KENTUCKY TRAUMA REGISTRY

2014 ANNUAL REPORT

October 2015

Julia Costich, JD, PhD
Svetla Slavova, PhD
Wei Gao, MS

Kentucky Injury Prevention and Research Center
333 Waller Avenue, Suite 202
Lexington, Kentucky 40504-2915
(859) 257-4954
www.kiprc.uky.edu

Table of Contents

Forward

The Kentucky Trauma Registry (KTR) was established by state law (KRS 211.490 et seq.; 902 KAR 28:040) to be the statewide repository for trauma data. It is housed administratively in the Kentucky Department for Public Health and managed by the Kentucky Injury Prevention Research Center (KIPRC), a unit of the University of Kentucky's College of Public Health. All trauma centers designated by the Commissioner of Public Health in the Kentucky Trauma Care System maintain trauma registries that are compatible with the National Trauma Data Bank (NTDB) standards established in the National Trauma Data Standard Data Dictionary. The trauma centers upload their trauma data electronically at least quarterly to the KTR. Clinical Data Management, Inc. (CDM) is the vendor that manages the downloading and compilation of data from participating trauma centers, including unverified facilities that report to the registry, and supplies the injury data to the Kentucky Injury Prevention and Research Center.

With support from the National Highway Traffic Safety Administration through the Kentucky Transportation Cabinet, KIPRC analyzes the statewide trauma registry data and provides a detailed profile of the traumatic injuries treated in the state's trauma facilities.

Requests for copies of this publication and any other inquiries should be directed to:

Svetla Slavova
Kentucky Injury Prevention and Research Center
333 Waller Avenue, Suite 242
Lexington, Kentucky 40504
(859) 323-7873 office
(859) 257-3909 fax

This report and previous trauma reports are posted on KIPRC website:
http://www.mc.uky.edu/kiprc/projects/trauma/index.html

Introduction

The body of this report summarizes data on trauma* patients cared for during calendar 2014 at Kentucky trauma centers, both verified and in applicant status, and reported to the Kentucky Trauma Registry as of July 31, 2015. A list of these facilities appears on the next page. It is important to note several characteristics of the data reported here.

- Governing state law (KRS 211.490 (6)) protects patient privacy by forbidding the identification of individual trauma patients in KTR data. Patients transferred between hospitals have separate records for treatment at each reporting facility that cannot be merged in the absence of personal identifiers. Thus, the number of records in KTR reflects total episodes of care in reporting facilities and is greater than the number of patients treated. The rest of this report refers to each episode of trauma care as a "case".
- These data represent the most serious injuries—those that meet national inclusion criteria—rather than all traumatic injuries in the state.
- Trauma that results in death at the scene of the event is not part of the reported data: KTR data entries are reported by hospital staff for patients who reach a hospital.
- If a traumatic injury occurs in Kentucky but the patient is treated in an out-of-state facility, it is not included in KTR data. Border areas are thus under-represented in this report.
- One facility reported the full year's data too late to be included in this report.

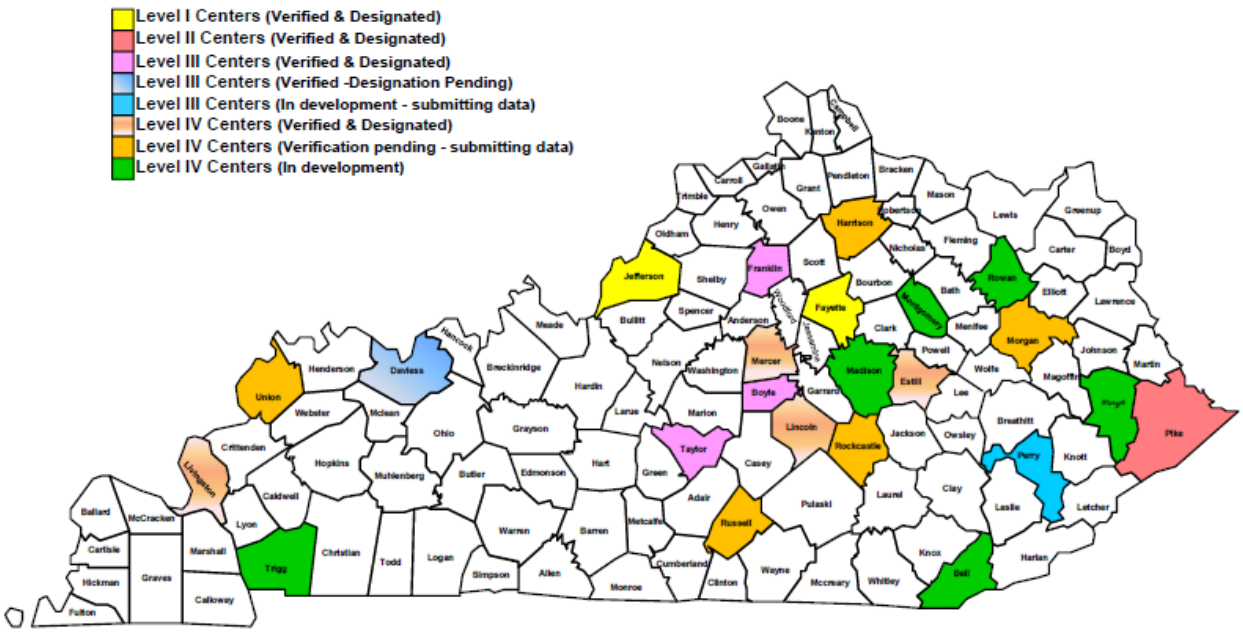
A broad overview of the hospital care provided to Kentucky residents whose primary diagnosis was some form of physical trauma appears in the Kentucky Inpatient and Emergency Department Traumatic Injury Data Report, available at http://www.kiprc.uky.edu/ projects/trauma/index.html.

---

*Kentucky law (KRS 311A.010) defines "trauma" as a single or multi-system life-threatening or limb-threatening injury requiring immediate medical or surgical intervention or treatment to prevent death or permanent disability.

Hospitals in the Kentucky Trauma System

(September 25, 2015)



Verified Trauma Centers

Level I - Pediatric – Kosair Children's Hospital, Louisville
Level I - UK Chandler Hospital Lexington
Level I - Pediatric – Kentucky Children's Hospital, Lexington
Level I - University of Louisville Hospital, Louisville
Level II – Pikeville Regional Hospital
Level III - Ephraim McDowell Regional Medical Center, Danville
Level III – Frankfort Regional Medical Center
Level III - Owensboro Health (Designation pending)
Level III - Taylor Regional Medical Center, Campbellsville
Level IV – Ephraim McDowell Fort Logan Hospital, Stanford
Level IV – James B Haggin Memorial Hospital, Harrodsburg
Level IV – Livingston Hospital, Salem
Level IV – Marcum & Wallace Hospital, Irvine

Definitions (per **902 KAR 28:010):**

(18) "Level I trauma center" means a regional trauma center that:

(a) Provides total care of every aspect of injury from prevention through rehabilitation; and

(b) Meets the requirements established in 902 KAR 28:020.

(19) "Level II trauma center" means a regional trauma center that:

(a) Provides screening and initial trauma care of the injured patient regardless of the severity of injury; and

(b) Meets the requirements established in 902 KAR 28:020.

(20) "Level III trauma center" means a regional trauma center that:

(a) Provides prompt assessment, resuscitation, emergency operations and stabilization;

(b) Arranges for transfer to a facility that can provide trauma care at a higher level;

(c) Serves communities that do not have immediate access to a Level I or Level II trauma center; and

(d) Meets the requirements established in 902 KAR 28:020.

(21) "Level IV trauma center" means a regional trauma center that:

(a) Provides advanced trauma life support before a patient is transferred to a higher level of care;

(b) Is located in a hospital emergency department; and

(c) Meets the requirements established in 902 KAR 28:030.

Kentucky's Reporting Trauma Centers, 2014

Trauma Center	Designation/Status
1. Crittenden County Hospital	Level IV (report gap)
2. Ephraim McDowell Regional Medical Center	Level III
3. Ephraim McDowell Fort Logan Hospital	Level IV
4. Frankfort Regional Medical Center	Level III
5. Harrison Memorial Hospital	Level IV in progress
6. Hazard ARH	Level III
7. James B. Haggin Memorial Hospital	Level IV
8. Kosair Children's Hospital	Level I Pediatric
9. Livingston Hospital	Level IV
10. Marcum & Wallace Memorial Hospital	Level IV
11. McDowell ARH	Level IV in progress
12. Methodist Hospital Union County	Level IV in progress
13. Middlesboro ARH	Level IV in progress
14. Morgan County ARH	Level IV in progress
15. Owensboro Medical Center	Level II
16. Parkway Regional Hospital	Level IV (closed 3/15)
17. Pikeville Medical Center	Level II in progress
18. Rockcastle County Hospital	Level IV in progress
19. Russell County Hospital	Level IV
20. St. Claire Medical Center	Level IV
21. St. Joseph Hospital Berea	Level IV
22. St. Joseph Hospital London	Level IV in progress
23. St. Joseph Hospital Mt. Sterling	Level IV
24. Taylor Regional Medical Center	Level III
25. Trigg County Hospital	Level IV in progress
26. University of Kentucky Children's Hospital	Level I Pediatric
27. University of Kentucky Medical Center	Level I
28. University of Louisville Hospital	Level I

Kentucky Trauma Registry Records 2008-2014

The Kentucky Trauma Registry has grown from 5 reporting facilities in 2008 to 28 in 2014, although Parkway Regional Hospital in Fulton has subsequently closed its doors. A total of 13,159 records were reported in 2014, nearly doubling the 2008 total (Figure 1). One facility's report was not received in time for full analysis, so the majority of the tables that follow assess a total of 12,731 records.

Figure 1: Total records, 2008-2014

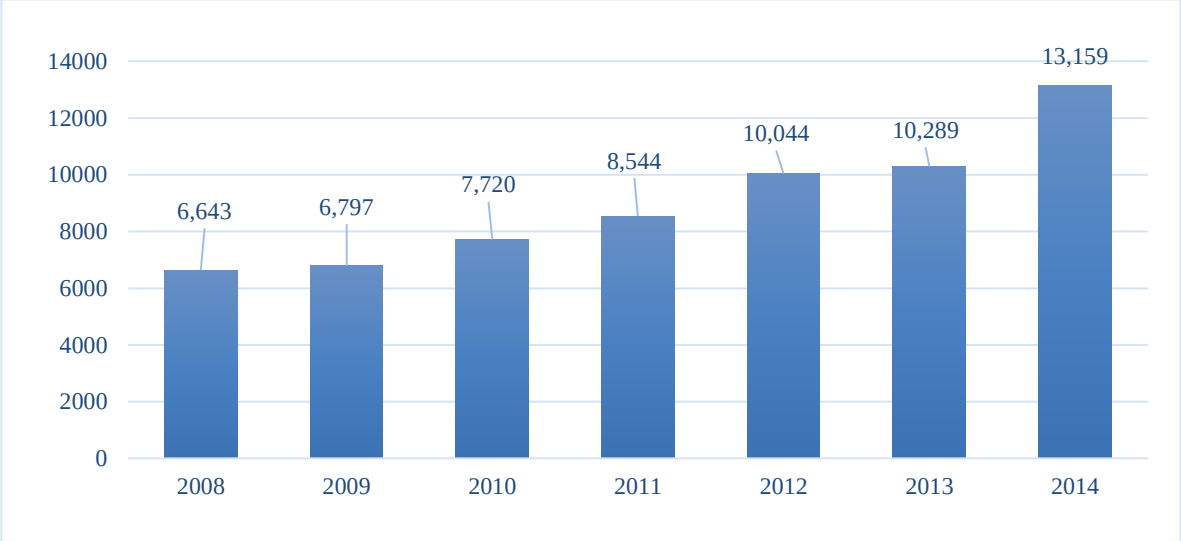


Table 1: Records by reporting trauma center, 2014

Hospital	Records
Crittenden County Hospital	6
Ephraim McDowell Regional Medical Center	370
Ephraim McDowell Fort Logan Hospital	84
Frankfort Regional Medical Center	358
Harrison Memorial Hospital	93
Hazard ARH	658
James B. Haggin Memorial Hospital	206
Kosair Children's Hospital	1,051
Livingston Hospital	60
Marcum & Wallace Memorial Hospital	187
McDowell ARH	14
Methodist Hospital Union County	69
Middlesboro ARH	109
Morgan County ARH	31
Owensboro Medical Center	799
Parkway Regional Hospital	20
Pikeville Medical Center	950
St. Joseph Berea	231
St. Joseph London	428
St. Joseph Mt. Sterling	166
Taylor Regional Medical Center	451
Trigg County Hospital	43
University of Kentucky Children's Hospital	483
University of Kentucky Medical Center	3,125
University of Louisville Hospital	3,022
Total	13,159

Demographic Information

Gender

Injuries to males comprised 60% of KTR records (Table 2). The ACS trauma classification excludes hip fractures, the most common traumatic injury in older adults, and a category that is therefore predominantly female. Thus, KTR demographics are significantly different from those of the related report on injuries as a whole, in which males and females are roughly equally represented (see Kentucky Inpatient and Emergency Department Traumatic Injury Data Reports, http://www.mc.uky.edu/kiprc/projects/trauma/index.html).

Table 2: Records by gender, 2014

Gender	Number	%
Female	5,058	39.73
Male	7,670	60.25
Total	12,731	100.00

Race/Ethnicity

Most (91%) of the records reported treatment for white patients, while 7% were for black patients (Table 3). Nearly all records list the patient's race, but 9% are missing information on ethnicity.

Table 3: Records by race and ethnicity, 2014

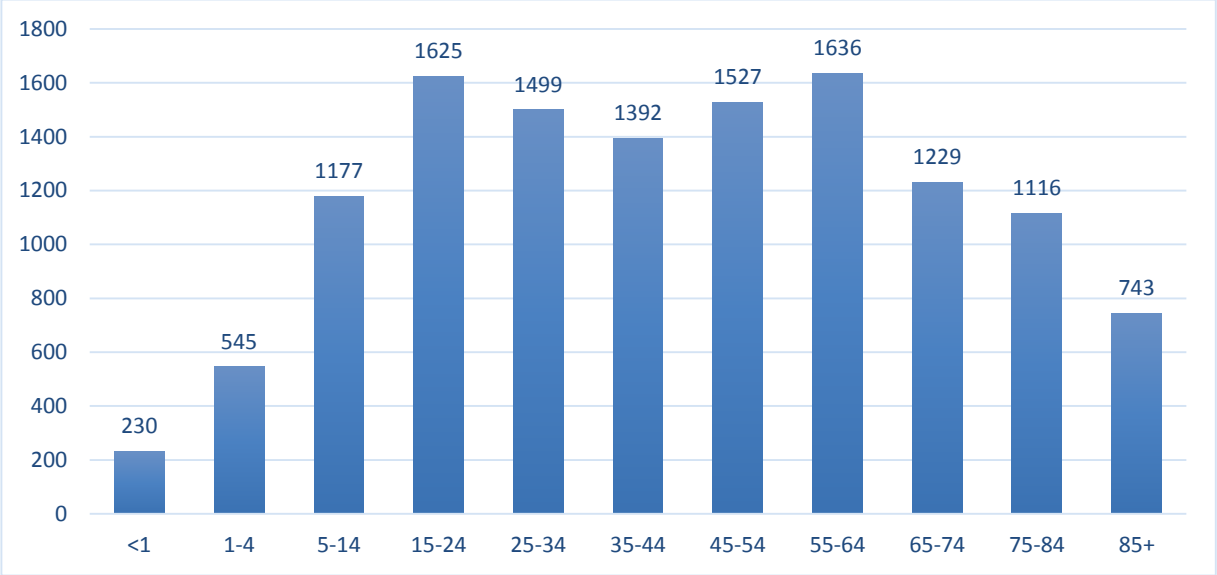
	Ethnicity			
Race	**Hispanic/ Latino**	**Non-Hispanic/Latino**	**Missing**	**Total**
Asian	0	21	*	24
Native Hawaiian or Other Pacific Islander	*	12	*	19
Other Race	90	40	*	134
American Indian	0	*	0	*
Black or African American	0	868	14	882
White	34	10,956	566	11,522
Missing	10	21	78	109
Total	137	11,925	669	12,731

*Totals less than 5 were suppressed by state data management policy

Age

Inclusion criteria influence the distribution of trauma records by age group. Whereas the statewide hospitalization data for traumatic injury is skewed towards older age groups (due to inclusion of hip fractures), the KTR records are mainly for working-age adults (Figure 2).

Figure 2: Records by age group, 2014



Patient County of Residence

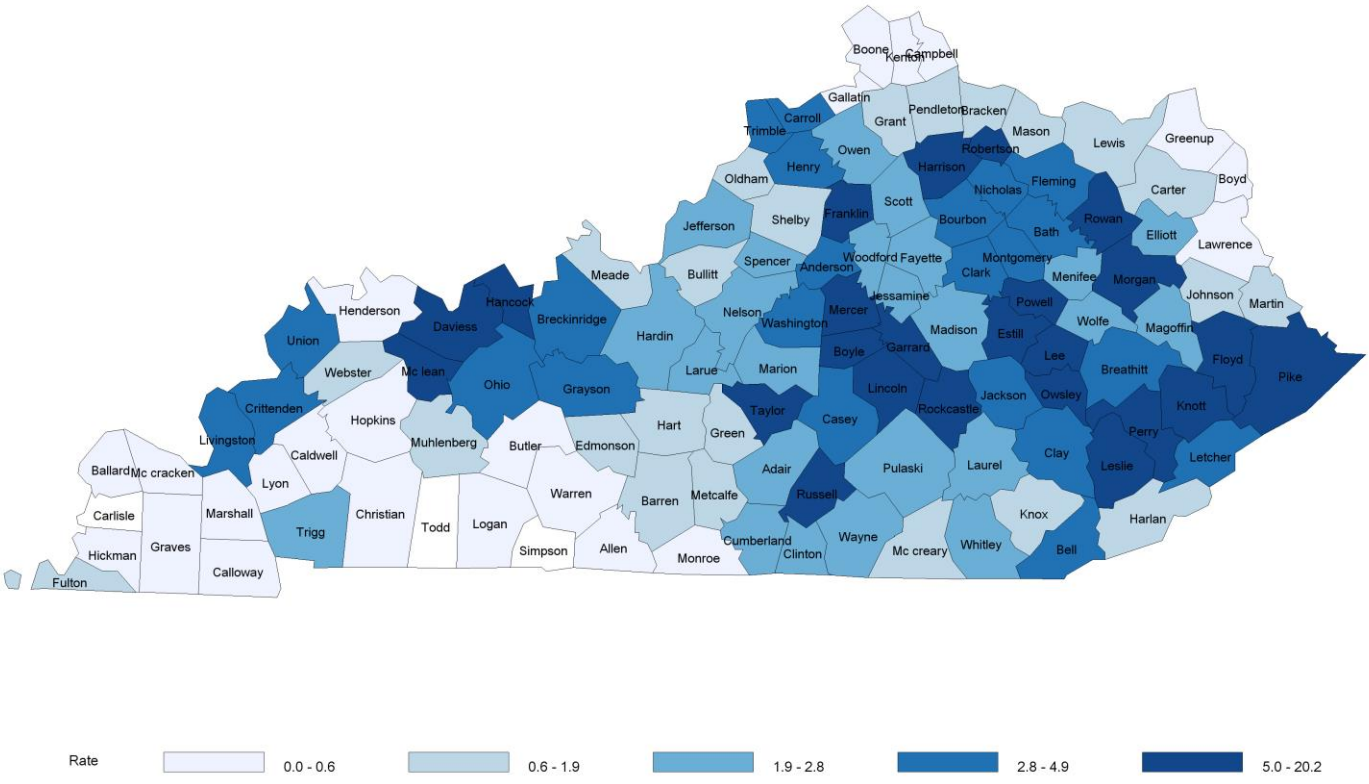
Table 4 sets out the number and proportion of KTR records for the counties with the highest number of reports. About one-fifth (19.33%) of the records were for patients residing in Jefferson or Fayette counties, which is expected as these are the most populous counties in the state. About one in eight (12.51%) of the total KTR records were for out-of-state patients. There were almost as many records from the top 10 counties as from the rest of the state's counties combined (43% vs. 44%).

Table 4: Records by county of residence, 2014

Top 10 KY counties based on volume	Number	%
Jefferson	1,799	14.13
Fayette	662	5.20
Pike	524	4.12
Daviess	515	4.05
Taylor	509	4.00
Perry	434	3.41
Franklin	335	2.63
Mercer	260	2.04
Lincoln	231	1.81
Boyle	226	1.78
All other Kentucky counties	5,643	44.32
Out-of-state residents	1,593	12.51

A map of rates per 1,000 residents follows. It must be interpreted with the caveat that it is not an accurate rendering of counties' incidence of trauma: low rates in the counties in the southwest and northern parts of the state reflected the lack of acute care hospitals reporting to the KTR in those regions. It is also possible that the residents of these counties are treated in out-of-state trauma centers such as the University of Cincinnati Hospital, Cincinnati Children's Hospital, or Vanderbilt University Hospital.

Map: Trauma Registry Records per 1,000 County Population, in Quintiles



Injury Information

Work-related Cases

Work-related trauma is defined as injury that occurs during paid employment. A total of 417 work-related trauma cases were recorded in the KTR dataset in 2014. Over one-third (38%) of the injuries were due to falls (Figure 3).

Figure 3: Work-related trauma records by cause of injury, 2014

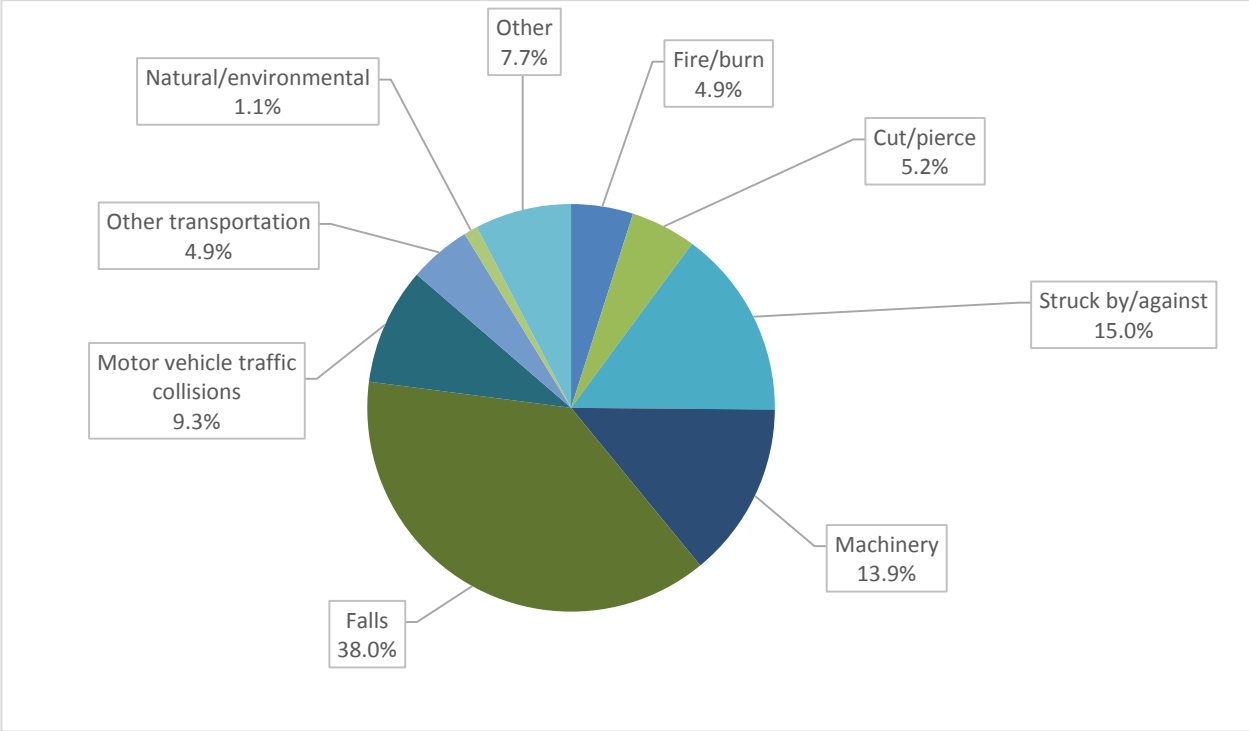


Table 5 shows the industry associated with patient's work environment for work-related trauma records. The "other services" category far exceeds all others, representing over one quarter (26.14%) of work-related trauma in the KTR.

Table 5: Work-related trauma records by industry, 2014

Industry	Number	%
Other Services	**109**	**26.14%**
Construction	**61**	**14.63%**
Transportation and Public Utilities	**33**	**7.91%**
Agriculture, Forestry, Fishing	**32**	**7.67%**
Manufacturing	**30**	**7.19%**
Natural Resources and Mining	**25**	**6.00%**
Education, Health Services, Information Services	**14**	**3.36%**
Professional and Business Services	**11**	**2.64%**
Retail Trade	**11**	**2.64%**
Government	**10**	**2.40%**
Other	**2**	**0.48%**
Missing/not available	**79**	**18.94%**
Total	**417**	**100.00%**

Cause and Intent of Injury

E-codes indicating mechanism and intent were provided for nearly all (99.4%) of the records. Unintentional falls (n=4,903) and unintentional motor vehicle traffic collisions (n=3,745) were the leading causes of injuries reported to KTR (Table 6).

Table 6: Records by cause and intent of injury, 2014

Cause	Unintentional	Intentional	Other/Undetermined
Motor vehicle traffic collisions	3,745	6	12
Firearm	107	314	23
Poisoning	<5	<5	<5
Falls	4,903	25	29
Suffocation	0	11	<5
Drowning	<5	0	0
Fire/burn	357	7	8
Cut/pierce	242	191	<5
Struck by/against	488	278	5
Machinery	156	0	0
Other pedal cycle	150	0	0
Other pedestrian	38	0	0
Other transportation	911	0	0
Natural/environmental	147	0	0
Overexertion	50	0	0
Other specified	178	105	<5
Not elsewhere classified (NEC)	33	15	6
Not specified	63	47	5
Total	11,581	1,003	97

Note: Missing information on cause and intent for 50 records

Cause/Intent of Injury by Age Group

Patients aged 15-24 accounted for over one-fifth (20.61%) of motor vehicle crash-related trauma, followed by those aged 25-34 (17.09%). This finding is similar to those of previous years. Falls among those 55 and older accounted for nearly two-thirds (61.25%) of all unintentional falls treated in trauma centers. More than two-fifths (205 records) of the injuries attributed to being unintentionally struck by or against an object were experienced by patients 5-24 years of age. An earlier review of the struck by/against injuries in this group found that more than half of these injuries were sport-related. About half (44.6%) of the assault injuries were to adults aged 15-34 (Table 7).

Table 7: Records by age and major causes of injury, 2014

Age	Unintentional Injuries										Intentional Injuries			
	Motor vehicle traffic collisions		Other transport Injuries		Falls		Struck by/against		All other unintentional		Assault		Self-harm	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
NA	0	0	*	*	5	0.10	*	*	*	*	*	*	0	0
<1	13	0.35	*	*	103	2.10	16	3.28	45	2.68	52	6.48	0	0
1-4	60	1.60	13	1.43	232	4.73	42	8.61	165	9.82	33	4.11	0	0
5-14	206	5.50	124	13.61	446	9.10	117	23.98	263	15.65	18	2.24	*	*
15-24	772	20.61	186	20.42	191	3.90	88	18.03	211	12.55	155	19.30	22	11.00
25-34	640	17.09	128	14.05	211	4.30	50	10.25	222	13.21	203	25.28	45	22.50
35-44	524	13.99	148	16.25	278	5.67	40	8.20	207	12.31	149	18.56	46	23.00
45-54	550	14.69	112	12.29	434	8.85	57	11.68	216	12.85	121	15.07	37	18.50
55-64	482	12.87	110	12.07	760	15.50	47	9.63	158	9.40	53	6.60	26	13.00
65-74	269	7.18	52	5.71	753	15.36	20	4.10	109	6.48	14	1.74	12	6.00
75-84	181	4.83	27	2.96	839	17.11	*	.082	58	3.45	*	0.37	*	2.00
85+	48	1.28	9	0.99	651	13.28	6	1.23	23	1.37	*	0.12	5	2.50

*Counts less than 5 were suppressed by state data management policy

Motor Vehicle Traffic Collision Involvement

Among the unintentional motor vehicle traffic collision (MVTC) records, 74.13% were coded as vehicle occupants, 14.72% as motorcyclists, and 7% as pedestrians (Table 8).

Table 8: Motor vehicle collision involvement, 2014

Role in motor vehicle traffic collision	Number	%
Motor vehicle occupant	2,774	74.13
Motorcyclist	551	14.72
Pedal cyclist	46	1.23
Pedestrian	262	7.00
Unknown	86	2.22
Other	26	0.69
Total	3,745	100.00

Protective Devices

There were 3,745 records for vehicle occupants injured in motor vehicle traffic collision. Protective devices were not used in 24.15% of the cases. Information on the use of protective devices was not available to the registrars in 11.93% of the cases (Table 9).

Table 9: Use of occupant protective devices in motor vehicle traffic collisions, 2014

Protective device	Use of protective devices by occupants in unintentional MVTC (n=3,745)	
	Number	%
Shoulder and Lap belt	1,083	39.04
Shoulder belt only	10	0.36
Lap belt only	416	15.00
Child restraint	58	2.09
Airbag	995	35.87
Available but not used	670	24.15
Missing information on protective device use	331	11.93

Note: In some records two or more protective devices were listed; therefore, counts do not add up to the total number of MVTC cases

Pre-Hospital Information

Transportation Mode

The mode of transportation and inter-facility transfers are presented in Table 10. The inter-facility transfer variable indicates whether the patient was transferred to the reporting facility from another acute care facility. Helicopter ambulance was used in 595 (19.47%) of the 3,056 inter-facility transfers and in 1,062 (14.68%) of the 7,233 non-transfer records. Ground ambulance was listed in 6,582 (63.97%) of all KTR cases.

Table 10: Transportation mode, 2014

Transportation mode	Inter-facility Transfer		
	Yes	No	Total
Missing information	14	57	71
Ground ambulance	2,667	5,213	7,897
Helicopter ambulance	692	1,143	1,835
Fixed-wing ambulance	0	<5	<5
Private/public vehicle/walk-in	175	2,671	2,872
Police	<5	46	39
Other	<5	<5	6
Total	3,553	9,135	12,688#

*Cells with counts of less than 5 were suppressed by state data management policy
43 records were missing interfacility transfer information

EMS Information

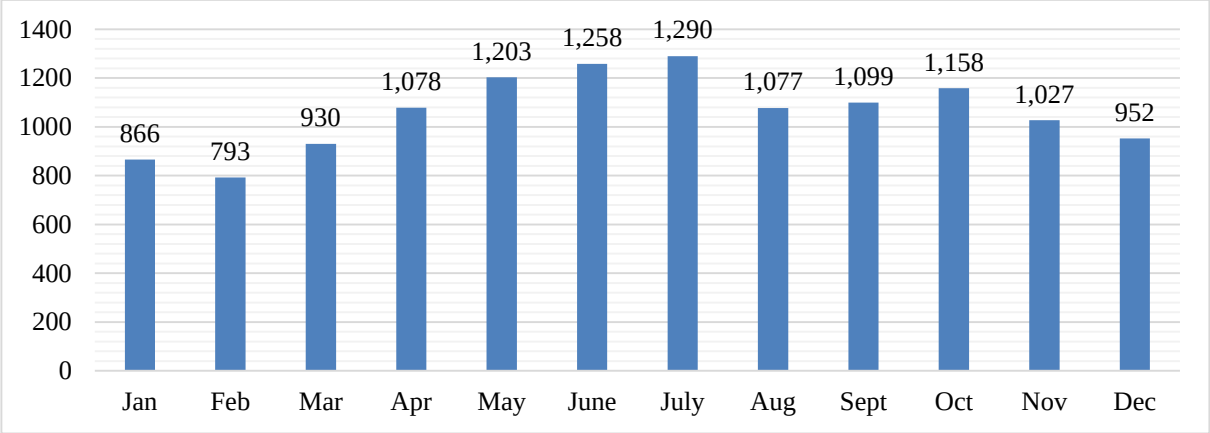
EMS notification, departure, and arrival times are not applicable data elements for patients who arrived at the trauma facility by private vehicle, and they may not be known for patients transferred from another acute care facility. It is reasonable to expect, however, that EMS information will be available for patients who were not inter-facility transferees and were transported to the trauma facility by ground ambulance (n=5,213) or helicopter ambulance (n=1,143) (Table 10). About 45% of these records did not include EMS notification, arrival, and scene departure dates and times, an improvement over the 2013 rate of 55%. With regard to patient status, EMS pulse, and respiratory rate, blood pressure and Glasgow Coma Scale scores were missing for 21% of direct transfers.

Emergency Department Information

Month of Arrival at ED/Hospital

Trauma volume varies by season, with a higher volume during summer months (Figure 4), mainly due to the increased number of motor vehicle traffic collision injuries and falls.

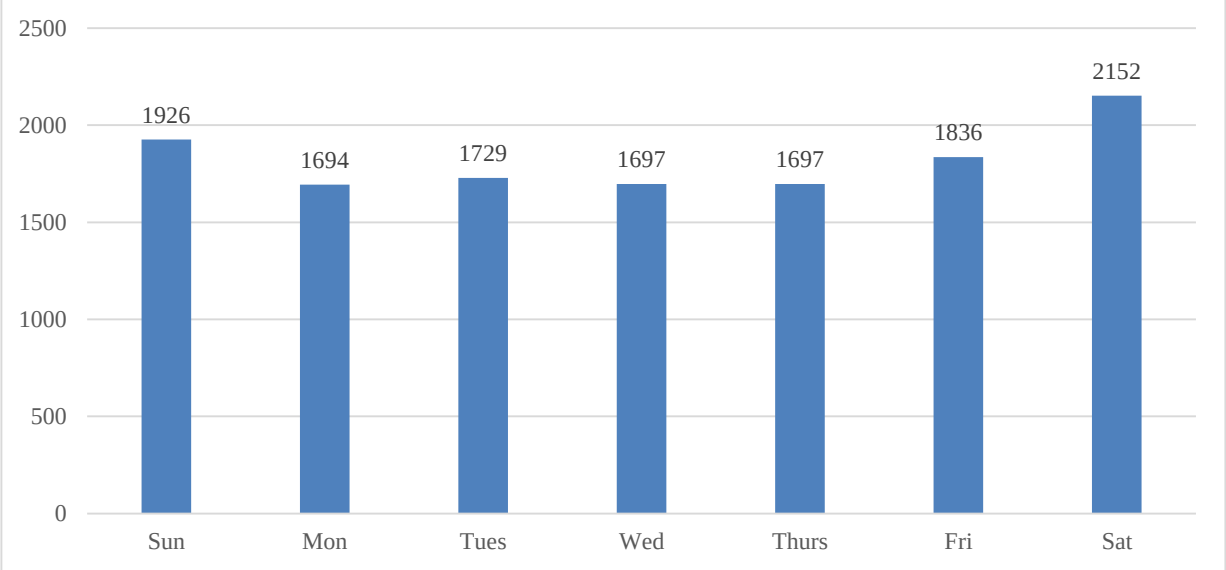
Figure 4: Month of ED/hospital arrival, 2014



Weekday of Arrival to ED/Hospital

A higher volume of trauma cases was recorded on weekend days (Figure 5).

Figure 5: Day of ED/hospital arrival, 2014



Time to ED/Hospital Arrival

The distribution of KTR records by time from the injury incident to hospital arrival and inter-facility transfer status is presented in Table 11. Patients are considered inter-facility transfers if they are transferred to the reporting facility from another acute care facility. Due to the lack of personal identifiers in trauma registry data collection, we cannot track specific patients from one facility to another. The incident time is unknown in 40.82% of cases.

Table 11: Time to ED/hospital arrival, 2014

Time to hospital	Inter-facility Transfer	
	Yes	No
<1 hour	**16**	**2,107**
1-2 hrs	**120**	**1,713**
2-5 hrs	**1,003**	**580**
5-12 hrs	**788**	**192**
12-24 hrs	**102**	**112**
24+ hrs	**235**	**365**
Same day (exact incident time unknown)	**970**	**3,654**
Next day or later (exact incident time unknown)	**309**	**264**
Incorrect (negative, zero, missing)	**2**	**90**
Total	**3,545**	**9,077**

Alcohol Use Indicator

Alcohol use beyond legal limits was confirmed by test for 907 (7.12%) of all records (Table 12).

Table 12: Alcohol use indicators, 2014

Alcohol Use Indicators		Number	%
No (confirmed by test)		2,856	22.43
Yes (confirmed by test [trace levels])		246	1.93
Yes (confirmed by test [beyond legal limit])		907	7.12
No (not tested)		7,022	55.16
Not Applicable		1,412	11.09
Not documented		160	1.26
Missing		128	1.01
Total		10,289	100.00

Drug Use Indicators

Illegal drug use was confirmed in 966 (7.59%) of the records (Table 13). The category "illegal drug use" includes use of illicit drugs or illegal use of a prescription drug according to the National Trauma Data Standard Data Dictionary.

Table 13: Drug use indicators, 2014

	Number	%
No (confirmed by test)	1,191	9.36
Yes (confirmed by test [prescription drug])	1,093	8.59
Yes (confirmed by test [illegal use of prescription drug])	74	0.58
Yes (confirmed by test [illegal drug use])	892	7.01
No (not tested)	7,616	59.82
Not Applicable	434	3.41
Not documented	1431	11.24
Total	12,731	100.00

Locally Calculated Injury Severity Scores

The Injury Severity Score (ISS) is an anatomical rating system that provides numerical values for patients with multiple and varying injuries. The National Trauma Data Bank characterizes ISS scores of 1-9 as mild, 10-15 as moderate, 16-24 as severe, and over 24 as very severe. Using this metric, 68.15% of trauma registry injuries were mild, 13.99% moderate, 10.7% severe and 7.28% very severe. ISS was missing for less than 1% of the records (Table 14).

Table 14: Records by ISS, 2014

Injury Severity Score Range	Category	Number	%
1-9	Mild	8,676	68.15
10-15	Moderate	1,781	13.99
16-24	Severe	1,362	10.70
25-75	Very severe	800	7.28
Missing	Missing	112	.88
Total		12,731	100.00

Does not include data received from one facility too late for inclusion.

Outcome Information

Table 15: Discharge status, 2014

Facility	ED Discharge	Inpatient Discharge
	Number (% facility)	Number (% facility)
Crittenden County Hospital	4 (66.67%)	2 (33.33%)
Ephraim McDowell Regional Medical Center	150 (40.54%)	220 (59.46%)
Fort Logan Hospital	82 (97.62%)	<5
Frankfort Regional Medical Center	169 (47.21%)	189 (52.79%)
Harrison Memorial Hospital	87 (93.55%)	6 (6.45%)
Hazard ARH	104 (15.81%)	554 (84.19%)
James B. Haggin Memorial Hospital	206 (100%)	0
Kosair Children's Hospital	21 (2.00%)	1030 (98.00%)
Livingston Hospital	26 (43.33%)	34 (56.67%)
Marcum & Wallace Memorial Hospital	186 (99.47%)	<5
McDowell ARH	14 (100%)	0
Methodist Hospital Union County	56 (81.16%)	13 (18.84%)
Middlesboro ARH	98 (89.91%)	11 (10.09%)
Morgan County ARH	31 (100%)	0
Owensboro Medical Center	121 (15.14%)	678 (84.86%)
Parkway Regional Hospital	13 (65.00%)	7 (35.00)
Pikeville Medical Center	132 (13.89%)	818 (86.11%)
Rockcastle Regional Hospital	98 (90.74%)	10 (9.26%)
Russell County Hospital	64 (100%)	0
St. Claire Medical Center	113 (65.32%)	60 (34.68%)
St. Joseph Berea	31 (100.00%)	0
St. Joseph Mt. Sterling	163 (98.19%)	<5
Taylor Regional Medical Center	375 (83.15%)	76 (16.85%)
Trigg County Hospital	43 (100.00%)	0
University of Kentucky Children's Hospital	28 (5.80%)	455 (94.20%)
University of Kentucky Medical Center	803 (25.70%)	2,322 (74.30%)
University of Louisville Hospital	448 (14.82%)	2,574 (85.18%)
Total	3,666	9,065

Note: Totals less than 5 were suppressed in keeping with state data management policy.

Three quarters (75.27%) of the records indicated discharge from ED to a bed or operating room in the same hospital, while 11.46% were transferred to another hospital. The latter number is somewhat higher than the 9% transfer rate reported in 2013 and may reflect the addition of several Level IV facilities to the trauma registry this year. Deaths are recorded for 148 (1.16%) ED patients (Table 16).

Table 16: ED discharge disposition, 2014

	Number	%
Same hospital	**9,583**	**75.27%**
Floor bed (general non-specialty unit bed)	**5,146**	**40.42%**
Observation unit (< 24 hour stays)	**364**	**2.86%**
Telemetry/step-down unit (less acuity than ICU)	**446**	**3.50%**
Operating Room	**1,679**	**13.19%**
Intensive Care Unit	**1,948**	**15.30%**
Died	**148**	**1.16%**
Other (jail, institutional care, mental health, etc.)	**22**	**0.17%**
Home without services	**1,267**	**9.95%**
Left against medical advice	**19**	**0.15%**
Transferred to another hospital	**1,459**	**11.46%**
Missing/not applicable	**233**	**1.83%**
Total	**12,731**	**100.00%**

Hospital Discharge

Two-thirds (67.7%) of trauma registry records on patients discharged from inpatient care indicated that the patient was well enough to go home without formal home health services, but over one in four (27%) required some kind of post-acute care. Trauma registry records identified 337 records of inpatients who died and 104 records of patients who died in the ED (Table 17).

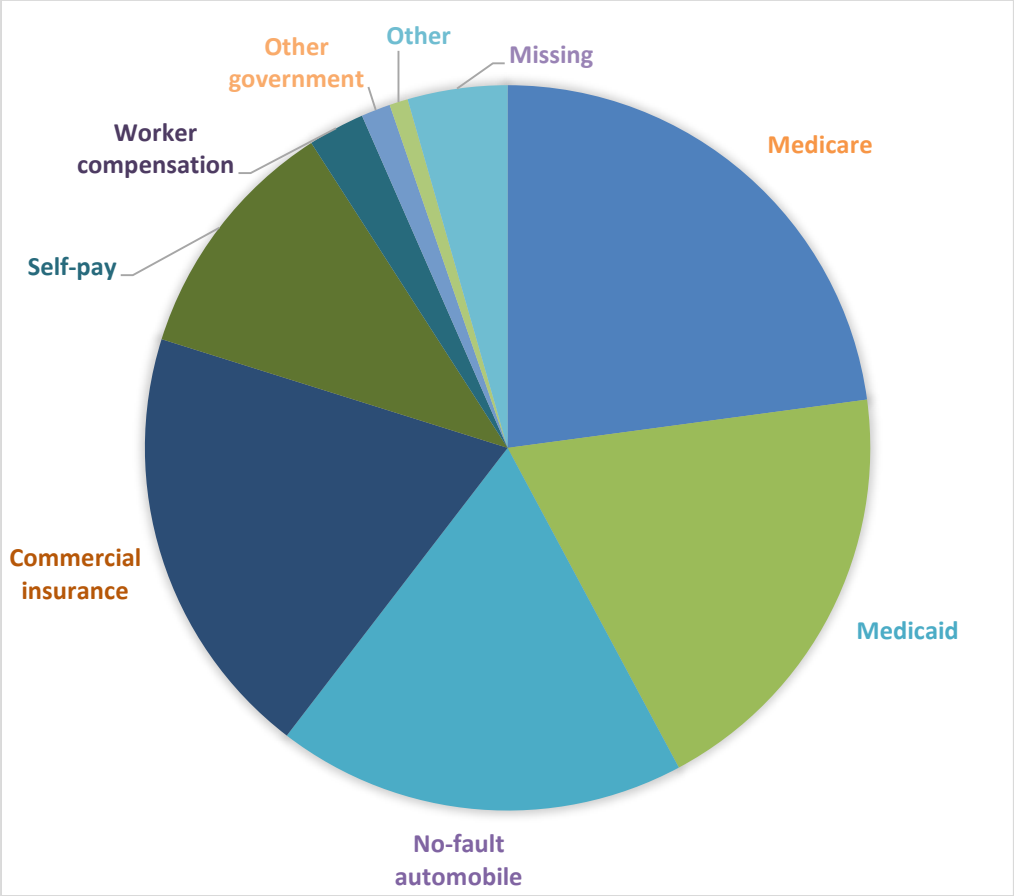
Table 17: Hospital discharge disposition, 2014

Discharge Destination	Number	%
Home without services	6,111	67.7%
Home with home health services	1,021	11.3%
Skilled nursing facility	789	8.7%
Other rehab or long-term care facility	461	5.1%
Deceased	337	3.7%
Another hospital	81	0.9%
Left against medical advice	60	0.7%
Intermediate care facility	47	0.5%
Prison/law enforcement	47	0.5%
Long-term care hospital	33	0.4%
Psychiatric hospital	31	0.3%
Other	7	0.1%
Total	9,025	100.0%

Financial Information

The expected source of payment was not reported for 566 records, about 4.5% of the total KTR volume. Among the encounters listing expected payer, Medicare (22.87%) was the leader, followed by Medicaid (19.30%), commercial insurance (19%) and no-fault automobile insurance (18.25%) (Fig. 6). This is a significant change from previous years and reflects the impact of Medicaid eligibility expansion, as does the change in records indicating "self-pay": the proportion declined from 16% in 2013 to 11% in 2014. This decline is significant because "self-pay" patients are rarely able to pay for their trauma care, and the federal funding that has historically provided some offset to uncompensated care will be reduced under the Affordable Care Act.

Figure 6: Primary source of payment, 2014



Conclusion

The Kentucky Trauma Registry continues to grow steadily and has added reporting facilities that serve both rural and urban areas over the past year. As the proportion of Kentucky hospitals in the KTR grows, it will become more representative of major trauma in the state as a whole. The state Trauma Advisory Council continues to work closely with candidate facilities as they progress towards state or national verification, and funding from the National Highway Traffic Safety Administration, made available through a grant from the Kentucky Office of Highway Safety, supports software or portal activation costs for their first year in the KTR. We look forward to increasing the value of KTR data for system-wide and facility-specific quality improvement initiatives through the addition of new variables in the 2015 reporting year.

The progress made by Kentucky's trauma system is particularly noteworthy because during the time covered by this report, the system had no state funding and would not have existed without the professionalism and dedication of clinical and support staff. The sustainability of statewide trauma care on this tenuous basis is a constant concern that has been brought before state policy makers repeatedly. Thanks to the Kentucky Commissioner of Public Health, funding has been made available to hire two full-time trauma system staff members during the 2015 state fiscal year. The value added by the state's trauma system--saving lives and avoiding catastrophic trauma-related disability--must be recognized and given proportionate support if the state trauma system is to continue its record of growth and effectiveness.

Acknowledgements:

In addition to our invaluable support from Trauma Advisory Council leadership and our grant funders, KTR facilities' trauma registrars have worked diligently to assure continuous quality improvement for KTR data as well as trauma care across the state.