening of two other teams to support the EATs, one to provide the groups with information (the data support team) and another to help coordinate efforts on locally owned roads (the local roads team).

The education team will identify the tools, networks and platforms that will help other teams distribute their messages, conduct their training and share their resources. Potential roles include developing a system by which to distribute messages and facilitating public outreach, education and marketing campaigns.

The team, which first met Jan. 23, 2012, is represented by the following agencies:

- Kansas Traffic Safety Resource Office (KTSRO)
- Kansas Highway Patrol (KHP)
- KU Transportation Center
- Kansas Department of Aging & Disability Services
- Kansas Department of Health and Environment (KDHE)
- Safe Kids Kansas
- Kansas Emergency Nurses Association (KENA)
- Boys & Girls Clubs of Topeka
- Kansas Department of Transportation (KDOT)

Some of the new strategies discussed below – specifically, a tiered communications network and a user-friendly website "hub" for traffic safety information – will serve several purposes: disseminating research on behavioral and engineering approaches to reducing traffic fatalities; publicizing engineering successes; educating drivers about new traffic laws; providing resources to locals; and promoting public involvement of Kansans with an interest in safety.

Educating Drivers: A Lifetime Course

To define the word "educate," dictionaries often mention schooling, training and instruction. But to make good driving decisions, new drivers need education from many sources,

KANSAS TRAFFIC SAFETY RESOURCE OFFICE

The KTSRO is the educational arm of the Kansas Bureau of Transportation Safety and Technology.

The mission of KTSRO is to provide public information and education to protect Kansans from avoidable injury or death on Kansas roadways.

Together with many partners, KTSRO focuses on measures dealing with novice drivers, increasing seat belt use, preventing drunken driving and underage drinking and raising motorcycle safety awareness. KTSRO is an extension of KDOT providing their resources, materials and traffic safety information through a physical office located at 2930 SW Wanamaker Drive, Topeka, KS, (800-416-2522) and on the web at www.ktsro.org.

INTRODUCTION

FOR EVERY SAFETY RESTRAINT, THERE IS A SEASON

A newborn's arrival into a family is a great teaching moment – among other things, about the use of safety restraints.

KDOT conducts observational safety belt usage surveys annually. In 2012, children – from newborns to age 4 – were observed to be properly restrained 97 percent of the time. In part, that's because hospitals educate new parents about the use of car seats before sending a newborn home.

Unfortunately, this figure drops to 79 percent for kids between ages 5 and 9. It's just harder to reach parents when the child is transitioning from a car seat to a booster seat or later from booster seat to seat belt.

At that point, parents need to learn booster seats work by raising a child up so the lap and shoulder belt are positioned safely. Their use reduces the risk of injury by 58 percent.

Knowing this, the Occupant Protection EAT has strategies to promote curricula such as Boosters to Belts and Safety Breaks. The education team will advise the Occupant Protection EAT on ways to implement these strategies.

including parents, law enforcement officials and more experienced peers and siblings. Driving decisions may be based on law (specifying, say, who needs to wear a seatbelt or the steps to get a driver's license) or technique (such as how to drive through a roundabout).

Driving decisions also may be affected by more informal sources – such as the repeated retelling, within a community, of a story or stories. Or it may be shaped by more novel approaches, such as that taken by Crawford County (see "A Seatbelt-Use Program Goes Viral"). Yet for the most part, in the realm of driving, the word "education" refers to systemic efforts to positively influence people's behavior through educational campaigns and programs. In general, the most effective public education strategies are those tied to a specific activity.

Educators who seek to have an impact need to keep the following questions in mind as they design programs.

- Who is your primary target audience?
- How do you reach this audience through all the background "noise"?
- If there are several audiences, what's the best medium for reaching each one?
- How do you measure your impact?
- There are many messengers. Who is the best for communicating yours?
- There are many messages. What's yours?
- How are changes in communications media affecting education?

How we answer these questions will determine the communication strategies we select and the messages we dispatch.

A SEATBELT-USE PROGRAM GOES VIRAL

Getting teenagers to use seatbelts is tough. One Kansas county got more kids to buckle up by getting them involved in creating a program and by using sugar rather than vinegar to change their behavior.

In 2008, when law enforcement officers visited every school in Crawford County and gave safety talks there, county teens had one of the state's lowest compliance rates for seatbelt use. But by the end of the 2008-2009 school year, the average increase in seatbelt use there was 16.3 percent.

Today, in more than half of all Kansas counties, at least one school uses the program, which is described in detail below.

Representatives from the Crawford County sheriff's office, Kansas Highway Patrol and Kansas Department of Transportation based their pilot program on two assumptions. The first: If students are involved in creating the program, they'll be more invested in its success. The second: Both the threat of consequences and the offer of rewards work best when you're trying to change behavior.

Students became creators when they were asked to nominate different names and slogans for the program. In the end, Seat Belts Are for Everyone (SAFE) won the most votes. Students also designed a pledge card, which recognized each of the six Crawford County schools participating in the program.

Law enforcement officials would visit schools, address students, then follow up with enforcement of seat belt laws, typically for a week following their visit.

Meanwhile, various agencies or offices were approached for contributions to fund rewards to teenagers who signed pledge cards promising to use seat belts. Students could sign the cards each month to be eligible for a monthly drawing.

Of the 1,875 students in the county, an additional 306 – or 16.3 percent – were using seatbelts by the end of the school year. Today, there are SAFE programs operating in over 50 Kansas counties. For more details, go here to learn more.

GOALS AND STRATEGIES

The Education Support Team has set three goals. It seeks to:

1. Reach drivers and those who influence them (police and lawmakers, for example) by developing a communications infrastructure,
2. Maintain a statewide traffic safety hub of information, training and resources; and
3. Support partners in traffic safety.

GOAL 1: Reach drivers and those who influence them (police and lawmakers, for example) by developing a communications infrastructure

New Strategy:

- Develop a tiered network of organizations and individuals to deliver messages to targeted audiences
  - Background: Messages delivered to the wrong audiences fall on deaf ears. KDOT public affairs managers and KHP public resource officers work hard to develop and maintain regional networks. But the audience for news of an engineering approach to prevent vehicles from leaving the roadway may be much different from an audience that needs to hear that car seats are safer than laps for children. We want to make certain that our message, whatever its form – news release, web link or public service spot – reaches its target audience. The network route a message takes will depend on the EAT that develops it; the media best suited to its distribution; and the target audience, such as, for example, the trauma community. We will specify audiences, identify partner agencies and create networks as needed to implement education strategies that emerge from the EATs.
  - Method: project
  - Costs: none
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: accepting the limits of our reach
  - Target date: FY 2015

Future Strategy:

- Meet with media representatives to brainstorm about media and messages that will give us access to our target audiences

KDOT'S VOICE IN KANSAS

- Send only meaningful information.
- Don't waste words.
- KDOT observes those rules to deliver its messages effectively to – and through – media.
- Statewide messages typically come from KDOT headquarters in Topeka.
- Regional messages originate from six district offices, each with its own public affairs manager, or PAM.
- Questions? For phone numbers, click here and search for the words "public affairs director" and "public affairs manager."

GOAL 2: Maintain a statewide traffic safety hub of information, training and resources

New Strategy:

- Create a domain and website, to be called SafeKan, as the central repository for safety information
  - Background: Websites facilitate public outreach. A Safekan website, frequently updated and user-friendly, will be the portal for all Kansas traffic and roadway safety information, beginning with this SHSP. The "Kansas Driving: Safe. Not Sorry" road kit is an example of the kind of information that could be made available on the site. Designed by KDOT to assist partners in making safe driving presentations, the kit contains brochures, pamphlets and videos. After an update, these could be provided online.
  - Method: project
  - Costs: TBD
  - Performance measure: site visits
  - Lead agency and contact: KDOT, Traffic Safety Section
  - Challenges: securing funding to maintain a site and steering traffic to it
  - Target date: FY 2016

Future Strategies:

- No future strategies identified at this time

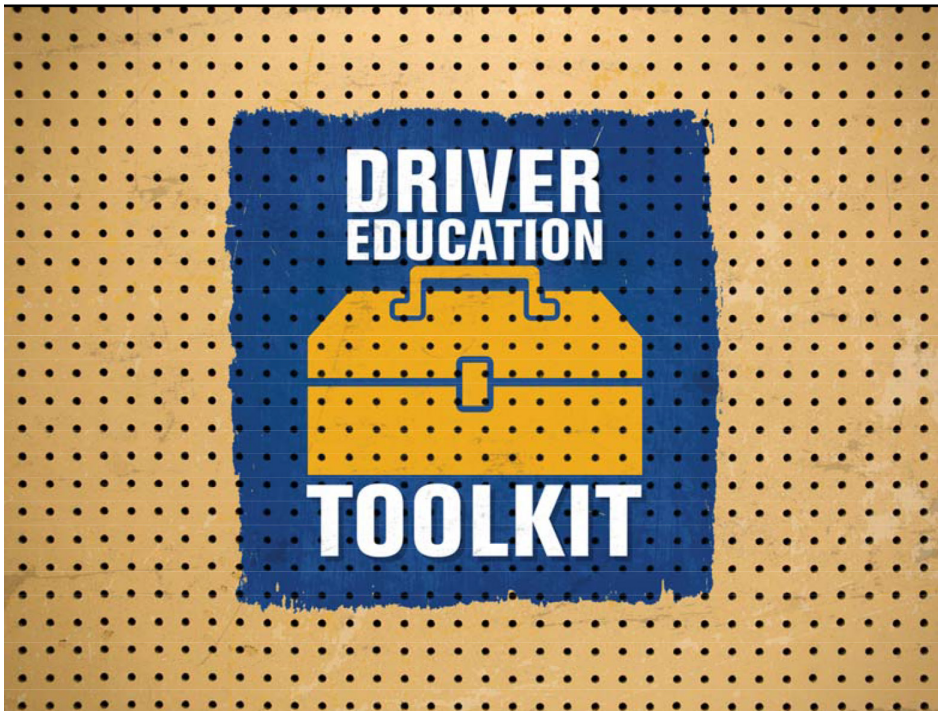
GOAL 3: Support partners in traffic safety

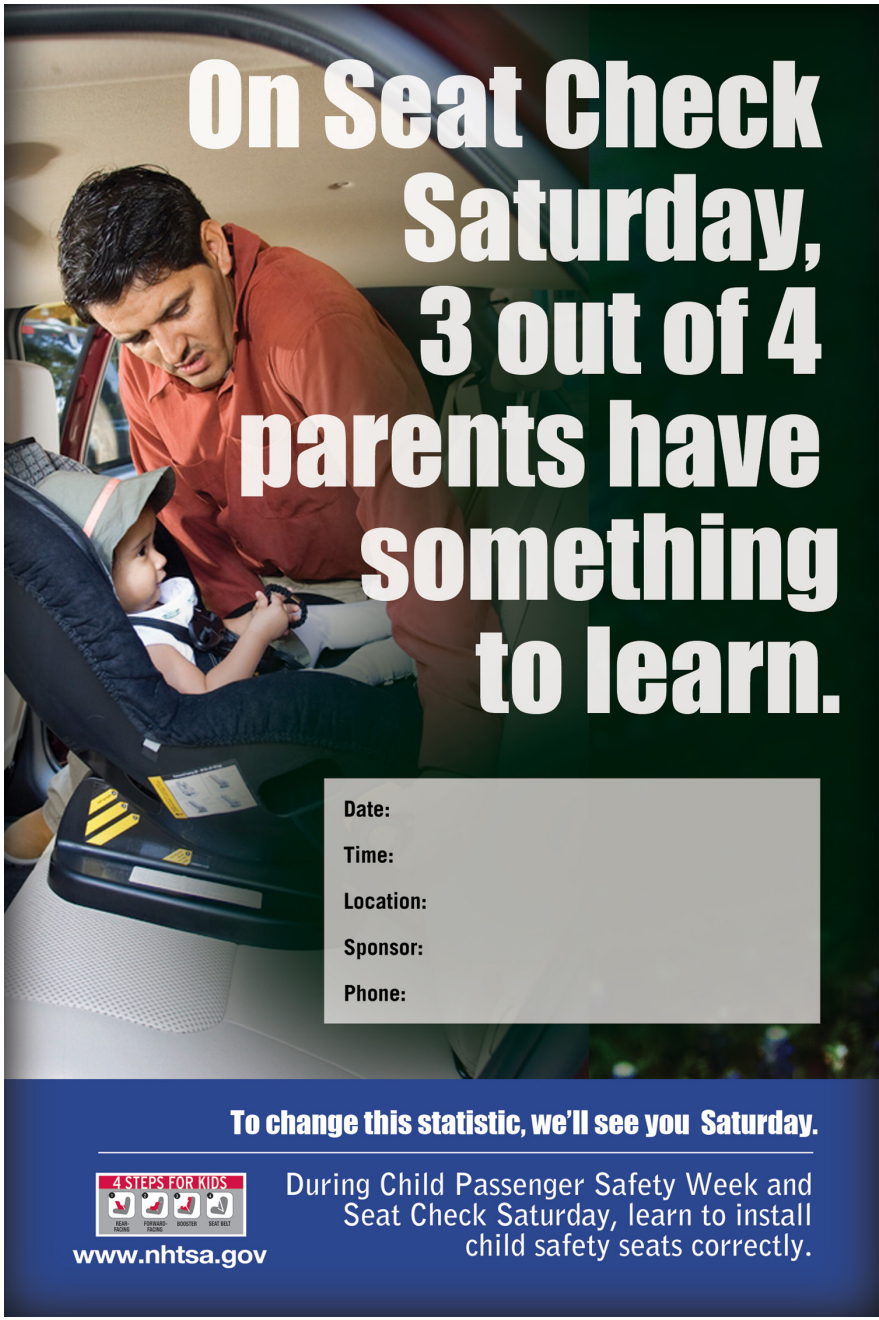
New Strategy:

- Develop a checklist tool for the EATs to use when implementing their education strategies
  - Background: Sometimes the hardest part about launching an initiative is knowing where to begin. A checklist tool developed by the education team will give practitioners guidance about how to design an education strategy.
  - Method: project
  - Costs: TBD
  - Lead agency and contact: Kansas Traffic Safety Resource Office
  - Challenges: anticipating the different needs of each EAT
  - Target date: FY 2015

Future Strategies:

- No future strategies identified at this time





KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

CHAPTER 11: LOCAL ROADS

SAFEKAN
Road to Zero Fatalities

INTRODUCTION

The Kansas State Highway System is highly visible to those traveling long distances across the state but represents only a fraction of all the miles of public roads in the state. Of 140,614 miles of public roadways, only 7.3 percent are part of the state highway system. The Kansas Turnpike Authority oversees another 0.2 percent. The remaining 92.5 percent of public roads – 130,068 centerline miles – are owned by cities, counties and townships. Traffic on these roads account for about 43 percent of the total vehicle miles traveled in Kansas, and crash data show that between 2008 and 2012 46 percent of fatalities and 53 percent of disabling injuries occurred on roads owned by local public authorities—both up one percent since 2005 thru 2009. Clearly, if we are to achieve our overall goal of halving fatalities and serious injuries by 2029, locally owned roads must be included as a significant part of the plan. The Local Roads Support Team (LRST) was formed to identify and coordinate strategies aimed at saving lives on local roads.

In helping to fashion the SHSP, support teams like the LRST function in the same way as emphasis area teams: They identify overall goals, select specific strategies and create action plans to implement those strategies. The difference is that the emphasis area teams focus on specific crash variables (such as seat belt use, driving while impaired and intersections) while support teams (such as education, data and local roads) address issues relevant to the SHSP as a whole.

Why have a dedicated local roads chapter? Because addressing safety on local roads involves different considerations than on state highways. Many roads owned by local governments were not built to modern operational and safety standards. Local governments generally have less access to professional engineers and to dedicated funding to address safety problems. There are different stakeholders for safety — including local elected officials, public works and law enforcement agencies. There are varying levels of awareness about local safety problems and how to best address them. To reduce crashes at the local level, we need strategies to address local realities and needs.

The LRST, driven by its mission of reducing by half fatal and serious injury crashes on locally owned roads by 2029 by reference to the 4 E's of roadway safety – engineering, enforcement, education and emergency medical services – committed itself to:

- Promoting the SHSP to local governments,
- Communicating with emphasis area teams to make sure they address local roads,
- Identifying goals and strategies that may not be specific to an emphasis area but are important to reducing crashes on local roads,
- Keeping abreast of new developments in local road safety; and
- Assisting fund managers to distribute their local safety funds on the basis of local safety priorities.

Many programs aimed at saving lives on local roads are already in place. Some of the more significant are as follows:

- Training and Technical Assistance
  - Traffic Assistance Service for Kansas (TASK) a partnership of Kansas State University and the University of Kansas
  - Kansas Local Technical Assistance Program (LTAP) at the University of Kansas
  - Traffic Engineering Assistance Program (TEAP) through the KDOT's Bureau of Local Projects
  - Road safety audits by KDOT and Kansas LTAP
  - Technical assistance provided by the Kansas County Road Engineer at the Kansas Association of Counties
  - Drug recognition expert training and certification through the International Association of Chiefs of Police

- Funding for Engineering Improvements
  - High Risk Rural Roads Program, managed by KDOT's Bureau of Local Projects
  - Intersection Safety Program, managed by KDOT's Bureau of Transportation Safety & Technology

INTRODUCTION

  - Railway-Highway Grade Crossing Program, managed by KDOT's Bureau of Design
  - Safe Routes to School, managed by KDOT's Bureau of Transportation Planning
  - Federal Fund Exchange Program, managed by KDOT's Bureau of Local Projects.
    - This program allows local agencies to exchange federal funds for state funds on projects including, but not limited to, safety improvements.

- Partnering and Education
  - Destination Safe, a regional safety coalition administered by the Mid-America Regional Council
  - SAFE - managed by the Kansas Traffic Safety Resource Office
  - NHTSA-funded Highway Safety Program
  - AAA training for older drivers

Many programs are already in place, yet the rates of serious and fatal crashes on local roads indicate there is more that needs to be done. The team decided to focus individually on two of the 4Es: engineering and enforcement. The other two E's, EMS and education are woven into each discussion. The discussions will ultimately result in strategies to dramatically reduce fatal and serious injury crashes on local roads. For each of the three discussions, a survey was sent asking team members to identify who is responsible for decision-making affecting that E on local roads, what safety resources and programs already exist for that E, what gaps exist and what the data suggests as strategies for reducing crashes.

As the team worked through these discussions some dominant themes emerged:

- Spending federal dollars is more cumbersome and less efficient than spending state dollars,
  - Project delivery, productivity and flexibility improve when the locals handle the projects themselves.

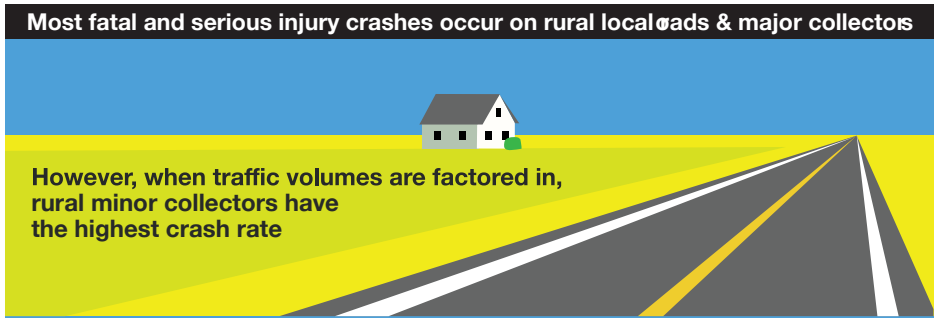
- When spending safety dollars the primary emphasis should shift to low-cost systemic safety improvements, with a secondary emphasis on higher-cost infrastructure projects at high-crash—or black spot—locations,
- Access to data is important to locals, but so is training to use the data to effectively reduce crashes,
- Single-vehicle crashes are more common on local roads than on state highways; and
  - In the event of a serious crash on a low-volume road, discovery, reporting, and EMS response could be compromised.

- There is a decline in interest among law enforcement personnel in enforcing traffic laws.

The Local Roads Support Team first met April 24, 2012. These agencies were represented:

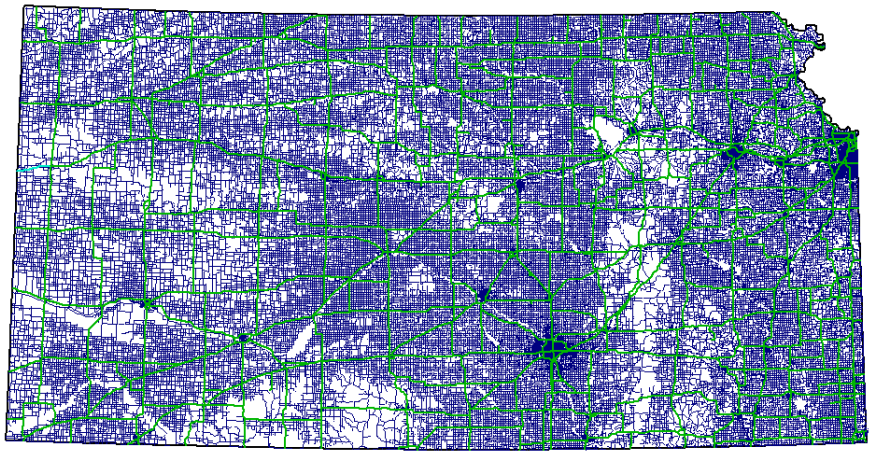
- KDOT
- Lawrence-Douglas County Metropolitan Planning Organization
- American Public Works Association (APWA)
- Kansas State Department of Education (KSDE)
- City of Topeka Traffic Engineering
- Kansas Local Technical Assistance Program (LTAP)
- Kansas Association of Counties (KAC)
- FHWA
- Lyon County Sheriff's Department
- Barton County Engineering
- Sedgwick County Traffic Engineering
- Kansas Board of Emergency Medical Services
- Kansas Department of Health and Environment (KDHE)

A thorough understanding of the data and research related to local road crashes is essential to the wise expenditure of our safety dollars. With input from the Data Support Team, the LRST will have the tools to assist local agencies when managing safety investments. The following are data the team considered when developing their strategies.



DATA POINTS

For the purpose of this chapter, a local road is defined as any public road not maintained by the state and not part of the State Highway System (such as K-10, US-54, and I-70.) Local roads represent 92.5 percent of all roads in Kansas and carry 43.3 percent of all traffic. To put these numbers in perspective, the state image below shows local roads in blue and the State Highway System in green.



The data presented in the charts below represents the roads shown above in blue—it does not include the State Highway System. The data indicates what is happening on local roads is often different than what occurs on state highways. Some of the data points to strategies addressed in other chapters of this plan, such as seat belts and teen drivers; other data points to goals and strategies detailed below. Additional data specific to local roadways is presented in other chapters of the plan.

1. Local roads are not benefiting from the statewide reduction in fatalities

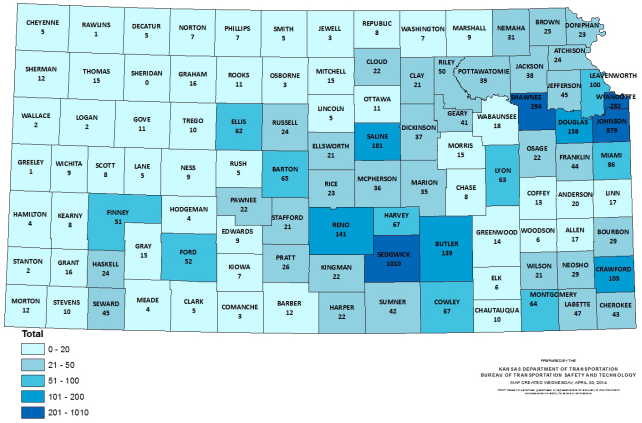
Fatalities in Kansas have been trending downward for the past decade. However, most of the reduction is found on state highways and not local roads. Based on five-year averages, in 2008 local roads represented 42 percent of all fatalities; by 2012 that share increased to 46 percent. Over this four-year period, the five-year average for state highway fatalities decreased by 14 percent; for local roads it increased by 1 percent.

LOCAL ROADWAY IMPACT - BY THE MAP

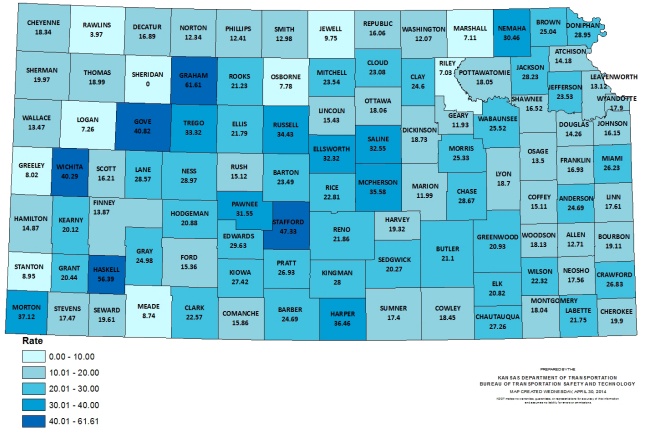
The following map shows the number of fatalities and serious injuries on local roadways by county, for the five-year period 2008 thru 2012. Not surprisingly, it generally follows population densities.

When the numbers are normalized based on population, more meaningful data can be presented. The information in this map can be used to identify priority counties for initiatives such as local road safety plans and regional safety coalitions.

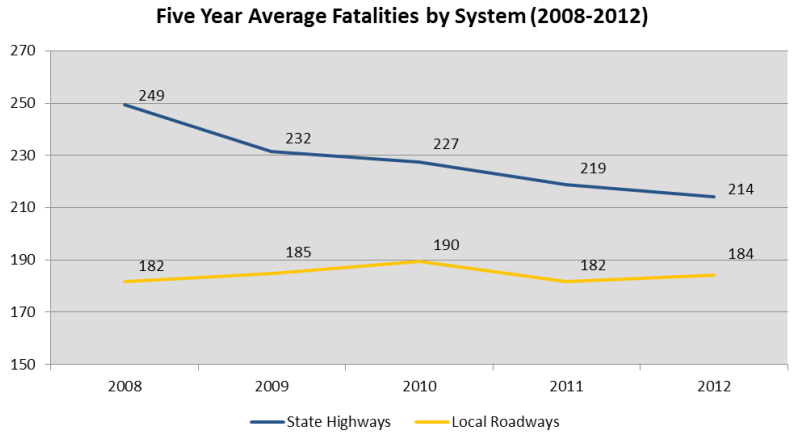
Local Roadway Fatalities and Serious Injuries (2008-2012)



Local Roadway Fatalities and Serious Injuries per 10,000 Population (2008-2012)



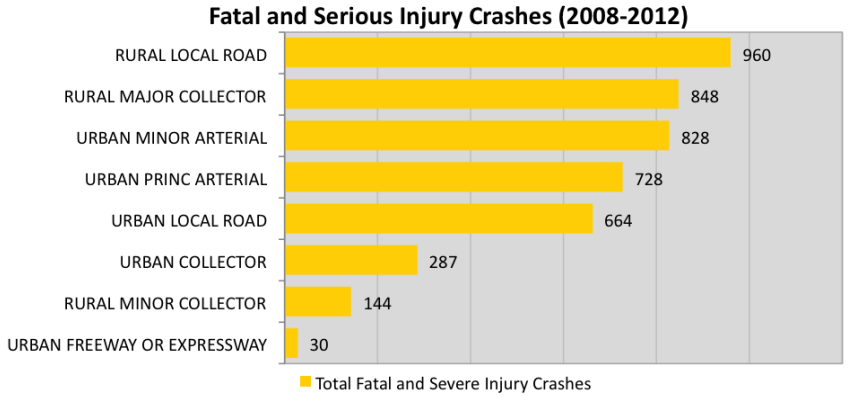
DATA POINTS



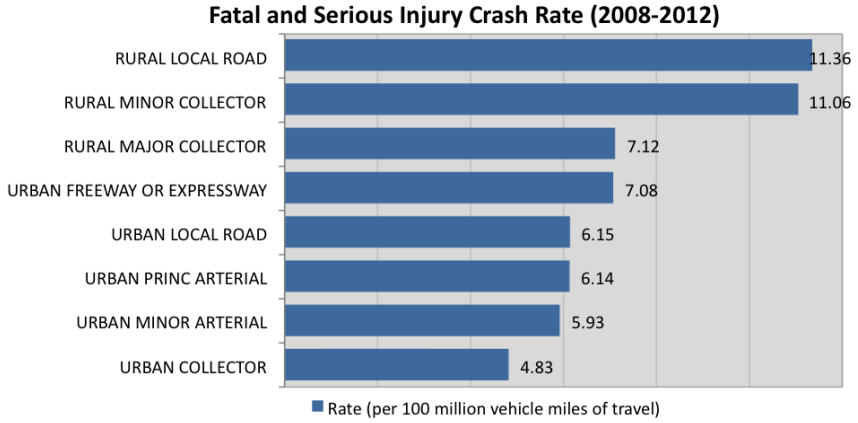
Exposure (i.e. traffic volume) does not explain these trends. Vehicle-miles of travel (VMT) on state highways has held relatively steady since 2003 while the VMT on local roads in 2012 approached 2007 levels after a slight reduction in the previous years.

2. Rural local and rural major/minor collectors have high rates of fatal and severe injury crashes despite low traffic volumes

About two percent of all crashes on locally-owned roads involve a fatal or serious injury. There are three levels of injury severity: possible, non-incapacitating and disabling/incapacitating. Only the latter is considered serious injury. Most fatal and serious injury crashes occur on roads classified as rural local roads and major collectors. However, when traffic volumes are factored in, rural minor collectors have the highest crash rate (note: Information on the functional classifications used in the tables below can be found in the introduction chapter of this plan; cities with a population of less than 5,000 are classified as rural, while some rural areas on the edge of large cities may be classified as urban).



Urban crashes account for about three of every four local road crashes, 61 percent of serious injury crashes and only 36 percent of fatal crashes.

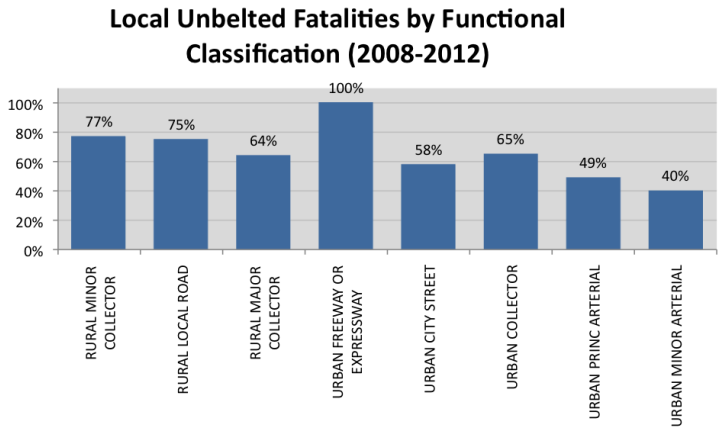


Two-thirds of all miles driven on local roads occur in urban areas.

DATA POINTS

3. Low seatbelt use on rural roads

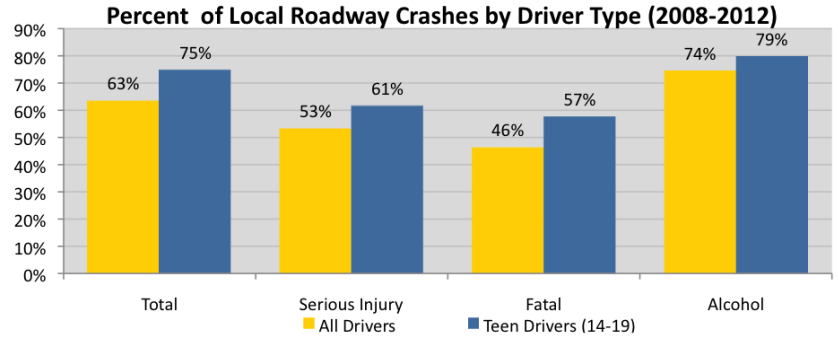
People in fatal and serious injury crashes on local roads are less likely to be wearing a seatbelt than those on the State Highway System. For all roads, 55 percent of fatality victims were not wearing a seatbelt; for local roads only urban arterials fall below this statewide average. See the chapter Occupant Protection Emphasis Area for strategies to increase seatbelt compliance.



Local traffic and rural traffic are both indicators of low seatbelt use. For example, 77 percent of fatalities where a seatbelt was available (i.e. non-motorcycle, non-bicycle and/or non-pedestrian) on rural minor collectors were NOT wearing a seatbelt

4. Inexperienced drivers are over-represented in local road crashes

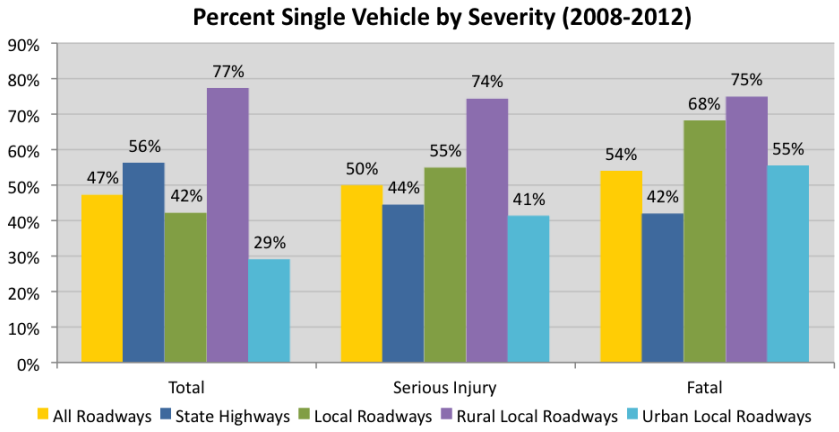
Seventy-five percent of all teen crashes (i.e. crashes that involve at least one driver from age 14 to 19) occur on local roads, including 57 percent of fatal crashes, 61 percent of serious injury crashes and 79 percent of impaired teen driver crashes. The graph below compares teen drivers to the population as a whole. See the Teen Driver chapter to review strategies which address inexperienced drivers.



Of the 126 teens killed in local traffic crashes between 2008 and 2012, 73 percent were NOT wearing a seatbelt. Teens are more likely to wear their seatbelts while driving/riding on urban local roads. This may be due to the primary seatbelt law for teens and the greater likelihood of meeting a police officer in town than in the country.

5. Single-vehicle crashes

Seventy-seven percent of all crashes on rural locally-owned roads do not involve multiple vehicles; that is, they are single-vehicle crashes—typically a result from running-off-the road. This is much higher than the 47 percent on all roadways and the 56 percent on state highways. This creates problems because a lone driver or occupant may not be able to call for help. In addition, since rural areas carry much less traffic and have much lighter law enforcement patrolling, a crash is less likely to be reported by another driver



According to a 2004 study by NHTSA, approximately 30 percent of the rural fatal crashes exceeded the "golden hour", while only about 8 percent of the urban fatal crashes exceeded it.

THE GOLDEN HOUR

In general, the time to deliver patients to definitive care consists of the six time intervals:

1. Time between crash occurrence and EMS notification,
2. Response time for EMS personnel to be notified and depart the station (i.e., chute time),
3. Travel time to the crash scene by EMS,
4. On-scene EMS rescue time,
5. Transport time to a hospital or trauma center; and
6. Emergency department resuscitation time.

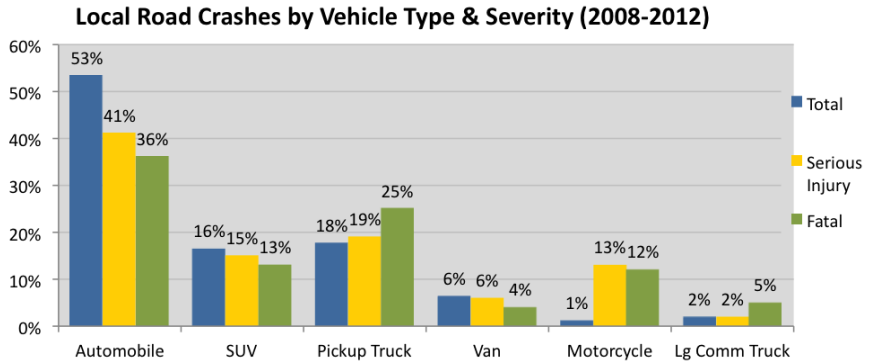
The best chance for survival following a traumatic injury occurs when the injured person is seen and treated within an hour of the event, known as the "Golden Hour". However, the average elapsed time for several of these time intervals typically is longer in rural areas than in urban areas.

National Average: Approximately 30 percent of the rural fatal crashes exceeded the golden hour, while only about 8 percent of the urban fatal crashes exceeded it. (NHTSA Study 2004)

or law enforcement. Although Emergency Management Services (EMS) issues are critical to safety on local roads, the strategies discussed are considered relevant to all roads. An EMS Support chapter will be developed soon to include specific EMS strategies. See the Roadway Departure Emphasis Area for strategies to address running-off-the road crashes.

6. The percent of pick-up trucks and motorcycles increase with crash severity

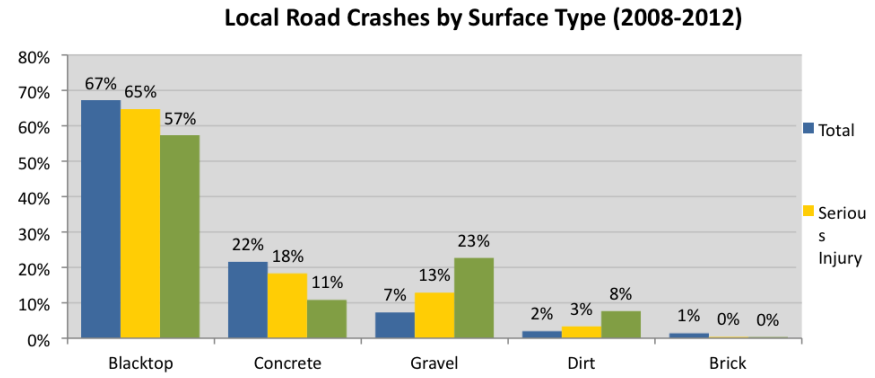
There is an increase in the frequency of pick-up trucks involved in local road crashes as the severity increases, accounting for 18 percent of all local road crashes, 19 percent of all local road serious injuries, and 25 percent of all local road fatalities. Motorcycles represent only one percent of crashes on local roads, but about one in eight fatal and serious injury crashes. Finding the right message to reach the typical driver of pickups and motorcycles is a serious challenge for those in behavioral safety.



While the numbers are much lower, large trucks show a pattern similar to pickup trucks and motorcycles.

7. Unpaved roads are over-represented in local road fatalities

There is an increase in the frequency of gravel road surfaces in local road crashes as the severity increases, making up: 7 percent of all local road crashes, 13 percent of all local road serious injuries and 23 percent of all local road fatalities. There is a similar increase on dirt roads, making up: 2 percent of all local road crashes, 3 percent of all local road serious injuries and 8 percent of all local road fatalities.



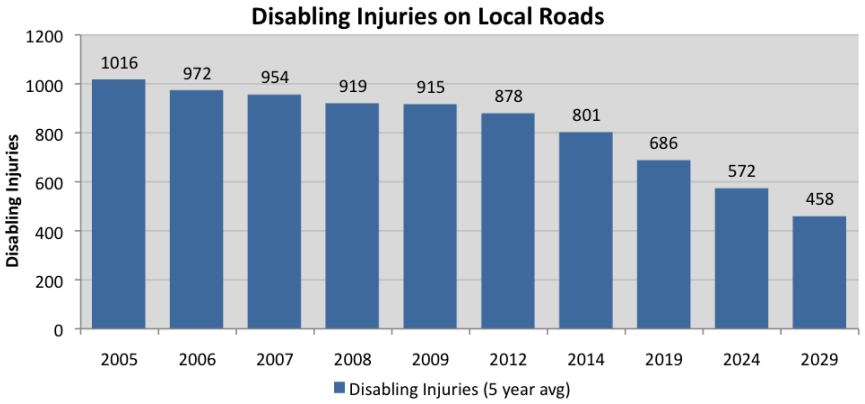
As severity increases, the percent share of paved roads (blacktop and concrete) decreases; this trend reverses for unpaved roads (gravel and dirt.) This could be due to a variety of factors; most notably unpaved roads typically have less "forgiving" roadsides than paved roads.

DATA POINTS

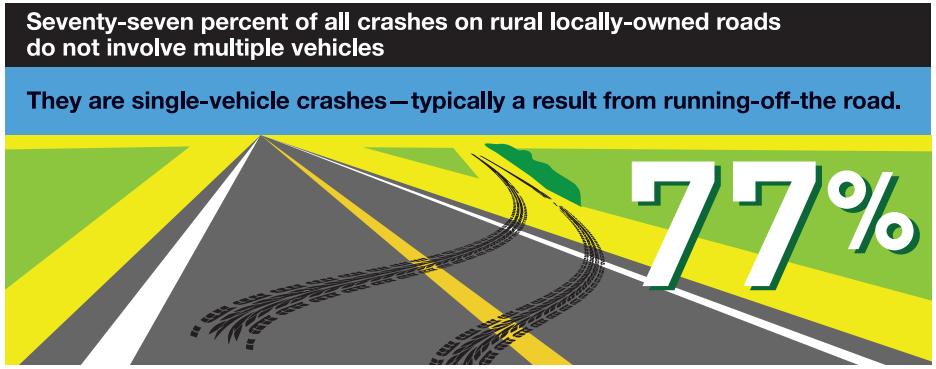
Performance Measures

Consistent with our plan's overall goal, the Local Roads Support Team seeks to halve fatalities and serious injuries on local roads within 20 years. In the five years between 2005 and 2009, Kansas averaged 185 fatalities and 915 disabling injuries on local roads annually. Therefore, our target performance measure for the effectiveness of our goals and strategies to reduce crashes is to average fewer than 93 fatalities and 458 disabling injuries during the years 2025 to 2029.

Data thru 2012 indicates the actual number of fatalities; data for 2014 and beyond indicates our goal.



Data thru 2012 indicates the actual number of fatalities; data for 2014 and beyond indicates our goal. These goals are independent of VMT; although the challenge of meeting these goals will be proportional to the rise and fall of VMT. Projecting VMTs on local roads—especially rural—is difficult due to changing demographics and shifting population distributions.



GOALS AND STRATEGIES

While there are many safety issues on local roads that could be addressed with goals and strategies in this chapter, the LRST chose those that had the best potential to significantly reduce the number of fatal and serious injury crashes on local roads. The LRST has chosen the following goals:

1. Make access to federal and state safety dollars for roads and streets less cumbersome for local agencies by identifying and acting on opportunities to improve efficiencies,
2. Maximize benefit from available funds by tying funding to the greatest needs, as indicated by crash data and crash research,
3. Improve local public authority (LPA) access to crash data,
4. Promote multi-disciplinary collaboration and cooperation on safety at local and regional levels to reduce crashes on the local system,
5. Train and otherwise assist LPAs in developing safety programs and identifying low-cost strategies; and
6. Emphasize to the law enforcement community the important role of law enforcement to improve safety on local roads.

These goals and strategies are in addition to those provided in other areas of the SHSP.

GOAL 1: Make access to federal and state safety dollars for roads and streets less cumbersome for local agencies by identifying and acting on opportunities to improve efficiencies

New strategies:

- Take advantage of flexibilities to maximize federal participation on projects
  - Background: Staff and budget at local agencies are often stretched thin. Typically, on federally funded local projects, the federal share is 90 percent of the costs of construction and inspection and the local agency picks up the remaining 10 percent. However, the local agency is often responsible for 100 percent of the cost of design, utility adjustments and right-of-way acquisition. The result is that many times a 90/10 project may turn into one where the costs are divided equally by the local agency and federal funds when the total project cost is considered. This strategy aims to simplify the application process for funds, lower the local match where possible and allow more work phases, such as design, in funding eligibility while striking a balance that ensures local ownership of project outcomes.
  - Method: policy
  - Costs: potentially fewer high-cost, spot improvement projects could result, as more dollars will need to be programmed on projects where the local agency requests funding of additional work phases.
  - Lead agency and contact: KDOT, Bureau of Local Projects and Bureau of Transportation Safety & Technology
  - Challenges: changing established ways of doing business in KDOT and local governments
  - Target date: FY 2015

- Consider alternatives to minimize construction engineering costs on city and county federal aid safety projects
  - Background: Local federal aid projects usually employ consultants to perform the construction engineering. Fees are based on hourly rates, and in some cases have exceeded 40% of construction costs. Construction engineering fees subtract from funds that can be used for construction. Possible alternatives are to reduce working days, or have local agency staff monitor the project when non-critical construction is underway.
  - Method: policy
  - Costs: risk of non-compliance
  - Lead agency and contact: KDOT, Bureau of Local Projects
  - Challenges: finding alternatives that satisfy KDOT as well as federal regulations
  - Target date: FY 2016

Future strategies:

- Consider eliminating federal-aid safety programs and move committed dollars to a state program, similar to the federal-fund exchange program
- Allow local agencies to submit applications for High Risk Rural Road (HRRR) funding at any time in the year

GOAL 2: Maximize benefit from available funds by tying funding to the greatest needs, as indicated by crash data and crash research

New strategy:

- Increase HSIP funding for locally-owned roads proportional to the distribution of fatal and serious injury crashes
  - Background: Business as usual is easy. Change is hard. But if HSIP funding is intended to reduce the incidence of fatalities and serious injuries, it only makes sense for HSIP spending to follow the pattern of fatal and serious injury crashes. Some programs will need to be reduced or eliminated to increase funding for locally-owned roads. The nature of

GOALS AND STRATEGIES

program management requires this be done incrementally over the next few years.
  - Method: policy
  - Costs: reduction in spending or elimination of other programs
  - Lead agency and contact: KDOT, Bureau of Transportation Safety and Technology
  - Challenges: competing interests
  - Target date: proportional to data by FY 2017

- **Future strategies:**
  - No future strategies identified at this time

HIGH RISK RURAL ROADS IN KANSAS

MAP-21 defines a high risk rural road as "any roadway functionally classified as a rural major or minor collector or rural local road with significant safety risks." States are required to define what is meant by "significant safety risks" and record such risks in an updated Strategic Highway Safety Plan. In Kansas a High Risk Rural Road is any rural major collector, rural minor collector or rural local road with significant safety risks. Roadways with significant safety risks may include:

- Roadways with a fatality and/or serious injury rate that is higher than similar roadways within the state,
- Roadways with characteristics that correlate with specific severe crash types based on cross-section elements, horizontal and vertical alignment and roadside safety considerations; and/or
  - Examples include, but are not limited to, narrow lanes, lack of shoulders, sight distance restrictions, low-speed curves, non-traversable roadside features, etc.
- Roadways that have been identified as a high risk location through a review by a Safety Circuit Rider (SCR) program, a Practical Road Safety Assessment (PRSA), a formal Road Safety Audit (RSA), a Traffic Engineering Assistance Program (TEAP) study, a Local Road Safety Plan (LRSP) and/or local knowledge and experience.

GOAL 3: Improve local public authority (LPA) access to crash data

New strategy:

- Improve local access to geo-coded crash maps through an automated process
  - Background: A new strategy in the Data Support plan is to geo-code all crashes on locally-owned roads. The next obvious step is making these maps available to local agencies. One option is to use the existing platform developed by the Kansas Data Access and Support Center.
  - Method: project
  - Costs: TBD
  - Lead agency and contact: KDOT, Geometric and Accident Data Unit (GAD)
  - Challenges: ensuring LPAs know about this new tool
  - Target date: FY 2015

Future strategy:

- Create an interactive website that LPAs can access

GOAL 4: Promote multi-disciplinary collaboration and cooperation on safety at local and regional levels to reduce crashes on the local system

New strategies:

- Pilot regional or local safety coalitions
  - Background: The Kansas SHSP addresses safety at the statewide level. As such, emphasis areas are selected based on statewide data. However, statewide data is not necessarily representative of local or regional data. Regional and local safety coalitions will identify issues that could be unique to their area and develop strategic plans to reduce fatal and serious injury crashes. See Appendix C, "Safety in Numbers", for an example.
  - Method: program
  - Costs: seed money to plant interest
  - Lead agency and contact: KDOT, Bureau of Transportation Safety and Technology
  - Challenges: encouraging voluntary participation from individuals and groups, identifying a regional safety champion and administrative support
  - Target date: FY 2015

GOALS AND STRATEGIES

- Promote regular meetings of local personnel representing such interests as public works, law enforcement, EMS and trauma centers to review crash records and develop solutions
  - Background: Silo . . . stovepipe . . . box. Terms like these describe a tendency to isolate from others when trying to solve a problem. The SHSP process encourages a multidisciplinary approach to reducing fatal and serious injury crashes. Such partnering at least fosters communication and, preferably, action-based outcomes. Packaged crash data, analysis and best practices could be provided to spur discussion.
  - Method: program
  - Costs: staff time
  - Lead agency and contact: KDOT, Bureau of Transportation Safety and Technology
  - Challenges: breaking down barriers among agencies, identifying a local safety champion or lead agency
  - Target date: FY 2015

- Pilot local road safety plans
  - Background: Many states have developed local road safety plans to advance safety on locally-owned major and minor collectors. In the fall of 2013, a delegation from Kansas attended a peer exchange to learn from the experiences of Minnesota and others. Local road safety plans assist LPAs to select and prioritize projects that will have the biggest impact on safety based on the crash types and high-risk roadway characteristics in their jurisdiction. Because of the random nature of crashes—in particular on lower-volume local roads—these plans place emphasis on low-cost systemic improvements; that is, the approach is proactive rather than reactive.
  - Method: program
  - Costs: $40,000 per County
  - Lead agency and contact: KDOT, Bureau of Local Projects
  - Challenges: staff to administer new program, funds to implement plans, roadway and crash data and low number of county engineers
  - Performance measure: number of county plans
  - Target date: Initiate three in FY 2015

Future strategies:

- No future strategies identified at this time

GOAL 5: Train and otherwise assist LPAs in developing safety programs and identifying low-cost strategies

New strategies:

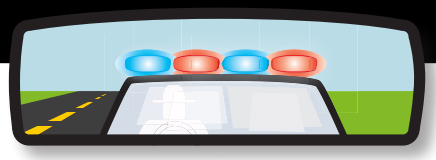
- Design a course on the acquisition and use of crash data and information to reduce crashes on local roads
  - Background: The cliché “jack of all trades and master of none” applies to most local public works staffs. Few cities, and even fewer counties, have the benefit of, for example, a full-time traffic engineer. Nevertheless, the agency that owns a road and is responsible for its maintenance is principally responsible as well for its safety. Training is key. It should be basic, relevant and brief. Kansas LTAP has acquired special T2 funds from the FHWA Kansas Division to develop this course.
  - Method: project
  - Costs: $6,000
  - Lead agency and contact: Kansas LTAP
  - Challenges: competing priorities for training, developing and promoting the course
  - Target date: Pilot in FY 2015

- Start a Safety Circuit Rider program
  - Background: Other states have developed similar programs that use crash data and crash research to locate actual and potential high crash sites along roadways and assist LPAs in finding low cost roadway solutions. The Safety Circuit Rider will visit counties and develop on-going relationships focused on safety improvements. As issues are identified, road safety assessments or audits may be initiated. If further investigation is needed, a TEAP study may be conducted which may eventually lead to a HRRR project. Safety Circuit Riders can take the lead to help counties identify both these needs and everyday solutions to safety concerns.
  - Method: program
  - Costs: portion of HRRR funding for half-time position
  - Lead agency and contact: KDOT, Bureau of Local Projects
  - Challenges: finding the ideal candidate for the position
  - Target date: FY2015

Future strategy:

- Develop tools to train elected officials on the importance of local road safety plans and funding safety improvements

ENFORCEMENT



Kansas cities, counties and townships oversee more than 130,000 miles of public road. That means that halving fatalities and serious injuries in the next 20 years will take lots of help from local partners – law enforcement in particular.

A short survey of police officials from Butler, Lyon, Johnson, Crawford and Stafford counties turned up several barriers to success in reducing crash numbers, including having too few officers and too little crash data.

John Koelsch, chief deputy at the Lyon County Sheriff's Office, who conducted the survey, noted that "law enforcement almost always has fewer personnel than needed to concentrate on traffic-related matters."

Three of the other four officers agreed, citing the problem, in their words, as a lack of "manpower," "people" or "extra officers to patrol."

The fourth said that a lack of personnel is less important than "motivation and permission to do traffic enforcement."

To reduce crashes on local roads also requires, according to Koelsch, "crash data easily accessed . . . in a timely matter."

The data could include, for example, the day of the week and time of day, along with such contributing factors as road and weather conditions, ages of drivers, impairment by alcohol or drugs, speed of vehicles and presence of hazards at crash "hot spots."

Those areas could then be worked more than others "when deputies have time," said former Crawford County Sheriff Sandy Horton, "but to be honest with you, to work traffic for this office is a luxury, as we are so busy responding to other calls."

KDOT is working to set up an accessible database that will contain such information linked to the location of crashes established by use of GPS technology.

Other needs mentioned included updated equipment (to replace aging radar, for example), as well as training related to impaired driving, both within the law enforcement academies and on the job.

Some grant money is available to help law enforcement reduce crashes on local roads – the KDOT Special Traffic Enforcement Program (STEP) is one source – but budget constraints at all levels of government restrict access to funds.

One of those surveyed, Dave Corp, now retired from service with the highway patrol, mentioned the importance to officers of feeling supported by judges and prosecutors when they do make arrests.

"Officers do not want to write tickets if some judge or prosecutor . . . dismisses them," he said. "That sends a message to the officer."

GOAL 6: Emphasize to the law enforcement community the important role of law enforcement to improve safety on local roads

New strategy:

- Promote the importance of traffic enforcement to the law enforcement community
  - Background: There appears to be a decline in interest among law enforcement personnel in enforcing traffic laws. Traffic enforcement allows direct contact with and a great chance to educate drivers. On local roads especially, there is sometimes a reluctance to arrest or ticket a "local", who may also be a neighbor. Regardless, traffic laws are written for a reason and law enforcement needs to enforce them. Delivering analyzed crash data is one way to initiate this conversation.
  - Method: practice
  - Costs: none
  - Lead agency and contact: KDOT, Bureau of Transportation Safety & Technology, Law Enforcement Liaisons
  - Challenges: competing with other law enforcement priorities
  - Target date: FY 2015

Future strategies:

- Provide training to law enforcement on such topics as traffic laws, distracted driving and the importance of writing tickets for infractions that result in crashes
- Create incentives for law enforcement agencies to participate in traffic safety campaigns by tying safety grants to enforcement activities
- Identify local road corridors that ,based on crash data, would benefit from enhanced enforcement activities

KANSAS
SHSP 2014

STRATEGIC HIGHWAY SAFETY PLAN 2014

APPENDICES

SAFEKAN

Road to Zero Fatalities

POLICIES, PROGRAMS, PERSONNEL, ACHIEVEMENTS

Road safety requires the skills of engineers, public relations specialists, trainers, law enforcement officers and emergency medical personnel, among others. Many strategies for making travel safer were identified in the first as well as the current Strategic Highway Safety Plan, by the Driving Force Task Force and in other initiatives. Some of the results are described below.

Impaired Driving

- Operation Impact was launched in the Kansas City area in 1990, in Wichita in 2010,
  - In these efforts, coalitions of law enforcement agencies execute selective enforcement campaigns.

- KHP executes Roving Aggressive Violation Enforcement (RAVE) saturation patrols on high priority corridors statewide,
  - RAVE targets impaired drivers, seat-belt use, child passenger safety, speeding and other traffic infractions.

- The Kansas Impaired Driving Assessment conference, from July 10 to 14, 2006, had several results,
  - Drivers with blood alcohol levels of 0.15 or greater now face heavier penalties and a DUI advisory board, which meets quarterly, was created. Although the conference did not give rise directly to this decision, the state also hired a traffic safety resource prosecutor to conduct training statewide and to provide prosecutors with information to assist them in cases involving driving under the influence of alcohol.

- Kansas has a very complex DUI law; The current law incorporates many recommendations made by the Kansas DUI Commission,
  - This multi-disciplinary state commission was sanctioned by the Kansas legislature to conduct a two year study (2009-10) of driving under the influence in Kansas. The DUI law is under constant review so as to ensure that it addresses any new trends in impaired driving enforcement.

- The Kansas Highway Patrol –Breath Alcohol Unit and Kansas Traffic Safety Resource Prosecutor offers numerous training opportunities related to DUI detection and enforcement. Additionally, Kansas Law Enforcement Training Center / law enforcement academies include DUI detection and enforcement as part of their standard curriculum,
- KDOT funds impaired driving deterrence initiatives that include Special Traffic Enforcement Program (STEP), Impaired Driving Deterrence Program (IDDP), RAVE and the 1-866-Must B 21 program,
- KDOT has provided federal grant money to Kansas Department of Health and Environment (KDHE) and the Kansas Bureau of Investigation (KBI) for the purchase of instruments used to establish impairment in suspected impaired drivers,
- The Kansas Traffic Safety Resource Prosecutor (KTSRP) and KHP – BAU offer various trainings across the state designed for prosecutors; and
- Kansas has a variety of drug treatment programs available to citizens.

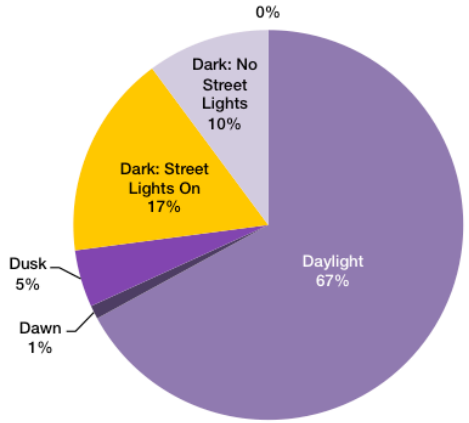
Intersections

- Kansas is a national leader in the promotion and use of roundabouts,
- Continue to manage a longstanding program related to the intersection of highways and railroad lines.
  - It oversees about 50 projects a year. Most involve replacing static signs with gates and signals where road and rail intersect. This program and another, Operation Lifesaver, have reduced fatalities in the past decade.

- Maintain sign retro-reflectivity (visibility when lighted by headlights) on state highways by replacing sign sheeting at scheduled intervals,
- Promote good access management near intersections through a corridor management policy,
- Perform improvements of crash-prone intersections under the support of a federal Highway Safety Improvement Program (HSIP) initiative designed to make intersections safer,

- Promote the Traffic Engineering Assistance Program (TEAP) to assist with traffic studies on locally owned roads,
- Complete geo-coding – the assignment of latitude and longitude – of crashes on local roads,
- Experiment with innovative intelligent transportation systems (ITS) applications,
- Review policy on left-turn lanes vs. bypass lanes at rural high-speed intersections,
- Promote and conduct road safety audits and assessments,
- Provide street lighting at higher-volume intersections and interchanges,

Intersection Fatalities by Light Condition (2008-2012)



One-third of all intersection fatalities occur from dusk to dawn, despite decreased traffic volume during those hours.

- Provide left-turn and right-turn lanes at intersections,
- Realign intersection approaches to reduce or eliminate intersection skew,
- Install dilemma-zone protection at signalized intersections,
- Optimize clearance intervals, including the all-red and yellow,
- Coordinate traffic signals along urban corridors,
- Install flashing solar-powered beacons on intersection warning and stop signs where appropriate; and
- Install transverse rumble strips across the stop approach lanes in rural areas where appropriate.

Older Driver

- Hosted first Kansas Senior Driving summit to educate and communicate with strategic partners,
  - + Held in March 2014

- Conduct training to increase the number of CarFit coordinators and technicians; and
  - + Conducted in Topeka and Salina - May 2014, 25 technicians and 19 event coordinators completed the training.

- Review visual considerations.
  - + For improved safety design use of all-red clearance interval, protected left-turn phase, backplates (reflectorized and nonreflectorized) to improve visibility; to improve conspicuity use of 12-inch versus 8-inch lenses on traffic signals; and the use of high reflectivity sign and pavement markings on the State Highway System.

Occupant Protection

- KDOT has sponsored Bucks for Buckles since 2005,
  - + This statewide seat belt awareness campaign has been directly credited for saving a life.

- KDOT has provided a three-year grant to fund the Buckle Up program,
  - + It provides child safety seats, training and other support to enhance child passenger safety.

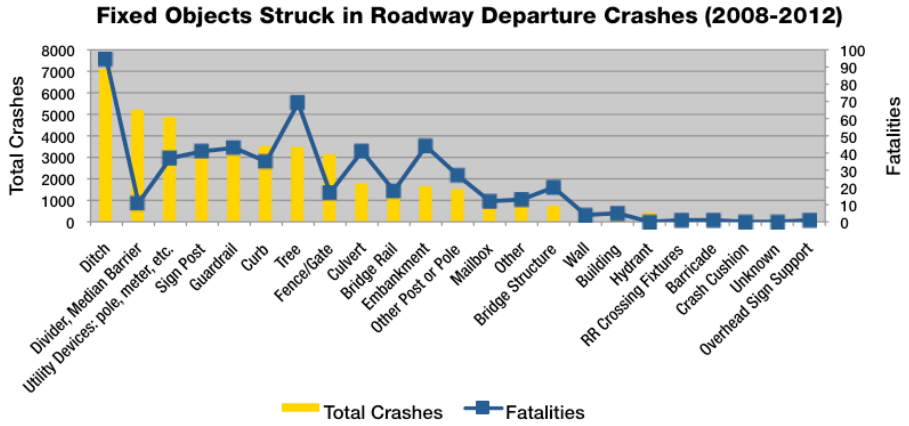
- KDOT sponsored an Occupant Protection Safety Assessment in December 2003,
  - + An expert panel felt that upgrading the seat belt law, adding law enforcement partners and increasing the number of child passenger safety technicians in Kansas were keys to occupant protection. Since then, Kansas has made strides in these areas, including passage of a primary seat belt law in 2010.

- Utilize KDOT staff and its safety partners to gain grassroots support, testify before the Kansas Legislature and provide information to the media on the benefits of strong safety restraint laws,
- Continue Click It or Ticket (CIOT) media/enforcement campaign,
- Research methods for retaining and recertifying law enforcement personnel trained in child passenger safety,
- Support continuing education opportunities for CPS Technicians and their instructors,

- Promote employer "buckle-up" programs,
- Expand use of non-traditional media (social networking sites, internet, games) to promote CIOT message,
- Promote occupant protection message at event venues, such as universities, Sporting KC, Country Stampede, and Johnson County Parks & Recreation,
- Expand the Seatbelts Are For Everyone (SAFE) program statewide,
- Provide funding support for a Kansas representative on the National CPS Board,
- Promote curricula such as Boosters to Belts, Safety Breaks and CPS for Daycare Providers,
- Survey attitudes about and knowledge of seat belt laws annually and use the results in public education efforts,
- Reach out to school resource officers and school nurses in order to provide seat belt education and information to students,
- Develop partnerships with the medical and faith communities to promote occupant protection strategies to senior citizens and minority group members,
- Continue support of Safe Kids Kansas by providing funding for supplies at check-up events, education regarding children in and around cars and by partnering through traditional and social media efforts,
- Continue presentations on occupant protection at the KDOT Traffic Safety Conference, Special Traffic Enforcement Program luncheons, and at KLETC trainings for new recruits,
- Provide signage for Law Enforcement Agencies to promote buckling up while on the job,
- Require all agencies that receive KDOT grants to have an enforceable seat belt usage policy.,
- Support child passenger safety training and certification for law enforcement agencies,
- Provide grants to pay for equipment and overtime related to conducting seat belt enforcement activities,
- Promote AAA Community Traffic Safety Awards for the exceptional enforcement of occupant protection laws,
- Train prosecutors/judges on OP Laws,
- Continue program to enforce nighttime seat belt use,
- Continue support for local child passenger safety inspection stations and provision of safety seats for low-income families,
- Continue observational surveys conforming to NHTSA standards,
- Increase enforcement efforts in counties with low rates of seat belt use,
- Provide occupant protection education within minority groups where seat belt use is low,
- Use billboards/gas pump toppers or other outdoor/non-traditional advertising to communicate messages in parts of Kansas with low rates of seat belt use ; and
- Amending KSA 8-2503 to allow for primary enforcement in all seating positions, regardless of age.

Roadway Departure

- In 2005 KDOT increased the width of the white edgeline on all state highways from 4 inches to 6 inches,
- In 2007 KDOT implemented a new centerline rumble strip policy. Since then, more than 300 miles of rumble strip have been installed,
- In 2009 KDOT developed a policy on the use of cable median barriers, which may prevent vehicles from crossing narrow grass medians and colliding with other vehicles,

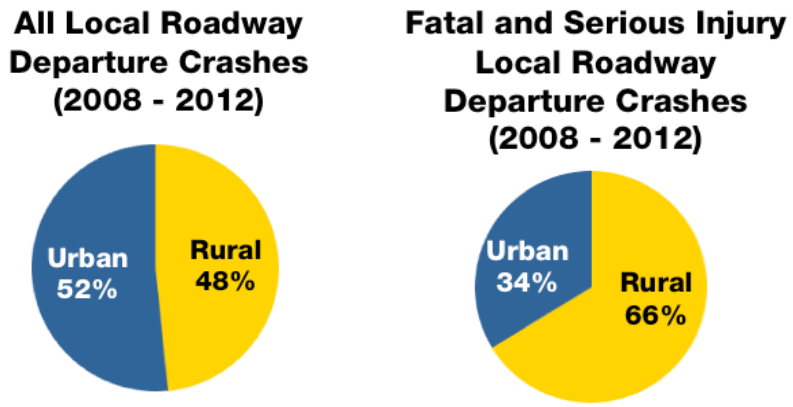


Objects mostly likely to be hit when drivers leave the road include ditches, utility devices (such as a telephone pole) and median barriers. However, striking a tree results in the highest number of fatality crashes. Some objects are engineered and positioned in the roadside environment with driver survival in mind (median barriers and guardrails, for example) while others (like trees) are not. The Bureau of Local Projects has implemented this program under their High Risk Rural Roads Program.

- Maintain sign retro-reflectivity (visibility when lighted by headlights) on state highways by replacing sign sheeting at scheduled intervals based on anticipated service life,
- Maintain pavement marking retro-reflectivity on state highways with a program that selects routes for maintenance based on the routine

collection of retro-reflectivity data,
- Research the potential impact of expanded use of centerline rumble strips,
- Improve shoulders where reasonable,
- Install rock-wedge shoulders,
- Utilize a tapered pavement edge where appropriate and promote its use to county agencies,
- Install shoulder rumble strips where appropriate,
- Create a program that funds the removal of fixed objects,
- Continue application of the most current Roadside Design Guide in highway design,
  + The guide is a document that highway agencies commonly use to develop roadside safety design criteria

- Support enhancement of the primary seat belt law,
- Select stretches of road for targeted enforcement efforts,
- Continue media campaigns highlighting the danger of impaired or distracted driving,
- Promote educational campaigns to let people know the likelihood of unbelted drivers and passengers being thrown from a vehicle in a rollover – and their survival rate,
- Support defensive driving training; and
- Conduct road safety assessments on locally-owned roads.



On local roads, roadway departure crashes are evenly split between urban and rural settings. But rural roadway departure crashes tend to be more severe.

Teen Drivers

- In 2009 the Crawford County sheriff and KDOT initiated SAFE, a program to promote seatbelt use among high school students.,
  + The program, launched in one county and six schools, now reaches at least 25 counties and 60 schools. Partnering with KDOT to provide funding for SAFE are the six Kansas trauma councils, AAA of Kansas/ Missouri and State Farm Insurance, as well as numerous local organizations and businesses.

- The Kansas Highway Patrol (KHP) and the Kansas Motor Carriers Association (KMCA) are promoting Teens and Trucks, a program aimed at teaching new drivers about the dangers of driving in the vicinity of large commercial motor vehicles and how to minimize accident risks,
- Stormont-Vail Health Care Trauma Services continues to conduct presentations to high schools on roadway safety,
- Promote programs that reach teen drivers through programs that are already in place such as:
  + The Kansas Highway Patrol (KHP) uses its “Convincer”, “Rollover”, and Teens in Trucks program to reach teen drivers,
  + Think First targets teens using speakers who have suffered consequences from poor decisions,
  + The Kansas Traffic Safety Resource Office has developed a Teen Driver Tool Kit,
  + The American Automobile Association (AAA) has a Dare to Prepare pre-permit program for young teens and parents; and
  + Safe Kids has a Countdown 2 Drive program that helps families build passenger agreements.

- Provide driver safety education at the elementary school level through programs such as Boosters to Belts and KDOT’s Put the Brake on Fatalities Day poster contest,
- Promote research that uses in-car cameras to understand the behaviors of young drivers,
- Install signs at the exits from school parking lots carrying such safety messages as *Buckle Up*
- Consider novice drivers when designing intersections near schools,
- Establish reduced speed zones near rural high schools at hours of peak use,
- Focus enforcement on routes to and from high schools,
- Maintain a police presence around schools; and
- Enforce graduated driver’s license restrictions.

Commercial Motor Vehicles (Future EAT)

- KHP, with the support of KMCA and funding from FMCSA, has implemented the Trucks on Patrol for Safety program,
  - + It aims to reduce commercial vehicle crashes caused by unsafe driving by others in proximity to those vehicles.

- KHP and FMCSA implemented Compliance, Safety, and Accountability 2010, a data driven system to identify motor carriers for a safety review; and
  - + These agencies visited 92 carriers in federal fiscal year 2010 to check their management processes and procedures for compliance with safety requirements.

- KHP conducted 52,458 commercial vehicle and bus safety inspections in federal fiscal year 2010.
  - + These inspections are designed to remove unsafe vehicles from highways and collect data on carrier safety.

Emergency Medical Services (Future EAT)

- Kansas was one of three states chosen by the National Highway Traffic Safety Administration to participate in a trauma and emergency medical services data evaluation project,
- Driving Force recommended support for trauma centers in each of six state regions,
  - + In 2010, Kansas had seven designated trauma centers and three hospitals working toward trauma center verification. As of this writing, hospitals have been verified as trauma centers, or are working toward verification, in all but one region (southwestern Kansas).

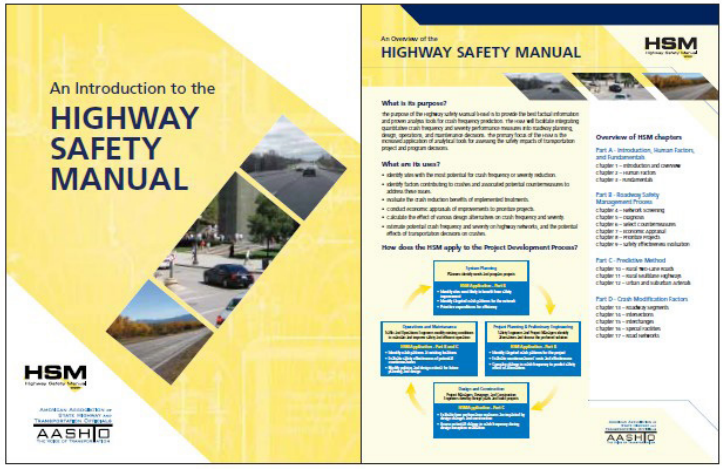
- Regional trauma councils promote motor vehicle safety in each of the trauma regions,
- The Kansas Emergency Nurses Association provides various injury prevention activities in each of its emergency departments; and

+ The national Emergency Nurses Association ranks Kansas 17th, along with 11 other states, in its report "2010 ENA National Scorecard on State Roadway Laws: A Blueprint for Injury Prevention."

- Law enforcement relies on trained hospitals and EMS personnel to assist in the gathering of blood evidence used in the prosecution of many DUI cases.

Data

- More than 60 law enforcement agencies are now utilizing the Kansas Law Enforcement Reporting Tool developed by the KHP to complete and electronically submit crash reports to KDOT,
- Educate transportation professionals about the Highway Safety Manual published by AASHTO,
- To view more information about the Highway Safety Manual, go to http://safety.fhwa.dot.gov/hsm/factsheet/factsheet.pdf



- Continue to train law enforcement on the use and importance of the crash reporting form,
  - + KDOT's GAD Unit is currently working on:
    - – continued enhancements to the Accident Coding Manual,
    - – continued ad hoc (personal) consultation via phone and email,
    - – continued communication via Facebook and Twitter concerning accident coding,
    - – development of a training video; and
    - – continued communication through the quarterly newsletter: http://www.ksdot.org/burtransplan/prodinfo/lawinfo.asp

- Continue to provide training for officials in local government so they can understand and use crash data in their safety-related decision making,
- Continue to promote electronic reporting of crash reports at city and county level; and

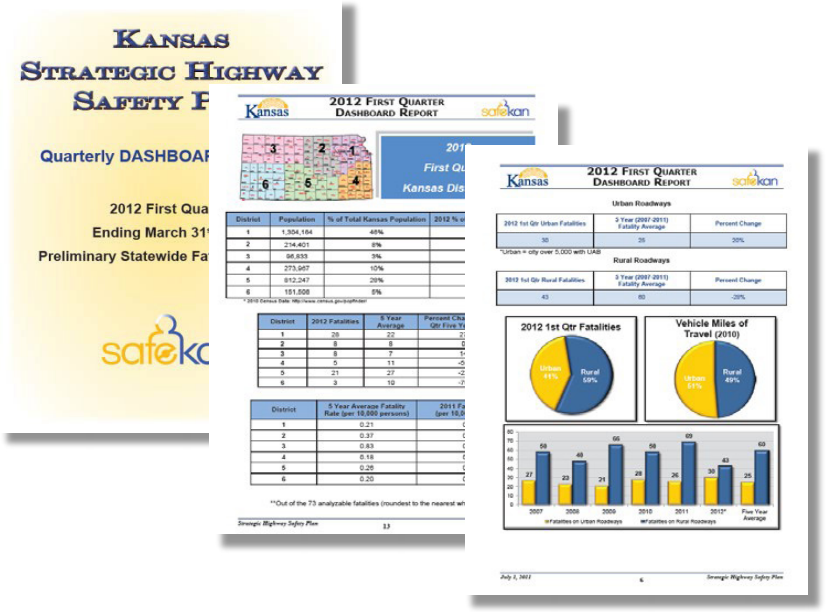
+ Approximately 60,000 crash reports are processed annually, with 50% submitted in paper form and 50% submitted electronically. Paper reports, however, require 85% of the resources with electronic requiring 15% of the resources. There are approximately 500 law enforcement agencies in the state, yet at this time only 140 agencies submit reports electronically. While this does not represent 50% of the agencies it is close to being 50% of the reports sent to KDOT.The Traffic Records System estimates the paper reports at $7.25/record and electronic reports at$1.50/record. This means that each electronic submission saves the State of Kansas $5.75. With approximately 30,000 crash reports still being submitted in paper-form each year, the savings for the state and taxpayers is significant. Parties interested in becoming KLER users or wishing further details are encouraged to contact the following: ***KHP IT Helpdesk*** at:*1-877-317-4597*

- Create and post Quarterly Dashboard Report.
  + Background: The quarterly Dashboard Report contains year-to-date preliminary (not officially closed out) fatality data for the following quarters:
    Quarter One: January 1st through March 31st
    Quarter Two: January 1st though June 30th
    Quarter Three: January 1st through September 30th
    Quarter Four (Annual Report): January 1st through December 31st

    The annual Dashboard Report contains annual preliminary fatality data from January 1st through December 31st. The Report can also be generated ad-hoc as requested by the ESC.

    The Report presents either quarterly or annual fatality counts compared to the previous year. These figures are then further broken down statewide, district, and county level by the emphasis areas outlined in the SHSP or as requested by the ESC.

Dashboard Reports can be viewed here:
http://www.ksdot.org/burTrafficSaf/reports/kshs.asp



Education

- The KDOT Traffic Safety Section utilizes federal funds to promote safety programs in Kansas and to raise public awareness about safety issues on Kansas roadways,
  + These campaigns include safety messages related to seat belt and child safety seat use; impaired and distracted driving; motorcycle, pedestrian and bicycle safety; and other road safety issues.

- The Traffic Assistance Services for Kansas program trains public employees charged with traffic safety responsibilities,
  + More than 100 local officials are trained each year.

- Promote media campaigns highlighting the danger of impaired or distracted driving,
- The Kansas Rural Transit Assistance Program (RTAP) provides defensive driving/emergency procedures training to about 600 transit agency employees annually,
+ The RTAP newsletter reaches a thousand Kansans with roadway safety information.

- KHP has visited 669 motor carriers new to the interstate motor carrier industry.
  - + During the visits, carriers learn about industry safety requirements.

- Deliver the impaired driving message to Citizens,
  - + There are several advocacy groups such as MADD and the DUI Victim's center that deliver an educational message against impaired driving. KTSRO and KTSRP offer many educational programs for both law enforcement and the public at large. Local media does report on DUI activity across the state and alcohol treatment programs designed to curb such activity

- Utilize social media like Facebook and Twitter to draw people to the KTSRO website,
- Reach more audiences with our message,
  - + Background: We use social media because teenagers and the young are an important audience to reach. The question now is prioritizing other audiences for messaging.

- Create an electronic safety calendar that helps safety partners keep track of such scheduled safety activities as campaigns and trainings; and
- Provide public works and law enforcement officials with training and educational materials through LTAP at KU and the Traffic Assistance Services for Kansas program at K-State.

Local Roads

- Support Regional Safety Coalitions,
- Publicly recognize champions of safety in order to raise the profile of traffic safety,
  - + Background: A highlight of the annual Kansas Transportation Safety Conference is the People Saving People awards that recognize individuals who have championed traffic safety in their communities. Also, the AAA Foundation annually recognizes outstanding law enforcement agencies with their Community Traffic Safety Awards.

- Provide practical road safety assessments on corridors through KDOT,
- Provide traditional road safety audits at trouble spots thru LTAP,
- Provide assistance to Local Public Authorities (LPA) in applying for funding,
- Package solutions with data through programs such as TEAP,
- Provide safety education through publications, technical assistance and face-to-face training,
- Provide technical assistance through the Kansas Association of Counties,
- Provide training for front-line workers, supervisors and executives through the Kansas Road Scholar program,
- Promote engineering-related safety topics through the Traffic Assistance Services for Kansas (TASK) program,
- Inform LPAs of issues pertaining to local road approaches to state highways as part of the countywide road safety assessments performed on the State Highway System by KDOT,
- Provide funding for local law enforcement to attend training in the latest techniques of traffic enforcement thru KDOT,
- Support KDOT's Law Enforcement Liaison (LEL) program,
  - + Background: KDOT utilizes four LELs to promote occupant protection/ impaired driving issues as well as maintain/enhance a good working relationship between KDOT and the nearly 450 diverse local law enforcement agencies within the State.

- Award grants to participating Kansas law enforcement agencies to increase education and enforcement efforts directed at compliance with Kansas safety belt, child passenger safety, and impaired driving laws through the Special Traffic Enforcement Program (STEP),
- Purchase and distribute equipment to STEP agencies that promote and participate in traffic safety enforcement efforts,
- Support Operation Impact in Wichita and Kansas City regions,
- Encourage partnerships between local media and law enforcement agencies,
- Promote systemic low-cost safety improvements in KDOT's High Risk Rural Roads Program, including: roadway departure; signing, pavement marking, and rumble strips; and horizontal curves,
- Continue the Federal Fund Exchange Program that allows local agencies to exchange federal funds for state funds on projects including, but not limited to, safety improvements; and
- Create an online form that LPAs can use to request and view crash data.
  - + Background: The form can be found here.

General and Non EAT/Support Team Strategies

- Since 1998 the 10,000 miles of road in the state highway system have been reviewed or studied, county by county, either by a traffic engineer or by an engineering associate supervised by an engineer from the Kansas Department of Transportation Traffic Engineering Section,
- KDOT aggressively promoted motorcycle awareness after cyclist fatalities in 2006 doubled from the average of previous years; and

- The Kansas Operation Lifesaver program was fourth in the nation in the number of presentations and events held in 2009.
  + It reached more than 97,000 Kansans.

Personnel and Restructuring:

- In 2005 KDOT created a new position, state highway safety engineer, to administer development of the first Strategic Highway Safety Plan,
- In 2008 KDOT provided funding for a traffic safety resource prosecutor to assist prosecuting attorneys in litigating DUI-related violations,
- In 2008 KDOT combined the bureaus of Traffic Safety and of Traffic Engineering and its Intelligent Transportation System program to form a new Bureau of Transportation Safety and Technology; and
- In 2008 KDOT created a new position of state highway safety analyst to assist the state highway safety engineer and others in making strategic, data-based investment decisions.

SAFETY SUPPORT GROUPS: RECORDKEEPING, EDUCATION, RESEARCH

The Traffic Records Coordinating Committee (TRCC) works to increase the amount of electronic reporting by law enforcement. Electronic records are both timelier and more comprehensive than paper records. The TRCC and Kansas Highway Patrol developed the Kansas Law Enforcement Reporting tool. One of the tool's uses is the electronic reporting of crashes. More than 60 law enforcement agencies use it to submit crash reports to KDOT. The agencies can view and amend these reports, lessening the amount of paperwork they maintain internally. The next TRCC project involves collection of electronic citation data, including DUI arrest and adjudication information.

The Kansas Local Technical Assistance Program (LTAP) at the University of Kansas provides safety training and information to local transportation agencies. LTAP is part of a national program that provides services to improve the safety and operating efficiency of local roads and bridges. Roadway and worker safety are emphasized. Road construction and maintenance workers, public works personnel and local elected officials are the primary audiences. LTAP provides training for about 500 persons a year; houses a lending library of training videos; publishes a quarterly newsletter that's mailed to about 3,500 LTAP customers and stakeholders; and maintains a website. LTAP courses focus on roadway safety assessment, traffic-impact studies, low-cost safety improvements and safety effects of geometric design features on two-lane rural roads. LTAP partners with the Kansas County Highway Association and the Kansas Chapter of the American Public Works Association on safety training activities through the Kansas Road Scholar certificate program and other safety-related efforts.

The AAA Foundation for Traffic Safety provides research and educational resources to support strategic highway safety planning. In addition to research on teen driving, distracted driving, senior mobility, child passenger safety and licensing issues related to crashes, the foundation has studied the problem of criticism by drivers of others' behavior (such as aggressive or distracted driving) that they fail to recognize in themselves. The AAA foundation reported the results in its Traffic Safety Culture Index. The AAA also works to identify roadways that are crash-prone and funds improvements to them.

SAFETY IN NUMBERS

The SHSP strategies identified in the chapters throughout this plan cannot be implemented without local support. KDOT recognizes the value of local input and networks. That being said, in the late 2000's, KDOT began to look for a way to partner with a team of safety partners to spread the safety message throughout the State. Regional Safety Coalitions were identified as the best way to spread this message.

A successful Regional Safety Coalition involves local, regional, state and federal agencies and blends the expertise of law enforcement, healthcare providers, emergency medical responders, information technology specialists, traffic engineers, public works officials, transportation safety advocates and victim support organizations.

KDOT is partnering with the Kansas Department of Health and Environment's Healthcare Emergency Preparedness Coalitions in order to form traffic safety regional safety coalition subcommittees which are replicable and cover the entire State. This partnership makes sense as traffic safety performance measures, fatalities and serious injuries, are a healthcare emergency with over 2,000 traffic-related fatalities or serious injuries within the state on an annual basis.

The first RSC subcommittee has been established in the Northwest part of the State. As lessons are learned and programs are implemented, KDOT will begin to reach out to the other 6 healthcare coalition regions of the State in order to form additional traffic safety subcommittees.

AS REGIONAL SAFETY COALITIONS ARE ESTABLISHED IN KANSAS, THERE'S A SUCCESSFUL MODEL THEY CAN STUDY: DESTINATION SAFE.

The Mid-America Regional Council, Missouri Department of Transportation and Kansas Department of Transportation founded the coalition in 2005, with the council providing administrative support. In 2007, the coalition won a Federal Highway Administration National Roadway Safety Award.

It establishes transportation safety priorities for a region that includes the Kansas City metropolitan area and adjacent counties on both sides of the Missouri/Kansas border. Besides setting priorities, another value of a group like Destination Safe is as a coordinator of systemic efforts to improve safety. In 2009, the safety coalition's leadership team had 29 members, with a subset of the membership meeting bimonthly.

The coalition's agenda is set by the Kansas City Regional Transportation Safety Blueprint. The blueprint focuses on six transportation safety priorities and serves Greater Kansas City in the same way that the SHSP serves Kansas.

In Missouri, Destination Safe projects are funded from District 4 of the Missouri Department of Transportation. In Kansas, Destination Safe reviews and forwards recommendations to the KDOT Bureau of Transportation Safety and Technology for possible funding thru the federal Section 402 program.