LOUISIANA EMERGENCY RESPONSE NETWORK

State Trauma Registry Report

2020 Data compiled from current patient records reported from eleven 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.
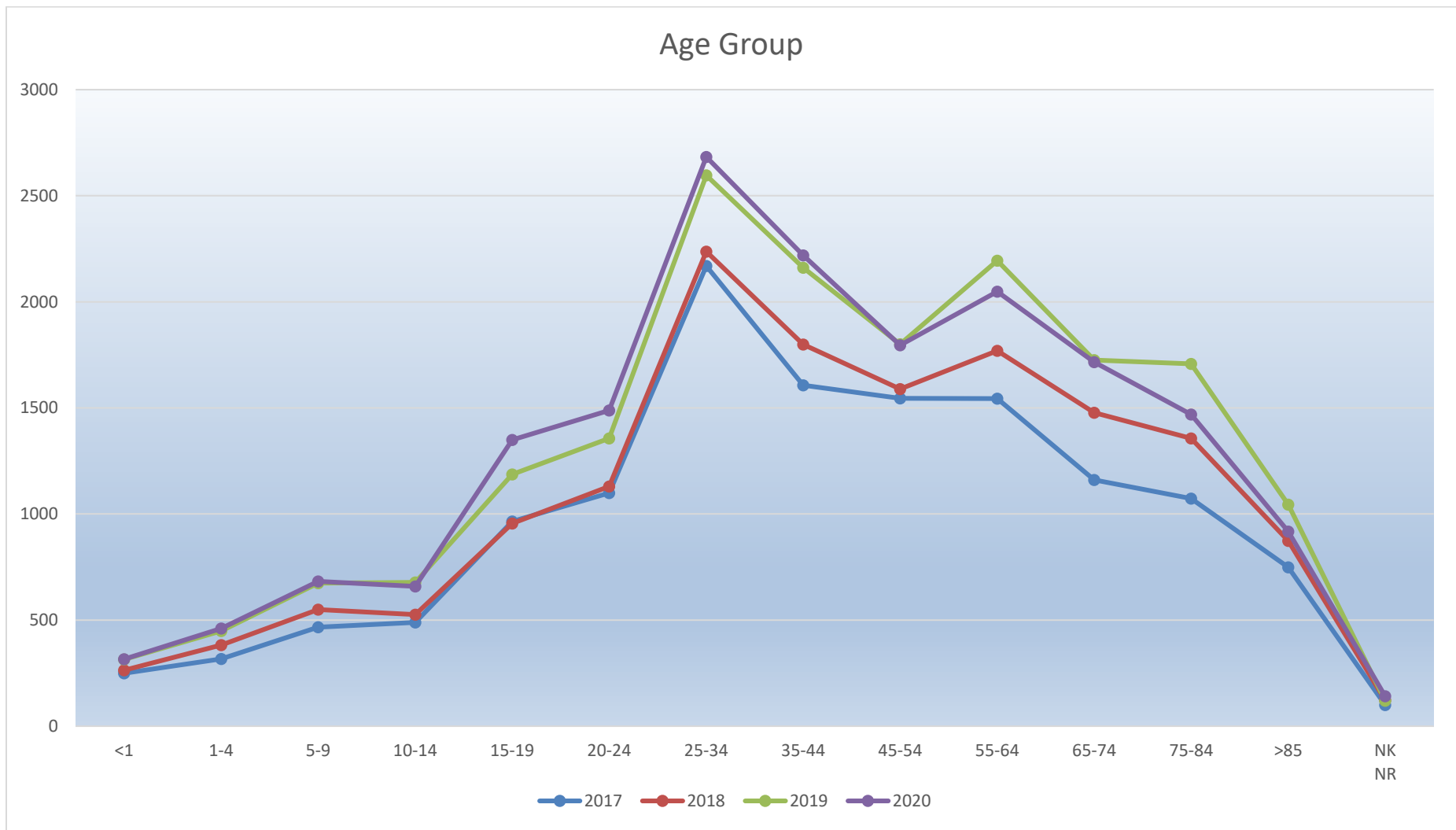

Age Group

Figure 2: Cause of Injury

Cause of Injury	Total
Fall	6091
Motor Vehicle Accident	3570
Firearm Discharge	1778
Assault	1731
Motorcycle	683
ATV Accident	653
Pedestrian	598
Struck by or Against Object	391
Machinery/Equipment Accident	331
Pedal Cycle Accident	319
Transport Accident	271
Animal Bite/Contact/Rider	256
Contact by Sharp Object	252
Suicide or Self-inflicted Injury	234
Caught, Crushed, Pinched	194
Acc Struck by Person	94
Abuse or Neglect	88
Burns, Fire, Flame, Explosion, Smoke	88
Other	80
Contact Hot Food or Object	51
Watercraft Accident	43
Overexertion	33
Slipping, Tripping, and Stumbling without Falling	21
Diving, Drowning, or Submersion	20
Foreign Body	17
Electrical Accident	14
Legal Intervention	12
Sport/Activity Accident	8
Unknown	8
Weather Accident	7
Aircraft Accident	7
Total	**17943**

Fall by Age	Total	Percentage
GERIATRIC (>64)	3400	55.82%
ADULT (15-64)	2015	33.08%
PEDIATRIC (0-14)	667	10.95%
NK/NR	9	0.15%
Grand Total	**6091**	**100.00%**

Assaults

- Sharp Object — 32%
- Firearm — 27%
- Brawl or Fight — 24%
- Blunt Object — 13%
- Other — 4%
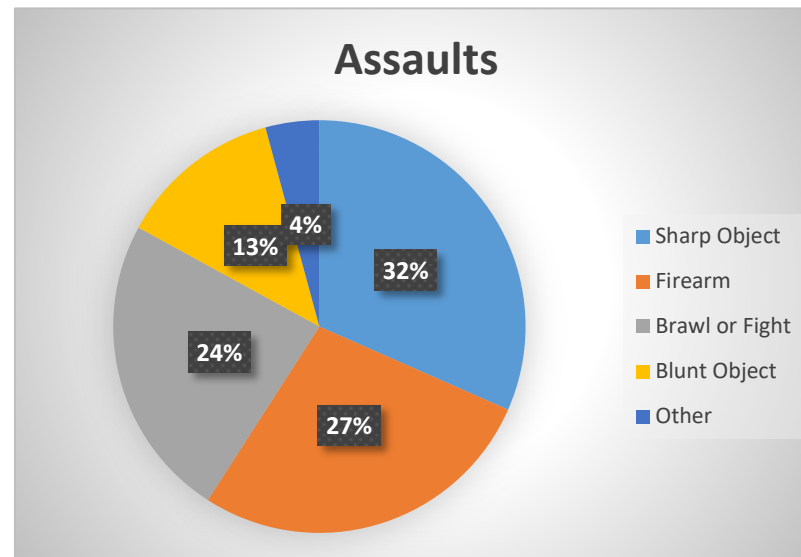
Figure 3: Cause of Injury by Mortality

Cause of Injury	Deaths
Assault	225
Fall	196
Motor Vehicle Accident	166
Suicide or Self Inflicted Injury	67
Pedestrian	60
Motorcycle	35
ATV Accident	18
Firearm Discharge	14
Pedal Cycle Accident	12
Other	11
Transport Accident	6
Struck By or Against Object	6
Animal Bite / Contact / Rider	5
Legal Intervention	4
Diving Drowning or Submersion	4
Abuse or Neglect	3
Burns, Fire, Flame, Explosion, Smoke	3
Contact by Sharp Object	2
Caught, Crushed, Pinched	2
Electrical Accident	2
Machinery / Equipment Accident	1
Weather Accident	1
Watercraft Accident	1
Total	**844**

Fall by Age	ISS Score Range					Total
	0	1-8	9-15	16-24	>24	
Adult (15-64)	.	6	11	8	26	51
Geriatric (>64)	2	24	50	16	53	145
Total	**2**	**30**	**61**	**24**	**79**	**196**

Assaults

- Firearm — 89.8%
- Sharp Object — 5.3%
- Brawl or Fight — 2.2%
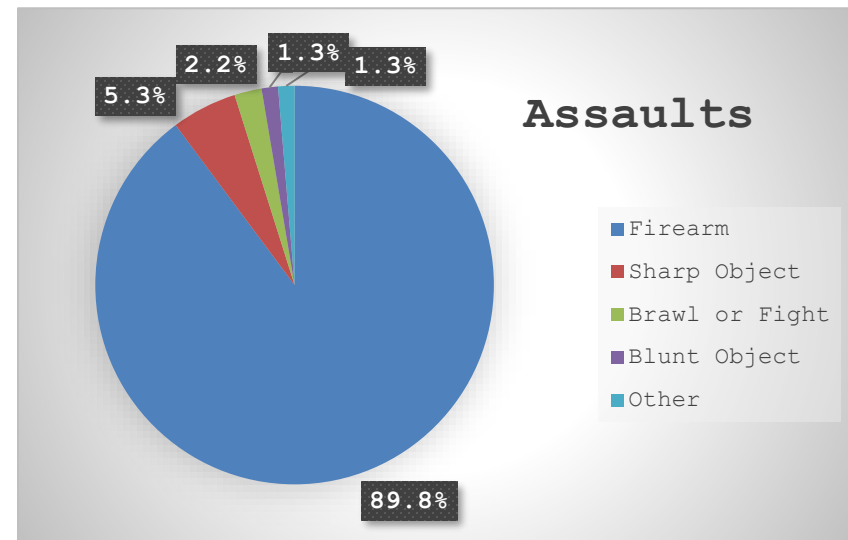- Blunt Object — 1.3%
- Other — 1.3%

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 By	2017	2018	2019	2020
Inter-Facility Transfer	2935	3688	4499	4455
Pre-Hospital	10339	11082	13505	13488
Unknown	0	1	5	0
Total	13274	14771	18009	17943
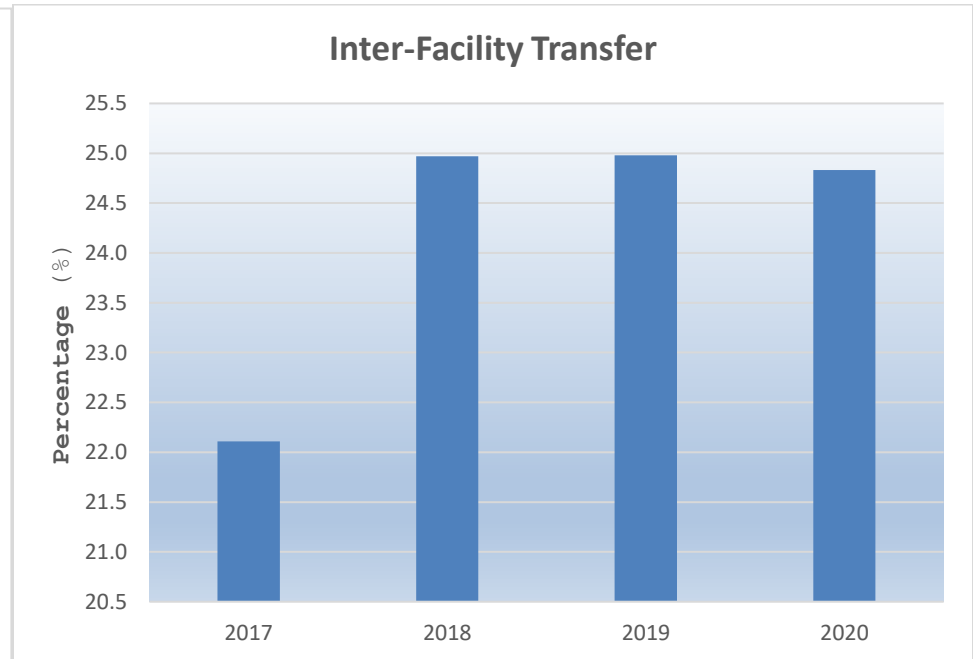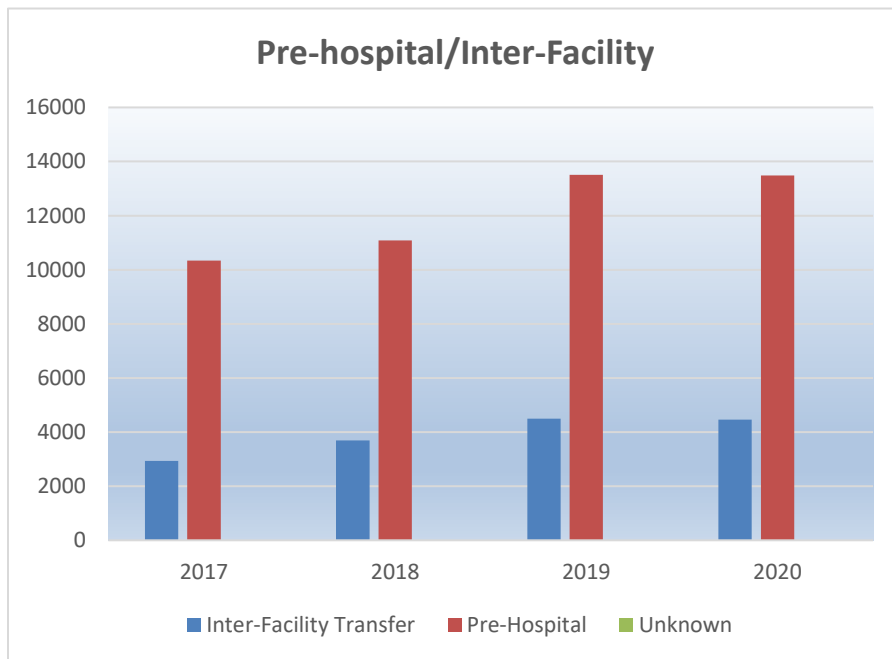
Figure 5: Payor Mix

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

Status	2017	2018	2019	2020
Not Paid	2322	2797	2996	2628
Paid	11128	12135	15013	15315
Total	13450	14932	18009	17943
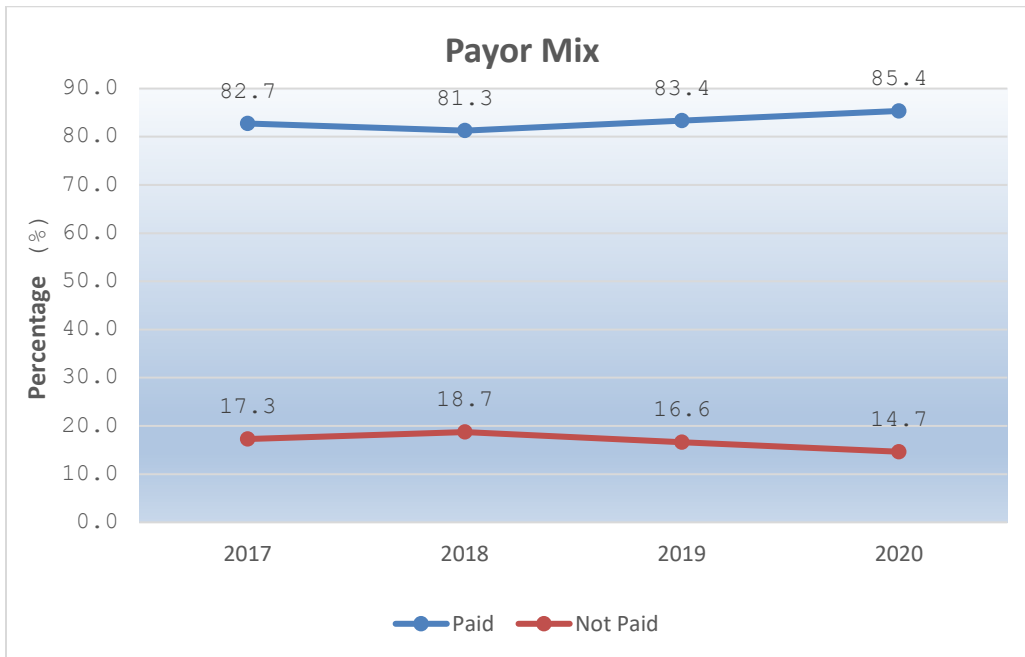
Figure 6: Payor Type

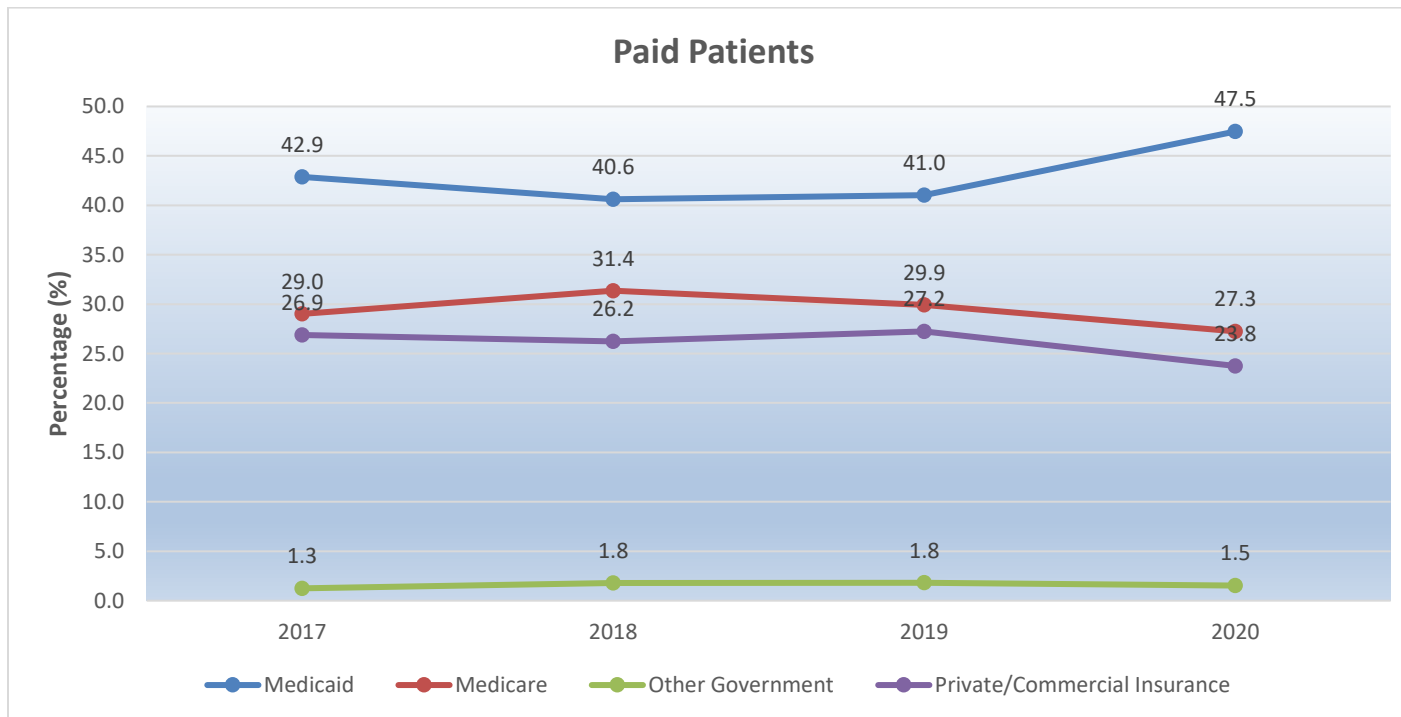Payor type for paid patients.   Data for 2016 and 2017 include Children's Hospital New Orleans, which was not included in previous years.

Paid Method	2017	2018	2019	2020
Medicaid	4771	4928	6158	7269
Medicare	3228	3806	4494	4173
Other Government	139	219	272	236
Private/Commercial Insurance	2990	3182	4089	3637
Total	11128	12135	15013	15315

Paid Patients

Medicaid: 42.9 (2017), 40.6 (2018), 41.0 (2019), 47.5 (2020)
Medicare: 29.0 (2017), 31.4 (2018), 29.9 (2019), 27.3 (2020)
Private/Commercial Insurance: 26.9 (2017), 26.2 (2018), 27.2 (2019), 23.8 (2020)
Other Government: 1.3 (2017), 1.8 (2018), 1.8 (2019), 1.5 (2020)

Legend: Medicaid, Medicare, Other Government, Private/Commercial Insurance

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
2017	5.41	3
2018	5.33	3
2019	4.90	2
2020	4.75	2
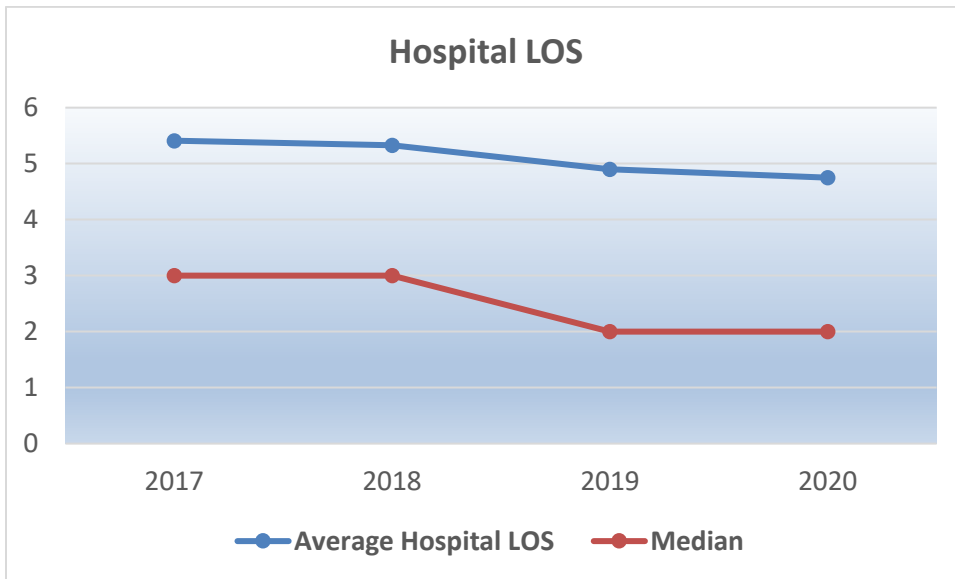
Figure 8: ICU Days

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	13225	73.71
1-5	3621	20.18
6-10	598	3.33
11-15	220	1.23
16-20	136	0.76
21-25	63	0.35
26-30	34	0.19
30-35	18	0.10
36-40	9	0.05
41-45	7	0.04
46-50	2	0.01
51-55	2	0.01
56-60	2	0.01
61-65	2	0.01
71-75	2	0.01
>75	2	0.01
	17943	100

Figure 9: Blood Alcohol Testing
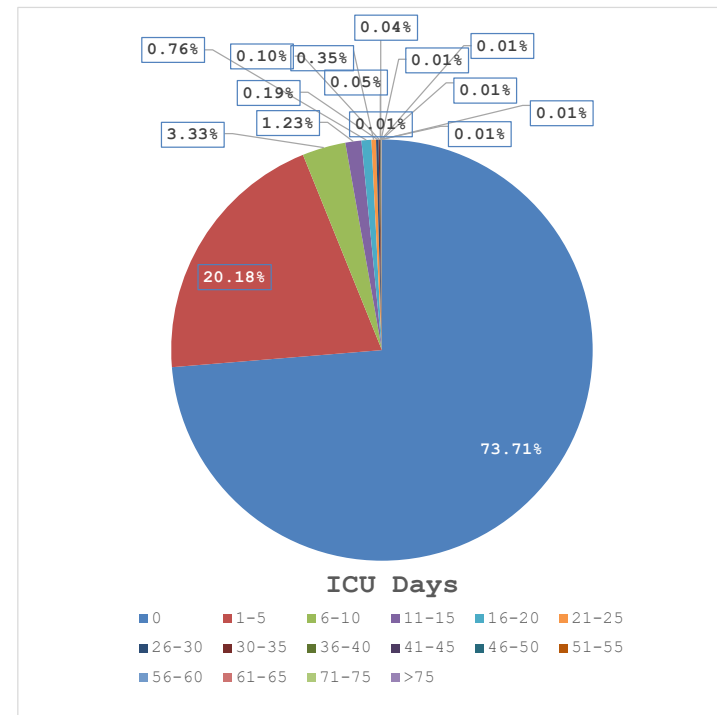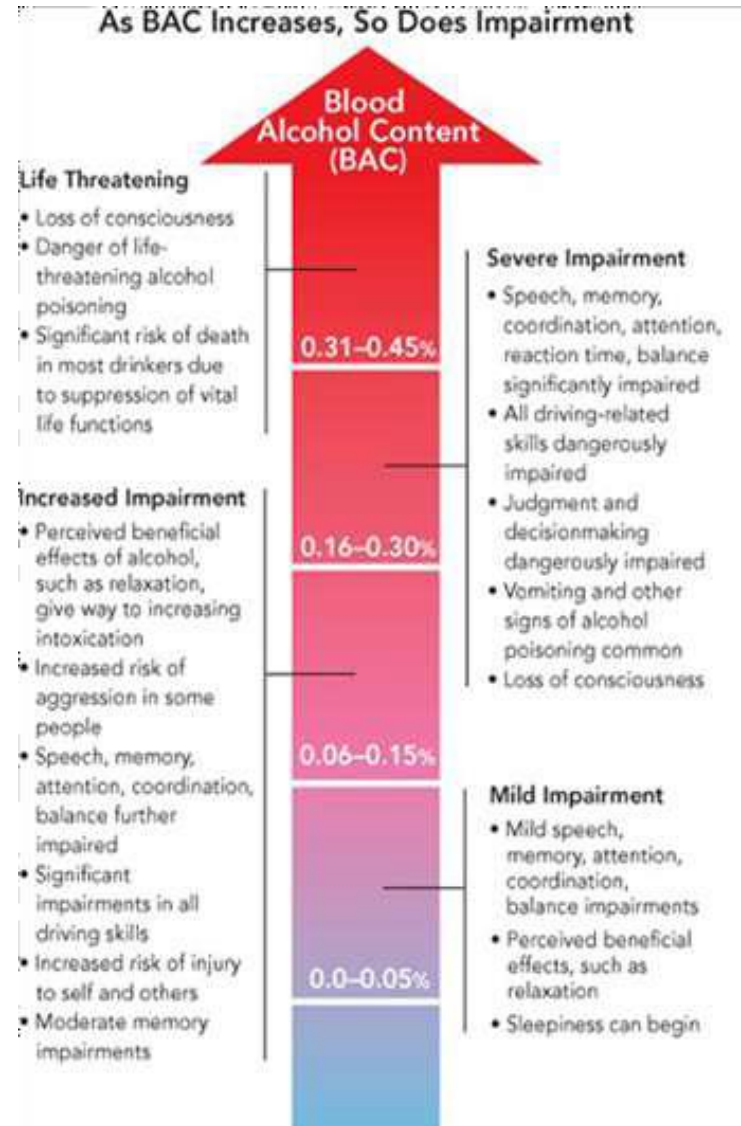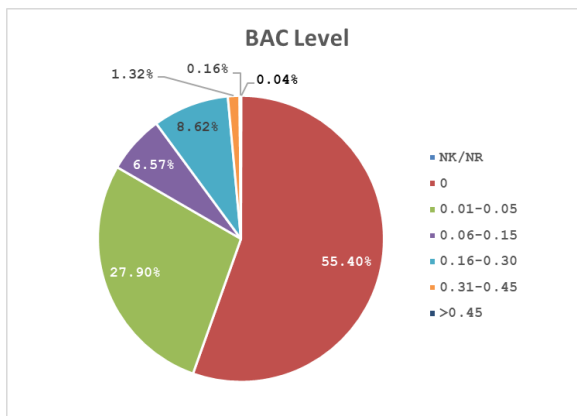
Of the 17,943 patients in the 2020 data, 46% were not tested, 54% were tested. Of the patients tested, 1833 had a BAC ≥ 0.08% (above legal limit).

Tested	Total	Percent (%)
Yes	9642	53.74
No	8285	46.17
NK/NR	16	0.09
Total	**17943**	**100**

Tested Patients	
BAC_Level	Total
NK/NR	4
0	5342
0.01-0.05	2690
0.06-0.15	633
0.16-0.30	831
0.31-0.45	127
>0.45	15

BAC Level

Pie chart legend:
- NK/NR
- 0
- 0.01-0.05
- 0.06-0.15
- 0.16-0.30
- 0.31-0.45
- >0.45

Pie chart values: 55.40%, 27.90%, 6.57%, 8.62%, 1.32%, 0.16%, 0.04%

As BAC Increases, So Does Impairment

Blood Alcohol Content (BAC)

Life Threatening
- Loss of consciousness
- Danger of life-threatening alcohol poisoning
- Significant risk of death in most drinkers due to suppression of vital life functions

0.31–0.45%

Severe Impairment
- Speech, memory, coordination, attention, reaction time, balance significantly impaired
- All driving-related skills dangerously impaired
- Judgment and decisionmaking dangerously impaired
- Vomiting and other signs of alcohol poisoning common
- Loss of consciousness

0.16–0.30%

Increased Impairment
- Perceived beneficial effects of alcohol, such as relaxation, give way to increasing intoxication
- Increased risk of aggression in some people
- Speech, memory, attention, coordination, balance further impaired
- Significant impairments in all driving skills
- Increased risk of injury to self and others
- Moderate memory impairments

0.06–0.15%

Mild Impairment
- Mild speech, memory, attention, coordination, balance impairments
- Perceived beneficial effects, such as relaxation
- Sleepiness can begin

0.0–0.05%

Figure 10: Drug Screening

Patients reported by based on drug screening. Of the 18,009 patients in the 2019 data, 59.53% were not tested, 16.88% tested negative, and the remaining 23.59 % tested positive for drugs.

Drug Screening	Total	Percent (%)
None	2926	16.31
Not Known/Not Recorded	9	0.05
Not Tested	10363	57.76
Positive for Multiple Drug	2080	11.59
Positive for Single Drugs	2565	14.30
Total	17943	100

Drug	Total	Percent (%)
THC (Cannabinoid)	2571	33.80
OPI (Opioid)	1825	23.99
BZO (Benzodiazepines)	1251	16.45
AMP (Amphetamine)	1046	13.75
COC (Cocaine)	684	8.99
BAR (Barbiturate)	61	0.80
mAMP (Methamphetamine)	59	0.78
MTD (Methadone)	38	0.50
PCP (Phencyclidine)	23	0.30
Other Evidence of Drugs	21	0.28
OXY (Oxycodone)	14	0.18
MDMA (Ectasy)	9	0.12
TCA (Tricyclic Antidepressant)	5	0.07

Drug Detected
- THC (Cannabinoid)
- OPI (Opioid)
- BZO (Benzodiazepines)
- AMP (Amphetamine)
- COC (Cocaine)
- BAR (Barbiturate)
- mAMP (Methamphetamine)
- MTD (Methadone)
- PCP (Phencyclidine)
- Other Evidence of Drugs
- OXY (Oxycodone)
- MDMA (Ectasy)
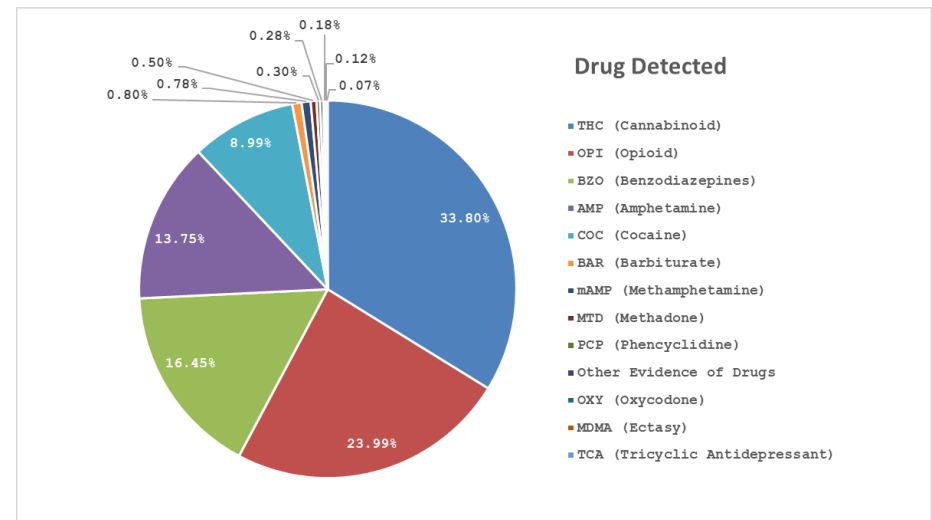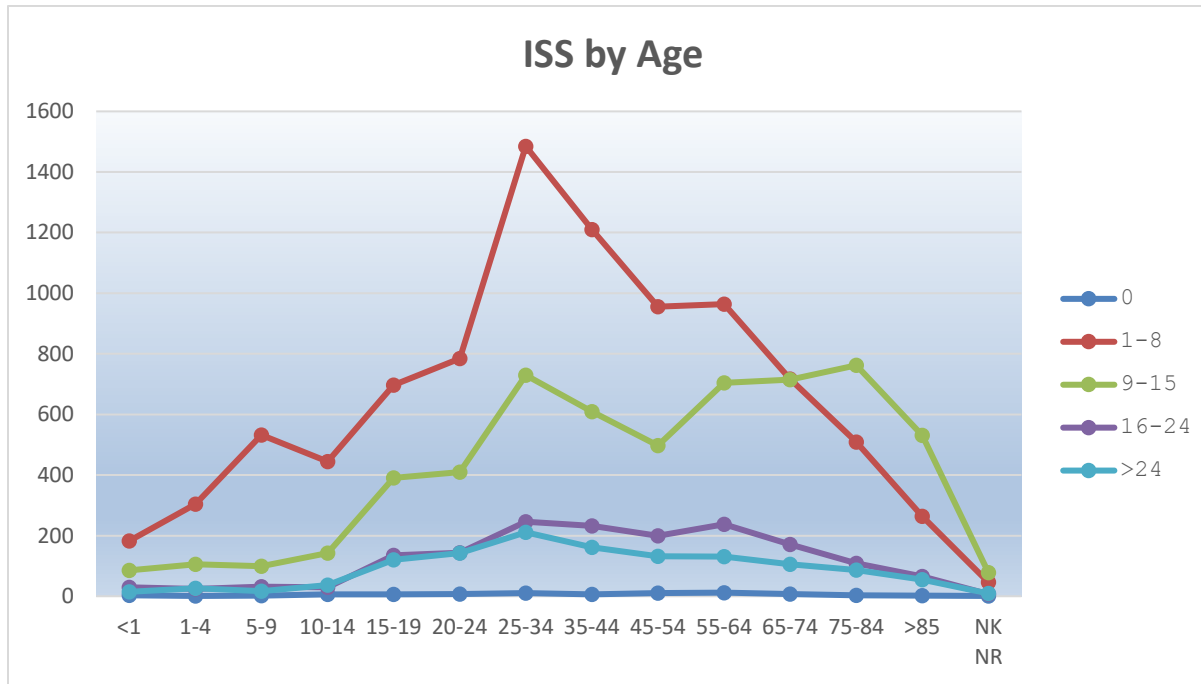- TCA (Tricyclic Antidepressant)

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 Faclity	Level I and II	Level III only
2017	8.31	8.32	8.21
2018	8.75	8.82	8.11
2019	8.43	8.71	6.75
2020	8.89	9.21	7.29

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

In 2016 there were 9 facilities reporting. In 2017 the number of facilities reporting increased to 10. In 2020 the number of facilities reporting increased to 11. Death percent includes patient that arrived to ED without signs of life.

Patients in Trauma Registry by Year

Death Rate by Year