



System Report
October – December 2017

Mississippi Trauma Care System

*Designated Trauma Care Providers
Working Together to Prevent and Treat Trauma*

Prepared for:

Mississippi State Board of Health

February 23, 2018

Introduction

The goal of the Mississippi Trauma Care System is to deliver the **right** patient to the **right** hospital the **first** time. Research shows that this approach decreases mortality. Trauma remains the leading cause of death for Mississippians age 1 to 44 and Mississippi ranks third in the nation for unintentional injury deaths.

Mississippi began development of a statewide trauma system in 1991. The Mississippi Legislature charged the Mississippi State Department of Health with the responsibility for oversight of trauma system development. Since that time the state has adopted a trauma care plan, established seven designated trauma regions, designated qualifying hospitals as trauma centers, maintains a trauma registry, and disbursed funding to trauma regions, trauma centers, and physicians and EMS providers.

The Mississippi Legislature passed House Bill 1405 during the 2008 Regular Session to revitalize and more fully fund the Mississippi Trauma Care System. Mississippi moved from a voluntary system with indigent reimbursement, to a mandatory system with block grant funding based on funding; the first trauma system of its type in the United States. During the 2016 Regular Session the Legislature passed Senate Bill 2362, also known as the Budget Transparency and Simplification Act. Senate Bill 2362 swept collections from fines previously directed to an account to fund the Trauma System, into the state General Fund. With SB 2362 about 35% of the Trauma System disbursement originates from the MSDH State General Funding allocation.

As suggested by the Mississippi Trauma Care Task Force, this report on the Mississippi Trauma Care System will be submitted quarterly to the Mississippi State Board of Health.



Trauma - Quarterly Activities

- Registry sub-committee State-wide Meeting
 - Registry inclusion guide for end-users
 - Validation process discussed for hospital, region & state level
 - Burn Inclusion criteria to regions for education
 - Data points required vs. optional
- Trauma User Group state-wide meeting (contact hours awarded)
 - Report writer training for end users
- Burn Performance Improvement meeting
 - Burn performance improvement plan approved
 - Burn performance indicators approved
 - Review of dashboard information
 - Regions to send all burn admits to performance improvement committee
- Burn sub-committee state-wide meeting
 - Burn destination guidelines sent to MDTQA
 - Review of dashboard information
 - Review of burn logic model with group
- Trauma Functionality, Rules & Regulations State-wide Meeting
 - Initial trauma training discussed
 - Task-force to review Trauma Funding Model
- Collaboration with IT Analyst with RFP process for trauma registry vendor

Trauma Center Survey/ Education Visits:

- Designation visit to Level II Center
- Designation visit to Level III Center
- Three (3) Education visits to Level III Centers

Trauma Center Designations:

The following Level IV Trauma Centers were designated during this period:

- Hancock Medical Center

Currently, the system is comprised of:

- Three (3) Level I Trauma Centers
 - University of Mississippi Medical Center, Jackson
 - Regional One Medical Center, Memphis
 - University of South Alabama, Mobile
- One (1) stand-alone Tertiary Pediatric Trauma Center
 - Le Bonheur Children's Hospital, Memphis
- Three (3) Level II Trauma Centers
 - Forrest General Hospital, Hattiesburg
 - Memorial Hospital of Gulfport, Gulfport
 - North Mississippi Medical Center, Tupelo
- Sixteen (16) Level III Trauma Centers
 - Anderson Regional Medical Center, Meridian

- Baptist Memorial Hospital – DeSoto, Southaven
- Baptist Memorial Hospital- Golden Triangle, Columbus
- Baptist Memorial Hospital-North Mississippi, Oxford
- Delta Regional Medical Center, Greenville
- Garden Park Medical Center, Gulfport
- Magnolia Regional Health Center, Corinth
- Merit Health Biloxi, Biloxi
- Merit Health Central, Jackson
- Merit Health River Oaks, Flowood
- Ocean Springs Hospital, Ocean Springs
- OCH Regional Medical Center, Starkville
- Rush Foundation Hospital, Meridian
- Singing River Hospital, Pascagoula
- South Central Regional Medical Center, Laurel
- Southwest Mississippi Regional Medical Center, McComb
- Sixty-three (63) Level IV Trauma Centers; and
- One Burn Center -J.M. Still at Merit Health Central

Mississippi Trauma Advisory Committee (MTAC):

- MTAC met on November 8, 2017 –
 - Bureau reviewed system finances
 - CEC update from Dr. Donald
 - Update on Trauma Registry RFP progress
 - System Performance Data presented
 - Trauma Activation criteria to advance to Board of Health in January; if approved plan for go- live date of March 1st, 2018.

Clinical Effectiveness Committee (CEC)/ Trauma Medical Directors:

- The clinical effectiveness committee discussions included:
 - Geriatric Trauma guidelines. Does our state need to adopt specific guidelines for geriatric trauma. The PI committee has defined “geriatric” as age 65 and older.
 - The Arkansas Trauma study. Framework discussed for progression of the study.
 - Education. Training related to trauma; exploring ideas of a statewide trauma symposium.
 - Advocacy. Proposal of a “Capitol Day” during the spring State Legislative session and offer to teach the ACS “Bleeding Control” course to the state legislators.
 - National topics that include bleeding control. The American College of Surgeons, Committee on Trauma has a national campaign “Stop the Bleed”. The Trauma System of Care began training police officers on tourniquet use in 2016. To date we have trained over 4000 law enforcement officers across the state. This training has proved to be successful with **fifteen (15) lives saved**.

Trauma Performance Improvement (PI) Program:

- The performance improvement committee is meeting on regular basis. A few of the items of discussion are as follows:
 - Approval of indicators for the statewide Performance Improvement plan
 - Discussion of transfers within the state from Level III and IV facilities.
 - Discussion of appropriateness of transfers.
 - Discussion of mortality related to trauma patients; specifically unexpected survivors and unexpected deaths.
 - Research and publications related to the trauma system of care.

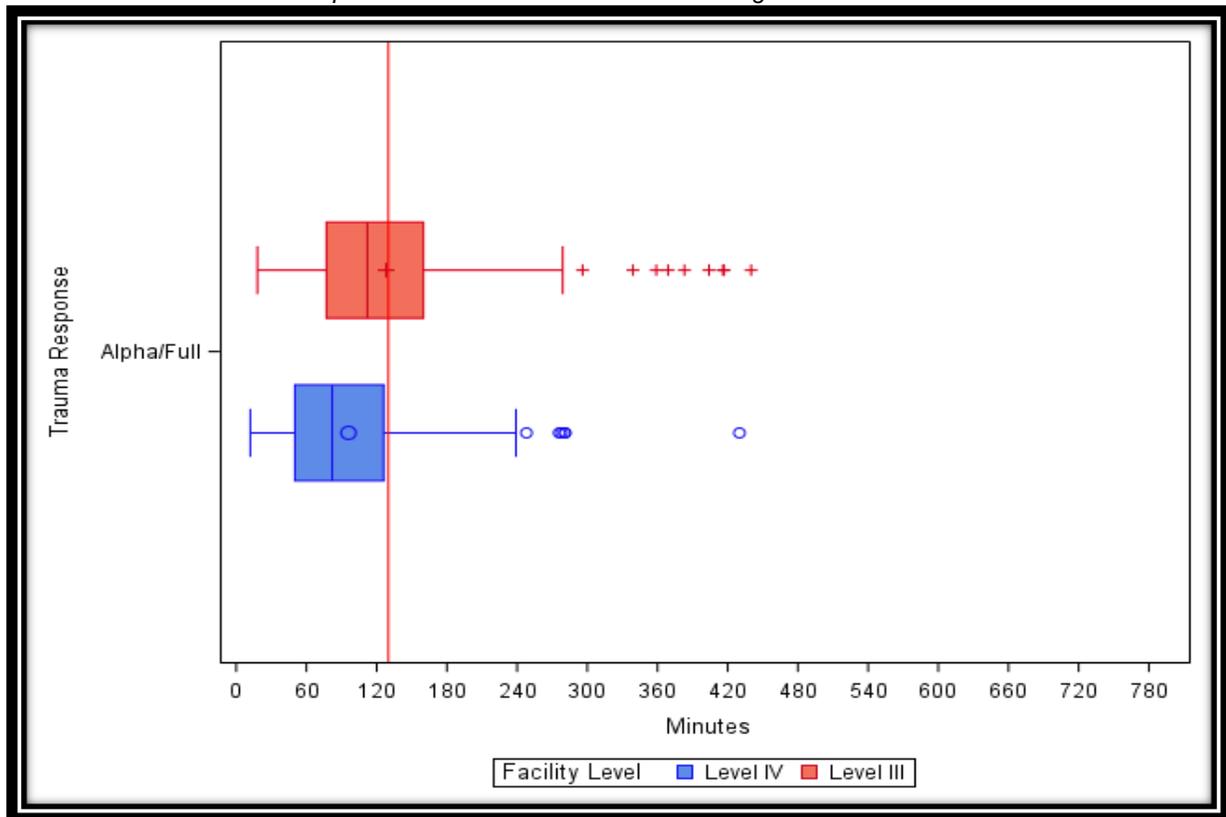
Below is a snapshot of the data the PI committee is analyzing for trends related to transfers:

Transfers (Turnaround Time in minutes) Box Plot by Trauma Response

(goal = 130 min)

N=1598

Alpha transfers from Level III and Level IV Centers to higher level of care



Source: Mississippi Trauma Registry CY2016

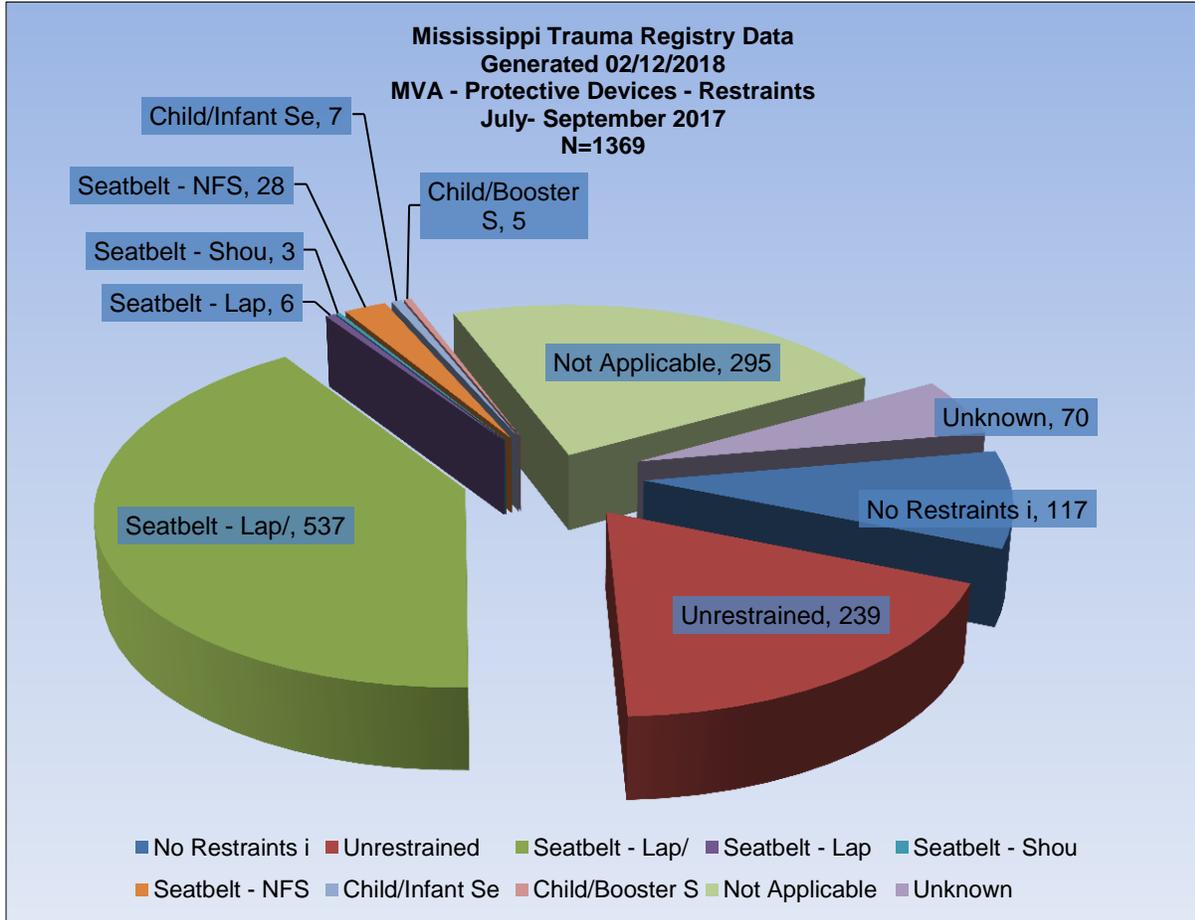
Data supports that the Trauma System as a whole is meeting this measure in transfers from both the Level IIIs and the Level IVs.

Trauma Data: (July 2017, August 2017, September 2017)**Injury Severity Score (ISS) Summary for Level I-III Trauma Centers**

Mississippi Trauma Registry Data
 Injury Severity Score Summary for Level I to Level III Hospitals
 Generated 02/12/2018
 Arrival Dates: 07/01/2017- 09/30/2017
 July - September 2017
 N = 3979

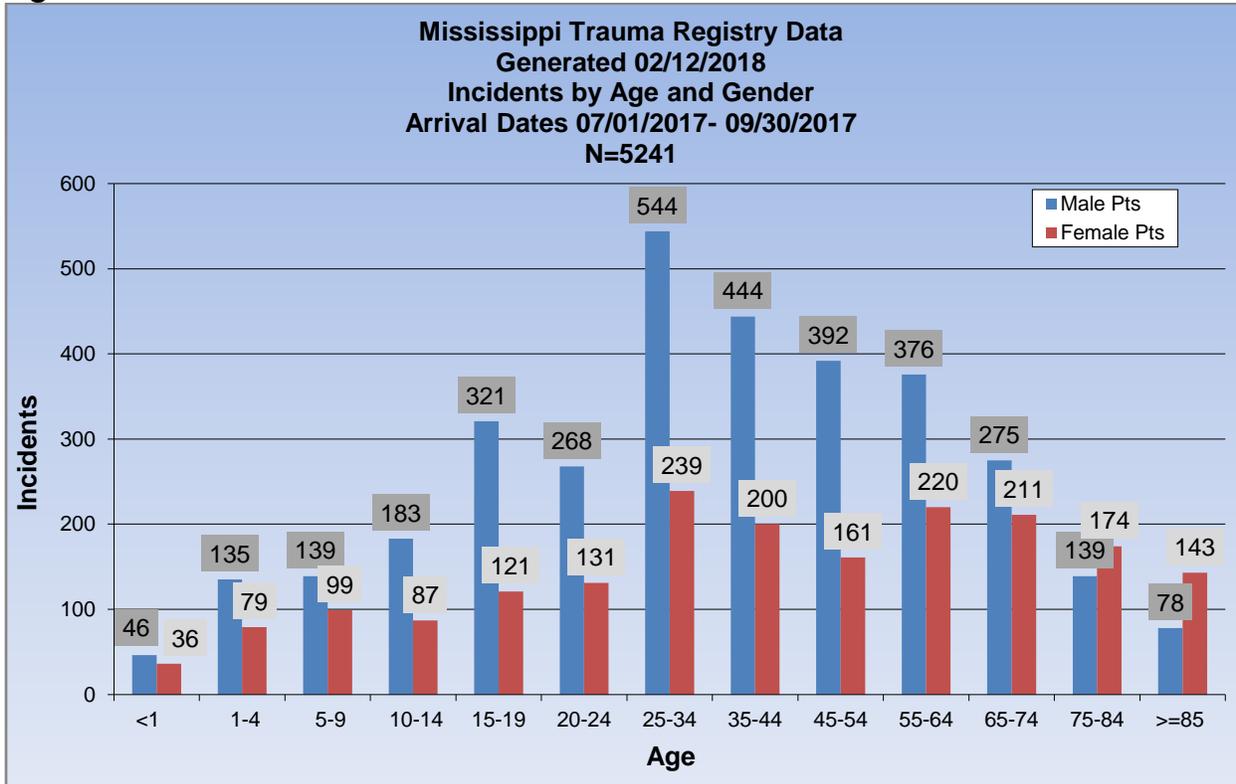
| Facility | ISS 1-9 | ISS 10-15 | ISS 16-24 | ISS>24 | Total Patients |
|--|---------|-----------|-----------|--------|----------------|
| Baptist Memorial Hospital-Desoto | 212 | 12 | 5 | 2 | 231 |
| Baptist Memorial Hospital-GoldenTriangle | 149 | 14 | 5 | 1 | 169 |
| Baptist Memorial Hospital-North Miss. | 123 | 11 | 3 | 0 | 137 |
| Delta Regional Medical Center | 72 | 8 | 2 | 0 | 82 |
| Forrest General Hospital | 450 | 51 | 23 | 8 | 532 |
| Garden Park Medical Center | 112 | 15 | 7 | 2 | 136 |
| LeBonheur Children's Medical Center | 136 | 23 | 18 | 5 | 183 |
| Magnolia Region Health Center | 98 | 18 | 12 | 4 | 132 |
| Memorial Hospital at Gulfport | 173 | 26 | 9 | 9 | 217 |
| Merit Health River Oaks | 17 | 1 | 0 | 0 | 18 |
| Merit Health Biloxi | 32 | 1 | 1 | 1 | 35 |
| Merit Health Central | 54 | 5 | 1 | 0 | 60 |
| North MS Medical Center-Tupelo | 273 | 61 | 26 | 16 | 376 |
| Ocean Springs Hospital | 76 | 12 | 2 | 0 | 90 |
| Oktibbeha County Hospital | 50 | 2 | 2 | 1 | 55 |
| Regional Medical Center - North | 110 | 24 | 6 | 2 | 142 |
| Regional One Health | 52 | 11 | 16 | 8 | 88 |
| Rush Foundation Hospital | 68 | 17 | 3 | 5 | 93 |
| Singing River Hospital | 98 | 7 | 4 | 0 | 109 |
| South Central Regional Medical Center | 59 | 16 | 6 | 2 | 83 |
| Southwest Mississippi Regional Medical C | 99 | 16 | 9 | 6 | 130 |
| Univ of South Alabama Medical Center | 48 | 14 | 13 | 17 | 92 |
| University Medical Center | 561 | 137 | 57 | 30 | 789 |
| Total | 3122 | 502 | 230 | 119 | 3979 |

MVA Injuries

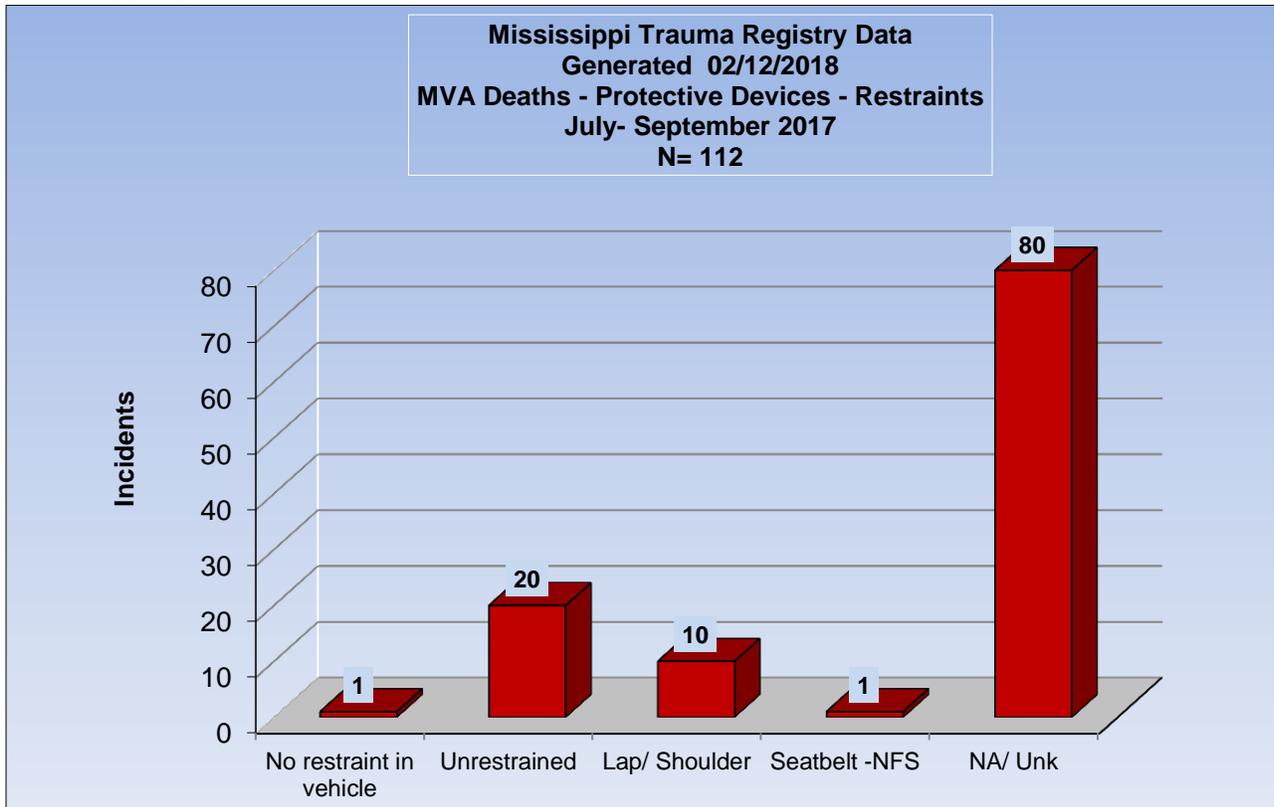


Legislative Bill signed on May 9, 2017 requiring all passengers in vehicle to wear seatbelts.

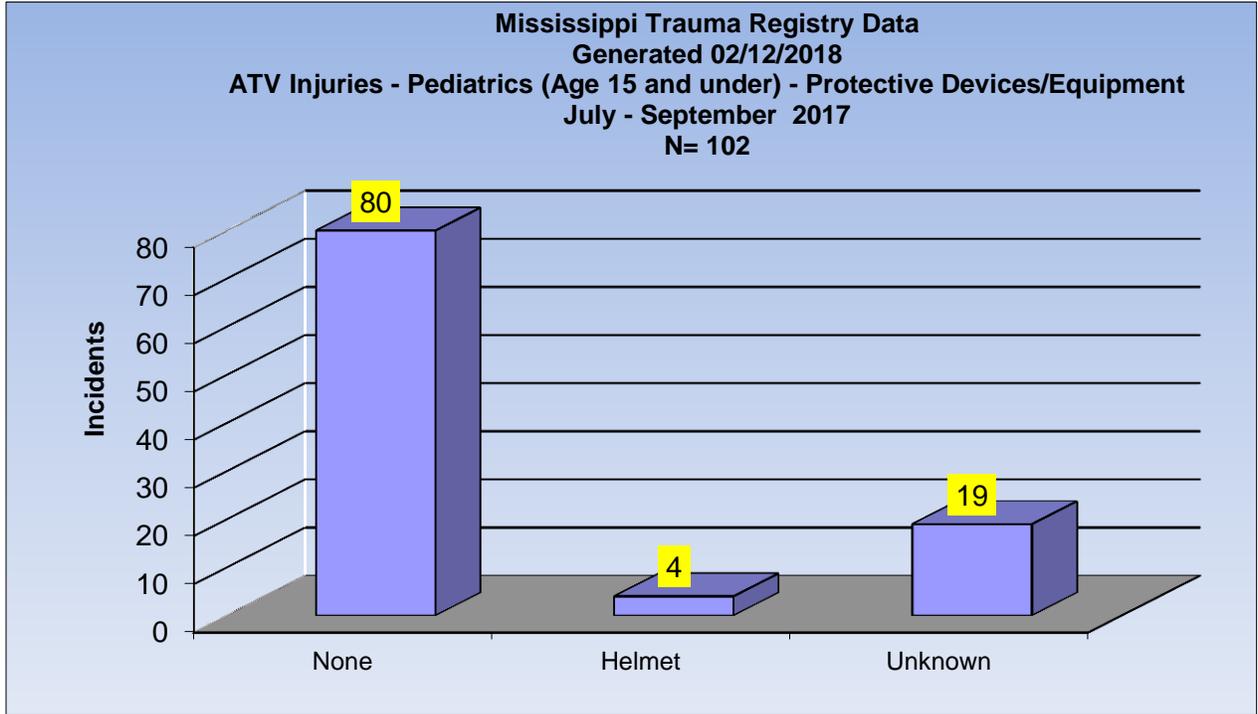
Age and Gender



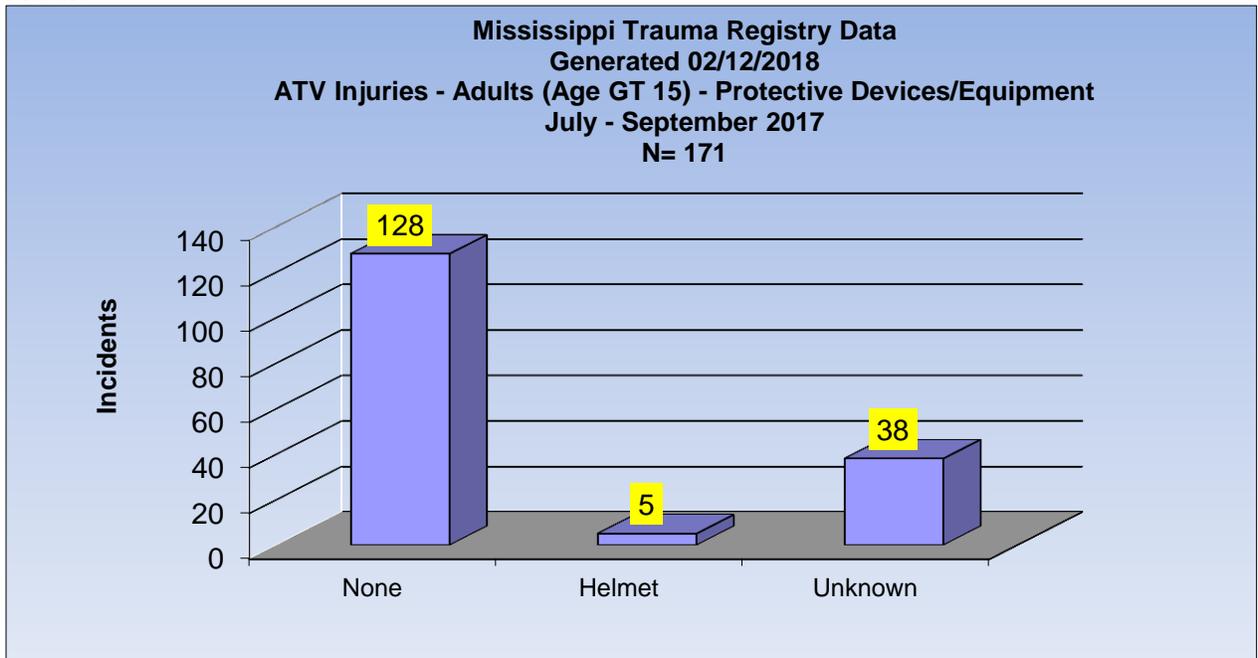
MVA Deaths



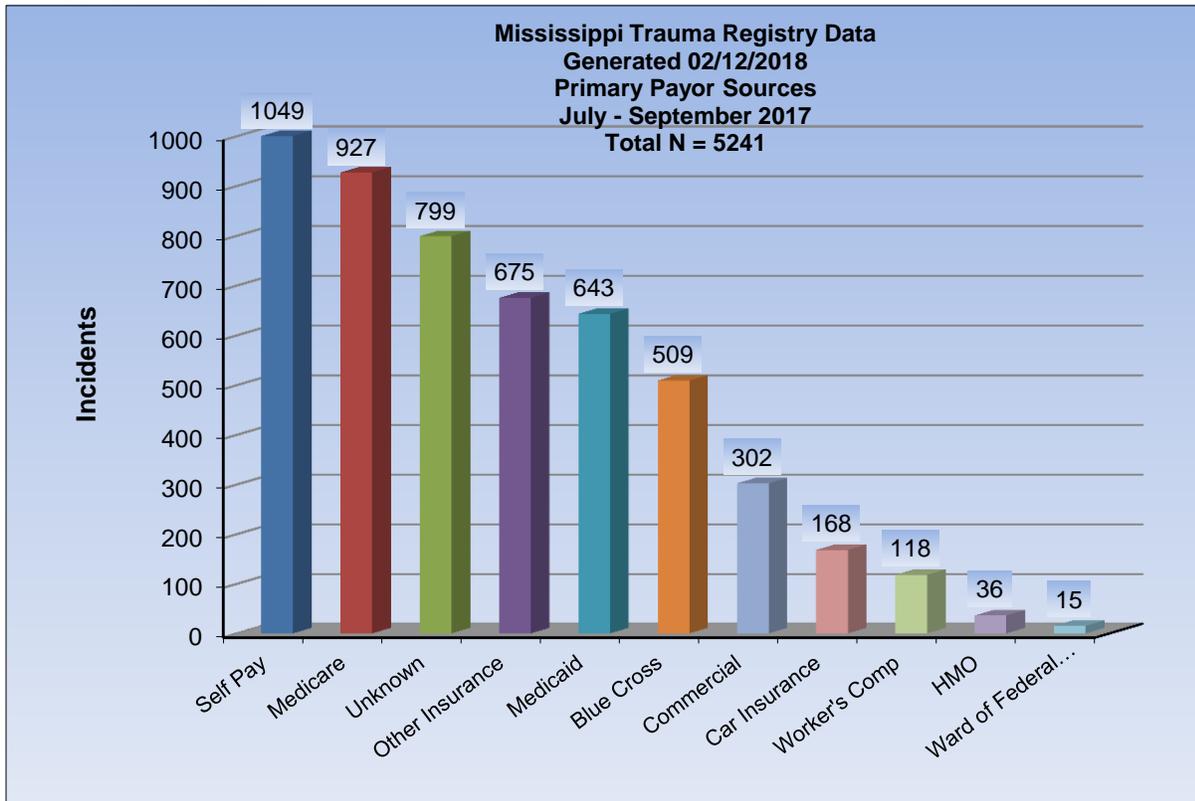
**ATV Injuries (Protective Devices)
Pediatric**



**ATV Injuries (Protective Devices)
Adult**



Financial Data:



Trauma Care Trust Fund:

| | October | November | December | Total |
|---------------------------|-----------|-----------|----------|------------------|
| Auto Privilege & Tag Fees | 1,155,138 | 1,424,676 | 872,954 | 3,452,778 |
| Interest Income | 5,011 | 9,725 | 10,252 | 24,988 |
| License, Fees and Permits | 103,386 | 119,263 | 102,898 | 325,547 |
| | | | | 3,803,314 |