

Impact

A quarterly newsletter delivering information from the Kansas Trauma Program.

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- ▶ Primary Seatbelt Law: Dr. Jason Eberhart-Phillips, State Health Officer
- ▶ Trauma Registry: Adolescent Motor Vehicle Occupant Traumas in Kansas

Fall 2009



Our Vision: "Healthy Kansans living in safe and sustainable environments."

www.kstrauma.org



Chairperson's Corner:

Welcome to the second edition of the trauma system newsletter. The systems approach to the delivery of trauma care is widely accepted as an effective strategy for reducing death due to injury. Kansas has made steady progress over the last decade in developing a system approach to trauma care. A critical component of this systems approach is the designation or verification of trauma center hospitals equipped to treat more severely injured patients. Since our last newsletter, there have been several noteworthy achievements made.

First, congratulations to Labette Health in Parsons, Kansas for achievement in receiving American College of Surgeons verification and state designation as a Level III trauma center. We would also like to acknowledge and congratulate Stormont-Vail HealthCare, Topeka for achieving Level II trauma center designation. Stormont, as many of you know, was originally designated as a Level III trauma center. The University of Kansas Hospital, Kansas City and Via Christi – St. Francis, Wichita were also re-verified as Level I trauma centers this summer by the ACS. These designations are a demonstration of the commitment and top quality health care that is provided to those injured in our state.

Due to the rural nature of our state, Kansas has made a conscious decision to develop an inclusive trauma system which includes all hospitals. As our next step, we are in the process of developing Level IV trauma center criteria. The Hospital Designation Subcommittee has been focused on this very topic. The subcommittee has outlined the criteria for level IV designation but is still working on incorporating the criteria into a regulation format

The trauma program could not accomplish its goals without collaboration, help and support of partners concerned with trauma care in Kansas. We want to thank the Kansas Emergency Nurses Association for their support of the trauma program in donating \$6,000 to support Trauma Nurse Core Course education classes in each of the six trauma regions. The donation is an acknowledgement of the trauma program's work in promoting and sponsoring trauma education throughout the state for all health care providers.

We appreciate all your hard work toward realizing our goal of improved trauma care for all Kansans, and hope you take a few moments to share this vision with your staff, program leadership and community.

Paul B. Harrison, MD, FACS
Chairperson, Advisory Committee on Trauma

Comments from the Program Director:

In this season of Thanksgiving, we would like to take this opportunity to thank everyone for their participation and support of the Kansas Trauma System. Many of you see on a daily basis the faces of those injured in our state and the impact those injuries have not only on the individual injured but their communities, families and loved ones. The goal of the trauma system, as originally written in 1998 and again in 2001, was to reduce the numbers of preventable deaths and improve outcomes from traumatic injuries. Those remain our goals in 2010. As you will note in both the Chairperson's Corner written by Dr. Paul Harrison and the program update, Kansas continues to make progress in the development of a comprehensive trauma system. While we have made inroads in the development of the state's trauma system, we still have much to accomplish.

The best trauma care starts with prevention. Fortunately, we have trauma data from our registry which many of the regional trauma councils have begun to utilize in targeting areas of greatest need such as falls in the elderly population and motor vehicle crashes in our younger population. We encourage you to join these efforts as they reach out to communities in promoting these prevention programs.

We invite you to share any news or ideas that would be of benefit to our trauma partners in the state. The newsletter will be distributed by email, and all editions will be archived on the kstrauma.org web site. Contributions should be emailed to Dan Robinson at: drobinson@kdheks.gov

Rosanne Rutkowski, RN, MPH
Trauma Program Director

Program Update

The Trauma Program and the Board of EMS have been working with Digital Innovation, the trauma registry vendor, to develop an interface that would allow hospital registrars to download pre-hospital EMS data directly into the trauma registry collection software called Collector. The work is still in the preliminary stages but we hope to have a contract in place soon.

With the departure of Dr. W. Christopher Bandy, the chair position of the trauma registry policy subcommittee was vacated. We would like to thank Dr. James Haan from Via Christi for agreeing to serve as the new chairperson. Under Dr. Bandy's leadership the policy committee developed the first trauma registry data reports for hospitals. The committee is currently in the process of updating the data indicators. We appreciate your feedback on these reports so we can further develop and make improvements. The committee looks forward to working with Dr. Haan and wishes Dr. Bandy the best as he begins his practice in California.

All hospitals should have received a copy of their trauma registry data report which was sent out via email in October. We hope to implement a new system of distributing these reports in the near future whereby hospitals can access their report directly on the web.

In response to the high frequency of fall related injuries experienced by Kansans each year, the Trauma Program has developed a Fall Prevention Resource Guide. The resource guide is designed to help individuals and communities better understand fall prevention while providing information on developing fall prevention programs at either the individual or community level. The guide also contains information identifying potential partners in Kansas for fall prevention.

[Please click here to view the Fall Prevention Guide.](#)

Many of the regional councils are in the process of working with their community partners in implementing injury prevention activities. Congratulations to the NE Regional Trauma Council and Labette Health for being awarded a KDHE Injury Prevention Grant. In addition, Mount Carmel Medical Center in Pittsburg received a grant award from the National Fire Protection Association for implementing the "Remembering When" curriculum which targets both fall and burn injury prevention.

In addition to the fall resource guide, the KDHE injury prevention program hosted a fall prevention symposium earlier this summer. [Click here for a copy of the resulting report.](#)

Each of the six trauma regions held their quarterly meeting this summer. Regional trauma plans were updated and approved by the regions. The next step in the process is the external review committee of the Advisory Committee on Trauma. Dr. Dennis Allin serves as the chair of the review committee which met in October.

The planning committee for the annual meeting of the Executive Regional Trauma Council Meeting has put together an outstanding agenda for this year's meeting scheduled for November 6 in Wichita. Dr. Scott Sasser, who was the lead author of the "CDC Field Triage Guidelines," will be a keynote speaker.

While we have made great strides in development and implementation of the trauma system in Kansas, much work remains. We invite and welcome your participation as we move forward. Thank you to those who are already involved.

Field Triage Guidelines:

When CDC published the Field Triage Guidelines for EMS Providers in January, the intent was to help ensure that those injured were taken to hospitals with resources to care for those injuries. The recommendations were designed to standardize decision-making at the injury scene and offer guidance on new technologies such as vehicle crash notification systems.

The report provides the rationale and development process for the revised 2006 Field Triage Decision Scheme: the National Trauma Triage Protocol for emergency medical service (EMS) providers. It was compiled by key trauma care experts to provide broader access of the information for emergency care services. The goal is to guide the nation's 800,000 EMS providers in making crucial field triage transport decisions.

The revised guidelines are in line with the 2006 Institute of Medicine report on the state of emergency care. The report envisioned a highly coordinated emergency services system that assures each patient receives the most appropriate care, at the optimal location, with minimum delay. The Regional Trauma Plan Review Subcommittee of the Kansas Advisory Committee on Trauma has recommended that the CDC Field Triage Guidelines be adopted as part of the state's six regional trauma plans.

Information and free downloads are available from CDC at www.cdc.gov/FieldTriage. For a complete copy of the MMWR report, please visit www.cdc.gov/mmwr. For more information about CDC's work in injury and violence prevention, please link to: www.cdc.gov/injury.

2010 Schedule of Meetings:

—For more information, click on the desired region.—

Northeast General Membership Meeting:

April 26 @ Topeka

Northwest General Membership Meeting:

May 05 @ Hays

North Central General Membership Meeting:

May 26 @ Salina

Southwest General Membership Meeting:

March 24 @ Garden City

Southeast General Membership Meeting:

August 19 @ TBA

South Central General Membership Meeting:

April 20 @ TBA

ACT Meetings for 2010

All meetings are tentatively scheduled to be held at the Kansas Medical Society

- February 10
- May 12
- August 25
- November 17



● The Northeast Regional Trauma Council (NERTC) was recently awarded \$4,000.00 for fall prevention programming from the Kansas Department of Health & Environment's Injury Prevention Program.

The grant will be used to coordinate a fall prevention "best practice" workshop which will showcase fall prevention curriculums and highlight fall prevention programs around Kansas. At the conclusion of the workshop, participants will be asked to evaluate the fall prevention curriculums. The evaluations will be used to identify the curriculum that best meets the needs of NE Kansas residents. The fall prevention curriculum identified will be provided to healthcare agencies around NE Kansas through funding provided by the NERTC.

- The executive committee welcomes Dr. Michael Moncure, University of Kansas Hospital and Julie Unruh, St. Francis Hospital as the committee's newest members.
- The NERTC has incorporated a performance improvement round-table discussion in the Rural Trauma Team Development Courses (RTTDC) that are instructed by teams from the NE region. The instructor team utilizes the hosting facility's Kansas Trauma Registry Data Report for the performance improvement presentation.



● The Northwest Regional Trauma Council (NWRTC) is offering community fall prevention grants for hospitals and health departments to implement Stand Strong for Life in their communities.

- Hays Medical Center, with funding support from the NWRTC, held an ATLS class on October 9th. The class was fully attended.
- Decatur Health System in Oberlin is hosting a RTTDC. Decatur Health Systems is collaborating with Via Christi Regional Medical Center to provide instruction for the class.
- The executive committee welcomes Kris Ochs, Grisell Memorial Hospital, Pam Hanchett, Phillips County Health Department, and Marcia Zillinger, Phillips County Hospital as the newest members of the executive committee.



Dee Vernberg, Trauma Epidemiologist, presents at the NW general membership meeting.

A Note of Thanks: Rural Trauma Team Development Course

The Kansas Trauma Program Staff and the Regional Trauma Councils would like to send a sincere note of appreciation to Overland Park Regional Medical Center, Stormont-Vail HealthCare, University of Kansas Hospital, Via Christi Regional Medical Center, and Wesley Medical Center for all of their hard work and dedication in supporting trauma education throughout the state by providing Rural Trauma Team Development Courses to our most rural parts of Kansas. We know many of you go outside your referral patterns to offer this course and your efforts are greatly appreciated. Your work is certainly one of the reasons why the American College of Surgeons has described Kansas as a leader in the Rural Trauma Development Course arena. Each of the bordering states of Kansas has only one facility that offers RTTDC. Those hospitals are in Grand Junction, Colorado; Tulsa, Oklahoma; St. Louis, Missouri; and Omaha, Nebraska. We appreciate everything you do for trauma care in Kansas!



● The North Central Regional Trauma Council (NCRTC) in collaboration with Mitchell County Hospital will be sponsoring an Advanced Trauma Life Support (ATLS) Refresher Course in February 2010. Watch for more information.

- The executive committee welcomes their newest members, Marvin VanBlaricon, Salina Fire & EMS and Mary Gray, Mitchell County Hospital.
- Senator Janis Lee presented at the NCRTC general membership meeting at Salina Regional Health Center on May 20. Senator Lee provided information regarding how best to contact your legislator, the legislative process and an overview of the past legislative year.
- NCRTC, with the assistance from Salina Regional Health Center, Stormont-Vail HealthCare and Via Christi Regional Medical Center, hosted a Trauma Nurse Core Course (TNCC) instructor course on October 5th at Salina Regional Health Center.



● Senator Tim Huelskamp presented at the Southwest Regional Trauma Council (SWRTC) General Membership Meeting on June 17th in Garden City. Senator

Huelskamp's presentation provided an overview of the past legislative session and encouraged EMS and hospitals to invite their legislators into their environment.

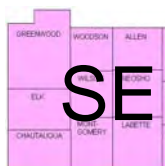
- Wichita County Health Center, Leoti hosted a Rural Trauma Team Development Course (RTTDC) on October 16. Wesley Medical Center is providing the instruction for the class.
- The ITV Trauma Education Series continues to be a success. The program has been commended in efforts to provide quality education while decreasing the cost in travel and staffing.



● The South Central Regional Trauma Council (SWRTC) executive committee welcomes Nancy Zimmerman, Comanche County Hospital; Grant Helferich, Butler County EMS; Bob Hickman, Reno County

Health Department; and Dr. Tyson Blatchford, South Central Kansas Regional Medical Center as the committee's newest members.

- This past spring, the council conducted a "Battle of the Buckles" with high schools in the region. Laptops were awarded to the two schools with the highest seat belt usage. Best Buy, Wichita, donated the software for the computers.



● Labette Health, Parsons hosted a regional burn symposium on September 24th.

● Mount Carmel Regional Medical Center will be hosting a Pediatric Trauma Education class on November 16.

- The executive committee welcomes Corey Hallacy, Eagle Med, as the committee's newest member.

Passing a Primary Seat Belt Law Once and For All

Sometimes the most sensible ideas to protect lives and save money are the hardest to sell.



One such idea is a primary seat belt law in Kansas. In the 2009 legislative session, a seemingly unstoppable coalition of advocates in health, transportation and law enforcement failed for the fourth time since 1999 to convince lawmakers to enact a bill giving traffic officers the right to stop and cite drivers solely on violation of the state's safety belt statutes.

Laws enabling "primary" enforcement of seat belt requirements have been shown consistently to increase observed seat belt use by 12 percent to 22.6 percent over so-called "secondary" enforcement regimes, like the one in Kansas. Here, as in 19 other states, officers can only cite motorists for seat belt violations in conjunction with the infringement of other laws.

Had a primary seat belt law been passed in Kansas, within a year of its enactment, between 140 and 158 Kansans would have avoided death on our highways. And, at least another 2,190 Kansans would have escaped serious injuries in motor vehicle crashes. In that first year the state would have saved between \$440 and \$485 million in medical and other economic costs, and tears too numerous to count.

But all such gains were lost, because some saw the bill as a threat to individual freedom, or an opportunity for police to practice racial profiling, with what they called a "minor traffic infraction".

On top of the costs to the state's health and economy, not passing the law prevented Kansas from raking in at least \$11.2 million in one-time federal transportation funds.

Fortunately none of the advocates who came together around a primary seat belt law in the 2009 session have lost any energy in taking up the cause again in 2010. The bill remains alive in a conference committee, and KDHE will again join its multi-sector partners to get this common sense law enacted in 2010.

And this time we hope the racial profiling argument won't get in the way of passing this life-saving legislation.

As much as anyone, minority communities in Kansas have the most to gain in lives saved from increased seat belt use. Failing to buckle up isn't a "minor traffic infraction."

Within a year of passing a primary seatbelt law, between 140 and 158 Kansans would have avoided death on our highways... and the state would have saved between \$440 and \$485 million in medical and other economic costs.

Michigan, a state with large minority populations, was one of the first states to pass mandatory seat belt laws. It has had a primary enforcement law on the books for nearly 10 years. As a result, Michigan's estimated seat belt use is almost 100 percent.

Don't Kansans deserve the same protection?



Jason Eberhart-Phillips, MD, MPH
Kansas State Health Officer
Director of Health, KDHE

Adolescent Motor Vehicle Occupant Traumas in Kansas

Overview of Motor Vehicle Traffic Crashes in Kansas. During adolescence, traffic crashes are a frequent occurrence. From 2005 to 2008, 103,809 15-19 year olds were involved in traffic crashes in Kansas. Of these individuals, 1,122 were transported by EMS to hospitals and lived. Sadly, 186 of these teens died as a result of their injuries (Personal communication, KDOT). During this same time period, 875 motor vehicle occupants in this age group were reported to the State Trauma Registry as being injured in traffic crashes.

Motor vehicle crash traumas as a public health problem. Motor vehicle traffic crashes (MVC) are an important public health problem in Kansas, and especially for adolescents. From 2005-2008, 15-19 year olds comprise almost 16% of all the 5,615 motor vehicle occupant traffic crashes (E810-819, .0,.1) reported to the State Trauma Registry. For all ages, these crashes represent the second most frequent cause of unintentional trauma after falls. For adolescents 15-19 year old, these crashes are the most frequent cause of trauma, accounting for 54% of unintentional trauma and 46% of all trauma. It is this age group that also has the highest rates* of motor vehicle traffic traumas (Figure 1).

Teen trauma patients. The number of teen traumas due to motor vehicle traffic crashes increases beginning at age 16 and peaks at age 18. The percent of adolescent trauma patients who are drivers also increases at age 16 when teens can obtain an unrestricted driver's license.¹ More than 60% of all adolescent trauma patients 16 years old and older were drivers at the time they were injured. With regard to gender differences, slightly more 15-19 year old males were injured compared to females (52.9%, 47.1% respectively). Historically, teens have had the lowest rates of seat belt use of any age group.² Trauma registry data suggests that more than half (56.2%) of trauma patients age 15-19 years old were not wearing a seat belt at the time they were injured (Figure 2).

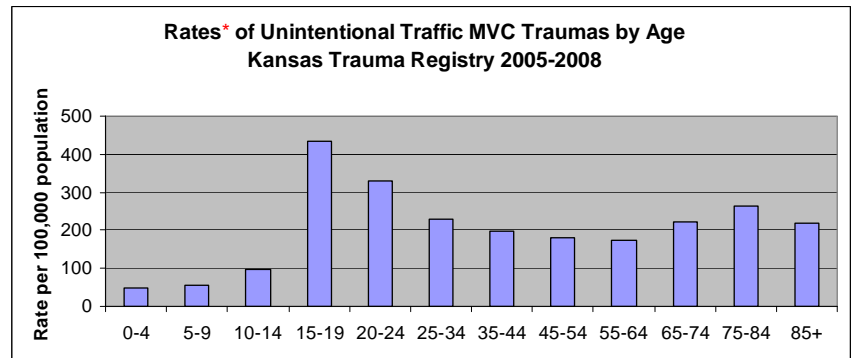
Adolescent Injury Severity & Outcome. Data from the Fatal Accident Reporting System (FARS) suggests that 56% of adolescents 15-19 years old who die in motor vehicle traffic crashes in Kansas die at the scene (personal communication, KDOT).

For patients who are treated in a hospital, the Trauma Registry captures the most severely injured or those who require the care provided at a trauma center. These data suggest that traffic crashes are a significant cause of morbidity for teens 15-19 years old. For example, about half (51%) of these patients had one or more brain injury diagnoses and more than a 1/3 (37%) had one or more spine or back diagnoses. These types of injuries may cause significant impairments that affect quality of life even in patients with reported good outcome.

Notes

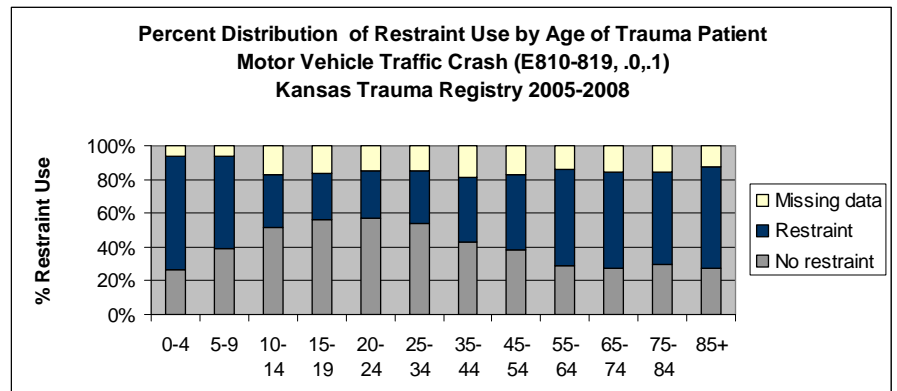
1. The 2009 Kansas Graduated Driver's License Bill not passed during this time period.
2. Shope JT, Bingham R. Teen driving: Motor vehicle crashes and factors that contribute. Am J Prev Med 2008; 35

Figure 1



Excludes unintentional motorcycle, pedestrian, pedalcyclist, other/unspecified MVC and non traffic injuries.
* Rates are calculated to provide a more precise comparison among groups. They should not be interpreted as statewide trauma rates.

Figure 2



Excludes unintentional motorcycle, pedestrian, pedalcyclist, other/unspecified MVC and non traffic injuries.

The average hospital length of stay for 15-19 year olds was 5.9 days. About 1/4 (24.69%) of these patients were hospitalized for 1 day, 30.85% were admitted for 2-3 days, 31.08% stayed for 4-10 days, and 13.27% stayed for 11 days or more.

Injury severity was mild (ISS 0-9) for 43.2% of these patients, moderate (ISS 10-15) for 20% of patients, and severe (ISS >15) for 36.8% of patients.

Most (70.97%) hospitalized adolescent patients were discharged home, but 3.6% required health care at home, 4.57% were discharged to out-of-state acute care facilities, 12.57% were admitted to rehabilitation facilities, and 1.8% required additional care at a specialty hospital, skilled nursing facility or mental health hospital. Death was the outcome for 5.14% of patients.

Factors associated with elevated teen risk

1. Inexperience

- Teen crash risk is higher during the first year of driving (at age 16), in part, because novice drivers do not recognize risks as well as more experienced drivers.
- Graduated Driver's License (GDL) laws address this risk factor by requiring guided driving practice, reducing exposure to high-risk situations while they gain driving experience, and delaying licensure.

2. Teens transporting other teens

- When unsupervised, teens driving with other teen passengers increases the risk of crashes and the risk of fatalities. This risk also increases with the number of teen passengers.
- Having peer passengers may increase risks because the behavior of peers may be as a distraction for the driver. Peers may also encourage risky driving behavior.
- GDL addresses this risk factor by limiting teen passengers.

3. Nighttime and week-end driving

- This is a high-risk activity for all drivers but especially beginning drivers. Data from the NHTSA shows that per mile driven, nighttime fatal crashes for 16 year olds is about twice as high as during the day.
- The GDL law in Kansas addresses this risk factor by limiting some nighttime driving.

4. Drinking and Driving

- Teens have a lower involvement rate of drinking and driving than other age groups except those over 55 years old.
- Lower drinking & driving rates in teens are due primarily to raising the drinking age to 21 years old.
- However, when teens do drink and drive, their inexperience with both alcohol and driving make them and others at more risk.²

5. Low seat belt use.

² Teens have the lowest seat belt usage of any other group. Not wearing a seat belt increases the risk of sustaining an injury if a crash occurs.

Prevention strategies

1. Enactment of Graduated Driver License (GDL).

Kansas passed a [GDL law in 2009](#).

This law will take effect 01/01/2010 for teens who do not currently have a permit or unrestricted license. For non-farm permits, [the key ways this law differs](#) from the current licensing provisions are:

- Time required to hold permits or restricted licenses
 1. Must hold instruction permit, for 1 year instead of 6 months to obtain restricted license (before age 17).
 2. Restricted license, must be held for 1 year (between 15 and 16 years old).
- Addition of a Lesser restricted license, for minimum age 16 years old but less than 17 years old.
- Restrictions for permits or restricted licenses (applies for 6 months after receive lesser restricted license).
 1. No use of wireless communication devices except to report illegal activity or to summon medical or emergency help for instruction permit, restricted license and lesser restricted license
 2. Nighttime restrictions 9 pm—5 am
 3. No more than one passenger less than 18 who is not member of immediate family.
 4. Licensed adult supervising driving must be 21 years old.
- Delay unrestricted licensure
Unrestricted license may be obtained at a minimum age of 17 years old.

2. Increase seatbelt use by teen drivers and passengers

- Currently, Kansas has a primary seat belt law for adolescents up to age 18 year old since 2008. For adults older than 18, there is secondary enforcement.
- Incentive programs to encourage seat belt use in high school students have been implemented in some Kansas communities with success.

3. Zero tolerance for alcohol by adolescents while driving.

- Because the legal drinking age in Kansas is 21 year old, there is [zero tolerance for teen drinking](#). These laws reduce teen access to alcohol and are credited with reducing teen driver's involvement in fatal alcohol-related crashes.
- In Kansas, if a teen is cited for drinking and driving as a first moving violation offense, his or her license will be suspended for 6 months.

Acknowledgments: The Trauma Program would like to thank the Kansas Department of Transportation (KDOT) for the help they provided for this article. Shaun Parkman shared information on Kansas traffic crash data collected and analyzed by KDOT, and Phyllis Marotta provided resource materials and expertise on safety strategies used in Kansas to prevent teen motor vehicle crashes and injuries.