

State Trauma Registry Reports

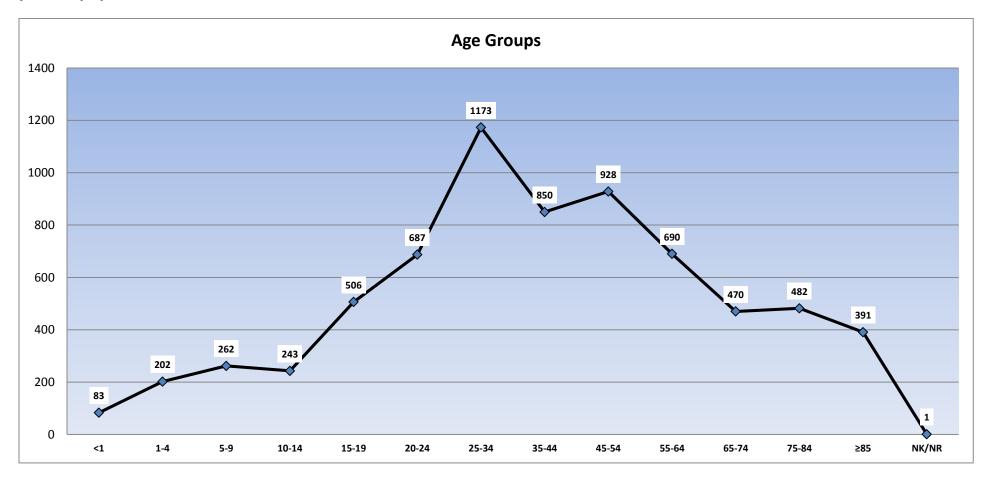
Chris Hector

2013 Data compiled from current patient records reported from four facilities to LERN State Trauma Registry. Includes standard dataset established by National Trauma Data Bank (NTDB)



Figure 1: Age Distribution

Patients reported by age group. Highest patient population lies in the age range 25 – 34 years old. This is also the highest patient population on a national level.



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Figure 2: Gender

Patients reported by gender. In Louisiana males accounted for 62% of all incidents up to age 70 compared to 70% on the national level.

Cause of Injury	Female	Male
Accidental falls	1006	991
Accidental poisoning by drugs, medicinal substances, and biologic	1	2
Accidents caused by fire and flames	2	4
Accidents caused by submersion, suffocation, and foreign bodies	2	5
Accidents due to natural and environmental factors	26	46
Air and space transport accidents	0	6
Homicide and injury purposely inflicted by other persons	169	1160
Injury resulting from operations of war	0	1
Injury undetermined whether accidentally or purposely inflicted	9	20
Legal intervention	2	22
Motor vehicle non-traffic accidents	68	191
Motor vehicle traffic accidents	805	1469
Other accidents	125	580
Other road vehicle accidents	35	78
Railway accidents	3	8
Suicide and self-inflicted injury	20	79
Vehicle accidents not elsewhere classifiable	0	2
Water transport accidents	5	26
Total	2278	4690

Gender	2011	2012	2013
Female	2256	2084	2278
Male	4654	4602	4690
NK/NR	5	22	0
Total	6915	6708	6968

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Figure 3: Cause of Injury

Patients grouped in categories by the primary cause of injury. Other accidents refer to any cause of injury not able to be classified by listed categories (strenuous movement, animal bites, struck by objects, poisoning).

Cause of Injury	Number	Percent
Accidental falls	1997	28.66%
Accidental poisoning by drugs, medicinal substances, and biologic	3	0.04%
Accidents caused by fire and flames	6	0.09%
Accidents caused by submersion, suffocation, and foreign bodies	7	0.10%
Accidents due to natural and environmental factors	72	1.03%
Air and space transport accidents	6	0.09%
Homicide and injury purposely inflicted by other persons	1329	19.07%
Injury resulting from operations of war	1	0.01%
Injury undetermined whether accidentally or purposely inflicted	29	0.42%
Legal intervention	24	0.34%
Motor vehicle non-traffic accidents	259	3.72%
Motor vehicle traffic accidents	2274	32.63%
Other accidents	705	10.12%
Other road vehicle accidents	113	1.62%
Railway accidents	11	0.16%
Suicide and self-inflicted injury	99	1.42%
Vehicle accidents not elsewhere classifiable	2	0.03%
Water transport accidents	31	0.44%
Total	6968	100.00%

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Figure 4: Cause of Injury by Survivability

A total of 5.81% of all trauma registry patients expired with 94.19% surviving.

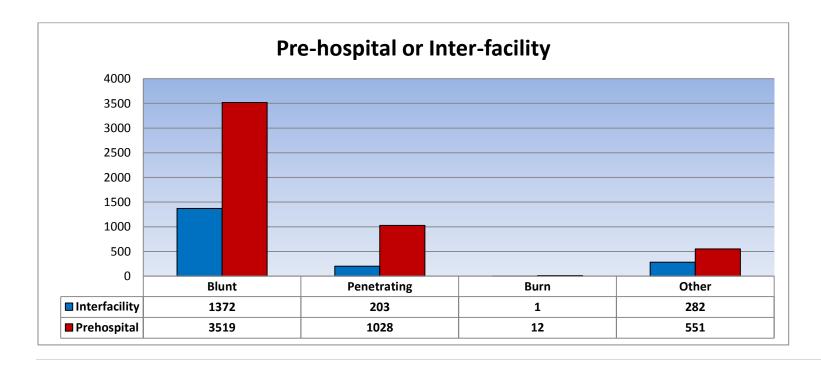
Row Labels	Died	Lived	Total
Accidental falls	92	1905	1997
Accidental poisoning by drugs, medicinal substances, and biologic	0	3	3
Accidents caused by fire and flames	0	6	6
Accidents caused by submersion, suffocation, and foreign bodies	0	7	7
Accidents due to natural and environmental factors	1	71	72
Air and space transport accidents	0	6	6
Homicide and injury purposely inflicted by other persons	97	1232	1329
Injury resulting from operations of war	0	1	1
Injury undetermined whether accidentally or purposely inflicted	3	26	29
Legal intervention	4	20	24
Motor vehicle non-traffic accidents	2	257	259
Motor vehicle traffic accidents	155	2119	2274
Other accidents	14	691	705
Other road vehicle accidents	3	110	113
Railway accidents	1	10	11
Suicide and self-inflicted injury	30	69	99
Vehicle accidents not elsewhere classifiable	0	2	2
Water transport accidents	3	28	31
Grand Total	405	6563	6968



Figure 5: Received Pre-Hospital/Transfer

Patients reported as received pre-hospital or transferred from another acute care facility by trauma type. Patients transferred from a private physician office, stand-alone ambulatory surgery center, or delivered to hospital by a non-EMS transport are not considered an inter-facility transfer. Outlying facilities that provide emergency services or that are utilized to stabilize a patient are considered acute care facilities.

Trauma Type	Inter-facility	Percent	Pre-hospital	Percent	Total	Total Percent
Blunt	1372	19.69%	3519	50.50%	4891	70.19%
Penetrating	203	2.91%	1028	14.75%	1231	17.67%
Burn	1	0.01%	12	0.17%	13	0.19%
Other	282	4.05%	551	7.91%	833	11.95%
Total	1858	26.66%	5110	73.34%	6968	100.00%

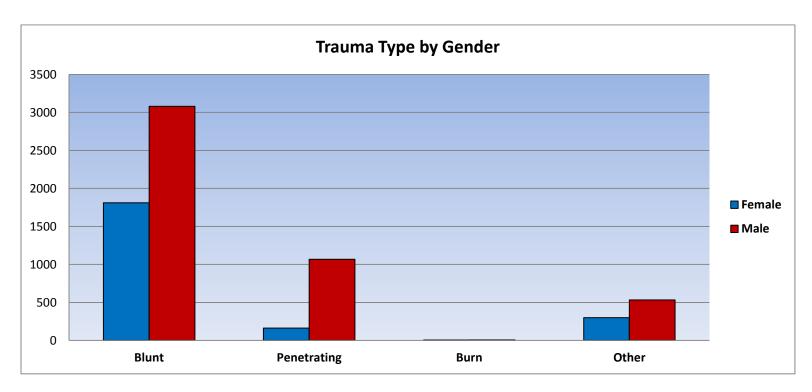


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Figure 6: Trauma Type by Gender

Patients reported by gender and grouped by specific trauma type.

Gender	Blunt	Penetrating	Burn	Other	Total
Female	1811	162	5	300	2278
Male	3080	1069	8	533	4690
Total	4891	1231	13	833	6968

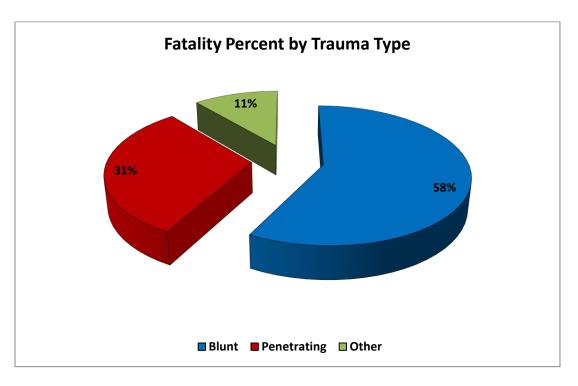


^{*}Other includes cases where Injury E-Code is suicide, undetermined, unspecified falls, strenuous movement, animal bites

Figure 7: Facility Traumatic Deaths by Trauma Type

Patients deaths reported by specific trauma type and grouped by expired in ED or hospital inpatient.

Trauma Type	Expired in ED	Expired in Hospital	Total
Blunt	64	170	234
Penetrating	65	61	126
Other	5	40	45
Total	134	271	405



^{*}Other includes cases where Injury E-Code is suicide, undetermined, unspecified falls, strenuous movement, animal bites

Figure 8: Blood Alcohol Testing

Patients reported by based on blood alcohol testing.

Alcohol Test Result	Number	Percent	National Percent
No(confirmed by test)	1030	14.78%	23.86%
No(not tested)	3486	50.03%	52.14%
Not Applicable	392	5.63%	1.95%
Not Known	18	0.26%	7.63%
Yes(confirmed by test [beyond legal limits])	652	9.36%	10.24%
Yes(confirmed by test [trace levels])	1390	19.95%	4.19%
Total	6968	100.00%	100.00%

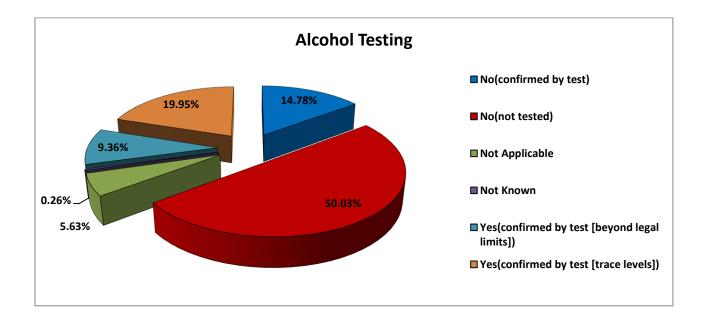


Figure 9: Drug Screening

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Patients reported by based on drug screening.

Drug Screen Result	Number	Percent	National Percent
No (confirmed by test)	961	13.79%	10.11%
Not Applicable	383	5.50%	5.83%
Not Known	2328	33.41%	13.09%
Not Performed	1933	27.74%	59.68%
Yes (confirmed by test [illegal use drug])	944	13.55%	7.59%
Yes (confirmed by test [prescription drug])	419	6.01%	3.69%
Total	6968	100.00%	100%

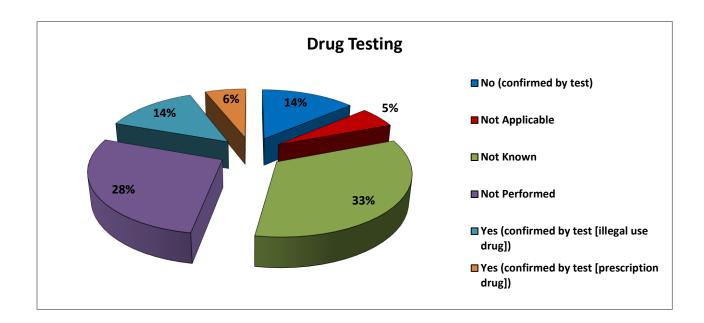


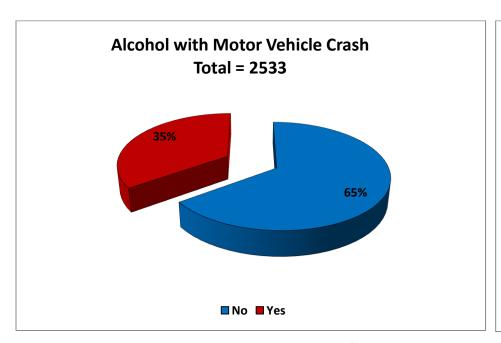
Figure 10: Blood Alcohol and Drug Testing for Motor Vehicle Crashes

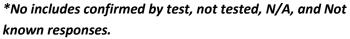
Alcohol Test	Number
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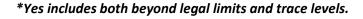


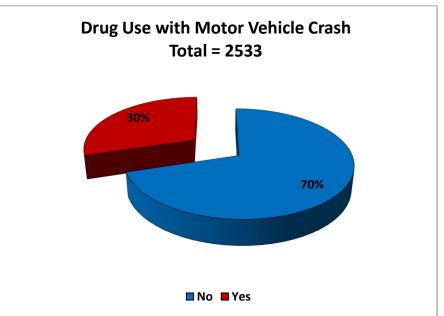
T EMERGENCE REGISTRET		
Drug Screen	Number	∍ро
No (confirmed by test)	562	
Not Applicable	16	
Not Known	721	
Not Performed	479	
Yes (confirmed by test [illegal use drug])	541	
Yes (confirmed by test [prescription drug])	214	
Total	2533	

No(confirmed by test)	530
No(not tested)	1097
Not Applicable	17
Not Known	3
Yes(confirmed by test [beyond legal limits])	382
Yes(confirmed by test [trace levels])	504
Grand Total	2533









^{*}No includes confirmed by test, N/A, not known, and not performed.

^{*}Yes includes illegal and prescription drugs.

Figure 11: ISS by Age

Patients reported by age group and ISS score. The Injury Severity Score (ISS) is a system for numerically stratifying injury severity. The ISS system has a range of 1-75 and risk of death increases with a higher score. NTDB categorizes ISS 1-8 as Minor; 9-15 as Moderate; 16-24 as Severe; and greater than 24 as Very Severe. Louisiana data shows 41.69% of patients with an ISS in the 1-8 (minor) range and 10.19% in the >24 (very severe) range. National data shows 47.05% in the 1-8 (minor) range and 7.78% in the >24 (very severe) range.

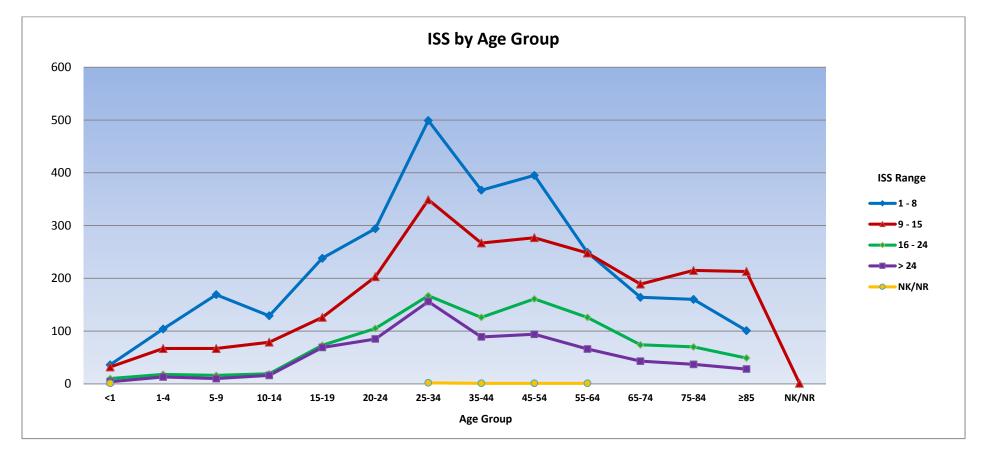
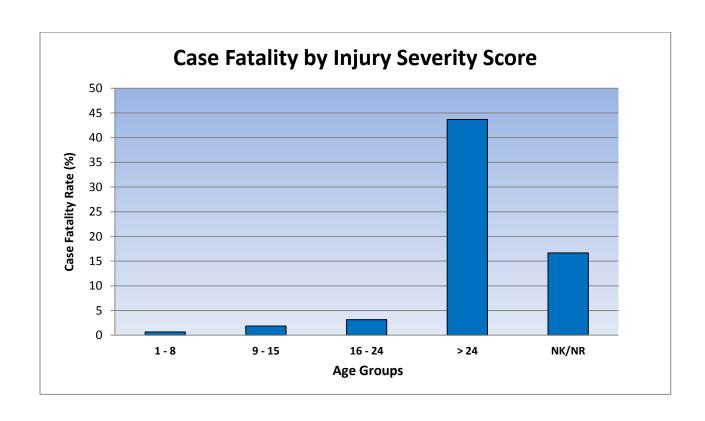


Figure 12: Fatalities by ISS Score



Patient fatalities reported by ISS score

ISS	Number	Percent	Deaths	Case Fatality Rate
1 - 8	2905	41.69%	19	0.65%
9 - 15	2333	33.48%	43	1.84%
16 - 24	1014	14.55%	32	3.16%
> 24	710	10.19%	310	43.66%
NK/NR	6	0.09%	1	16.67%
Total	6968	100.00%	405	5.81



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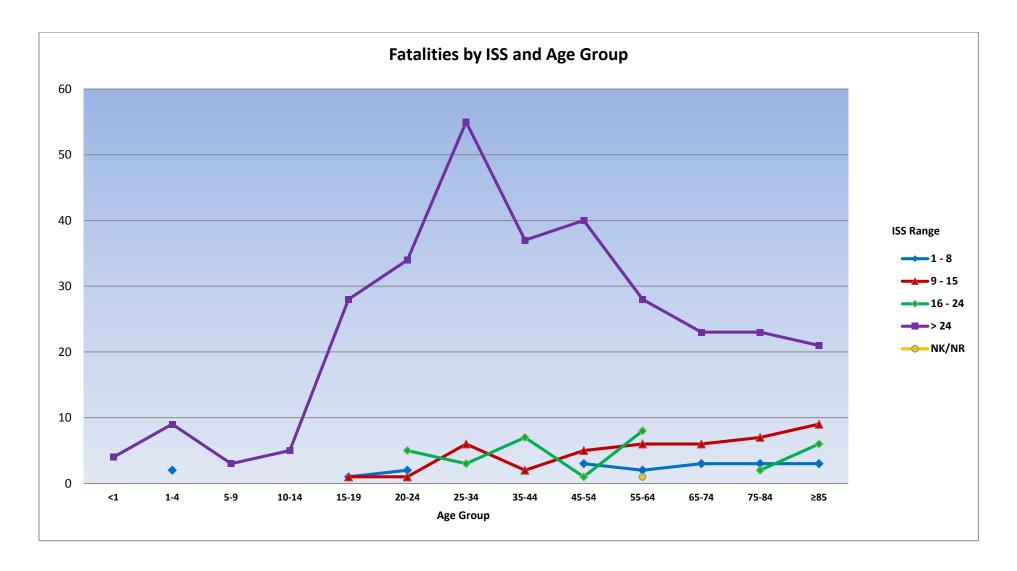


Figure 13: Hospital Length of Stay



The hospital length of stay (LOS) is calculated by the using the admit time/date and the discharged time/date. For the purpose of this report days were adjusted based on rules for calculating LOS for ICU and Vent days(Each partial or full day is measured as one calendar day). Patients admitted and discharged on same day count as 0.

Days in Hospital	Number	Percent	
0	967	13.88%	
1 - 5	3436	49.31%	
6 - 10	935	13.42%	
11 - 20	637	9.14%	
21 - 30	205	2.94%	
31 - 40	88	1.26%	
> 40	61	0.88%	
NK/NR	639	9.17%	
Total	6968	100.00%	

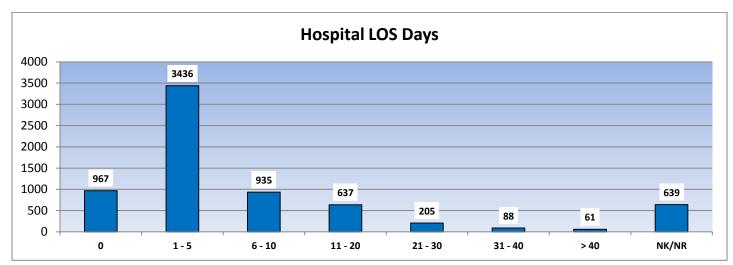


Figure 14: Intensive Care Unit (ICU) Length of Stay



The intensive care unit (ICU) length of stay (LOS) is the cumulative amout of time spent in the ICU. Each partial or full day is measured as one calendar day.

Days in ICU	Number	Percent
0	4576	65.67%
1 - 5	1707	24.50%
6 - 10	311	4.46%
11 - 20	245	3.52%
21 - 30	88	1.26%
31 - 40	29	0.42%
> 40	12	0.17%
Grand Total	6968	100.00%

Figure 15: Ventilator Days

The ventilator days are calculated by cumulative time patient spends on a ventilator. Each partial or full day is measured as one calendar day. Excludes mechanical ventilation times associated with OR procedures and non-invasive ventilatory support (CPAP or BIPAP).

Vent Days	Number	Percent		
0	6623	95.05%		
1 - 5	222	3.19%		
6 - 10	51	0.73%		
11 - 20	52	0.75%		
21 - 30	15	0.22%		
> 30	5	0.07%		
Grand Total	6968	100.00%		

Figure 16: ED/Acute Care Dispositions



The ED/Acute Care Disposition is the location of the patient after treatment in the emergency department. Over 45% of trauma patients were admitted to the floor after leaving the ED, over 28% admitted to ICU and over 14 % went direct to OR.

ED/Acute Care Disposition	Number	Percent	National Percent
Floor bed (general admission, non-specialty unit bed)	3163	45.39%	42.46%
Intensive Care Unit	1988	28.53%	19.12%
Operating room	994	14.27%	11.71%
Home without services	458	6.57%	9.09%
Observation unit (unit that provides < 24 hour stays)	167	2.40%	2.29%
Died	134	1.92%	1.07%
Transferred to another hospital	27	0.39%	3.98%
Telemetry/step-down unit (less acuity than ICU)	24	0.34%	6.67%
Other (jail, institution, etc)	5	0.07%	0.40%
Not Applicable	4	0.06%	2.06%
NK/NR	3	0.04%	0.74%
AMA	1	0.01%	0.26%
Home with services	0	0.00%	0.16%
Total	6968	100.00%	100.00%

Figure 17: Hospital Discharge Disposition

Patients reported by disposition upon discharge from the hospital. *

Hospital Disposition	Number	Percent	National Percent
Home with no home services	4466	64.09%	55.01%
Rehabilitation or long-term facility	631	9.06%	7.60%
Not Applicable	625	8.97%	14.95%
Skilled Nursing Facility	355	5.09%	10.51%
Expired	271	3.89%	2.67%
Intermediate Care Facility	219	3.14%	1.99%
Home with Home Health Services	215	3.09%	4.61%
Acute care hospital	96	1.38%	1.48%
AMA	55	0.79%	0.70%
Hospice care	33	0.47%	0.42%
Not Known	2	0.03%	0.07%
Total	6968	100.00%	100.00%

Figure 18: Hospital Admission Times

^{*}Data of patient dispositions upon discharge from hospital. **Not Applicable** refers to patients who expired in ED, discharged from the ED, discharged to jail/institution, or transferred to other hospital

The hour of admission of reporting hospitals peaks at 8:00 PM and is at its minimal during 6:00 AM.

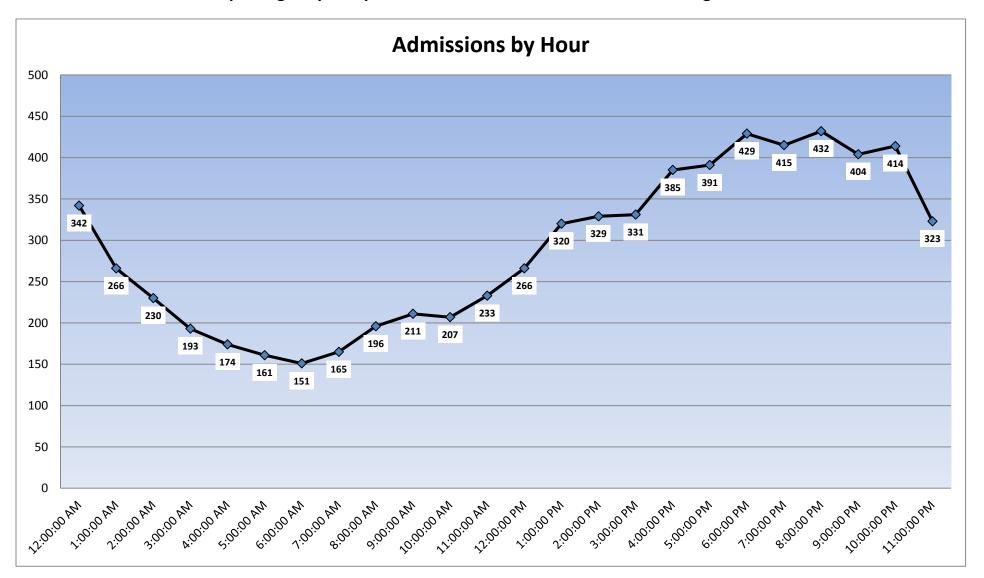


Figure 19: Hospital Admissions by Trauma Type



Patients reported by hour of admission grouped by the trauma type. Blunt trauma peaks at 6:00 PM while penetrating peaks at 10:00 PM.

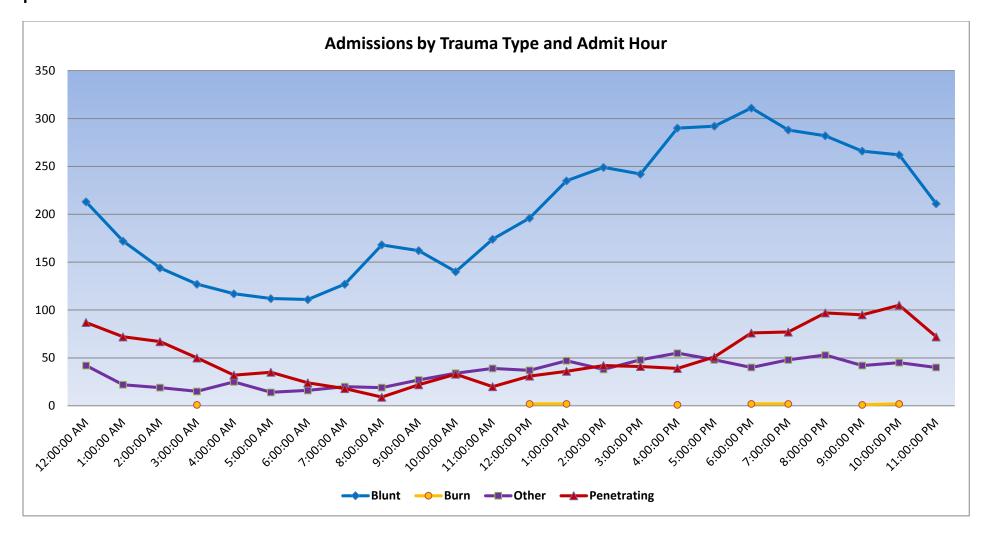


Figure 20: Primary Method of Payment



Primary source of payment for hospital care. Other refers to all patients whose primary payment source does not meet any other listed category (examples: jail, Medicaid applied for, or free care)

Primary Payment Source	Number	Percent	National Number	National Percent
Self-Pay	1905	27.34	124182	14.90
Medicare	1448	20.78	189370	22.73
Medicaid	1159	16.63	103825	12.46
Private/Commercial Insurance	967	13.88	169262	20.31
Blue Cross/Blue Shield	684	9.82	52310	6.28
Other	429	6.16	29850	3.58
Worker's compensation	161	2.31	22857	2.74
Not Billed (for any reason)	107	1.54	4906	0.59
Other Government	68	0.98	26228	3.15
Not Known	38	0.55	47294	5.68
No Fault Automobile	2	0.03	52866	6.34
Not Applicable	0	0	10361	1.24
Total	6968	100.00	833311	100.00

Figure 21: Paid / Not Paid Annual Comparison

Paid compared to not paid for years 2011, 2012, and 2013. Not paid is inclusive of patients primary payment listed as Other, Not Known, Self-Pay, or Not Billed. Self-Pay is pay that is not otherwise paid by insurance/Medicaid/Medicare etc. Other is just a catch-all for anything that doesn't fit in the other categories.

Paid/Not Paid	2011	Percent	2012	Percent	2013	Percent
Paid	3841	56%	4173	62%	4489	64%
Not Paid	3074	44%	2535	38%	2479	36%
Total	6915	100%	6708	100%	6968	100%

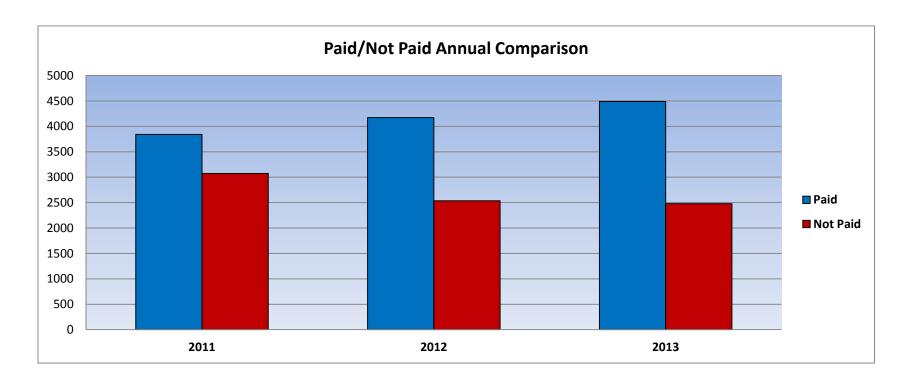


Figure 22: Primary Method of Payment by Trauma Type

Paid compared to not paid by trauma type.

Paid/Not Paid	Blunt	Percent	Penetrating	Percent	Burn	Percent	Other	Percent
Paid	3320	67.88%	536	43.54%	11	84.62%	622	74.67%
Not Paid	1571	32.12%	695	56.46%	2	15.38%	211	25.33%
Total	4891	100%	1231	100%	13	100%	833	100%

