



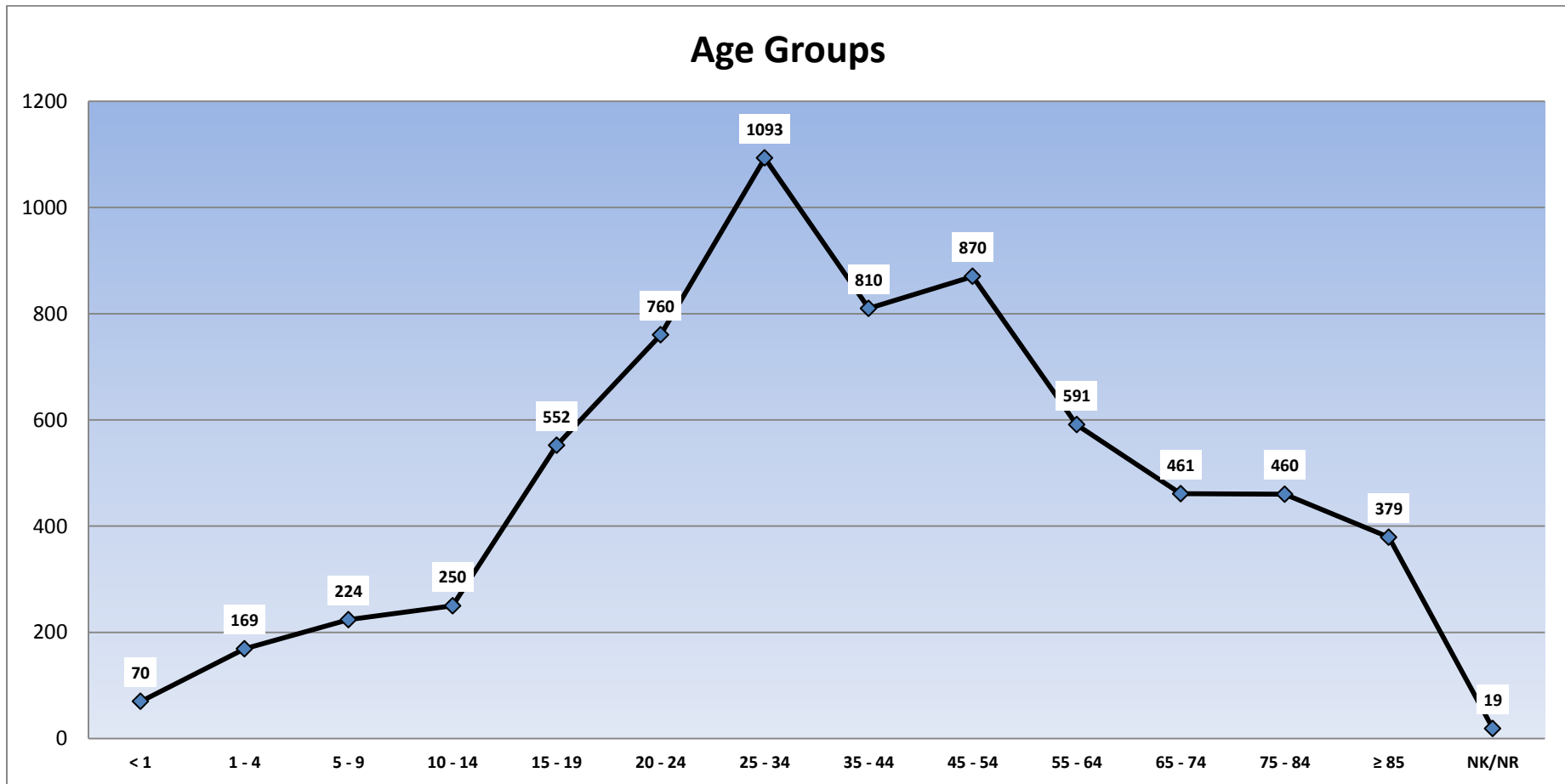
# State Trauma Registry Reports

Chris Hector

2012 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

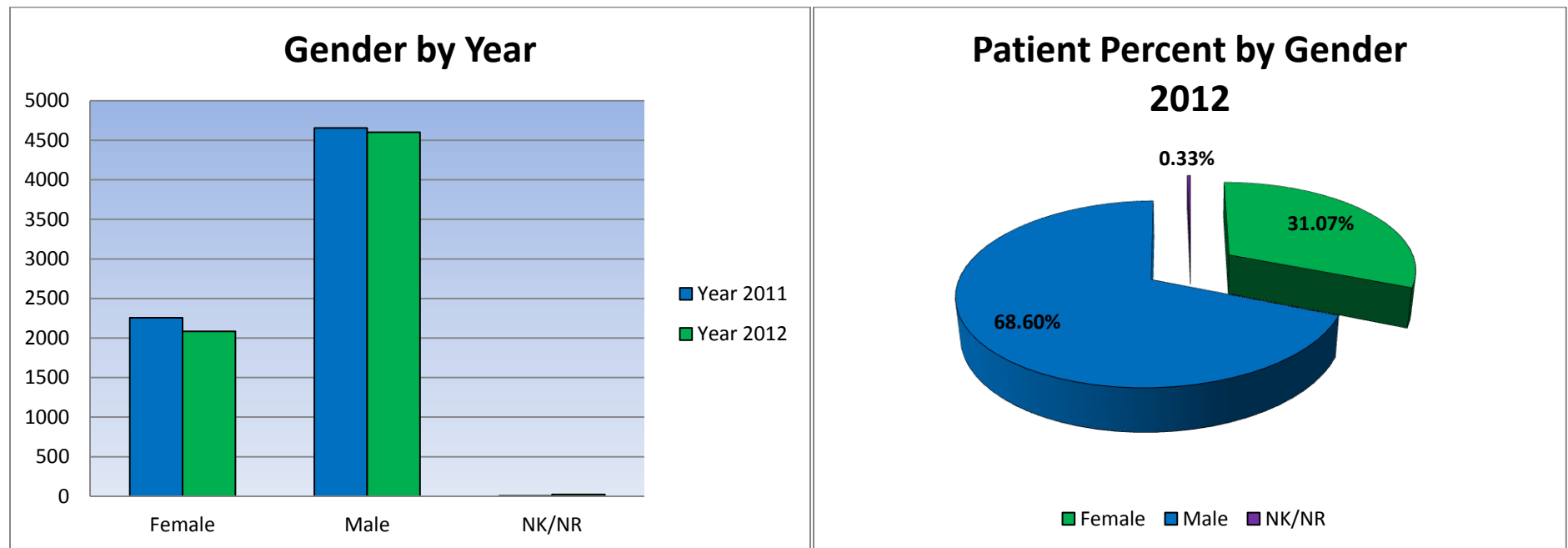
Patients reported by age group. Highest patient population lies in the age range 25 – 34 years old.



## Figure 2: Gender

Patients reported by gender. Highest population was male at 68.6%

Gender	2011	2012
Female	2256	2084
Male	4654	4602
NK/NR	5	22
<b>Total</b>	<b>6915</b>	<b>6708</b>



## 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 of Patients	Percent
Accidental falls	1958	29.19%
Accidental poisoning by drugs, medicinal substances, and biologic	1	0.01%
Accidents caused by fire and flames	11	0.16%
Accidents caused by submersion, suffocation, and foreign bodies	7	0.10%
Accidents due to natural and environmental factors	73	1.09%
Air and space transport accidents	3	0.04%
Homicide and injury purposely inflicted by other persons	1369	20.41%
Injury undetermined whether accidentally or purposely inflicted	30	0.45%
Legal intervention	26	0.39%
Motor vehicle non-traffic accidents	256	3.82%
Motor vehicle traffic accidents	2134	31.81%
Other accidents	604	9.00%
Other road vehicle accidents	108	1.61%
Railway accidents	2	0.03%
Suicide and self-inflicted injury	96	1.43%
Water transport accidents	30	0.45%
<b>Total</b>	<b>6708</b>	<b>100.00%</b>

## Figure 4: Cause of Injury by Survivability

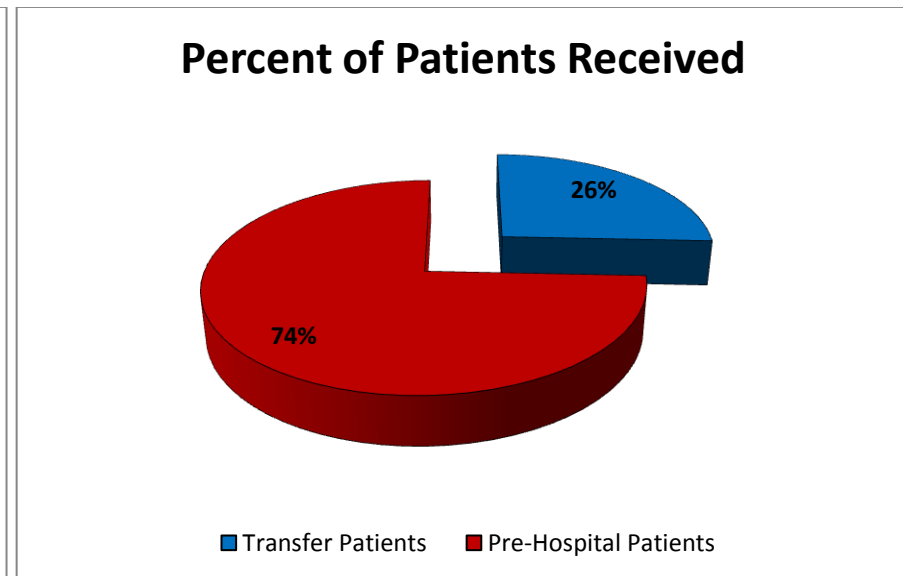
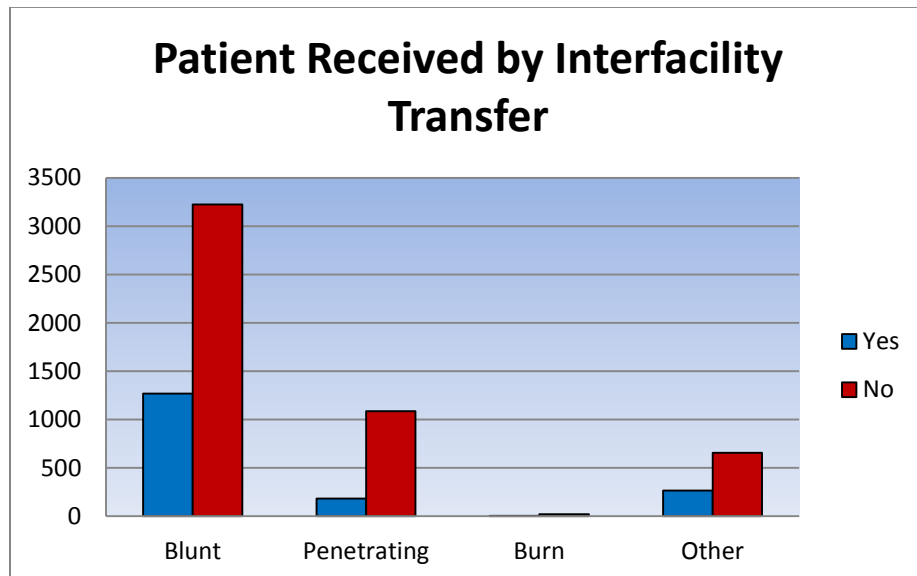
**Only 5.69% of all trauma registry patients expired with 94.23% surviving and 0.08% could not be determined.**

Cause of Injury	Died	Lived	Unknown	Total
Accidental falls	119	1839	0	1958
Accidental poisoning by drugs, medicinal substances, and biologic	0	1	0	1
Accidents caused by fire and flames	1	10	0	11
Accidents caused by submersion, suffocation, and foreign bodies	0	7	0	7
Accidents due to natural and environmental factors	5	68	0	73
Air and space transport accidents	0	3	0	3
Homicide and injury purposely inflicted by other persons	62	1305	2	1369
Injury undetermined whether accidentally or purposely inflicted	1	29	0	30
Legal intervention	3	23	0	26
Motor vehicle non-traffic accidents	16	240	0	256
Motor vehicle traffic accidents	134	1997	3	2134
Other accidents	31	573	0	604
Other road vehicle accidents	5	103	0	108
Railway accidents	0	2	0	2
Suicide and self-inflicted injury	5	91	0	96
Water transport accidents	0	30	0	30
<b>Total</b>	<b>382</b>	<b>6321</b>	<b>5</b>	<b>6708</b>

## Figure 5: Inter-facility Transfer

Patients reported as 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	Yes	No	Total
Blunt	1270	3224	4494
Penetrating	183	1085	1268
Burn	3	21	24
Other	266	656	922
<b>Total</b>	<b>1722</b>	<b>4986</b>	<b>6708</b>

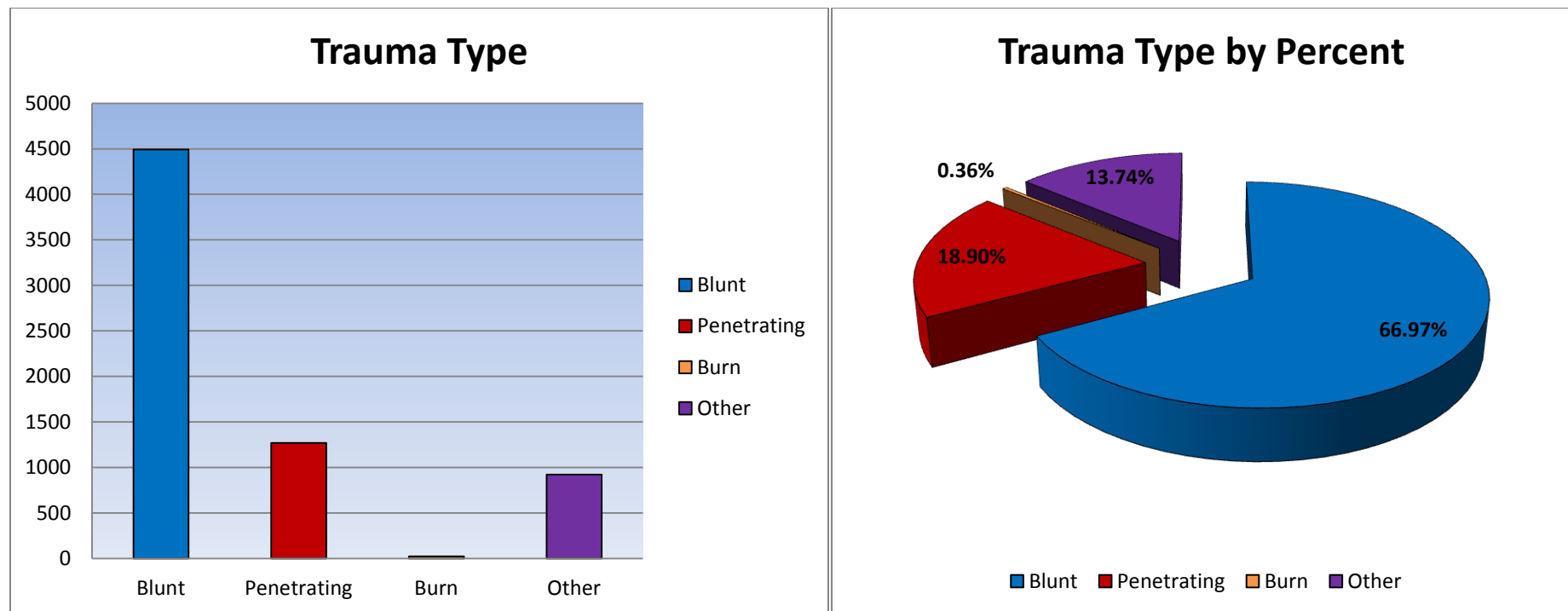


## Figure 6: Trauma Type and Percent of Total

Patients grouped by trauma type. Largest percent of patients suffered blunt trauma making 66.97%.

Trauma Type	Number of Patients	Percent
Blunt	4494	67.00%
Penetrating	1268	18.90%
Burn	24	0.36%
Other*	922	13.74%
<b>Total</b>	<b>6708</b>	<b>100.00%</b>

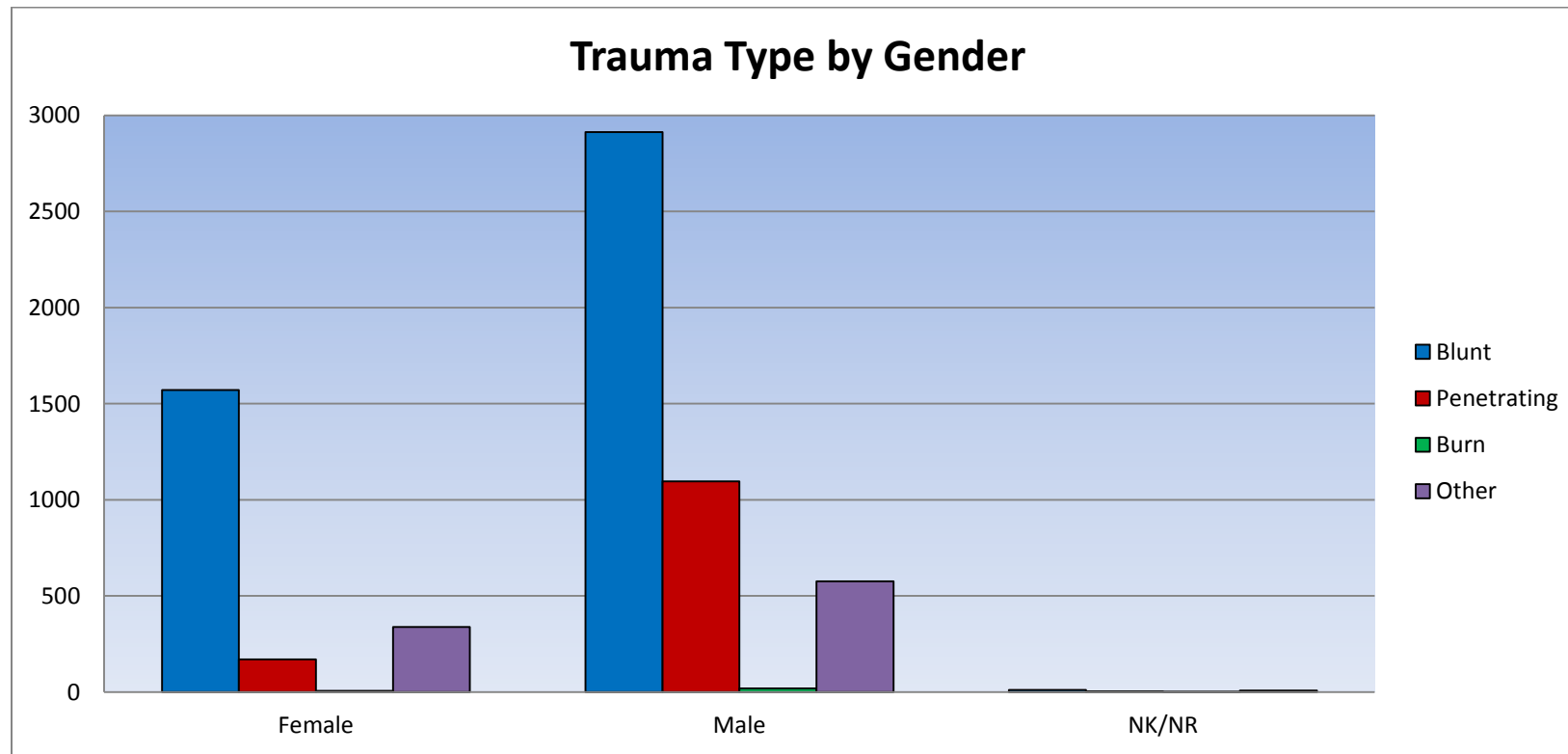
\***Other** includes cases where Injury E-Code is suicide, undetermined, unspecified falls, strenuous movement, animal bites



## Figure 7: Trauma Type by Gender

Patients reported by gender and grouped by specific trauma type.

Gender	Blunt	Penetrating	Burn	Other	Total
Female	1571	170	5	338	2084
Male	2912	1096	18	576	4602
NK/NR	11	2	1	8	22
<b>Total</b>	<b>4494</b>	<b>1268</b>	<b>24</b>	<b>922</b>	<b>6708</b>

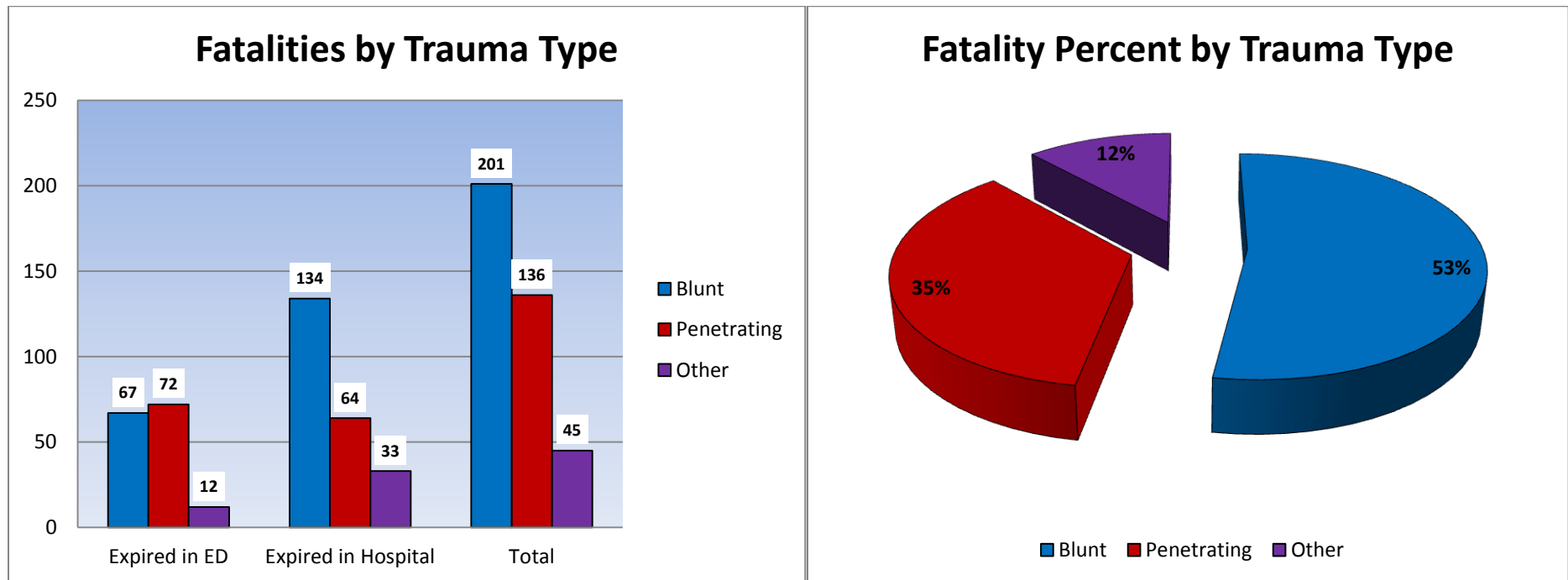




## Figure 8: Facility Traumatic Deaths by Trauma Type

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	67	134	201
Penetrating	72	64	136
Burn	0	0	0
Other*	12	33	45
<b>Total</b>	<b>151</b>	<b>231</b>	<b>382</b>

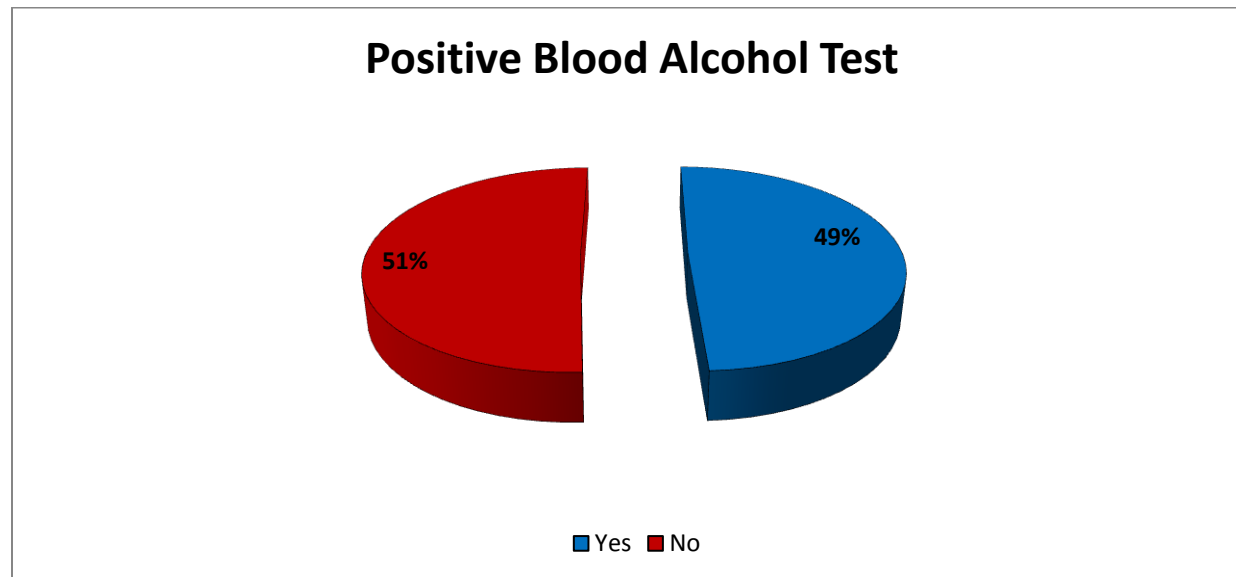


\***Other** includes cases where Injury E-Code is suicide, undetermined, unspecified falls, strenuous movement, animal bites

## Figure 9: Blood Alcohol Testing by Trauma Type

Patients reported by blood alcohol testing and grouped by specific trauma type.

Alcohol Test Result	Blunt	Penetrating	Burn	Other	Total
No(confirmed by test)	755	90	3	179	1027
No(not tested)	1596	407	15	333	2351
Not Applicable	3	0	0	1	4
Not Known	13	5	1	2	21
Yes(confirmed by test [beyond legal limits])	1489	186	1	306	1982
Yes(confirmed by test [trace levels])	638	580	4	101	1323
<b>Grand Total</b>	<b>4494</b>	<b>1268</b>	<b>24</b>	<b>922</b>	<b>6708</b>



\*Negative includes *No(confirmed by test), No(not tested), Not Known, and Not Applicable.*

## Figure 10: Drug Screen by Trauma Type

Patients reported by drug screen and grouped by specific trauma type.

Drug Screen Result	Blunt	Penetrating	Burn	Other	Total
No (confirmed by test)	876	90		131	1097
Not Applicable	3				3
Not Known	1429	861	18	390	2698
Not Performed	1171	119		278	1568
Yes (confirmed by test [illegal use drug])	611	155	2	44	812
Yes (confirmed by test [prescription drug])	404	43	4	79	530
<b>Total</b>	<b>4494</b>	<b>1268</b>	<b>24</b>	<b>922</b>	<b>6708</b>

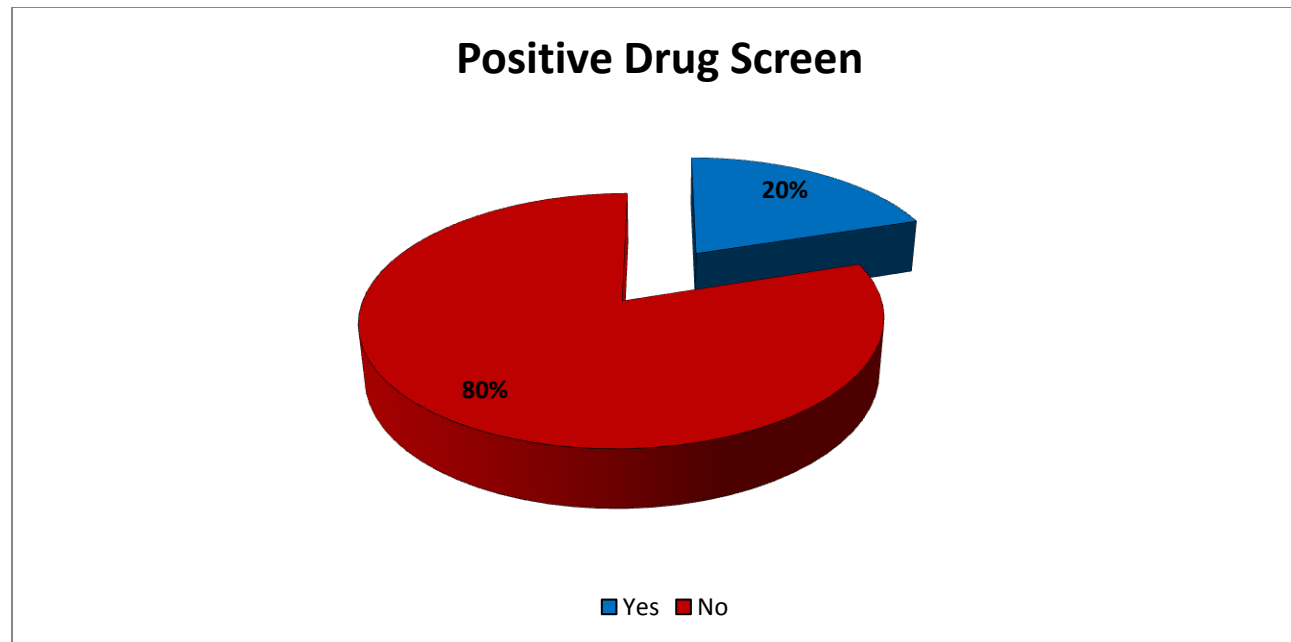
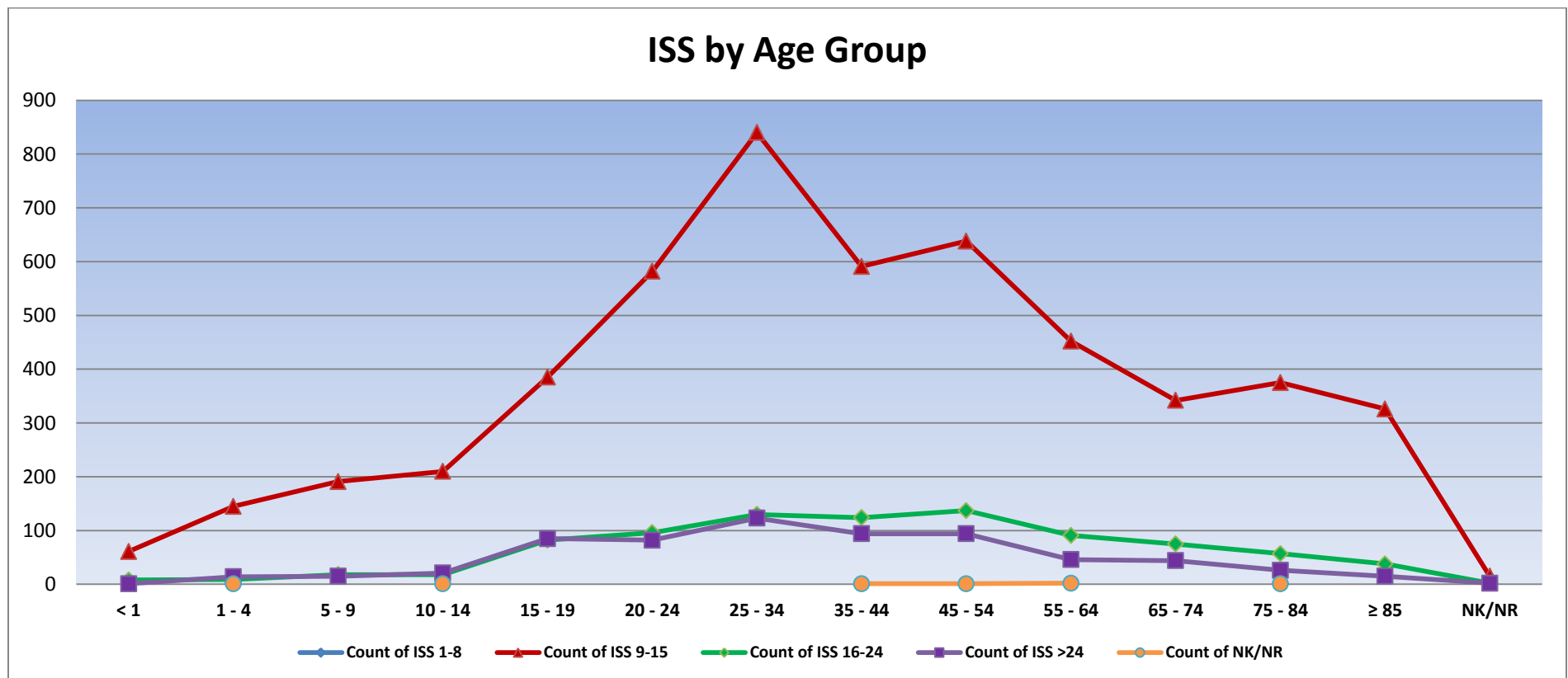


Figure 11: ISS by Age

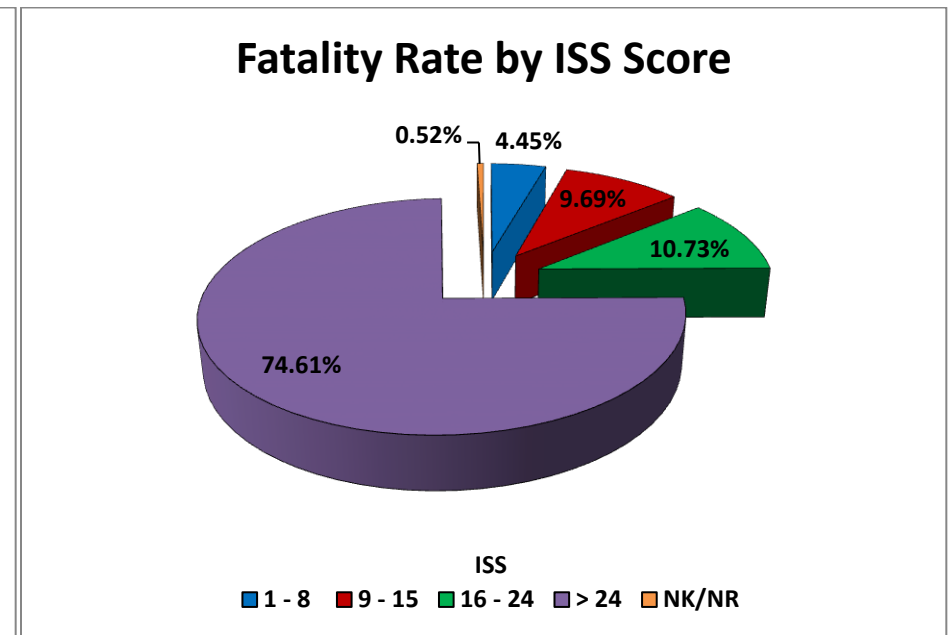
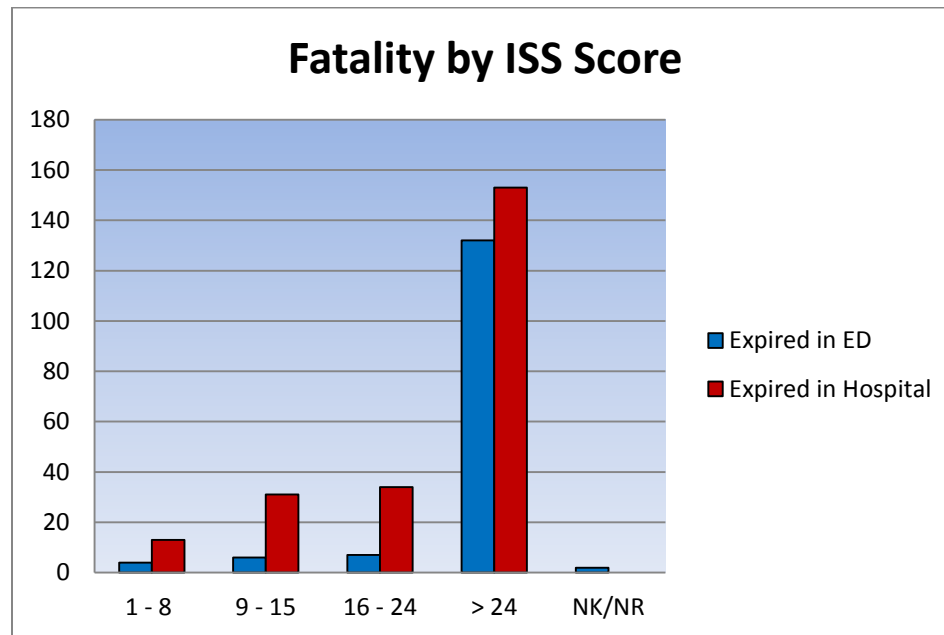
Patients reported by age group and ISS score. The Injury Severity Score (ISS) is an anatomical scoring system that provides an overall score for patients with multiple injuries. Each injury is assigned an AIS (Abbreviated Injury Scale) score and is allocated to one of six body regions (Head, Face, Chest, Abdomen, Extremities (including Pelvis), and External). One is minor while five is severe and six is considered a non-survivable injury. Only the highest AIS score in each body region is used. The 3 most severely injured body regions have their score squared and added together to produce the ISS score.

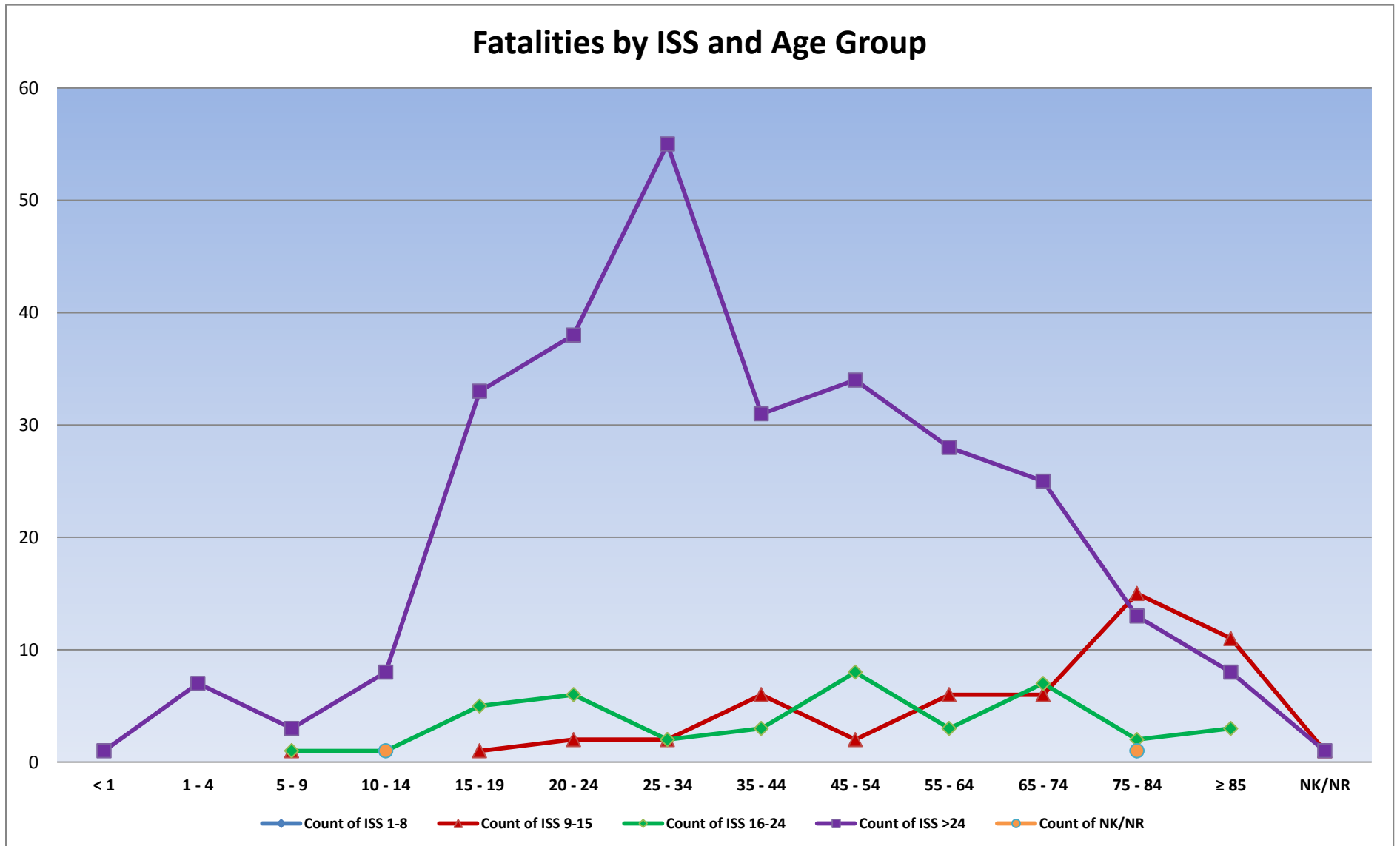


## Figure 12: Fatalities by ISS Score

### Patient fatalities reported by ISS score

ISS Range	1 - 8	9 - 15	16 - 24	> 24	NK/NR	Total
Expired in ED	4	6	7	132	2	151
Expired in Hospital	13	31	34	153	0	231
<b>Total</b>	<b>17</b>	<b>37</b>	<b>41</b>	<b>285</b>	<b>2</b>	<b>382</b>

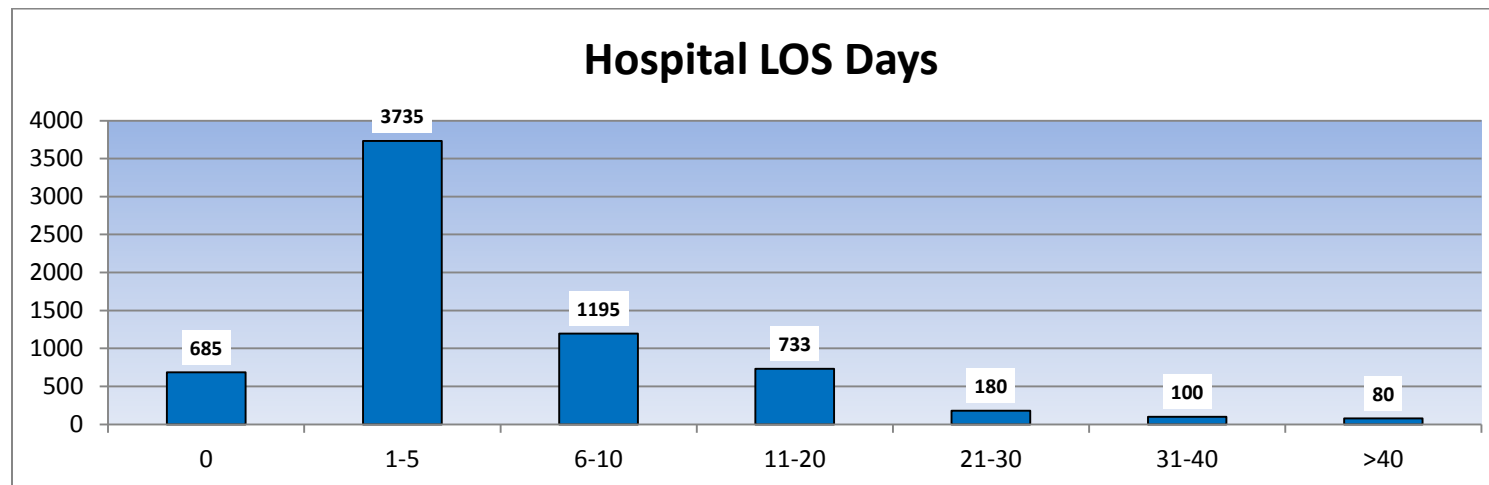




## Figure 13: Hospital Length of Stay

The hospital length of stay (LOS) is calculated by 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).

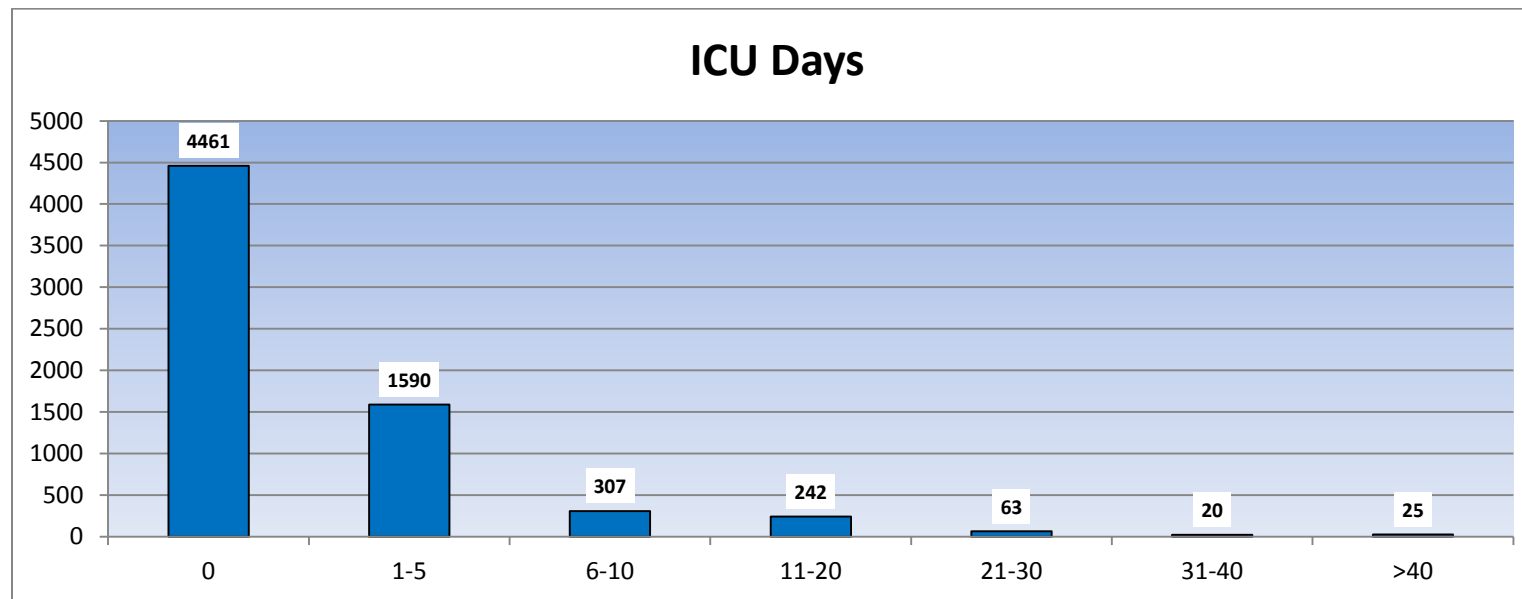
Days in Hospital	Number of Patients	Percentage
0	685	10.21%
1-5	3735	55.68%
6-10	1195	17.82%
11-20	733	10.93%
21-30	180	2.68%
31-40	100	1.49%
>40	80	1.19%
<b>Total</b>	<b>6708</b>	<b>100.00%</b>



## Figure 14: 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.

Days in ICU	Number of Patients	Percentage
0	4461	66.50%
1-5	1590	23.70%
6-10	307	4.58%
11-20	242	3.61%
21-30	63	0.94%
31-40	20	0.30%
>40	25	0.37%
<b>Total</b>	<b>6708</b>	<b>100.00%</b>

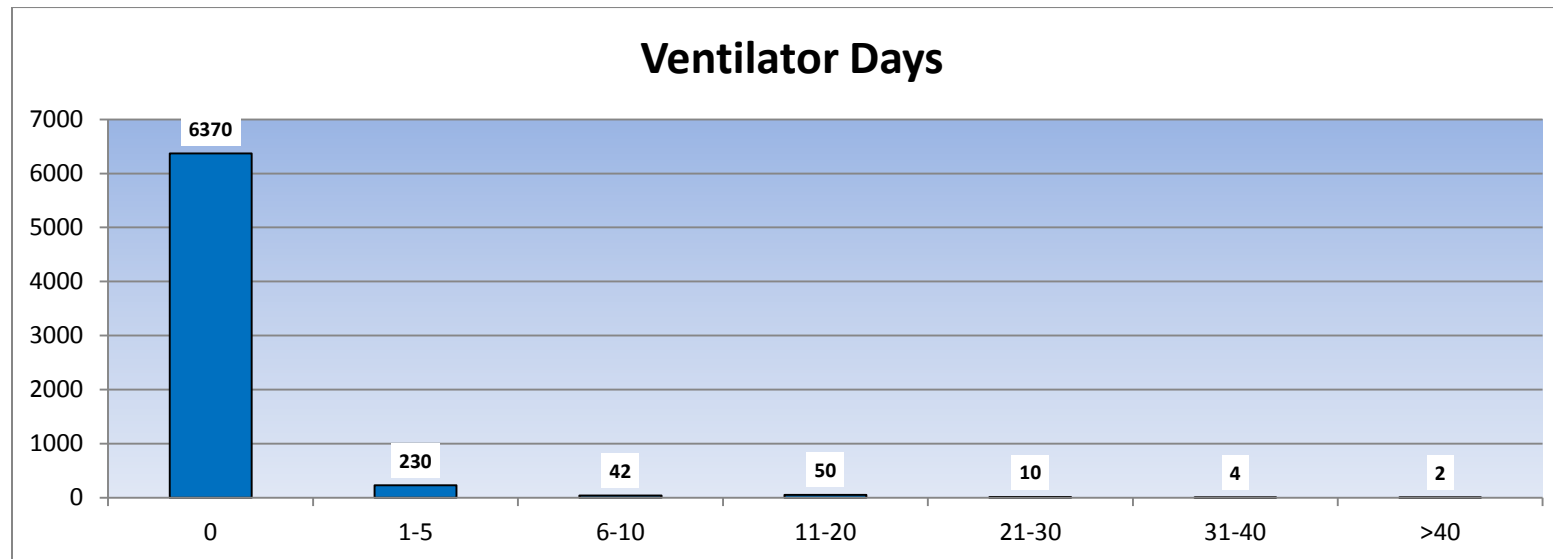




## Figure 15: Ventilator Days

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 of Patients	Percentage
0	6370	94.95%
1-5	230	3.43%
6-10	42	0.63%
11-20	50	0.75%
21-30	10	0.15%
31-40	4	0.06%
>40	2	0.03%
<b>Total</b>	<b>6708</b>	<b>100.00%</b>

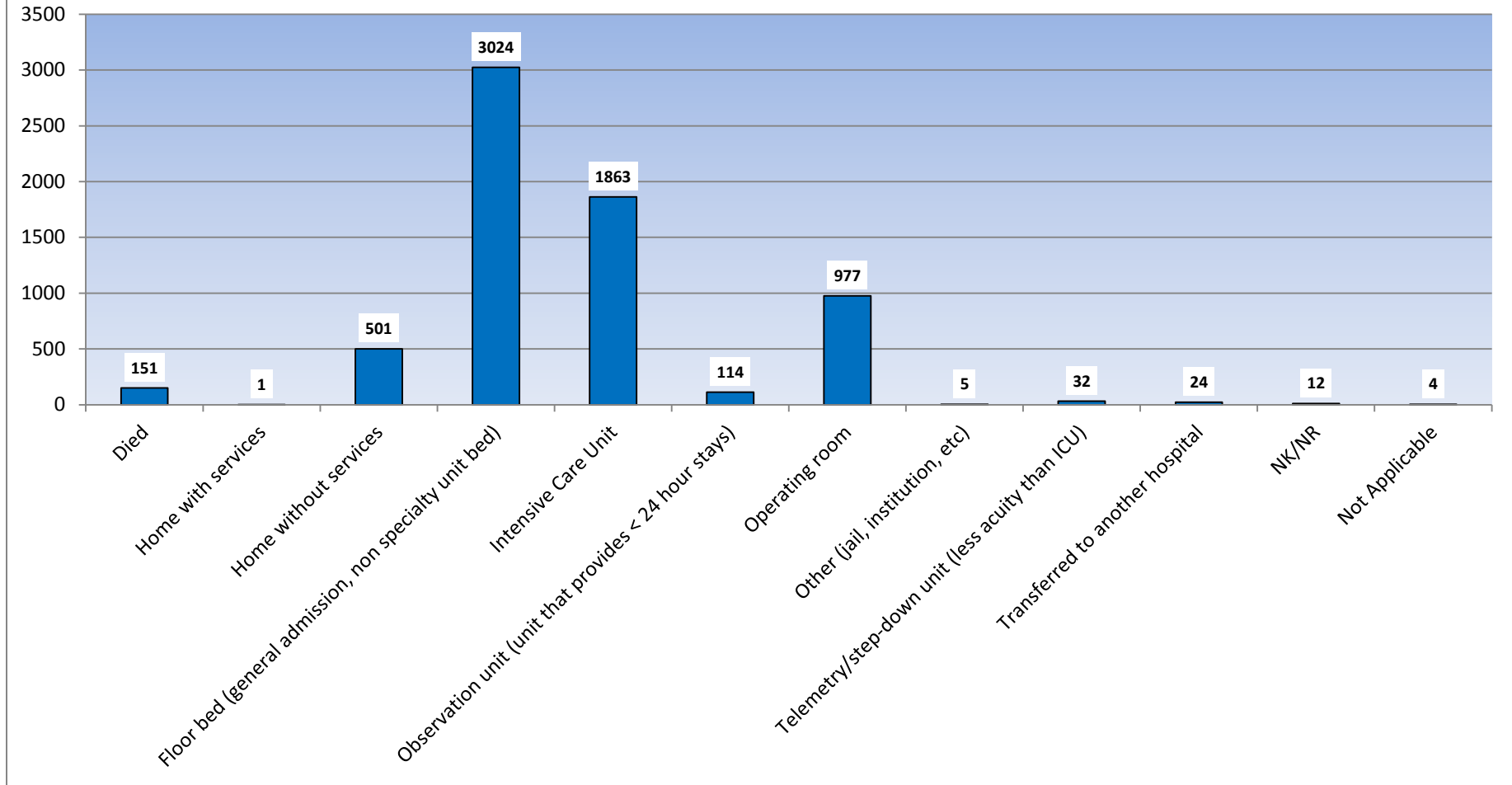


## Figure 16: ED/Acute Care Dispositions

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 27% admitted to ICU and over 14 % went direct to OR.

ED/Acute Care Dispositions	Number of Patients	Percentage
Expired	151	2.25%
Home with services	1	0.01%
Home without services	501	7.47%
Floor bed (general admission, non-specialty unit bed)	3024	45.08%
Intensive Care Unit	1863	27.78%
Observation unit (unit that provides < 24 hour stays)	114	1.70%
Operating room	977	14.56%
Other (jail, institution, etc)	5	0.07%
Telemetry/step-down unit (less acuity than ICU)	32	0.48%
Transferred to another hospital	24	0.36%
NK/NR	12	0.18%
Not Applicable	4	0.06%
<b>Total</b>	<b>6708</b>	<b>100%</b>

### ED/Acute Care Disposition

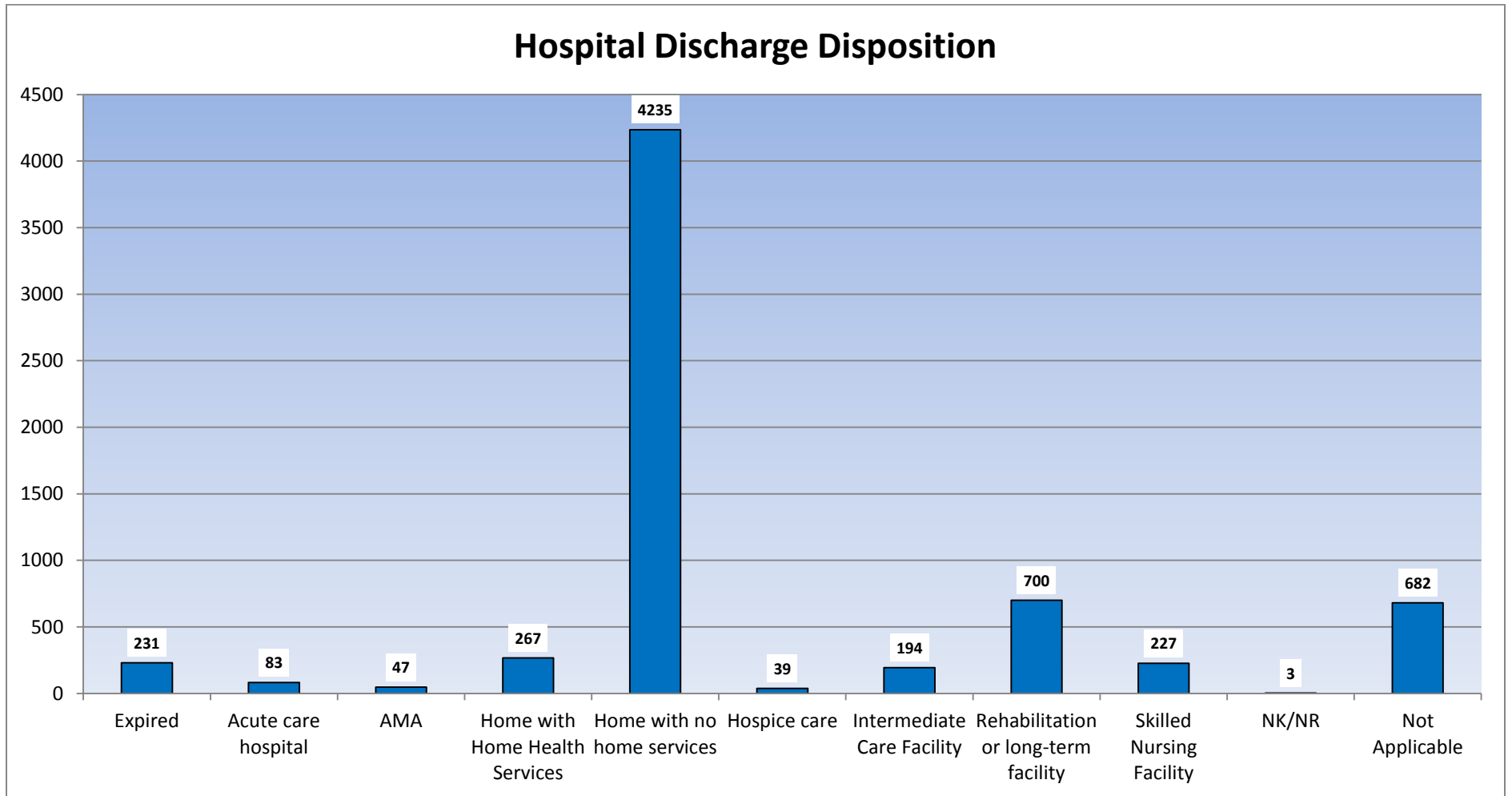


## Figure 17: Hospital Discharge Disposition

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

Hospital Discharge Dispositions	Number of Patients	Percent
Expired	231	3.44%
Acute care hospital	83	1.24%
AMA	47	0.70%
Home with Home Health Services	267	3.98%
Home with no home services	4235	63.13%
Hospice care	39	0.58%
Intermediate Care Facility	194	2.89%
Rehabilitation or long-term facility	700	10.44%
Skilled Nursing Facility	227	3.38%
NK/NR	3	0.04%
Not Applicable	682	10.17%
<b>Total</b>	<b>6708</b>	<b>100%</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 18: Hospital Disposition by Trauma Type

Patients reported by disposition upon discharge from hospital and grouped by specific trauma type.\*

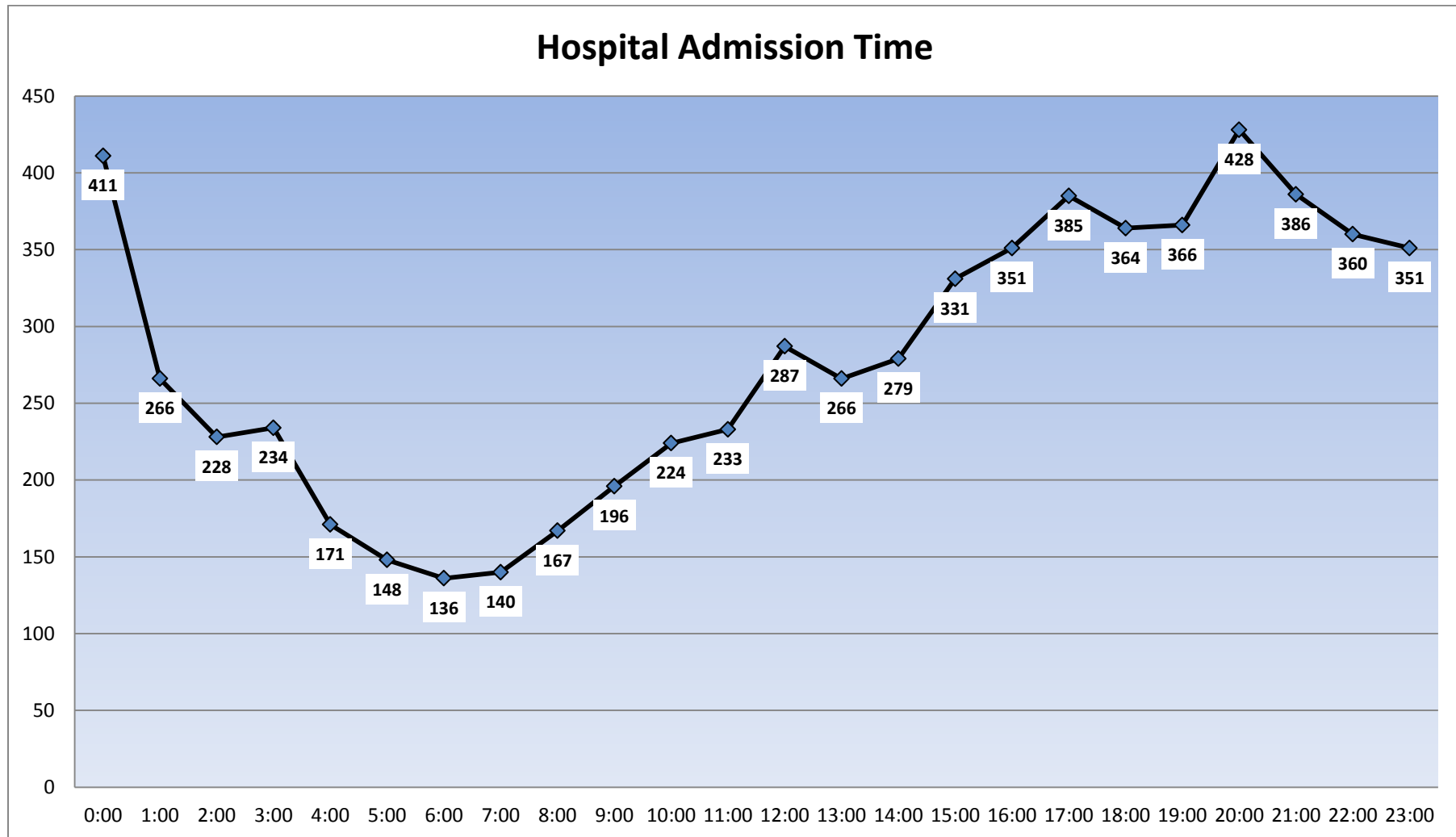
Hospital Disposition	Blunt	Penetrating	Burn	Other**	Total
Expired	134	64	0	33	231
Acute care hospital	63	12	0	8	83
AMA	31	11	0	5	47
Home with Home Health Services	209	7	0	51	267
Home with no home services	2983	684	20	548	4235
Hospice care	26	0	1	12	39
Intermediate Care Facility	136	39	0	19	194
Rehabilitation or long-term facility	540	41	0	119	700
Skilled Nursing Facility	152	1	0	74	227
Not Applicable	218	409	3	52	682
NK/NR	2	0	0	1	3
<b>Total</b>	<b>4494</b>	<b>1268</b>	<b>24</b>	<b>922</b>	<b>6708</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.

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

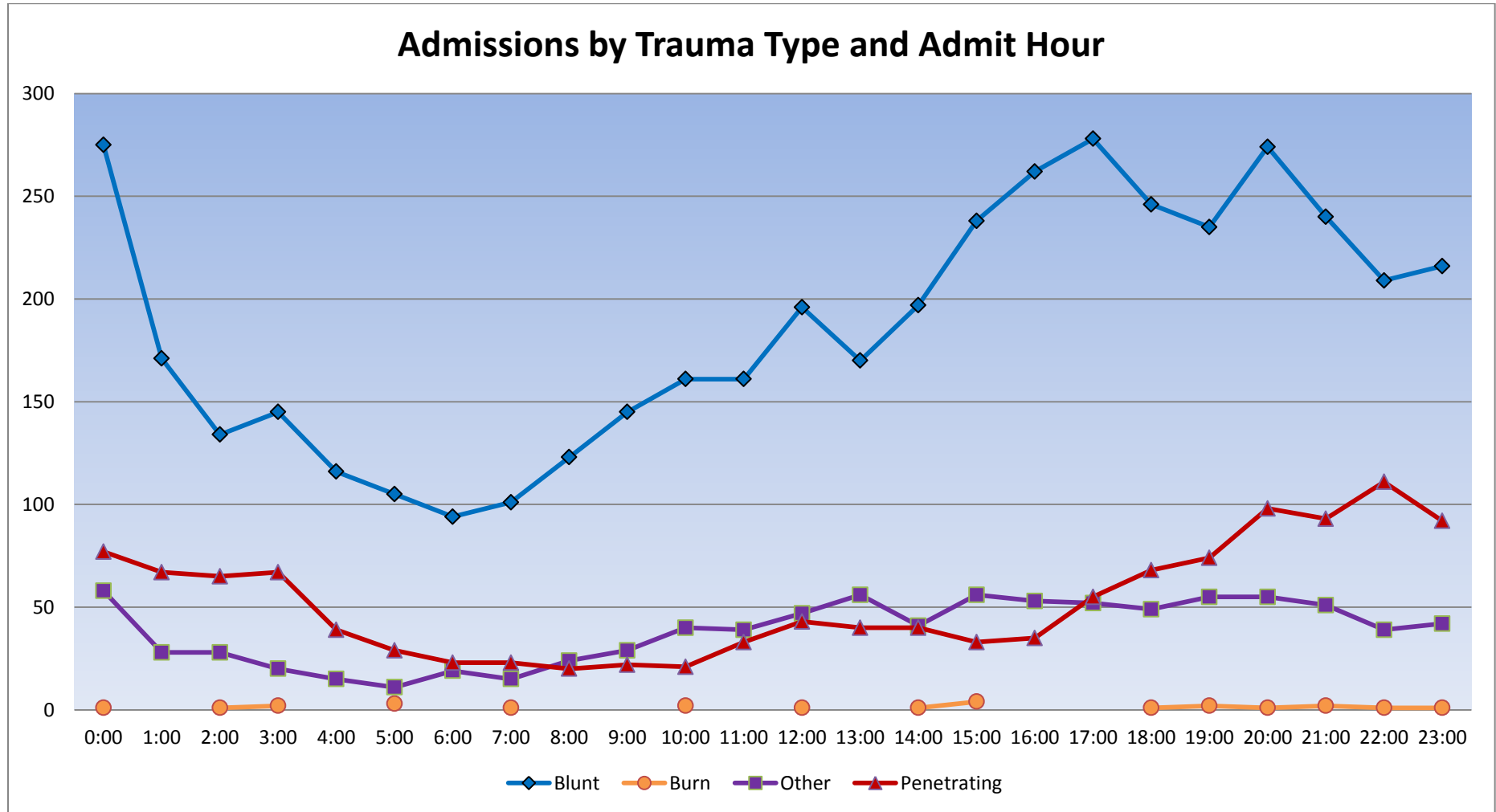
## Figure 19: Hospital Admission Times

The hour of admission of reporting hospitals peaks at 20:00 (8:00 PM) and is at its minimal during 06:00 (6:00 AM).



## Figure 20: Hospital Admissions by Trauma Type

Patients reported by hour of admission grouped by the trauma type. Blunt trauma peaks several times of the day including 17:00 (5:00 PM), 20:00 (8:00 PM), and 24:00 (12:00 AM) while penetrating peaks at 22:00 (10:00 PM).



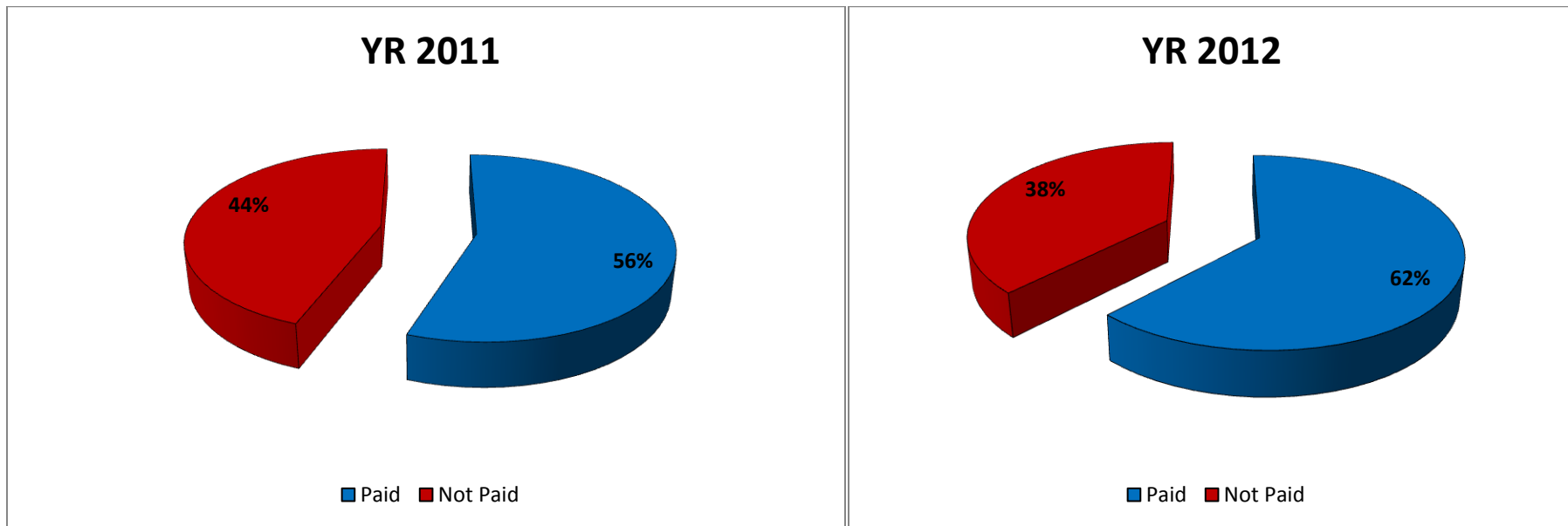


## Figure 21: Primary Method of Payment

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 Method of Payment	2011	2012
Blue Cross/Blue Shield	426	594
Medicaid	1100	1083
Medicare	1191	1364
No Fault Automobile	17	2
Not Billed (for any reason)	379	122
Not Known	403	54
Other	533	441
Other Government	33	65
Private/Commercial Insurance	906	895
Self-Pay	1759	1918
Worker's compensation	168	170
<b>Total</b>	<b>6915</b>	<b>6708</b>

**Paid compared to not paid for years 2011 and 2012. 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.**



## Figure 22: Primary Method of Payment by Trauma Type

Primary source of payment reported by blunt and penetrating trauma categories.

Primary Method of Payment	Blunt	Penetrating	Burn	Other	Total
Blue Cross/Blue Shield	472	54	1	67	594
Medicaid	693	279	8	103	1083
Medicare	952	54	1	357	1364
No Fault Automobile	2	0	0	0	2
Not Billed (for any reason)	111	2	1	8	122
NK/NR	38	11	0	5	54
Other	236	160	3	42	441
Other Government	44	8	0	13	65
Private/Commercial Insurance	661	115	3	116	895
Self-Pay	1161	579	6	172	1918
Worker's compensation	124	6	1	39	170
<b>Total</b>	<b>4494</b>	<b>1268</b>	<b>24</b>	<b>922</b>	<b>6708</b>

Paid/Not Paid	Blunt	Penetrating	Burn	Other	Total
Paid	2948	516	14	695	4173
Not Paid	1546	752	10	227	2535
<b>Total</b>	<b>4494</b>	<b>1268</b>	<b>24</b>	<b>922</b>	<b>6708</b>

