

Trauma Care Advisory Council

# Trauma Care in Tennessee

2021 Report to the 112<sup>th</sup> General Assembly

Tennessee Department of Health  
Trauma Care Advisory Council  
January 24, 2022

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STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
DIVISION OF HEALTH LICENSURE AND REGULATION  
**TRAUMA CARE ADVISORY COUNCIL**  
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NASHVILLE, TN 37243

January 25, 2022

Dear Members of the General Assembly,

As required by Tenn. Code Ann §68-59-103, we are pleased to submit our Annual Trauma Report. This report reflects activities and accomplishments of the Trauma Care Advisory Council (TCAC) and Tennessee's designated Trauma Hospitals.

The Trauma Care Advisory Council implemented in 1990 advises the Board for Licensing Health Care Facilities and the Emergency Medical Services (EMS) Board about the regulatory standards to ensure the adequacy of statewide trauma care. Rule promulgation is guided by national standards.

In 2007, the General Assembly enacted the Trauma Fund Law, providing valuable but limited financial resources to support and maintain Tennessee's statewide Trauma System.

The data in this publication give an overview of patients cared for in Tennessee designated Trauma Centers and Comprehensive Regional Pediatric Centers. With your ongoing support, the TCAC hopes to continue to expand access and quality trauma care for injured Tennesseans.

Respectfully Submitted,

Brian J. Daley, MD, MBA, FACS  
Professor of Surgery, UTHSC- Knoxville  
University of Tennessee Medical Center at Knoxville  
Chair, Trauma Care Advisory Council  
Chair, Tennessee Committee on Trauma

## **2020 EXECUTIVE SUMMARY**

Over calendar year 2020, 39,861 patients received care in a state designated trauma center or a Comprehensive Regional Pediatric Center (CRPC) due to a trauma-related injury. Even with the COVID crisis, traumatic injuries and resource consumption increased in Tennessee. The total number of patients managed in centers designed to improve the care of the injured has risen consistently over the last eight years. The effect of the care to these patients in these institutions has been to reduce potential years of life lost, to return as close to pre-injury health and to increase the return to family, work, and community. While seemingly a large number, many injuries are underreported to our system as patients are treated in non-trauma hospitals.

Trauma centers are responsible for outreach and prevention. Raising awareness around both pediatric and adult causes of trauma from teen suicide and seatbelt use, to helmet use, along with fall prevention in the elderly has been paramount for the Trauma Care Advisory Council (TCAC) with the help of the Tennessee Committee on Trauma and other state agencies. Most importantly, though, is the maintenance of trauma center excellence to ensure optimal care of the injured. Our trauma centers provided care for Tennesseans from every county in the state, as well as patients from nearly every state in the continental US.

The Trauma Care Advisory Council (TCAC) was established in 1990 to advise the Office of Health Care Facilities regarding trauma care policy and regulation. Currently, Tennessee has 5 Level I trauma centers, 2 Level II centers, 6 level III centers, and 1 provisional Level III center, for 14 total adult centers. There are an associated 4 CRPC's, two of which have been verified by the ACS as Level 1 Pediatric Trauma Centers (LeBonheur in Memphis and Monroe Carrell in Nashville) treating those injured under the age of 16. TCAC constantly reviews the designation rules and integrates the verification process of the American College of Surgeons Committee on Trauma to assess the programs at the highest national standard for trauma care. TCAC has also provided support to the Council on Pediatric Emergency Care (CoPEC) to update the rules for pediatric trauma.

The epidemic of elder ground level falls continues unabated across Tennessee (and the nation) and is the number one cause of trauma admission and mortality. The admissions and death rates continue to climb as our population ages, accounting for greater than 50% of admissions in several trauma centers. Unfortunately, motor vehicle crashes (MVCs) remain lethal and are the second highest cause fatality rate in the state. Gun-related suicide deaths continues to overshadow homicides at a rate of 2 to 1 at both the state and national level. These are urgent issues we as Tennesseans need desperately to address.

This report provides information on injury patterns across the state, referral patterns, and financial statistics. Other key aspects of this report include Injury Prevention actions and

statewide research efforts. It is the goal of the TCAC to target future outreach and prevention activities through data from the state registry and to continually strive to improve patient outcomes through an array of performance improvement initiatives, research activities, and outcomes-based evidence research. Such efforts consist of outreach to nursing homes and specific communities to educate the elderly on fall risk, “Battle of the Belts” for high school student awareness of seatbelt use and motorcycle and ATV safety education. The ‘Stop the Bleed’ education about a simple method to ensure as many first responders, bystanders and others are prepared in any situation to stop active hemorrhage is ongoing. So far, the efforts of the trauma programs have led to educating over 5000 individuals across the state. This includes school nurses, teachers, Scouts, first responders and many members of the legislature and state offices.

This report also reflects the ongoing effort of the Trauma Centers as dedicated to caring for the injured patient. As the number of trauma patients continues to increase in the state, we believe the efforts of the trauma council are important to maintain and improve the outcomes of our citizens across the entire state. We are aware that there are areas of the state that remain outside the contiguous counties of the major metropolitan areas that are not within easy reach of a designated trauma center. We continue to advocate for formal universal system designation of all hospitals as Level I, II, III or IV, ensuring not only the capture of all injured patients data but rendering and maintaining the highest possible level of trauma care for all Tennesseans. This would require additional state dedicated funding to preserve the infrastructure of many of the smaller, rural hospitals to support a complete trauma system.

Lastly, the income and disbursement of the Trauma Fund monies is reported. The Trauma Fund, designated by the Trauma Center Funding Law of 2007, is slowly declining in revenue, placing our Trauma System at risk. Trauma Funds are allocated for Trauma Center readiness, for uncompensated care to all reporting hospitals, and to support a state-wide, multidisciplinary Trauma Symposium, focusing on the latest improvements in trauma care.

With your ongoing support and endorsement, we can continue with our mission of providing the highest level of care, injury prevention, education, and research to minimize the death and disability occurring because of injury across the state of Tennessee. As the Chair of the TCAC and TN Committee on Trauma, and working alongside Rob Seesholtz and the many other members of the state team, I am awed every day by their selfless dedication to the care of the injured in Tennessee.

Brian J. Daley, MD, MBA, FACS  
Chair, Trauma Care Advisory Council  
Chair, Tennessee Committee on Trauma

## **TRAUMA CENTER FUNDING**

With the passage of the Tennessee Trauma Center Funding Law of 2007, the Trauma Care Advisory Council was charged with developing recommendations on how to distribute Trauma System Fund reserves. In keeping with the intent of the statute, three broad categories for disbursement were identified:

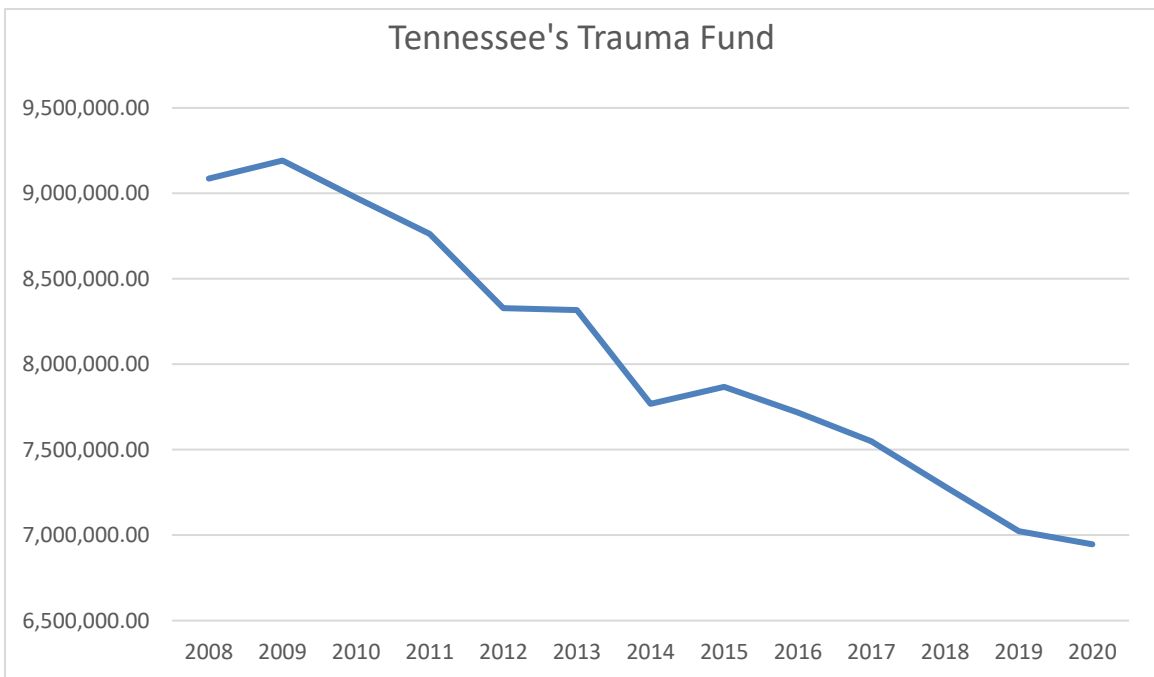
1. Money to support the **trauma system infrastructure** at the state level:
  - The State Trauma System Manager is responsible for providing general oversight for Tennessee's system of trauma care. Responsibilities include oversight of Tennessee's trauma fund, trauma registry, administrative support to the Trauma Care Advisory Council, and the coordination of site visits for new and existing trauma centers. Trauma system infrastructure has been bolstered as monies were approved for the expenditure on trauma education, trauma registry improvements and for a state-wide trauma symposium.
2. **Readiness costs** to designated trauma centers and comprehensive regional pediatric centers:
  - Tennessee trauma centers and CRPC's are ready at a moment's notice to treat those suffering from traumatic injury and are required to maintain life critical services 24 hours a day, 7 days a week, 365 days a year. While readiness costs disbursed from the trauma fund cannot realistically compensate centers for all of their costs, readiness funds help to ensure that these necessary life critical services are maintained. Readiness cost amounts for state designated trauma centers and CRPC's may be found in **appendix III**.
3. Money for **uncompensated care**:
  - The trauma funding law provides for uncompensated care funding to be distributed to: 1) designated trauma centers 2) comprehensive regional pediatric centers and 3) other acute care hospitals functioning as a part of the trauma system.
  - Distribution to eligible hospitals is based on: 1) the level of funding within the reserve account following infrastructure and readiness costs and 2) the documented level of each hospital's uncompensated trauma cost. Though this amount will vary from year to year, at the end of 2020, trauma fund disbursements totaled \$6,946,577.34 to eligible facilities. **Appendix III** shows quarterly payments made to eligible hospitals for calendar year 2020.

Trauma Fund disbursement totals have seen a steady decline since the funds inception. Since then, the trauma fund has decreased over \$2,100,000.00 dollars making finding alternative sources of funding a priority to ensure the viability of Tennessee's Trauma System.

### Trauma Fund Disbursement Totals Since Inception

	Calendar Year	Trauma Fund Disbursement Totals
*Start of Trauma Fund	<b>2008</b>	\$9,086,822.57
	<b>2009</b>	\$9,192,013.69
	<b>2010</b>	\$8,973,548.13
	<b>2011</b>	\$8,762,345.31
	<b>2012</b>	\$8,328,132.57
	<b>2013</b>	\$8,316,610.13
	<b>2014</b>	\$7,768,758.15
	<b>2015</b>	\$7,867,741.77
	<b>2016</b>	\$7,717,970.86
	<b>2017</b>	\$7,548,708.50
	<b>2018</b>	\$7,283,384.96
	<b>2019</b>	\$7,022,767.11
	<b>2020</b>	\$6,946,577.34

**\$2,140,245.23 below initial disbursement when trauma fund started**

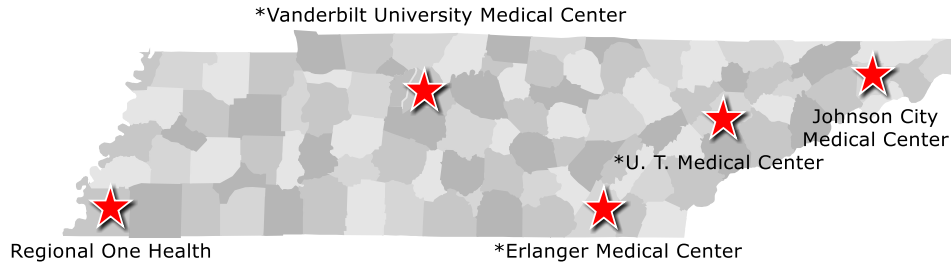






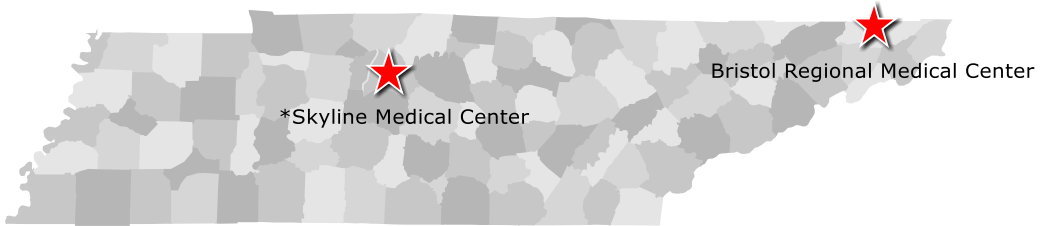
## Appendix I: Current Trauma Center Location & Level of Designation

### Level I Tennessee Trauma Centers



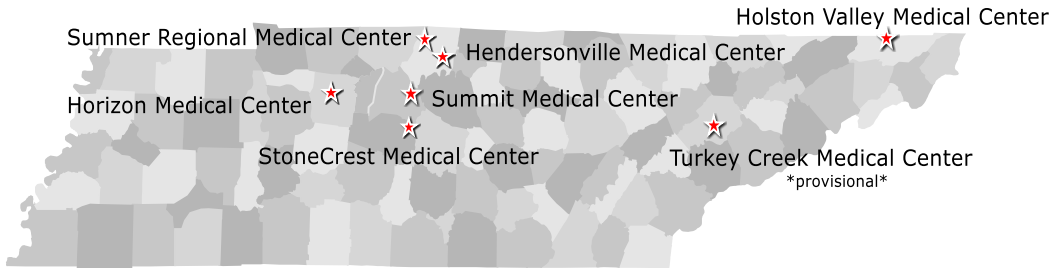
In addition to state designation "\*" indicates verification as an American College of Surgeons Trauma Center

### Level II Tennessee Trauma Centers

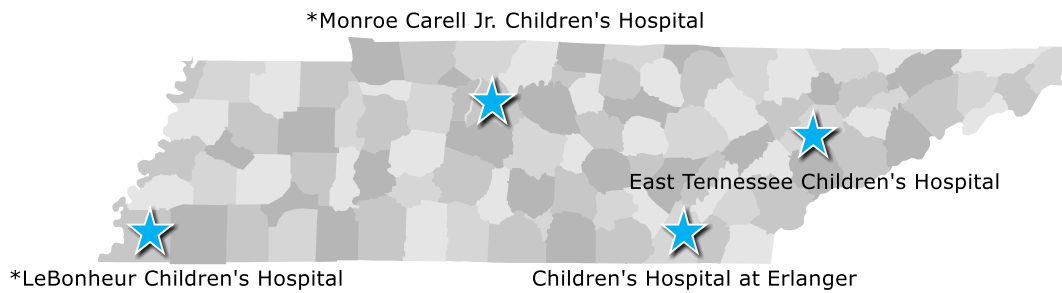


In addition to state designation "\*" indicates verification as an American College of Surgeons Trauma Center

### Level III Tennessee Trauma Centers



### Comprehensive Regional Pediatric Centers

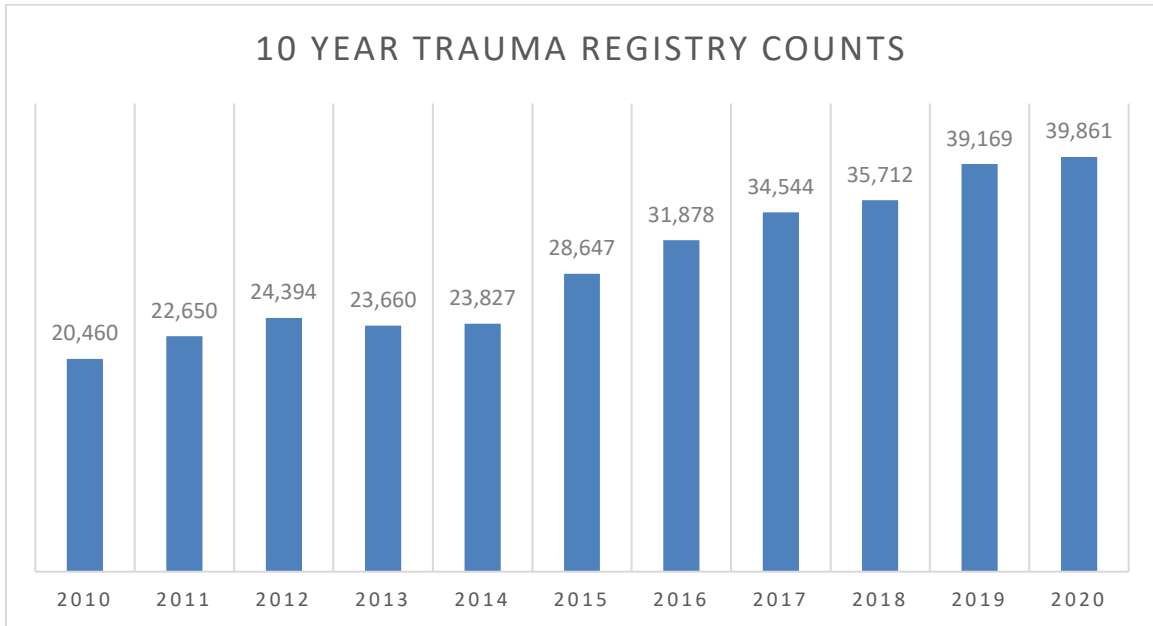


\*Indicates verification as an American College of Surgeons Pediatric Trauma Center

Appendix II:  
2020 Trauma Registry Reports

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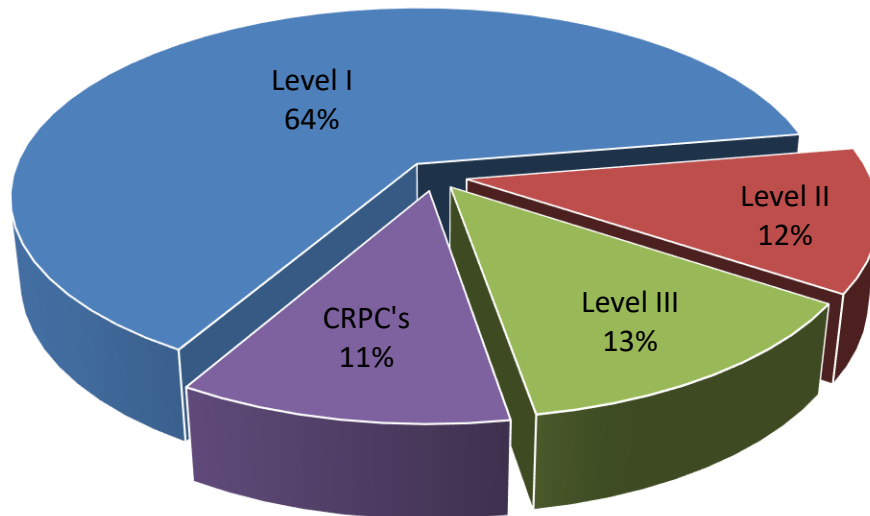
Figure 1a:



In 2020, 39,861 patients were entered in the state trauma registry as a result of meeting inclusion criteria related to traumatic injury. The growth pattern of traumatic injury patient totals recorded in the registry since 2010 is shown above.

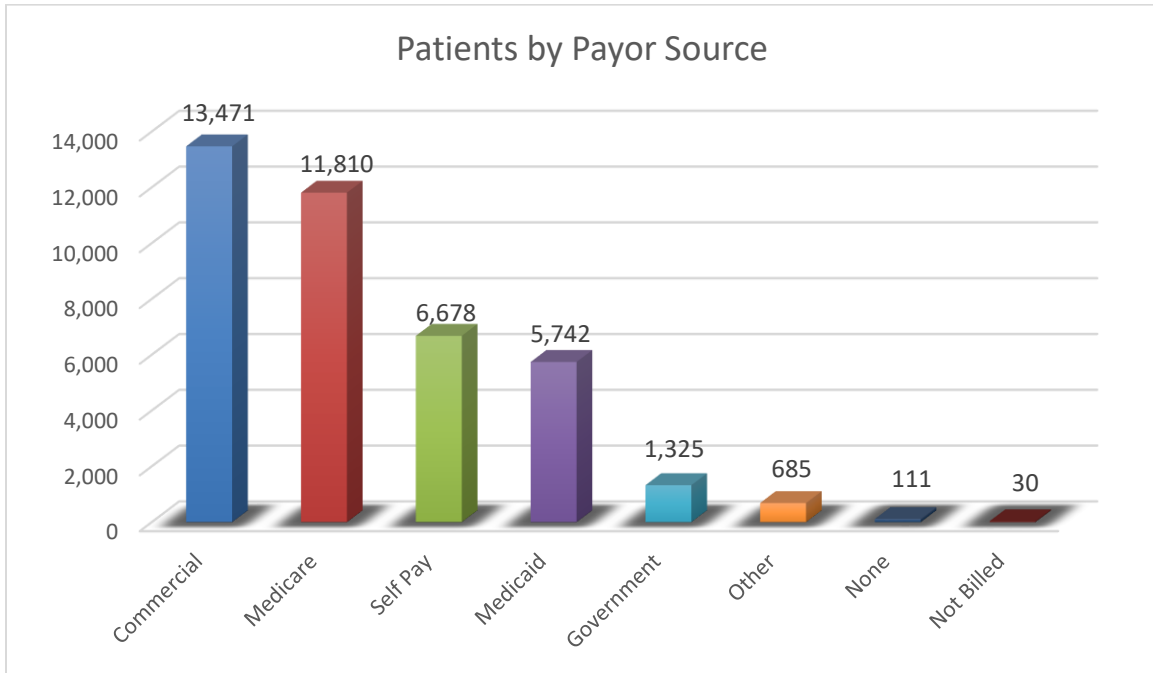
Figure 1b:

Distribution of Patients Treated at Trauma Centers & CRPC's



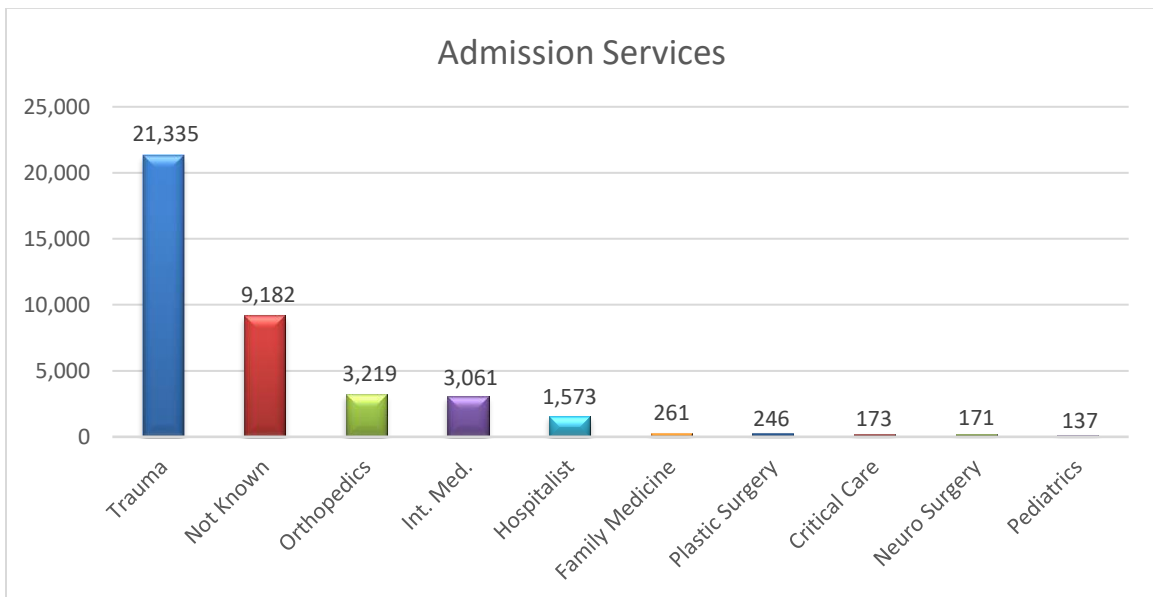
The chart above reflects the distribution of patients who received care at trauma centers and CRPC's for calendar year 2020.

Figure 2a:



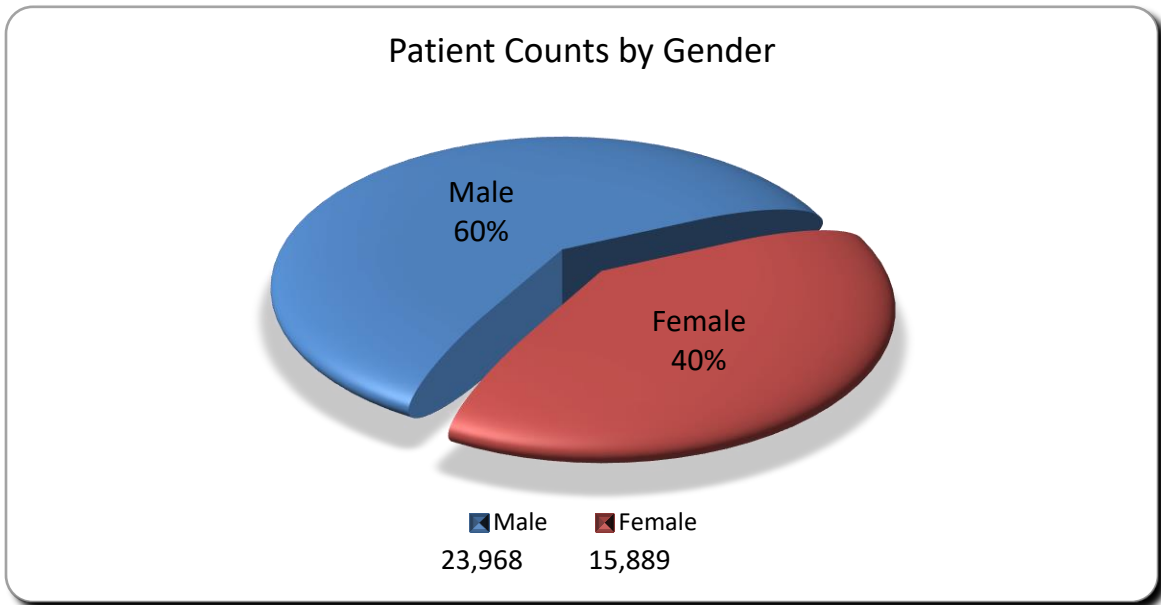
Commercial Insurance continues as the number one payor source for those receiving care at a trauma center or CRPC in 2020.

Figure 2b:



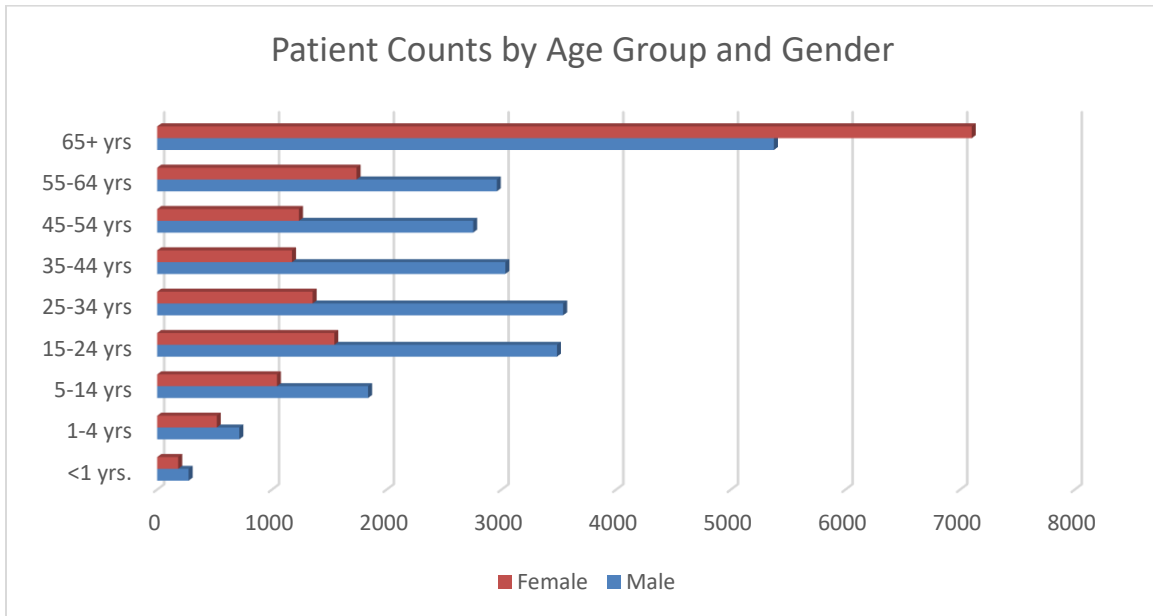
The graph above reflects the top 10 surgical/medical admission services utilized when being admitted for a traumatic injury.

Figure 3a:



60% of all patients treated at a Tennessee trauma center or CRPC were male. This 2020 data reflects a one-point percentage change in the injury gender distribution from 2019.

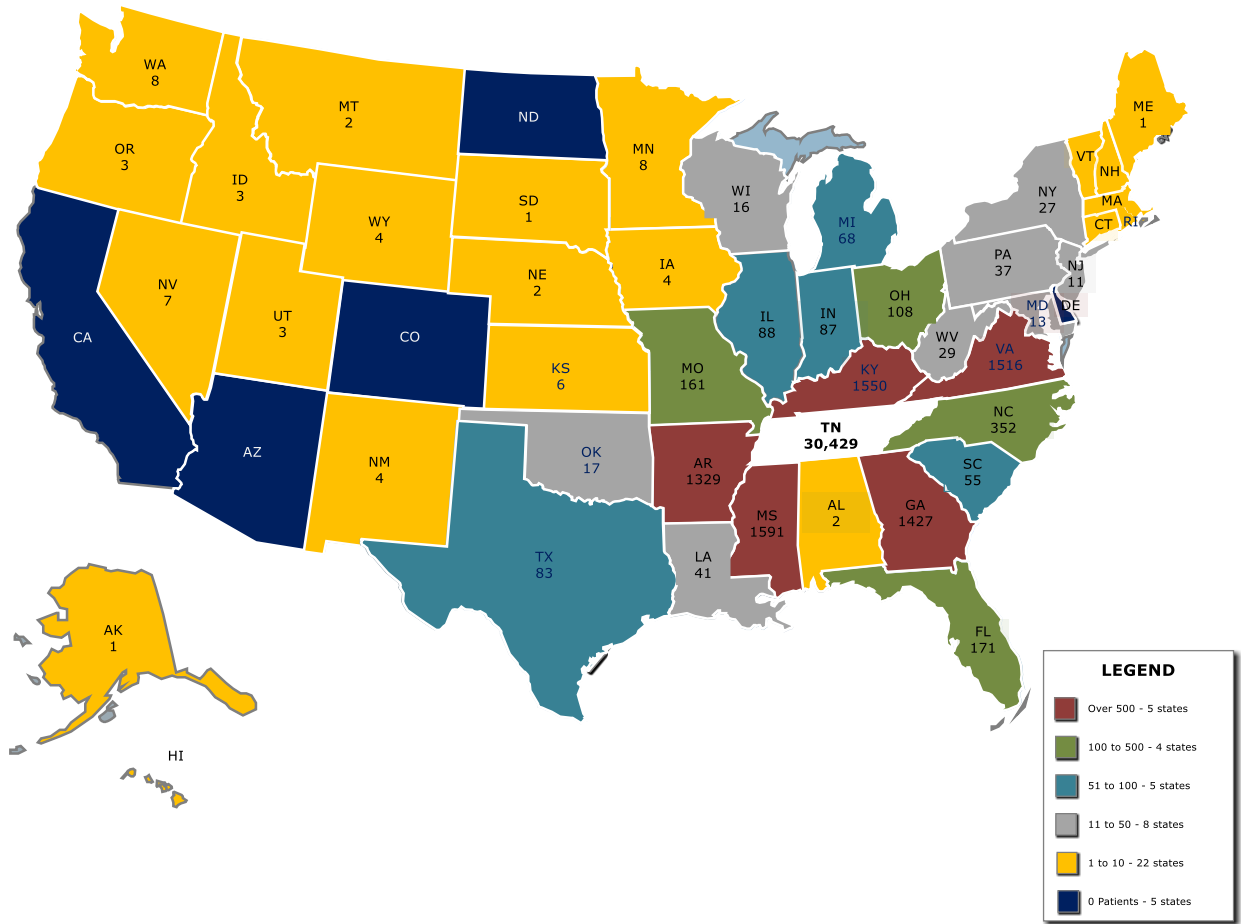
Figure 3b



The information above is reflective of traumatic injury patient counts by age and gender for 2020.

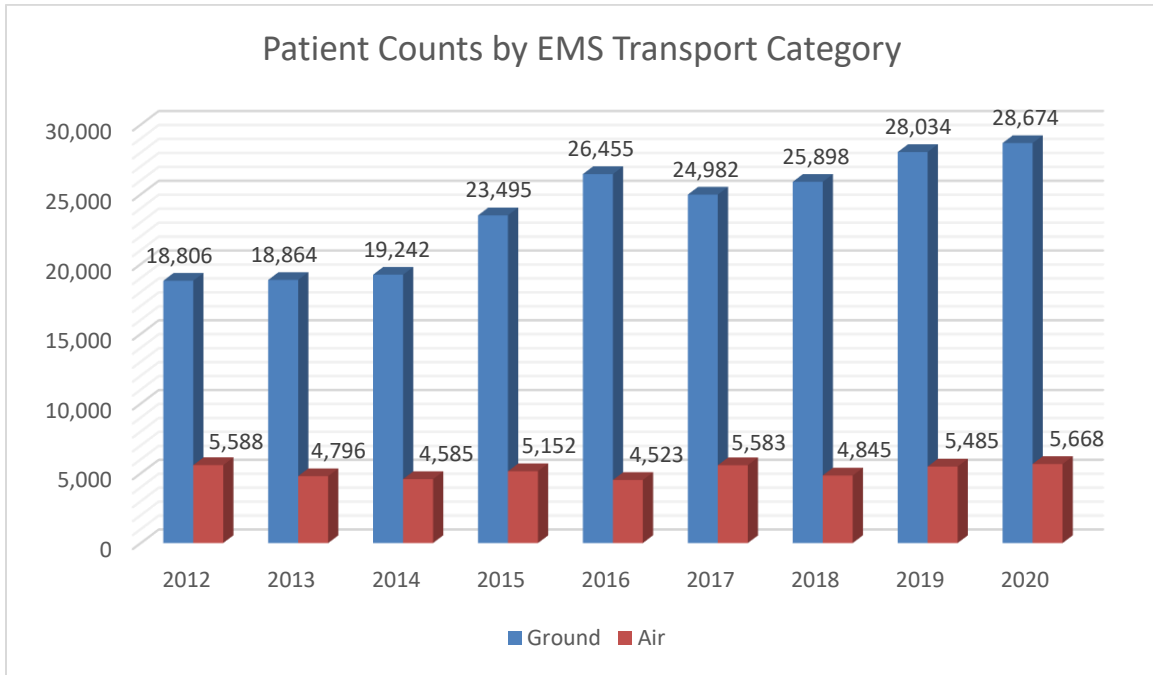
Figure 4:

Trauma Patients Treated in Tennessee Trauma Centers and CRPC's by State of Residence



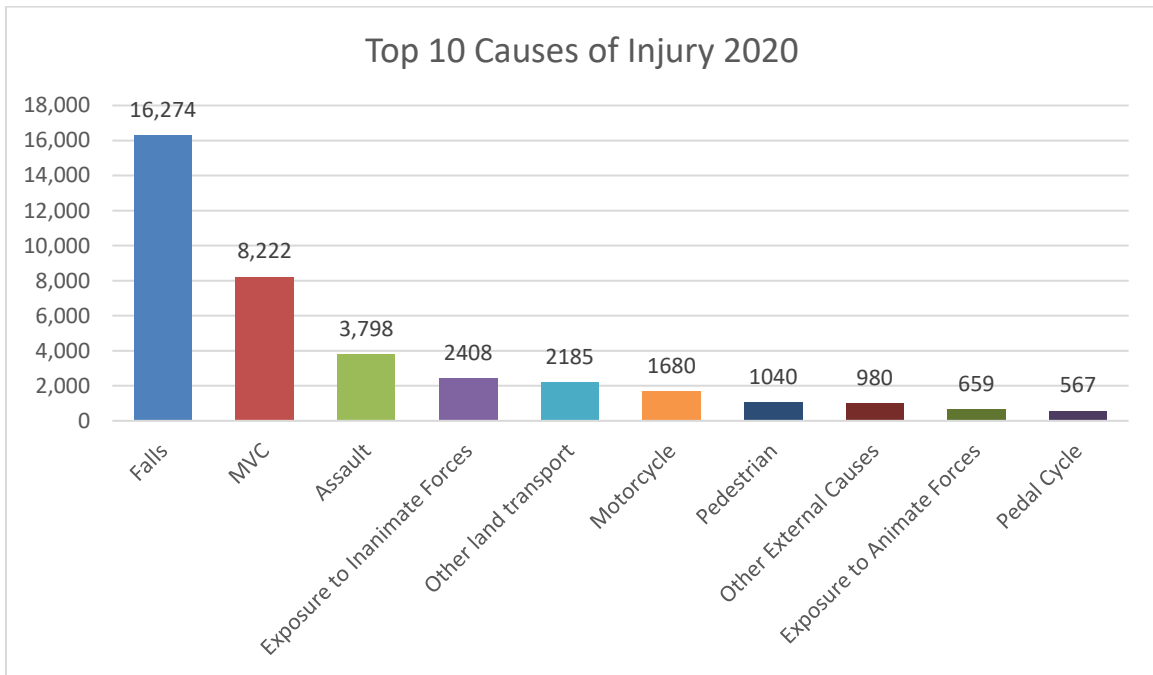
76% of all trauma cases treated in Tennessee trauma centers or CRPC's were Tennesseans (30,429); 24% of all cases (9,432) were residents of other states.

Figure 5a:



Patient transports by air travel to a trauma center or CRPC have again shown a year-to-year increase.

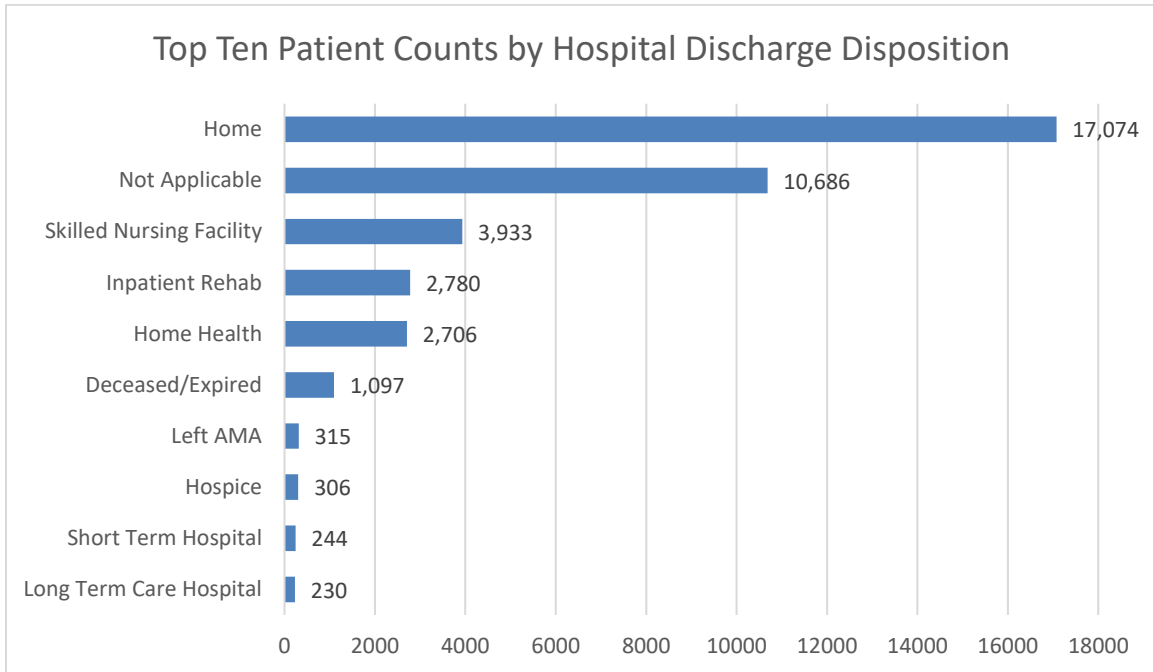
Figure 5b:



The graph above reflects the top ten causes of injury for seeking care at a trauma center or CRPC in 2020.

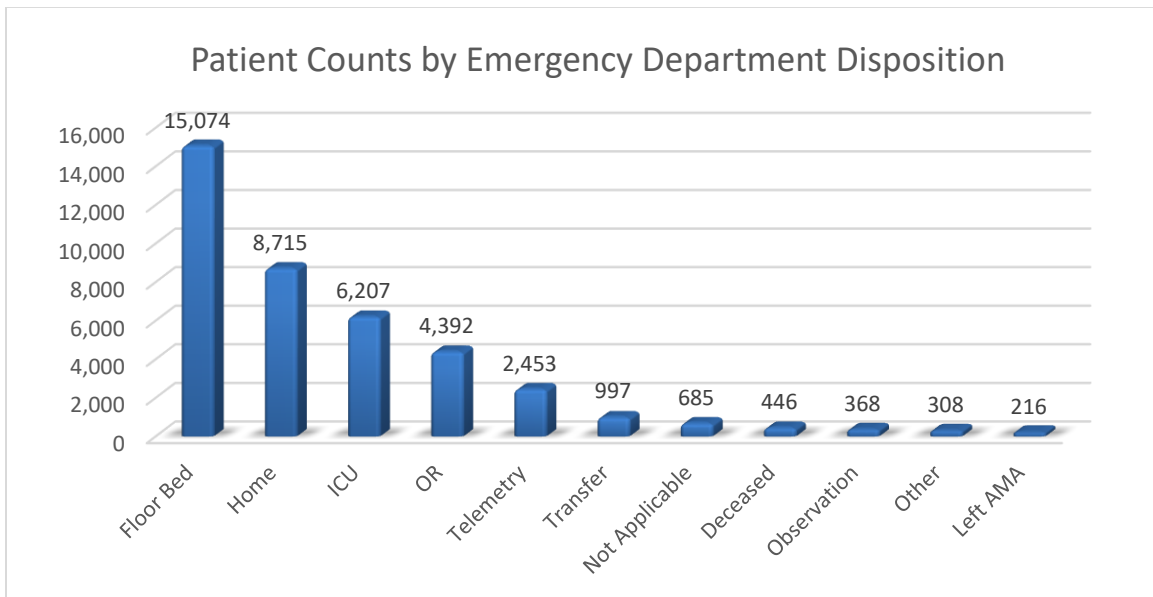


Figure 6a:



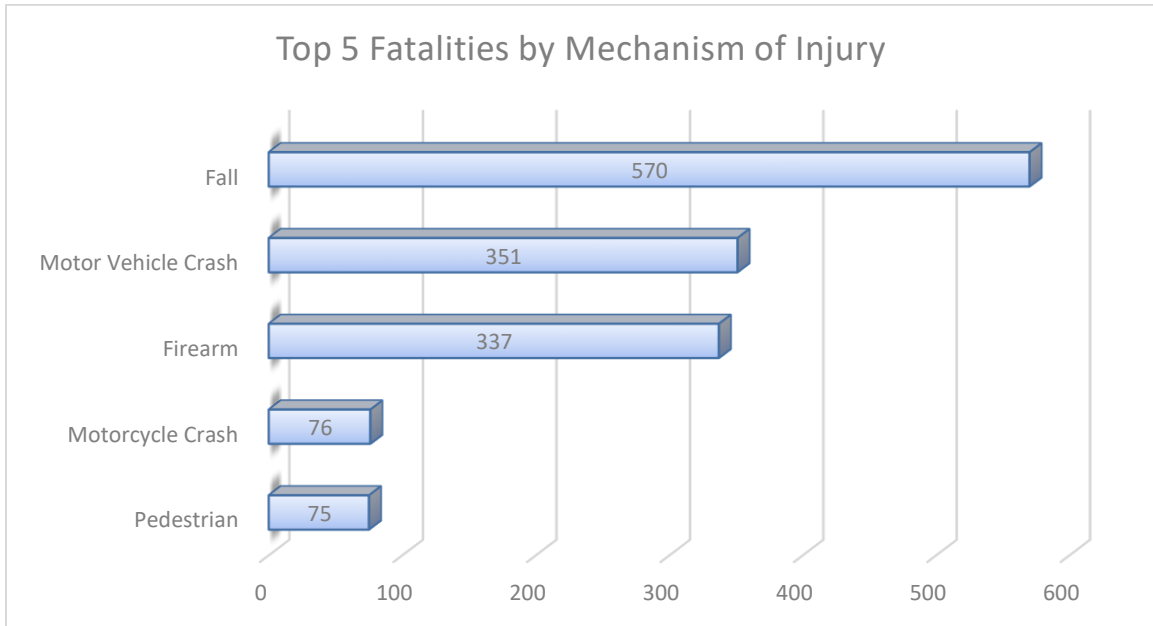
58% of patients admitted to a trauma facility in 2020 were discharged back to their home after hospital admission. 13% were admitted into a skilled nursing facility upon hospital discharge and approximately 4% of patients had an outcome of death.

Figure 6b:



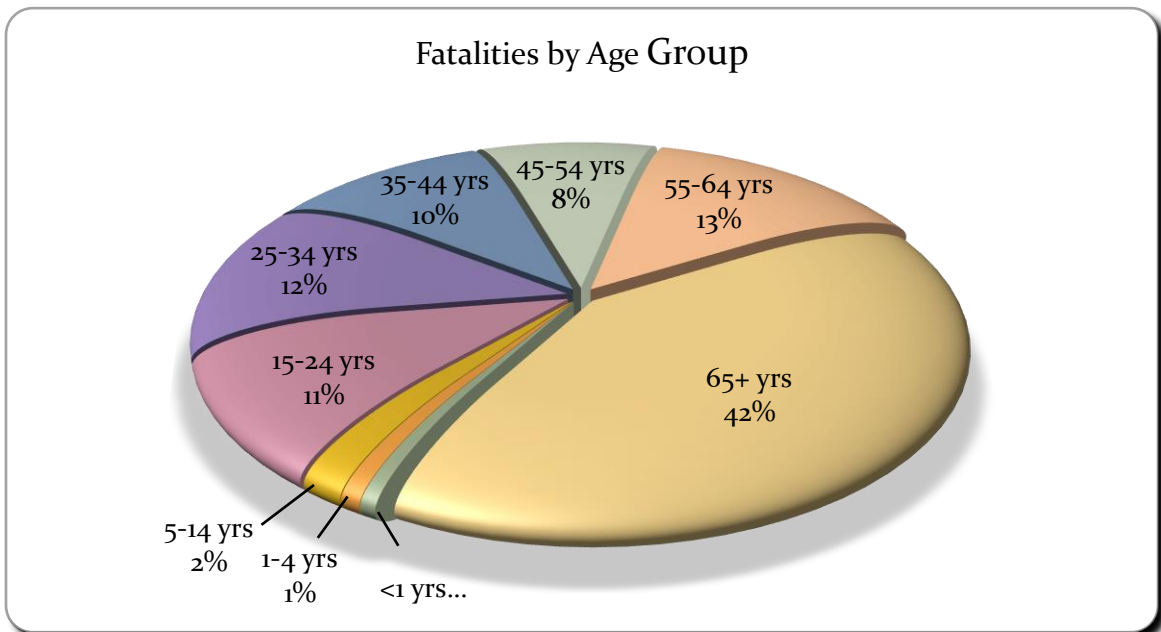
Most patients who met inclusion criteria for trauma registry submissions for 2020 were admitted to a floor bed based on their Emergency Department discharge disposition.

Figure 7a:



Fatalities from falls, motor vehicle crashes, firearms, pedestrian injuries and motorcycle crashes remain the top 5 mechanisms for injury that lead to death.

Figure 7b:



The chart above is reflective of fatalities separated into their respective age groups.

Appendix III:  
2020 Trauma Fund Distribution

**FUNDS DISTRIBUTED TO TRAUMA CENTERS AND NON-TRAUMA CENTERS  
FROM TENNESSEE TRAUMA FUND - 2020 - 1st QUARTER DISTRIBUTION**

Level	Hospital Name	Hospital Specific Pool Payment	Readiness Costs	Total Hospital Distribution Payment
	<b>TOTAL</b>	<b>\$975,326.96</b>	<b>\$846,750.00</b>	<b>\$1,822,076.96</b>
Lev 1	Regional One Health	\$399,406.62	\$97,250.00	\$496,656.62
Lev 1	Vanderbilt University Hospital	\$260,331.10	\$153,250.00	\$413,581.10
Lev 1	Erlanger Medical Center - Baroness	\$83,862.99	\$153,250.00	\$237,112.99
Lev 1	The University of Tennessee Medical Center	\$65,531.34	\$102,250.00	\$167,781.34
Lev 1	Johnson City Medical Center	\$24,556.36	\$72,500.00	\$97,056.36
Lev 2	TriStar Skyline Medical Center	\$46,340.51	\$37,750.00	\$84,090.51
PED	LeBonheur Children Medical Center	\$2,419.79	\$64,250.00	\$66,669.79
PED	East Tennessee Childrens Hospital		\$51,000.00	\$51,000.00
Lev 2	Bristol Regional Medical Center	\$6,865.87	\$37,750.00	\$44,615.87
Lev 3	Holston Valley Medical Center	\$15,947.26	\$15,500.00	\$31,447.26
Lev 3	TriStar Horizon Medical Center	\$3,246.53	\$15,500.00	\$18,746.53
Lev 3	TriStar Summit Medical Center	\$2,851.59	\$15,500.00	\$18,351.59
Lev 3	Sumner Regional Medical Center	\$1,619.05	\$15,500.00	\$17,119.05
Lev 3	TriStar Stonecrest Medical Center	\$689.30	\$15,500.00	\$16,189.30
	Methodist University Hospital	\$16,189.30		\$16,189.30
	Baptist Memorial Hospital-Memphis	\$7,878.78		\$7,878.78
	Jackson-Madison Cnty. General Hospital	\$4,002.08		\$4,002.08
	Saint Thomas West Hospital	\$3,818.10		\$3,818.10
	Fort Sanders Regional Medical Center	\$2,828.92		\$2,828.92
	TriStar Southern Hills Medical Center	\$2,684.75		\$2,684.75
	Tenova Healthcare Physicians Regional M C	\$2,390.97		\$2,390.97
	Williamson Medical Center	\$2,302.01		\$2,302.01
	Erlanger North Hospital	\$2,234.25		\$2,234.25
	Maury Regional Medical Center	\$1,955.49		\$1,955.49
	TriStar Hendersonville Medical Center	\$1,948.33		\$1,948.33
	Saint Francis Hospital	\$1,889.58		\$1,889.58
	Parkridge Medical Center	\$1,472.94		\$1,472.94
	Parkwest Medical Center	\$1,076.35		\$1,076.35
	Morristown-Hamblen Healthcare System	\$1,014.60		\$1,014.60
	Methodist North Hospital	\$1,009.42		\$1,009.42
	CHI Memorial Hospital Chattanooga	\$969.80		\$969.80
	Henry County Medical Center	\$902.15		\$902.15
	Indian Path Medical Center	\$816.77		\$816.77
	CHI Memorial Hospital Hixon	\$785.29		\$785.29
	Methodist Medical Center of Oak Ridge	\$685.23		\$685.23
	Blount Memorial Hospital	\$648.86		\$648.86
	Cookeville Regional Medical Center	\$591.57		\$591.57

	Saint Francis Hospital-Bartlett	\$526.14		\$526.14
	Cumberland Medical Center	\$483.86		\$483.86
	West Tennessee Healthcare Dyersburg Hospital	\$319.25		\$319.25
	Tennova Healthcare - Clarksville	\$139.57		\$139.57
	Southern TN Reg. Health Sys.- Winchester	\$94.29		\$94.29

**FUNDS DISTRIBUTED TO TRAUMA CENTERS AND NON-TRAUMA CENTERS  
FROM TENNESSEE TRAUMA FUND - 2020 – 2nd QUARTER DISTRIBUTION**

Level	Hospital Name	Hospital Specific Pool Payment	Readiness Costs	Total Hospital Distribution Payment
	<b>TOTAL</b>	<b>\$726,966.05</b>	<b>\$846,750.00</b>	<b>\$1,573,716.05</b>
Lev 1	Vanderbilt University Hospital	\$252,237.91	\$153,250.00	\$405,487.91
Lev 1	Regional One Health	\$234,913.45	\$97,250.00	\$332,163.45
Lev 1	Erlanger Medical Center - Baroness	\$50,441.96	\$153,250.00	\$203,691.96
Lev 1	The University of Tennessee Medical Center	\$53,825.07	\$102,250.00	\$156,075.07
Lev 1	Johnson City Medical Center	\$19,372.68	\$72,500.00	\$91,872.68
Lev 2	TriStar Skyline Medical Center	\$41,597.30	\$37,750.00	\$79,347.30
PED	LeBonheur Children Medical Center	\$7,587.01	\$64,250.00	\$71,837.01
PED	East Tennessee Childrens Hospital		\$51,000.00	\$51,000.00
Lev 2	Bristol Regional Medical Center	\$12,070.04	\$37,750.00	\$49,820.04
Lev 3	Holston Valley Medical Center	\$17,934.96	\$15,500.00	\$33,434.96
Lev 3	TriStar Summit Medical Center	\$3,942.86	\$15,500.00	\$19,442.86
Lev 3	TriStar Horizon Medical Center	\$2,188.52	\$15,500.00	\$17,688.52
Lev 3	TriStar Stonecrest Medical Center	\$2,151.80	\$15,500.00	\$17,651.80
Lev 3	Sumner Regional Medical Center	\$1,329.93	\$15,500.00	\$16,829.93
	Methodist University Hospital	\$8,142.02		\$8,142.02
	Baptist Memorial Hospital-Memphis	\$4,421.46		\$4,421.46
	TriStar Southern Hills Medical Center	\$3,752.10		\$3,752.10
	Maury Regional Medical Center	\$3,051.13		\$3,051.13
	Jackson-Madison Cnty. General Hospital	\$2,211.20		\$2,211.20
	Saint Thomas West Hospital	\$2,142.75		\$2,142.75
	Methodist North Hospital	\$1,775.38		\$1,775.38
	Methodist Medical Center of Oak Ridge	\$975.67		\$975.67
	Williamson Medical Center	\$780.72		\$780.72
	CHI Memorial Hospital Chattanooga	\$120.15		\$120.15

**FUNDS DISTRIBUTED TO TRAUMA CENTERS AND NON-TRAUMA CENTERS  
FROM TENNESSEE TRAUMA FUND - 2020 – 3rd QUARTER DISTRIBUTION**

Level	Hospital Name	Hospital Specific Pool Payment	Readiness Costs	Total Hospital Distribution Payment
	<b>TOTAL</b>	<b>\$900,488.74</b>	<b>\$846,750.00</b>	<b>\$1,747,238.74</b>
Lev 1	Regional One Health	\$334,142.61	\$97,250.00	\$431,392.61

Lev 1	Vanderbilt University Hospital	\$216,846.75	\$153,250.00	\$370,096.75
Lev 1	Erlanger Medical Center - Baroness	\$103,337.57	\$153,250.00	\$256,587.57
Lev 1	The University of Tennessee Medical Center	\$67,657.26	\$102,250.00	\$169,907.26
Lev 1	Johnson City Medical Center	\$20,563.79	\$72,500.00	\$93,063.79
Lev 2	TriStar Skyline Medical Center	\$54,623.78	\$37,750.00	\$92,373.78
PED	LeBonheur Children Medical Center	\$10,442.26	\$64,250.00	\$74,692.26
PED	East Tennessee Childrens Hospital	\$1,693.39	\$51,000.00	\$52,693.39
Lev 2	Bristol Regional Medical Center	\$12,751.11	\$37,750.00	\$50,501.11
Lev 3	Holston Valley Medical Center	\$15,984.64	\$15,500.00	\$31,484.64
Lev 3	TriStar Horizon Medical Center	\$3,602.53	\$15,500.00	\$19,102.53
Lev 3	TriStar Summit Medical Center	\$2,615.28	\$15,500.00	\$18,115.28
Lev 3	Sumner Regional Medical Center	\$1,304.81	\$15,500.00	\$16,804.81
Lev 3	TriStar Stonecrest Medical Center	\$1,255.71	\$15,500.00	\$16,755.71
	Methodist University Hospital	\$16,755.71		\$16,755.71
	Erlanger North Hospital	\$11,601.55		\$11,601.55
	Jackson-Madison Cnty. General Hospital	\$4,535.19		\$4,535.19
	Baptist Memorial Hospital-Memphis	\$3,566.14		\$3,566.14
	Saint Thomas West Hospital	\$3,058.65		\$3,058.65
	TriStar Southern Hills Medical Center	\$2,523.80		\$2,523.80
	Williamson Medical Center	\$2,233.74		\$2,233.74
	Parkwest Medical Center	\$1,231.98		\$1,231.98
	Cookeville Regional Medical Center	\$1,231.88		\$1,231.88
	Blount Memorial Hospital	\$1,208.51		\$1,208.51
	Methodist North Hospital	\$1,153.10		\$1,153.10
	Henry County Medical Center	\$1,079.75		\$1,079.75
	Methodist Medical Center of Oak Ridge	\$1,051.24		\$1,051.24
	CHI Memorial Hospital Chattanooga	\$1,027.38		\$1,027.38
	Saint Francis Hospital-Bartlett	\$607.58		\$607.58
	CHI Memorial Hospital Hixon	\$309.99		\$309.99
	Greeneville Community Hospital East	\$254.55		\$254.55
	Morristown-Hamblen Healthcare System	\$236.51		\$236.51

**FUNDS DISTRIBUTED TO TRAUMA CENTERS AND NON-TRAUMA CENTERS  
FROM TENNESSEE TRAUMA FUND - 2020 – 4th QUARTER DISTRIBUTION**

Level	Hospital Name	Hospital Specific Pool Payment	Readiness Costs	Total Hospital Distribution Payment
	<b>TOTAL</b>	<b>\$941,295.59</b>	<b>\$862,250.00</b>	<b>\$1,803,545.59</b>
Lev 1	Regional One Health	\$377,201.72	\$97,250.00	\$474,451.72
Lev 1	Vanderbilt University Hospital	\$236,657.44	\$153,250.00	\$389,907.44
Lev 1	Erlanger Medical Center - Baroness	\$96,607.36	\$153,250.00	\$249,857.36
Lev 1	The University of Tennessee Medical Center	\$83,135.97	\$102,250.00	\$185,385.97
Lev 1	Johnson City Medical Center	\$13,289.99	\$72,500.00	\$85,789.99
Lev 2	TriStar Skyline Medical Center	\$46,363.97	\$37,750.00	\$84,113.97
PED	LeBonheur Children Medical Center	\$7,142.75	\$64,250.00	\$71,392.75
PED	East Tennessee Childrens Hospital	\$509.93	\$51,000.00	\$51,509.93

Lev 2	Bristol Regional Medical Center	\$8,078.22	\$37,750.00	<b>\$45,828.22</b>
Lev 3	Holston Valley Medical Center	\$22,863.56	\$15,500.00	<b>\$38,363.56</b>
Lev 3	TriStar Summit Medical Center	\$6,973.57	\$15,500.00	<b>\$22,473.57</b>
Lev 3	TriStar Horizon Medical Center	\$1,376.99	\$15,500.00	<b>\$16,876.99</b>
Lev 3	TriStar Stonecrest Medical Center	\$1,306.32	\$15,500.00	<b>\$16,806.32</b>
Lev 3	Sumner Regional Medical Center	\$559.03	\$15,500.00	<b>\$16,059.03</b>
Lev 3	TriStar Hendersonville Medical Center	\$192.68	\$15,500.00	<b>\$15,692.68</b>
	Methodist University Hospital	\$15,692.68		<b>\$15,692.68</b>
	Baptist Memorial Hospital-Memphis	\$4,074.81		<b>\$4,074.81</b>
	Jackson-Madison Cnty. General Hospital	\$3,102.11		<b>\$3,102.11</b>
	St. Thomas Rutherford Hospital	\$2,206.37		<b>\$2,206.37</b>
	Erlanger North Hospital	\$2,145.23		<b>\$2,145.23</b>
	Saint Thomas West Hospital	\$1,490.09		<b>\$1,490.09</b>
	Cookeville Regional Medical Center	\$1,429.97		<b>\$1,429.97</b>
	LeConte Medical Center	\$1,264.99		<b>\$1,264.99</b>
	Williamson Medical Center	\$1,000.39		<b>\$1,000.39</b>
	Blount Memorial Hospital	\$997.07		<b>\$997.07</b>
	TriStar Southern Hills Medical Center	\$898.56		<b>\$898.56</b>
	Maury Regional Medical Center	\$897.57		<b>\$897.57</b>
	Parkwest Medical Center	\$831.86		<b>\$831.86</b>
	Parkridge Medical Center	\$777.31		<b>\$777.31</b>
	Methodist North Hospital	\$742.83		<b>\$742.83</b>
	Henry County Medical Center	\$435.61		<b>\$435.61</b>
	CHI Memorial Hospital Chattanooga	\$318.92		<b>\$318.92</b>
	Greeneville Community Hospital East	\$301.13		<b>\$301.13</b>
	CHI Memorial Hospital Hixon	\$289.78		<b>\$289.78</b>
	Morristown-Hamblen Healthcare System	\$75.73		<b>\$75.73</b>
	Saint Francis Hospital-Bartlett	\$63.08		<b>\$63.08</b>

Appendix IV:  
Research Publications

1. Impact of a New Helicopter Base on Transport Time and Survival in a Rural Adult Trauma Population. Sborov KD, Gallagher KC, Medvecz AJ, Brywczyński J, Gunter OL, Guillaumondegui OD, Dennis BM, Smith MC. *J Surg Res.* 2020 Oct;254:135-141. doi: 10.1016/j.jss.2020.04.020. Epub 2020 May 21. PMID: 32445928
2. Musculoskeletal Trauma in Critically Injured Patients: Factors Leading to Delayed Operative Fixation and Multiple Organ Failure. Richards JE, Medvecz AJ, O'Hara NN, Guillaumondegui OD, O'Toole RV, Obremskey WT, Galvagno SM, Scalea TM. *Anesth Analg.* 2020 Dec;131(6):1781-1788. doi: 10.1213/ANE.0000000000005252. PMID: 33186164
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4. Is NBATS-2 up to the Task? Actual vs. Predicted Patient Volume Shifts With the Addition of Another Trauma Center. Dooley JH, Dennis BM, Magnotti LJ, Sharpe JP, Guillaumondegui OD, Croce MA, Fischer PE. *Am Surg.* 2021 Apr;87(4):595-601. doi: 10.1177/0003134820952383. Epub 2020 Nov 1. PMID: 33131286
5. Pulmonary Complications After Trauma Pneumonectomy. Kazior MR, Streams JR, Dennis BM, King AB, Henson CP, Slinger P, McDonald S, Tong JL, Chaney MA. *J Cardiothorac Vasc Anesth.* 2020 Jul;34(7):1952-1961. doi: 10.1053/j.jvca.2020.01.057. Epub 2020 Feb 11. PMID: 32147324
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10. Impact of a New Helicopter Base on Transport Time and Survival in a Rural Adult Trauma Population. Sborov KD, Gallagher KC, Medvecz AJ, Brywczyński J, Gunter OL, Guillaumondegui OD, Dennis BM, Smith MC. *J Surg Res.* 2020 Oct;254:135-141. doi: 10.1016/j.jss.2020.04.020. Epub 2020 May 21. PMID: 32445928
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