



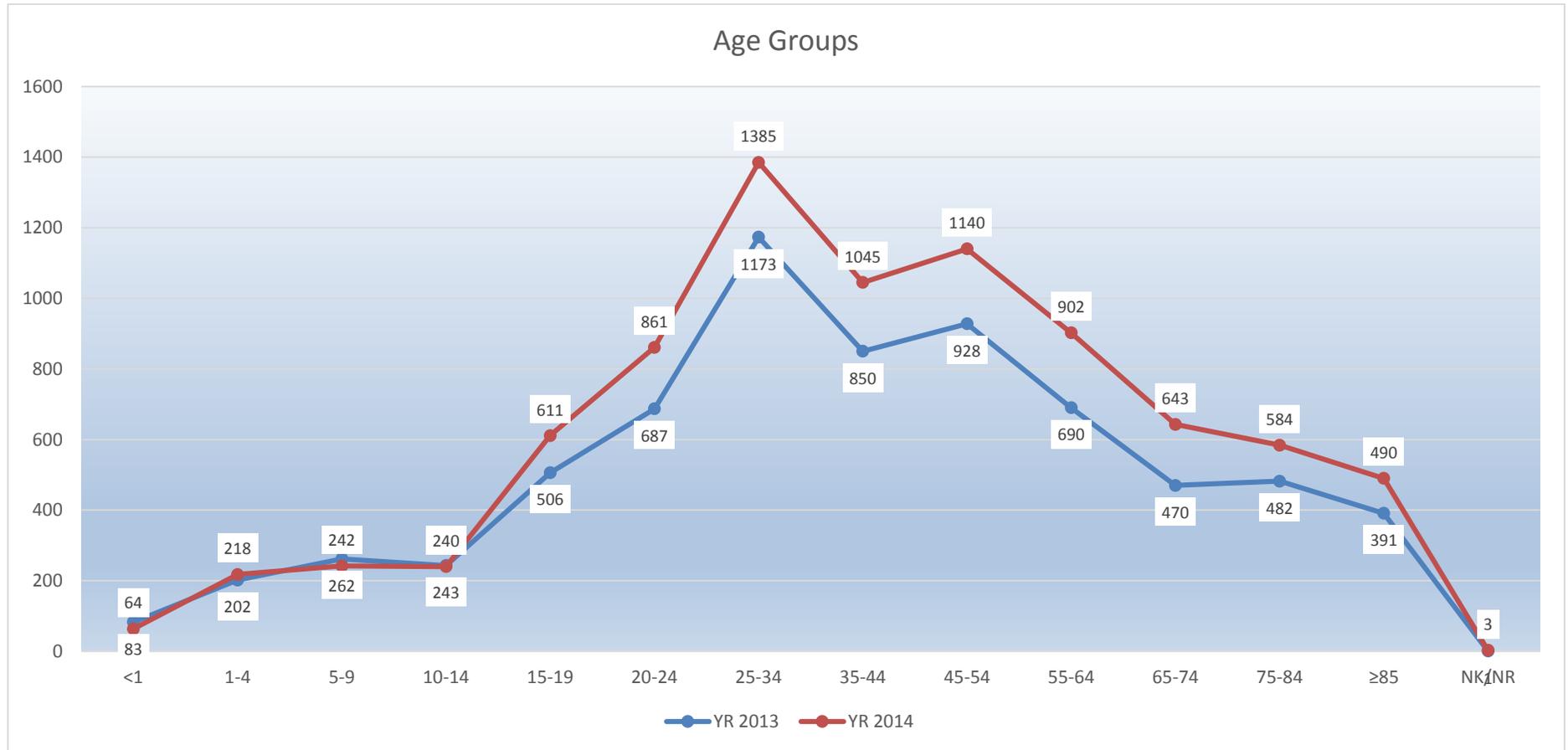
# State Trauma Registry Reports

Chris Hector

2014 Data compiled from current patient records reported from six 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.



\*\*National data obtained from National Trauma Data Bank 2014 Annual Report

## Figure 2: 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	Total	Percent
Motor vehicle traffic accidents	2661	31.58%
Accidental falls	2572	30.52%
Homicide and injury purposely inflicted by other persons	1614	19.15%
Other accidents	776	9.21%
Motor vehicle non-traffic accidents	312	3.70%
Suicide and self-inflicted injury	138	1.64%
Other road vehicle accidents	115	1.36%
Accidents due to natural and environmental factors	86	1.02%
Injury undetermined whether accidentally or purposely inflicted	41	0.49%
Water transport accidents	33	0.39%
Legal intervention	29	0.34%
Accidents caused by fire and flames	16	0.19%
Railway accidents	14	0.17%
Air and space transport accidents	8	0.09%
Accidents caused by submersion, suffocation, and foreign bodies	5	0.06%
Vehicle accidents not elsewhere classifiable	3	0.04%
Accidental poisoning by drugs, medicinal substances, and biologic	2	0.02%
Surgical and medical procedures as the cause of abnormal reaction	1	0.01%
<b>Total</b>	<b>8426</b>	<b>100.00</b>

## Figure 3: Cause of Injury by Survivability

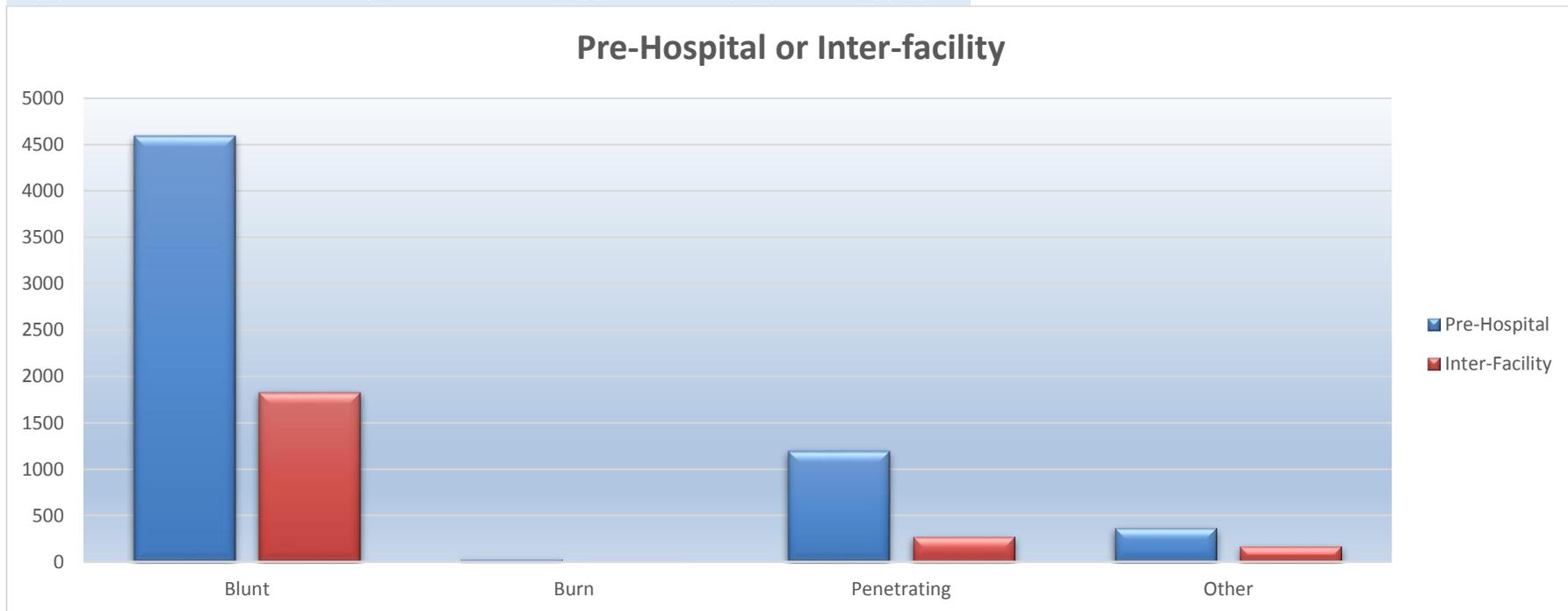
A total of 5.66% of all trauma registry patients expired with 94.34% surviving.

Cause of Injury	Died	Lived	Total
Motor vehicle traffic accidents	170	2491	2661
Accidental falls	110	2462	2572
Homicide and injury purposely inflicted by other persons	109	1505	1614
Suicide and self-inflicted injury	38	100	138
Other accidents	25	751	776
Injury undetermined whether accidentally or purposely inflicted	10	31	41
Water transport accidents	4	29	33
Motor vehicle non-traffic accidents	4	308	312
Other road vehicle accidents	3	112	115
Accidents caused by fire and flames	1	15	16
Accidents caused by submersion, suffocation, and foreign bodies	1	4	5
Accidents due to natural and environmental factors	1	85	86
Legal intervention	1	28	29
Vehicle accidents not elsewhere classifiable	0	3	3
Railway accidents	0	14	14
Accidental poisoning by drugs, medicinal substances, and biologic	0	2	2
Air and space transport accidents	0	8	8
Surgical and medical procedures as the cause of abnormal reaction	0	1	1
<b>Total</b>	<b>477</b>	<b>7949</b>	<b>8426</b>

## Figure 4: 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.

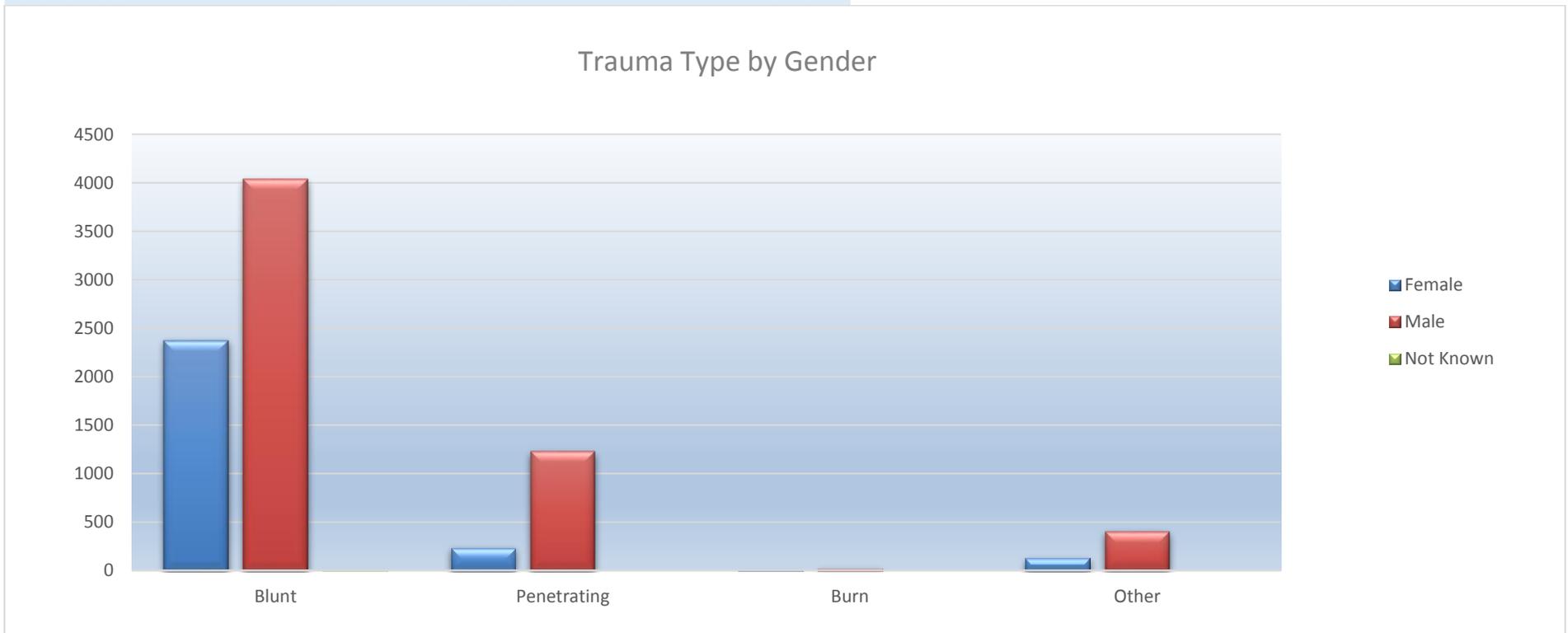
Trauma Type	Pre-Hospital	Inter-Facility	Total	Percent
Blunt	4590	1824	6414	76.12%
Burn	24	3	27	0.32%
Penetrating	1195	265	1460	6.23%
Other	361	164	525	17.33%
<b>Total</b>	<b>6170</b>	<b>2256</b>	<b>8426</b>	<b>100.00%</b>



## Figure 5: Trauma Type by Gender

Patients reported by gender and grouped by specific trauma type.

Trauma Type	Female	Male	Not Known	Total
Blunt	2374	4036	4	6414
Penetrating	232	1228	0	1460
Burn	7	20	0	27
Other	124	401	0	525
<b>Grand Total</b>	<b>2737</b>	<b>5685</b>	<b>4</b>	<b>8426</b>



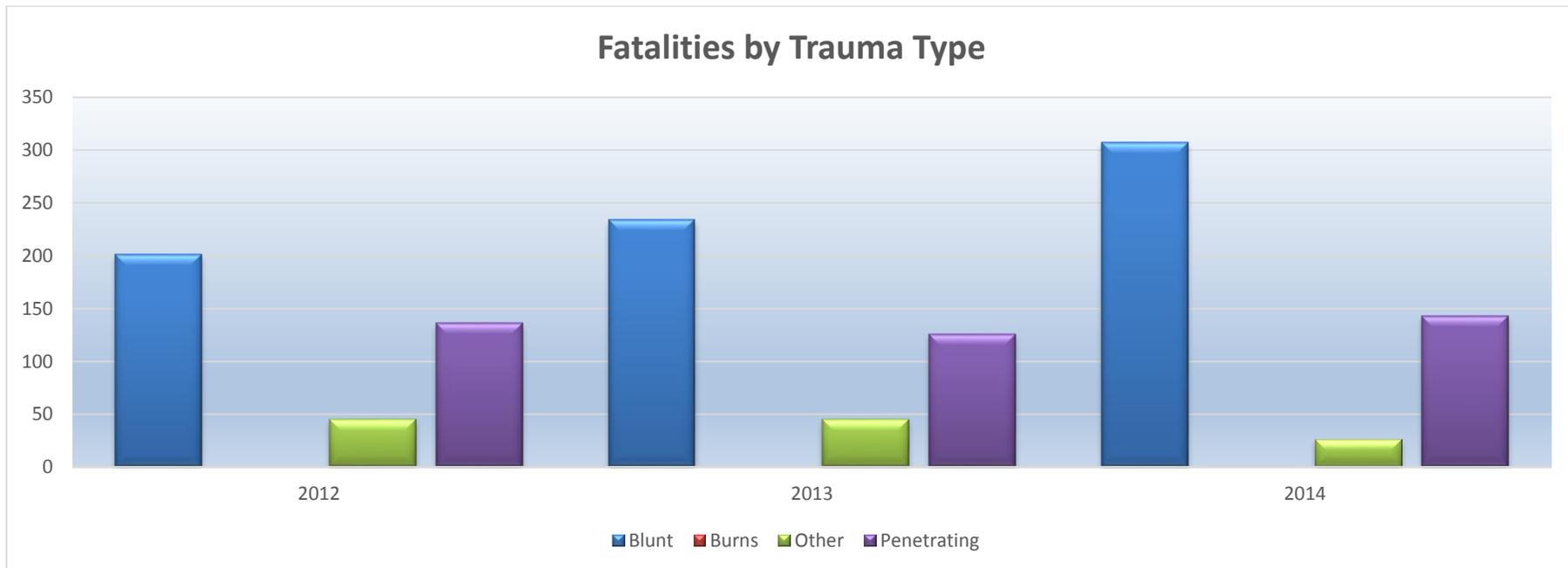
\***Other** includes cases where Injury E-Code is suicide, undetermined, unspecified falls, strenuous movement, animal bites

## \*Figure 6: 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	76	231	307
Burn	1	0	1
Other	7	19	26
Penetrating	62	81	143
<b>Total</b>	<b>146</b>	<b>331</b>	<b>477</b>

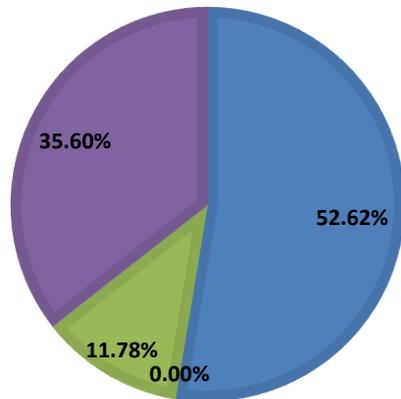
Year	Deaths	Total Patients	Death Percent
2012	382	6708	5.69%
2013	405	6968	5.81%
2014	477	8426	5.66%
<b>Total</b>	<b>1264</b>	<b>22102</b>	<b>5.72%</b>



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

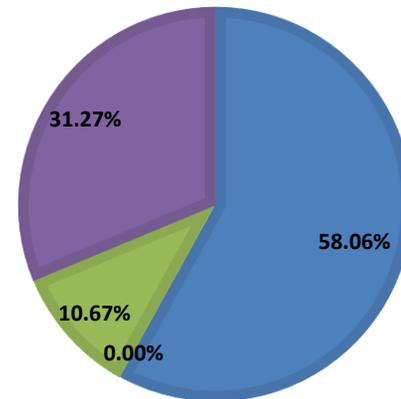
### 2012

■ Blunt ■ Burn ■ Other ■ Penetrating



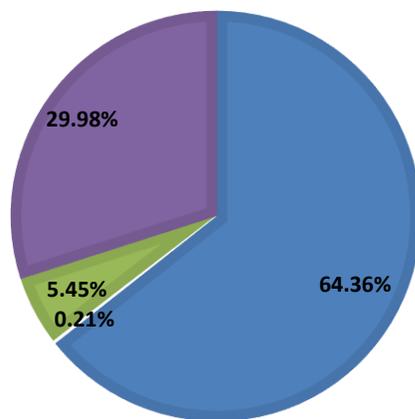
### 2013

■ Blunt ■ Burn ■ Other ■ Penetrating



### 2014

■ Blunt ■ Burn ■ Other ■ Penetrating

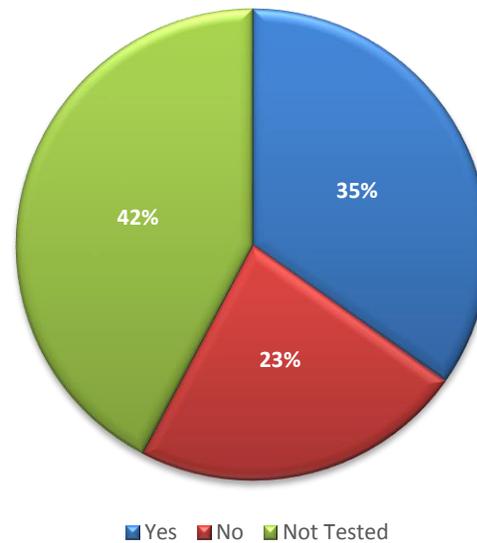


## Figure 7: Blood Alcohol Testing

Patients reported by based on blood alcohol testing.

Alcohol Test Result	Total	Percent	National Percent
No(confirmed by test)	1246	14.79%	24.39%
No(not tested)	3991	47.37%	52.15%
Yes(confirmed by test [beyond legal limits])	773	9.17%	9.81%
Yes(confirmed by test [trace levels])	1707	20.26%	3.76%
Not Applicable	659	7.82%	2.98%
Not Known	50	0.59%	6.89%
<b>Total</b>	<b>8426</b>	<b>100.00%</b>	<b>100.00%</b>

Detected Alcohol Use for Motor Vehicle Crashes  
Total = 2973

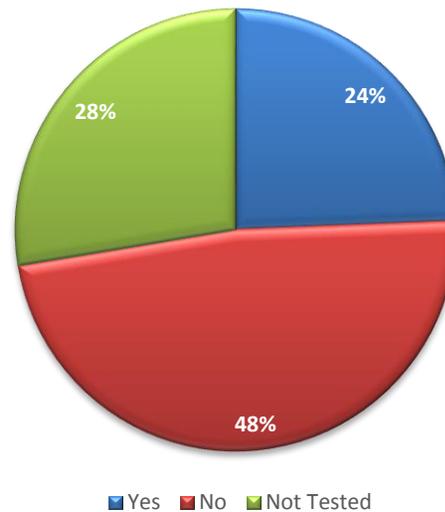


## Figure 8: Drug Screening

Patients reported by based on drug screening.

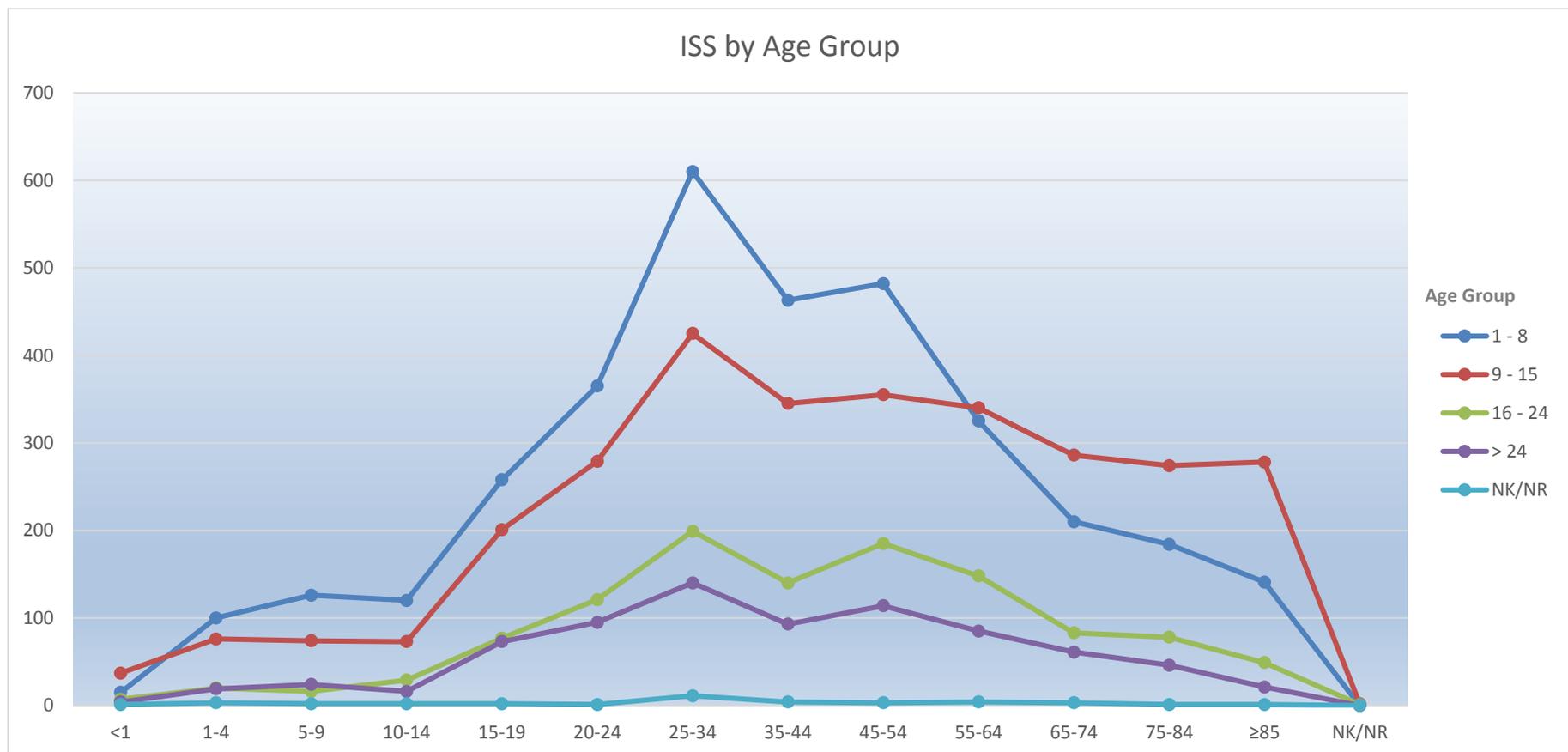
Drug Test Result	Total	Percent	National Percent
No (confirmed by test)	1152	13.67%	11.02%
Not Performed	2735	32.46%	62.54%
Yes (confirmed by test [illegal use drug])	1062	12.60%	7.43%
Yes (confirmed by test [illegal and prescription drug])	82	0.97%	NR
Yes (confirmed by test [prescription drug])	239	2.84%	3.83%
Not Applicable	664	7.88%	5.03%
Not Known	2492	29.58%	10.16%
<b>Total</b>	<b>8426</b>	<b>100.00%</b>	<b>100.00%</b>

Detected Drug Use for Motor Vehicle Crashes  
Total = 2973



## Figure 9: 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.

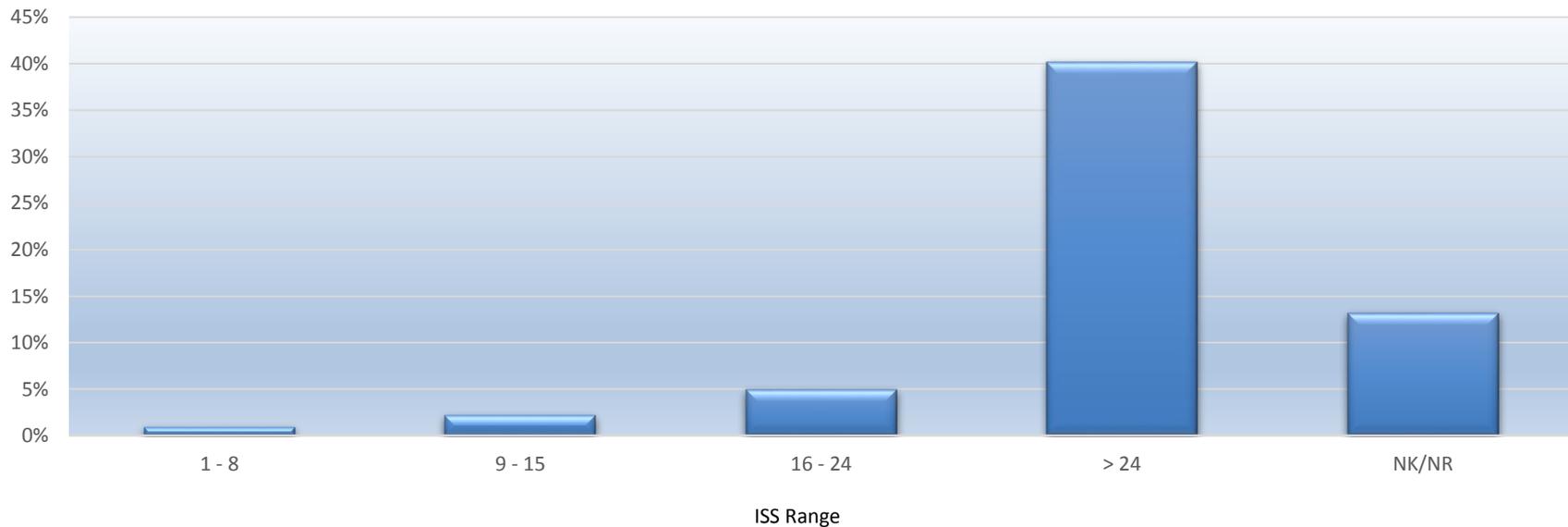


## Figure 10: Fatalities by ISS Score

### Patient fatalities reported by ISS score

ISS	Number	Percent	Deaths	Case Fatality Rate
1 - 8	3399	40.34%	31	0.91%
9 - 15	3045	36.14%	66	2.17%
16 - 24	1153	13.68%	57	4.94%
> 24	791	9.39%	318	40.20%
NK/NR	38	0.45%	5	13.16%
<b>Grand Total</b>	<b>8426</b>	<b>100.00%</b>	<b>477</b>	<b>5.66%</b>

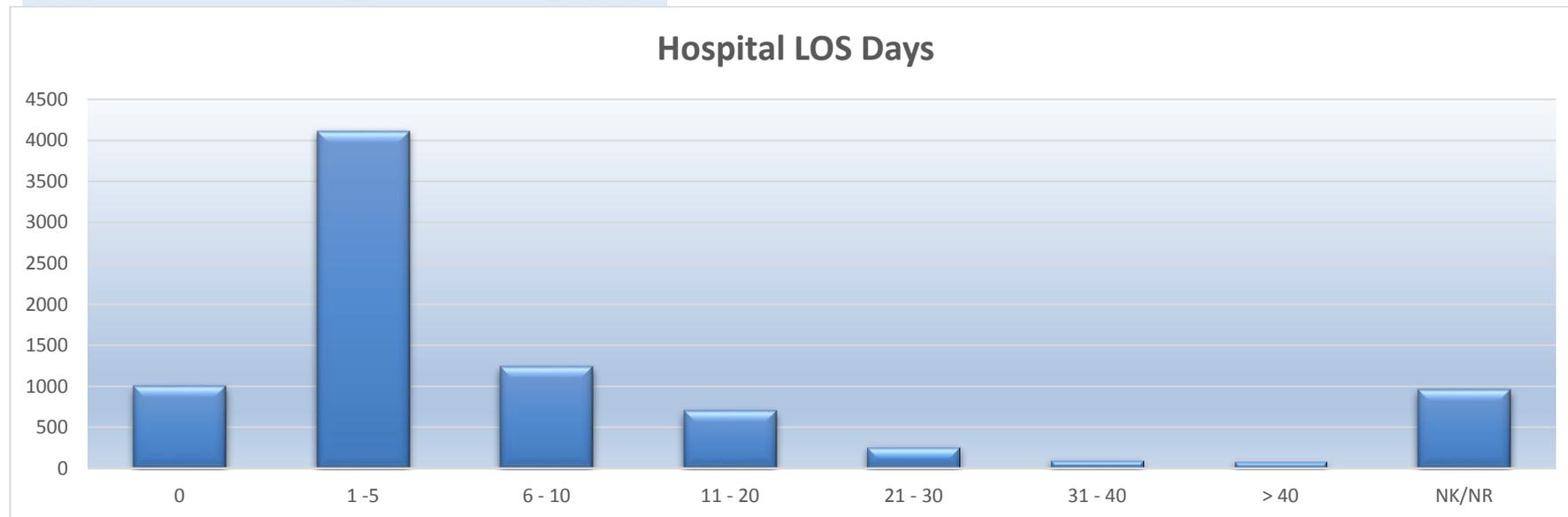
Case Fatality Rate



## Figure 11: 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.

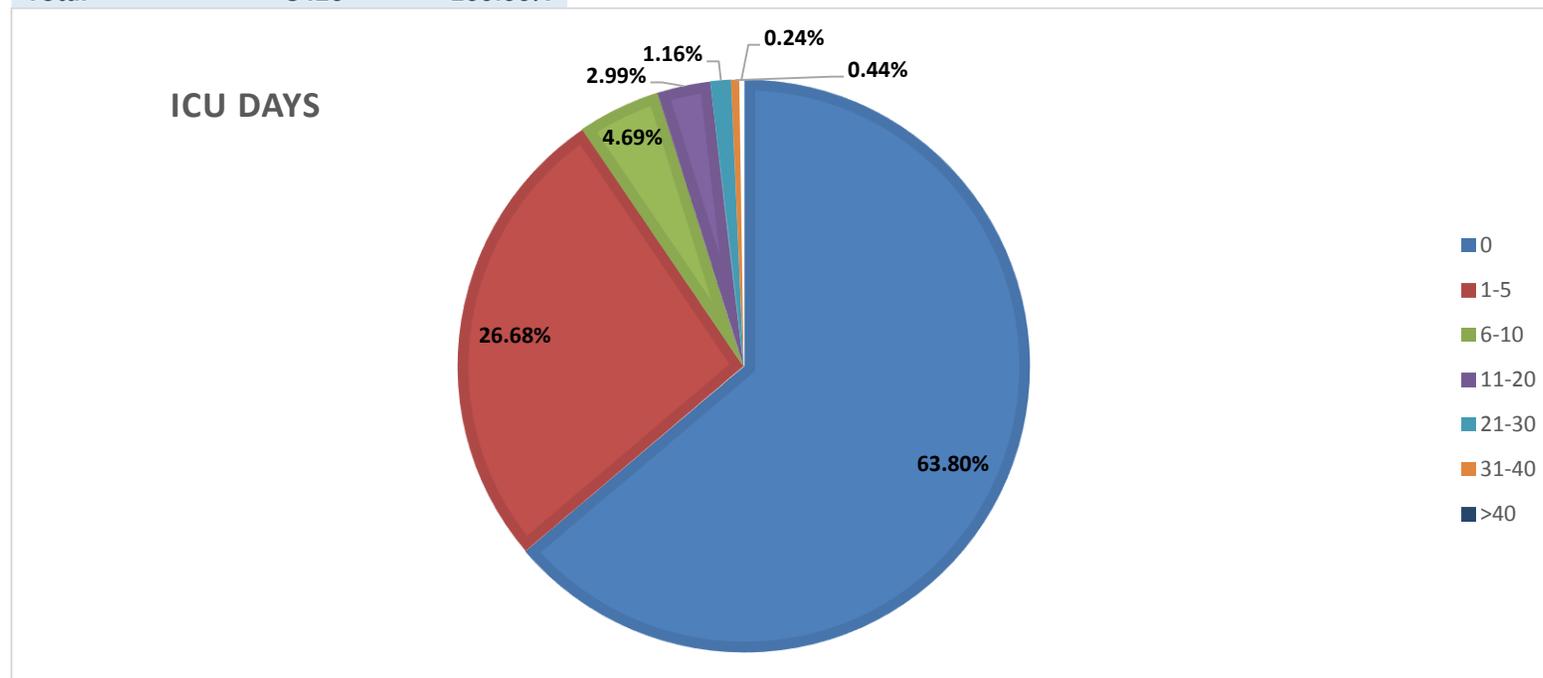
Days	Number	Percent
0	1000	11.87%
1 -5	4111	48.79%
6 - 10	1236	14.67%
11 - 20	701	8.32%
21 - 30	253	3.00%
31 - 40	94	1.12%
> 40	75	0.89%
NK/NR	956	11.35%
<b>Total</b>	<b>8426</b>	<b>100.00%</b>



## Figure 12: Intensive Care Unit (ICU) Length of Stay

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

ICU Days	Total	Percent
0	5376	63.80%
1-5	2248	26.68%
6-10	395	4.69%
11-20	252	2.99%
21-30	98	1.16%
31-40	37	0.44%
>40	20	0.24%
<b>Total</b>	<b>8426</b>	<b>100.00%</b>



## Figure 13: ED/Acute Care Dispositions

The ED/Acute Care Disposition is the location of the patient after treatment in the emergency department. Over 42% of trauma patients were admitted to the floor after leaving the ED, over 29% admitted to ICU and over 12% went direct to OR.

ED/Acute Care Disposition	Number	Percent
Floor bed (general admission, non-specialty unit bed)	3595	42.67%
Intensive Care Unit	2447	29.04%
Operating room	1056	12.53%
Home without services	627	7.44%
Observation unit (unit that provides < 24 hour stays)	392	4.65%
Deceased/Expired	146	1.73%
Transferred to another hospital	69	0.82%
Telemetry/step-down unit (less acuity than ICU)	65	0.77%
Other (jail, institution, etc)	10	0.12%
Not Applicable	7	0.08%
Home with services	3	0.04%
AMA	3	0.04%
Not Known	3	0.04%
Not Recorded	3	0.04%
<b>Total</b>	<b>8426</b>	<b>100.00%</b>

## Figure 14: Hospital Discharge Disposition

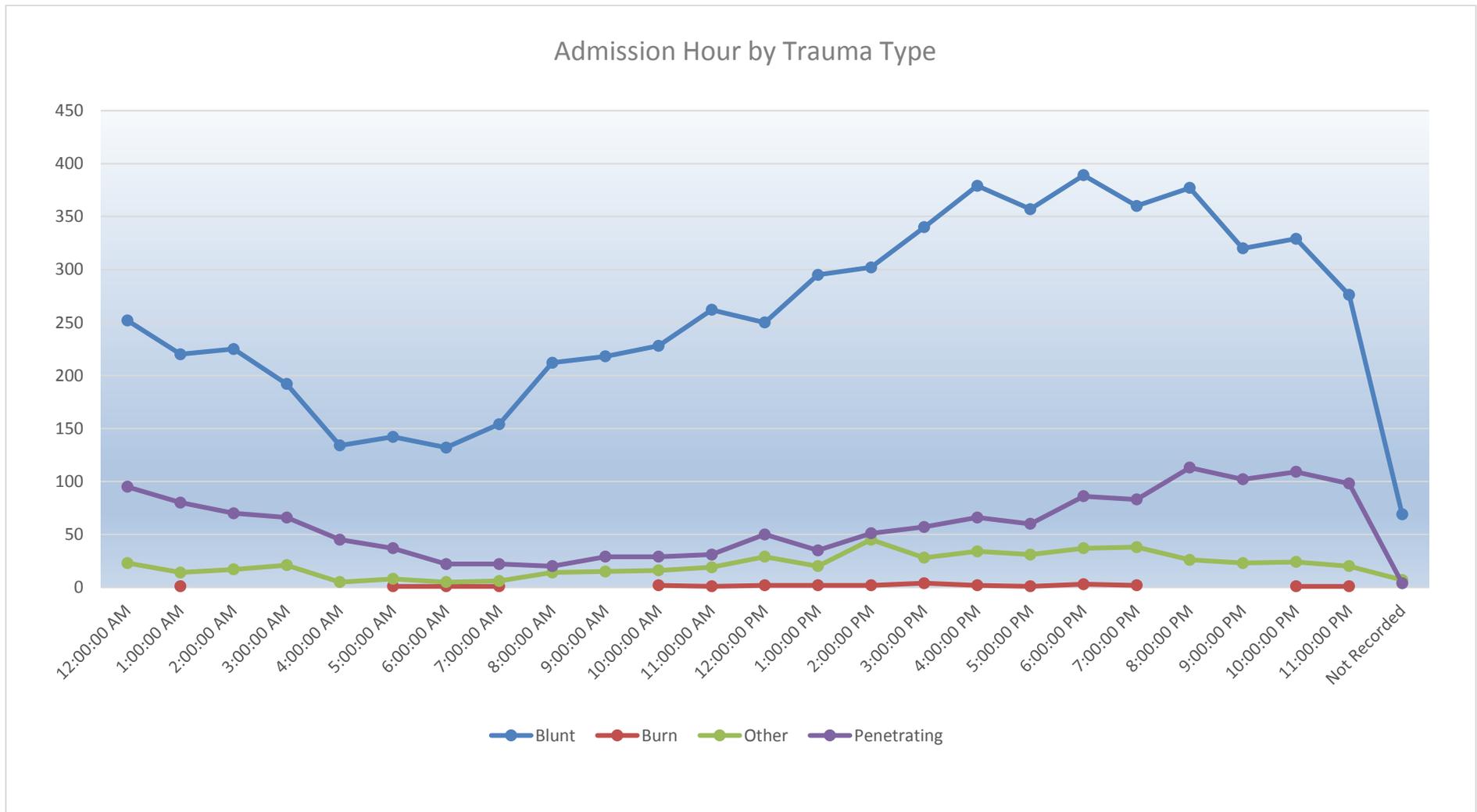
Patients reported by disposition upon discharge from the hospital. \*

Hospital Disposition	Number	Percent
Discharged to home or self-care (routine discharge)	5129	60.87%
Not Applicable	858	10.18%
inpatient rehab or designated unit	682	8.09%
Skilled Nursing Facility	504	5.98%
Deceased/Expired	331	3.93%
Intermediate Care Facility	303	3.60%
Home with Home Health Services	269	3.19%
AMA	76	0.90%
Acute care hospital	71	0.84%
Correctional Facility or in Law Enforcement Custody	64	0.76%
Long Term Care Hospital (LTCH)	60	0.71%
Hospice care	39	0.46%
Psych Visit	22	0.26%
Another type of institution not defined elsewhere	10	0.12%
Not Known	8	0.09%
<b>Total</b>	<b>8426</b>	<b>100.00%</b>

\*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

## Figure 15: 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 8:00 PM.



\*\*National data obtained from National Trauma Data Bank 2014 Annual Report

## Figure 16: Paid / Not Paid Annual Comparison

Paid compared to not paid for years 2011, 2012, 2013 and 2014. 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	2014	Percent	National Percent
Paid	3841	56%	4173	62%	4489	64%	5402	64%	74.87%
Not Paid	3074	44%	2535	38%	2479	36%	3026	36%	25.13%
<b>Total</b>	<b>6915</b>	<b>100%</b>	<b>6708</b>	<b>100%</b>	<b>6968</b>	<b>100%</b>	<b>8428</b>	<b>100%</b>	<b>100.00%</b>

