

# State Trauma Registry Report

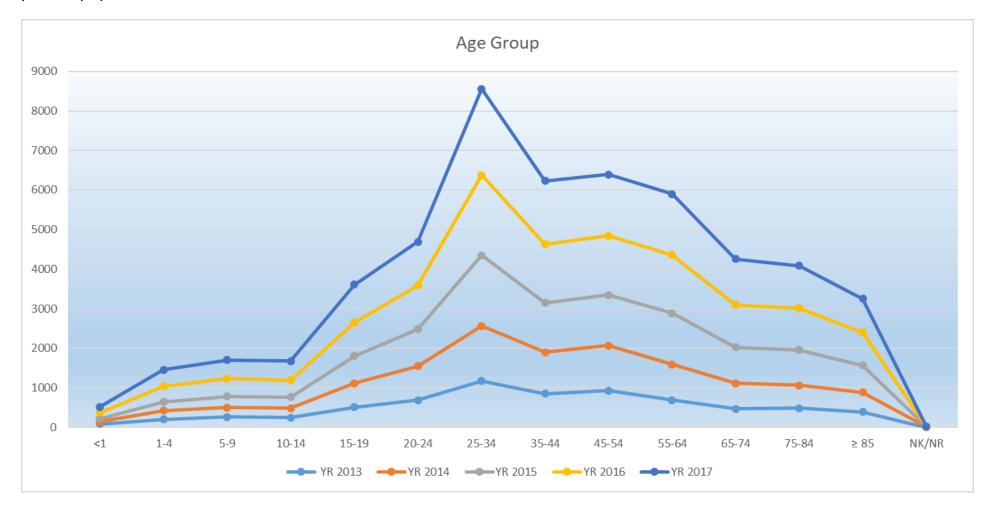
**Chris Hector** 

2017 Data compiled from current patient records reported from nine 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.



# Figure 2: Cause of Injury

| Cause of Injury                  | Total |
|----------------------------------|-------|
| Fall                             | 4532  |
| Motor Vehicle Accident           | 3034  |
| Assault                          | 2281  |
| Motorcycle Accident              | 631   |
| Pedestrian Injured               | 527   |
| Pedal Cycle Accident             | 297   |
| Machinery Accident               | 263   |
| Struck by Object                 | 261   |
| Firearm Discharge                | 233   |
| Suicide or Self Inflicted Injury | 215   |
| Contact by Sharp Object          | 209   |
| Other Accident                   | 157   |
| Animal Bite                      | 121   |
| Caught, Crushed, Pinched Between | 118   |
| Acc Struck by Person             | 110   |
| Activity Accident                | 108   |
| Animal Rider                     | 71    |
| Fire or Flames or Explosion      | 69    |
| NK/NR                            | 43    |
| Foreign Body                     | 42    |
| Watercraft Accident              | 30    |
| Struck by Animal                 | 29    |
| Abuse or Neglect                 | 27    |
| Contact with Hot Food or Object  | 24    |
| Legal Intervention               | 24    |
| Drowning or Submersion           | 20    |
| Electrical Accident              | 18    |
| Three Wheeled Vehicle Acc        | 18    |
| Contact with Sharp Object        | 10    |
| ATV Accident                     | 8     |
| Aircraft Accident                | 4     |
| Weather Related                  | 4     |
| Railway Accident                 | 2     |
| Total                            | 13540 |

| Falls by Age       | Total | Percent |
|--------------------|-------|---------|
| Pediatric (0-14)   | 376   | 8.30%   |
| Adult (15-64)      | 3113  | 68.69%  |
| Geriatric (>64)    | 1041  | 22.97%  |
| NK/NR              | 2     | 0.04%   |
| <b>Grand Total</b> | 4532  | 100.00% |



# Figure 3: Cause of Injury by Mortality

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

| Cause of Injury                  | Died | Percent |
|----------------------------------|------|---------|
| Fall                             | 350  | 58.43%  |
| Struck by Object                 | 71   | 11.85%  |
| Motor Vehicle Accident           | 65   | 10.85%  |
| Assault                          | 34   | 5.68%   |
| NK/NR                            | 13   | 2.17%   |
| Pedestrin Injured                | 9    | 1.50%   |
| Pedal Cycle Accident             | 9    | 1.50%   |
| Motorcycle Accident              | 7    | 1.17%   |
| Other Accident                   | 6    | 1.00%   |
| Acc Struck by Person             | 5    | 0.83%   |
| Suicide or Self Inflicted Injury | 5    | 0.83%   |
| Machinery Accident               | 5    | 0.83%   |
| Firearm Discharge                | 4    | 0.67%   |
| Animal Bite                      | 2    | 0.33%   |
| Animal Rider                     | 2    | 0.33%   |
| Caught, Crushed, Pinched Between | 2    | 0.33%   |
| Contact by Sharp Object          | 2    | 0.33%   |
| Legal Intervention               | 2    | 0.33%   |
| Abuse or Neglect                 | 2    | 0.33%   |
| Electrical Accident              | 1    | 0.17%   |
| Drowning or Submersion           | 1    | 0.17%   |
| Activity Accident                | 1    | 0.17%   |
| Contact with Hot Food or Object  | 1    | 0.17%   |
| Grand Total                      | 599  | 100.00% |

| Falls by Age     | Died | Percent |
|------------------|------|---------|
| Pediatric (0-14) | 20   | 5.71%   |
| Adult (15-64)    | 239  | 68.29%  |
| Geriatric (>64)  | 90   | 25.71%  |
| NK/NR            | 1    | 0.29%   |
| Total            | 350  | 100.00% |

#### ISS Score for Deaths

| Cause of Injury         | Mean ISS |
|-------------------------|----------|
| All                     | 22.35    |
| Falls                   | 22.20    |
| Struck by Object        | 44.94    |
| Motor Vehicle Collision | 12.31    |
| Assault                 | 9.33     |
|                         | 1        |

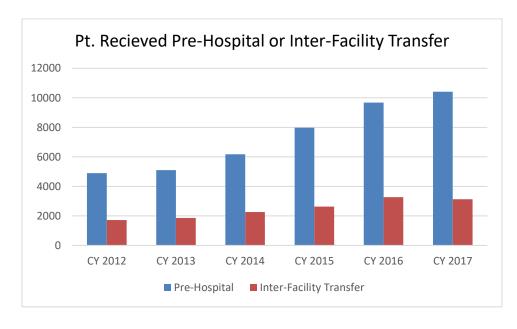
|                  | ISS Score | ISS Score Range MVC Deaths |       |     |  |  |
|------------------|-----------|----------------------------|-------|-----|--|--|
| Age Group        | 1-8       | 9-15                       | 16-24 | >24 |  |  |
| Pediatric (0-14) | 0         | 0                          | 1     | 1   |  |  |
| Adult (15-64)    | 8         | 16                         | 4     | 8   |  |  |
| Geriatric(>64)   | 9         | 12                         | 5     | 1   |  |  |
| Total            | 17        | 28                         | 10    | 10  |  |  |



#### Figure 4: Received Pre-Hospital or by Transfer

Patients reported as received pre-hospital or transferred from another acute care facility. 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.

| Received       | CY 2012 | CY2013 | CY2014 | CY2015 | CY2016 | CY2017 |
|----------------|---------|--------|--------|--------|--------|--------|
| Pre-Hospital   | 4986    | 5110   | 6170   | 7971   | 9677   | 10411  |
| Inter-Facility | 1722    | 1858   | 2256   | 2625   | 3272   | 3129   |
| Transfer       | 26%     | 27%    | 27%    | 25%    | 25%    | 23%    |
| Total          | 6708    | 6968   | 8426   | 10596  | 12949  | 13540  |

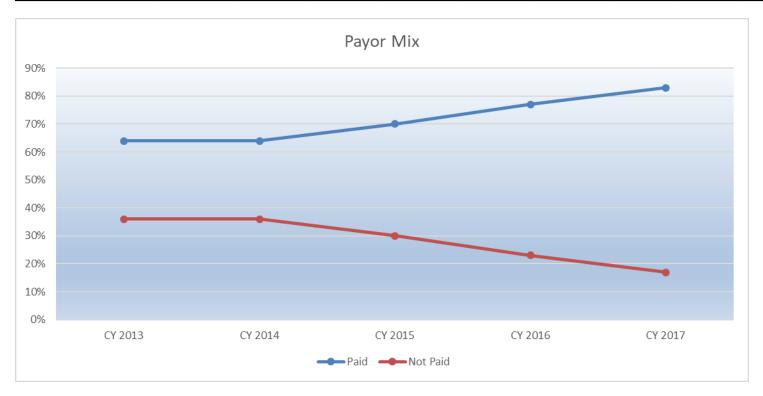




# Figure 5: Payor Mix

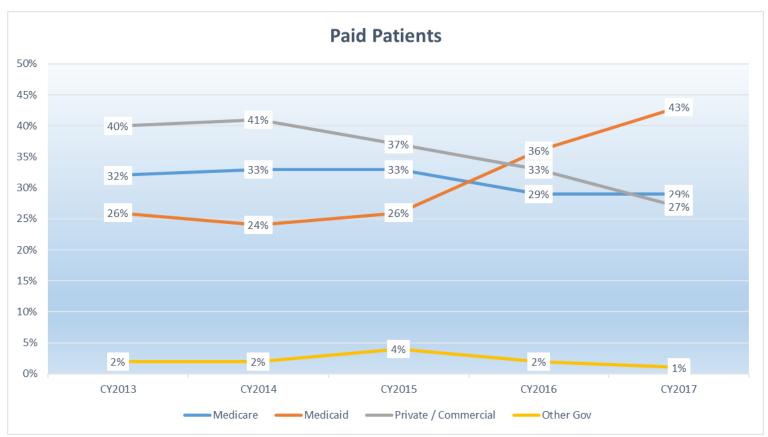
Not Paid is inclusive of Primary Payment listed as Other, Not Known, Self-Pay, or Not Billed.

| Paid/Not Paid | CY 2013 | Percent | CY 2014 | Percent | CY 2015 | Percent | CY 2016 | Percent | CY 2017 | Percent |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Paid          | 4489    | 64%     | 5402    | 64%     | 7381    | 70%     | 9876    | 77%     | 11212   | 83%     |
| Not Paid      | 2479    | 36%     | 3026    | 36%     | 3215    | 30%     | 3018    | 23%     | 2328    | 17%     |
| Total         | 6968    | 100%    | 8428    | 100%    | 10596   | 100%    | 12894   | 100%    | 13540   | 100%    |



## Figure 6: Payor Type

Payor type for paid patients. Data for 2016 and 2017 include Children's Hospital New Orleans, which was not included in previous years.



| Paid Method          | CY2013 | Percent | CY2014 | Percent | CY2015 | Percent | CY2016 | Percent | CY2017 | Percent |
|----------------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
| Medicare             | 1448   | 32%     | 1782   | 33%     | 2468   | 33%     | 2904   | 29%     | 3234   | 29%     |
| Medicaid             | 1159   | 26%     | 1287   | 24%     | 1880   | 26%     | 3568   | 36%     | 4812   | 43%     |
| Private / Commercial | 1814   | 40%     | 2207   | 41%     | 2740   | 37%     | 3234   | 33%     | 3025   | 27%     |
| Other Gov            | 68     | 2%      | 126    | 2%      | 293    | 4%      | 170    | 2%      | 141    | 1%      |
| Total                | 4489   | 100%    | 5402   | 100%    | 7381   | 100%    | 9876   | 100%    | 11212  | 100%    |

Figure 7: Hospital Average/Median 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 each partial or full day is measured as one calendar day. Patients admitted and discharged on same day count as 0.

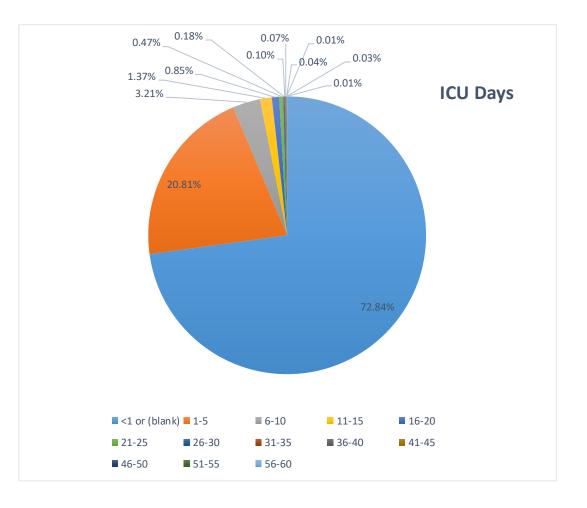
| Year   | Average Hospital LOS | Median |
|--------|----------------------|--------|
| CY2012 | 5.33                 | 2      |
| CY2013 | 5.19                 | 2      |
| CY2014 | 5.20                 | 3      |
| CY2015 | 5.41                 | 3      |
| CY2016 | 5.38                 | 3      |
| CY2017 | 5.41                 | 3      |



#### Figure 8: ICU Days

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

| ICU Days | Total | Percent |
|----------|-------|---------|
| 0        | 9862  | 72.84%  |
| 1-5      | 2818  | 20.81%  |
| 6-10     | 434   | 3.21%   |
| 11-15    | 186   | 1.37%   |
| 16-20    | 115   | 0.85%   |
| 21-25    | 63    | 0.47%   |
| 26-30    | 25    | 0.18%   |
| 31-35    | 14    | 0.10%   |
| 36-40    | 10    | 0.07%   |
| 41-45    | 6     | 0.04%   |
| 46-50    | 2     | 0.01%   |
| 51-55    | 4     | 0.03%   |
| 56-60    | 1     | 0.01%   |
| Total    | 13540 | 100.00% |

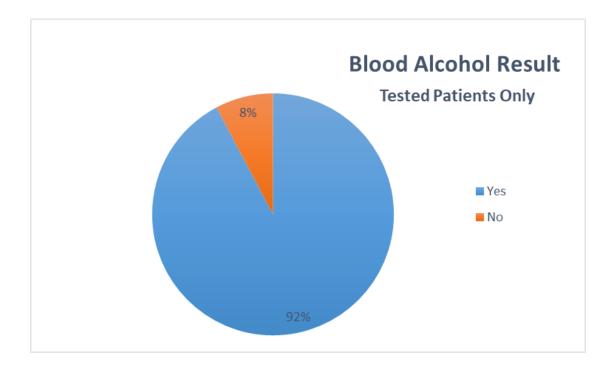




## Figure 9: Blood Alcohol Testing

Patients reported by based on blood alcohol testing. Of the 13,540 patients in the 2017 data, 56% were not tested, 3% tested negative, and the remaining 41% tested positive for alcohol.

| Blood Alcohol | Total | Percent |
|---------------|-------|---------|
| Yes           | 5476  | 40.44%  |
| No            | 459   | 3.39%   |
| Not Tested    | 7605  | 56.17%  |
| Total         | 13540 | 100.00% |





#### Figure 10: Drug Screening

Patients reported by based on drug screening. Of the 13,540 patients in the 2017 data, 56% were not tested, 20% tested negative, and the remaining 24 % tested positive for drugs.

| Drug Screening                 | Total | Percent |
|--------------------------------|-------|---------|
| Not Tested                     | 7644  | 56.45%  |
| None                           | 2675  | 19.76%  |
| THC (Cannabinoid)              | 1035  | 7.64%   |
| BZO (Benzodiazepines)          | 698   | 5.16%   |
| OPI (Opioid)                   | 614   | 4.53%   |
| AMP (Amphetamine)              | 491   | 3.63%   |
| COC (Cocaine)                  | 299   | 2.21%   |
| BAR (Barbiturate)              | 41    | 0.30%   |
| Other Evidence of Drugs        | 12    | 0.09%   |
| mAMP (Methamphetamine)         | 10    | 0.07%   |
| MTD (Methadone)                | 8     | 0.06%   |
| PCP (Phencyclidine)            | 5     | 0.04%   |
| MDMA (Ectasy)                  | 4     | 0.03%   |
| TCA (Tricyclic Antidepressant) | 4     | 0.03%   |
| Total                          | 13540 | 100.00% |

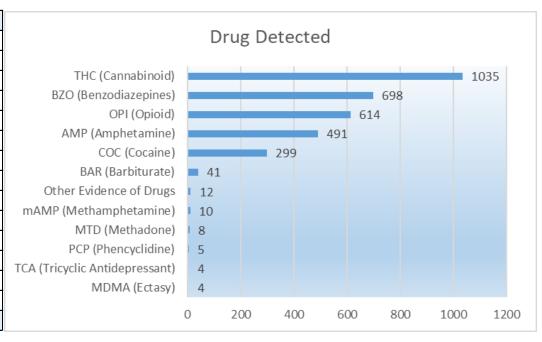
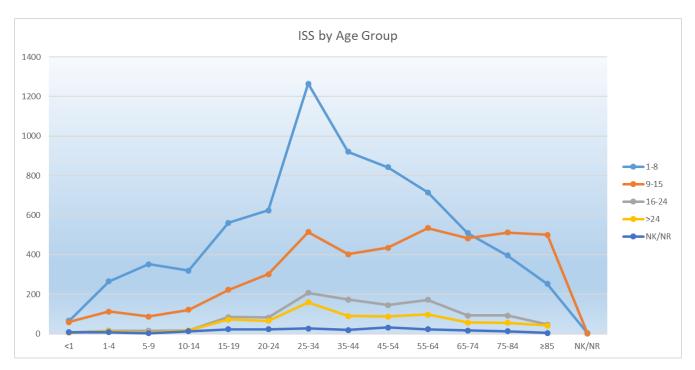


Figure 11: ISS by Age

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.



|         | Mean ISS Score        |                               |           |
|---------|-----------------------|-------------------------------|-----------|
| Year    | All Trauma Facilities | Level I and II                | Level III |
| CY 2012 | 10.79                 | 10.79                         | N/A       |
| CY 2013 | 10.95                 | 10.95                         | N/A       |
| CY 2014 | 10.8                  | 10.81                         | 8.17      |
| CY 2015 | 10.32                 | 10.42                         | 7.60      |
| CY 2016 | 9.27                  | 9.29                          | 8.52      |
| CY 2017 | 8.45                  | 8.46 (8.64 without Childrens) | 8.24      |

Figure 12: Total Patients in Registry by Year / Deaths Percent by Year



Trauma registry patient totals by year. In 2012 there were 4 facilities reporting. In 2016 the number of facilities reporting increased to 9. Death percent includes patient that arrived to ED without signs of life.

