



Indiana Trauma Care Committee Meeting

November 8, 2013

HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 2

District 1

Methodist Northlake

Methodist Southlake

St. Anthony – Crown Point

St. Margaret - Dyer

District 2

Community Hospital of
Bremen

Elkhart General

Memorial Hospital South Bend

Pulaski Memorial Hospital

District 3

Cameron Memorial

Lutheran

Parkview Huntington

Parkview LaGrange

Parkview Noble

Parkview Regional Medical
Center

Parkview Whitley



HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 2

District 4

Franciscan St. Elizabeth –
Lafayette Central

Franciscan St. Elizabeth –
Lafayette East

IU Health – Arnett

IU Health – White Memorial

District 5

St. Francis – Indianapolis

St. Francis - Mooresville

Hendricks Regional Health

IU Health – Methodist

IU Health – Riley for Children

Johnson Memorial

Major Hospital

St. Vincent - Indianapolis

Wishard Health Services

Witham Health Services

Witham at Anson



HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 2

District 6

Community Hospital of
Anderson & Madison Co.

Henry County

IU Health – Ball Memorial

IU Health – Tipton

Marion General

Reid Hospital

St. Vincent Anderson

District 7

St. Vincent - Clay

Sullivan County Community

Terre Haute Regional

Union Hospital

District 8

IU Health - Bedford

IU Health – Bloomington

Monroe Hospital

Schneck Medical Center



HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 2

District 9

Scott Memorial

District 10

Daviess Community

Deaconess

Gibson General

Good Samaritan

Memorial Hospital & Health
Care Center

Perry County Memorial

~~**St. Mary's Medical Center**~~

St. Mary's Warrick



HOSPITALS TRAINED ON THE TRAUMA REGISTRY (YTD)

- Bluffton Regional
- Cameron Memorial
- Community Hospital of Anderson & Madison
- Daviess Community
- Gibson General
- Good Samaritan
- Greene County
- IU Health – Bedford
- IU Health – North
- IU Health – Tipton
- King's Daughters'
- Marion General
- Methodist Southlake
- Monroe Hospital
- Porter Valparaiso
- Scott Memorial
- St. Margaret – Hammond
- St. Mary's Warrick
- St. Vincent Anderson
- St. Vincent – Clay
- St. Vincent – Dunn
- St. Vincent – Jennings
- Union – Clinton



QUARTER 2 2013 STATEWIDE REPORT

- 6,056 incidents
- April 1, 2013 to June 30, 2013
- 51 total hospitals reporting
 - 8 trauma centers
 - 43 hospitals

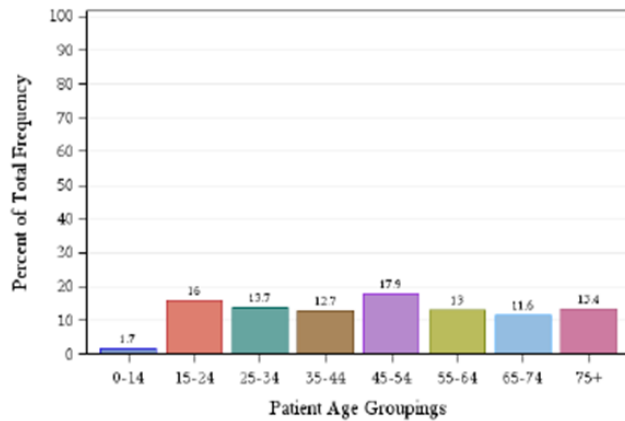


EXAMPLE: HOSPITAL-SPECIFIC REPORTS

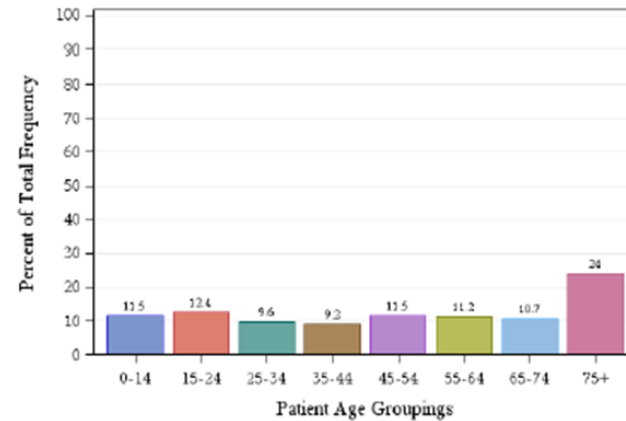
Quarter 2 2013 data from 04/01/2013 - 06/30/2013
 ██████████ Incidents
 6056 Incidents Statewide and 51 Hospitals Reporting

Patient Age Groupings (Years)

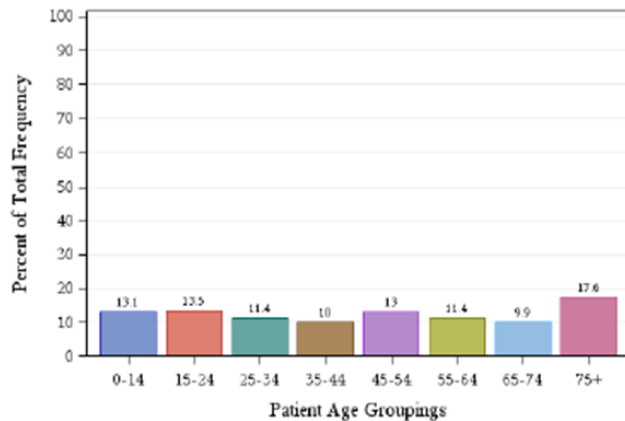
Hospital A



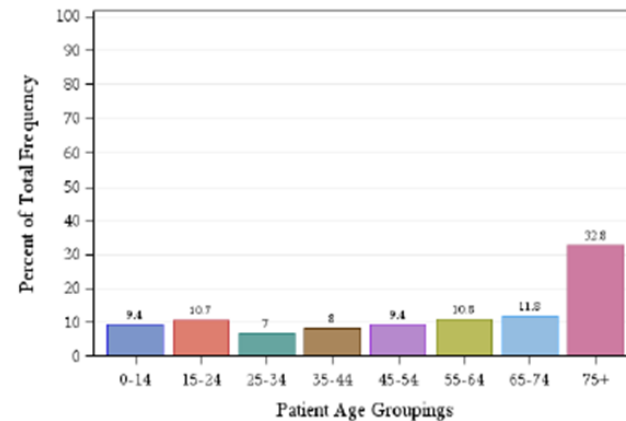
Indiana Average



Trauma Center

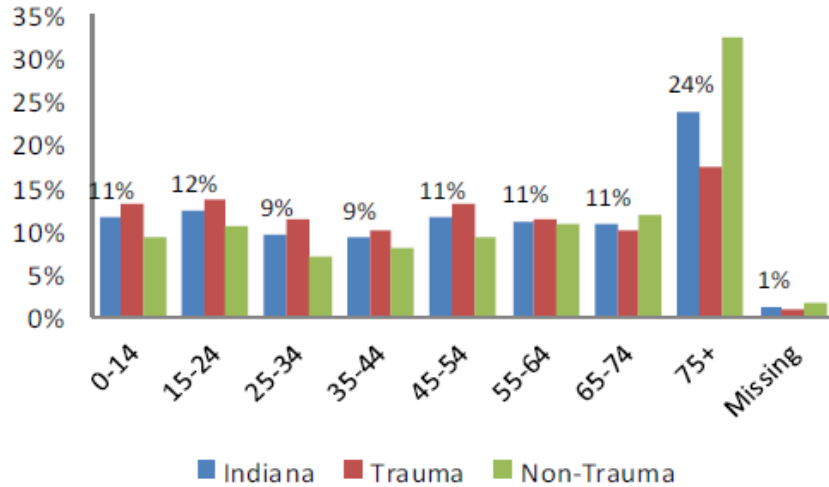


Non-Trauma Center

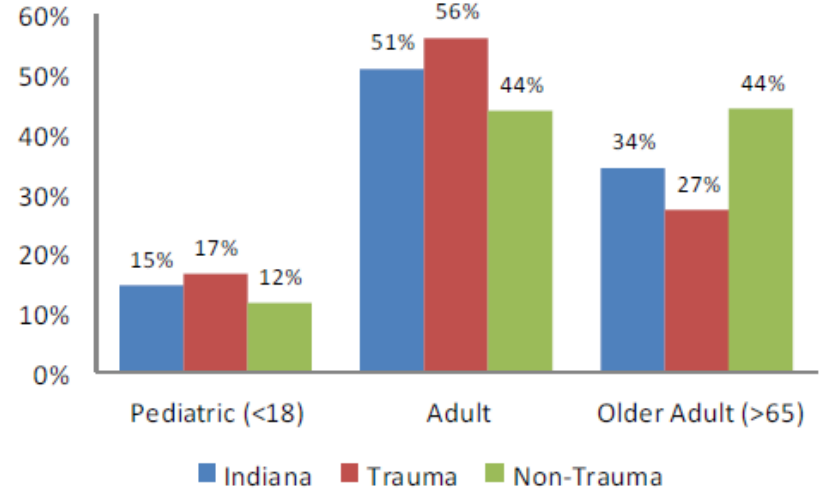


PATIENT DEMOGRAPHICS

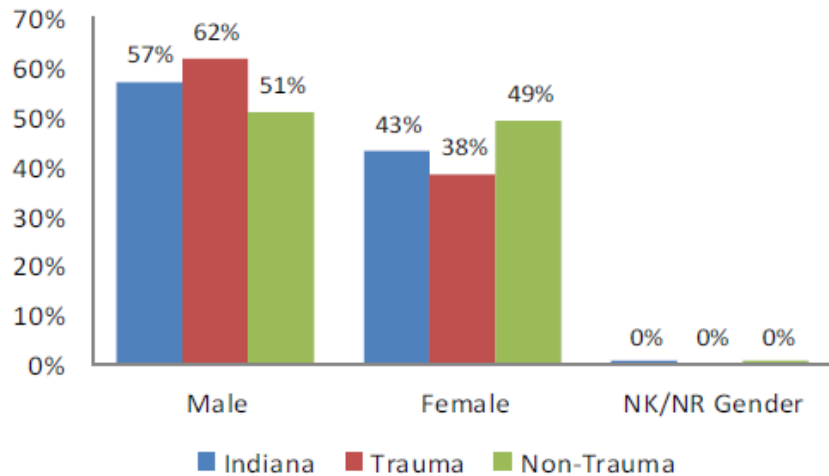
Patient Age



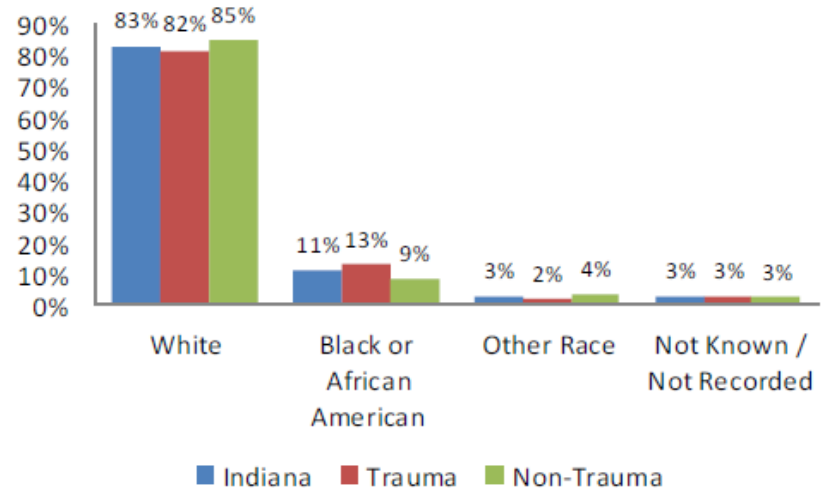
Patient Age Groupings



Patient Gender

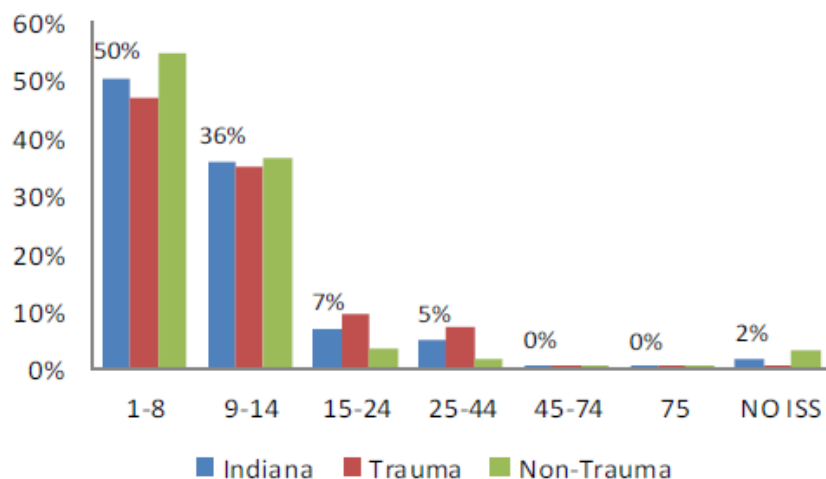


Patient Race

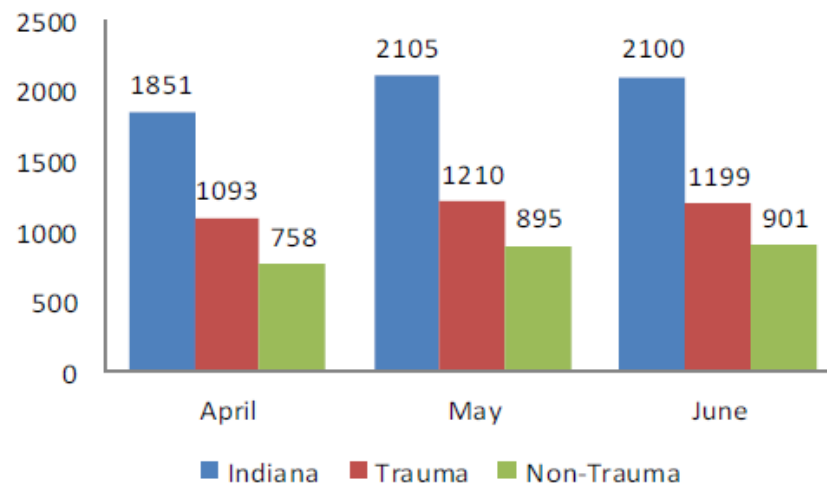


INJURY

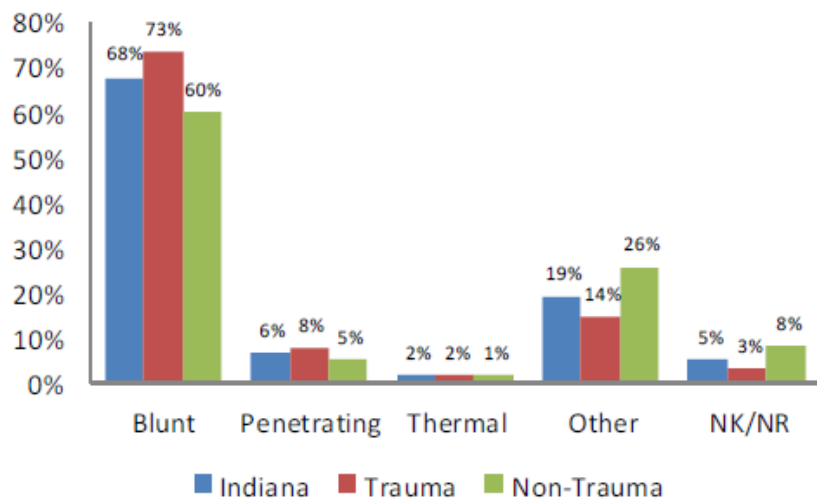
Injury Severity Score (ISS)



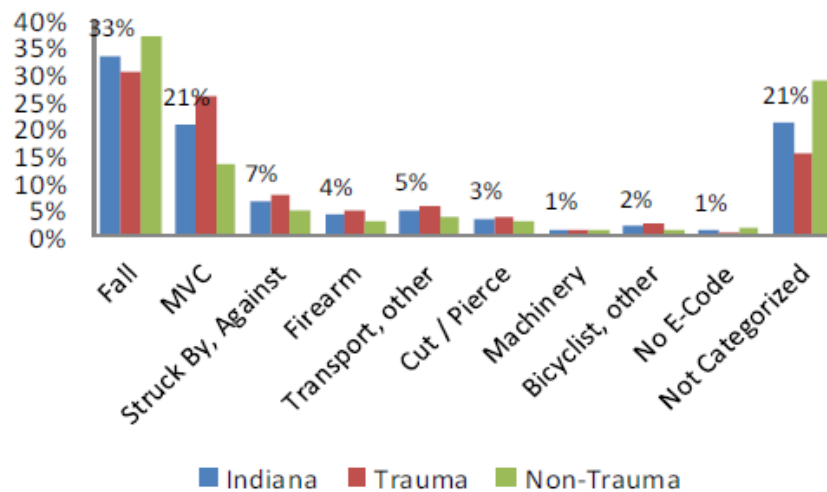
Month of Injury



Trauma Type

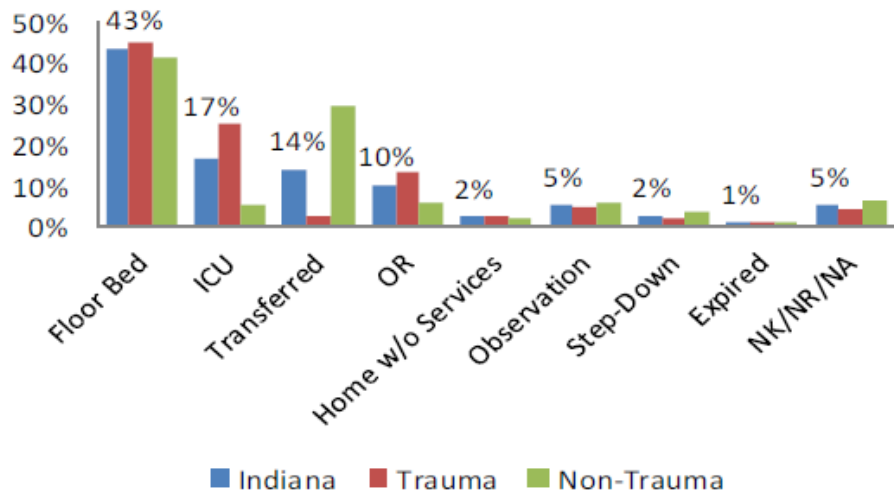


Cause of Injury

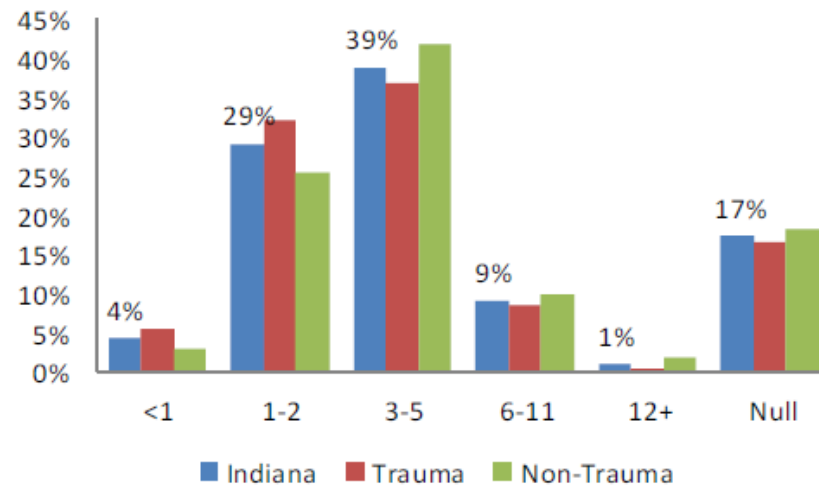


ED: DISPOSITION / LENGTH OF STAY

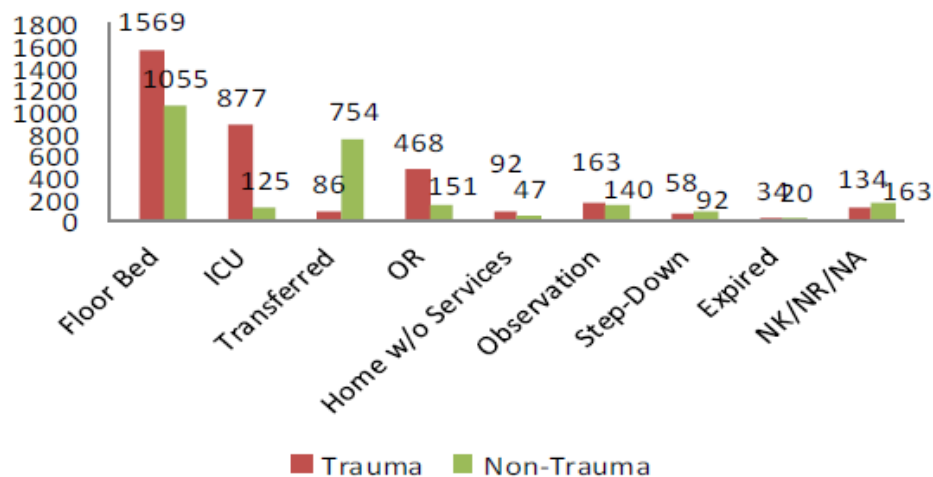
ED Disposition by Percentage



ED Length of Stay (Hours)



ED Disposition by Count

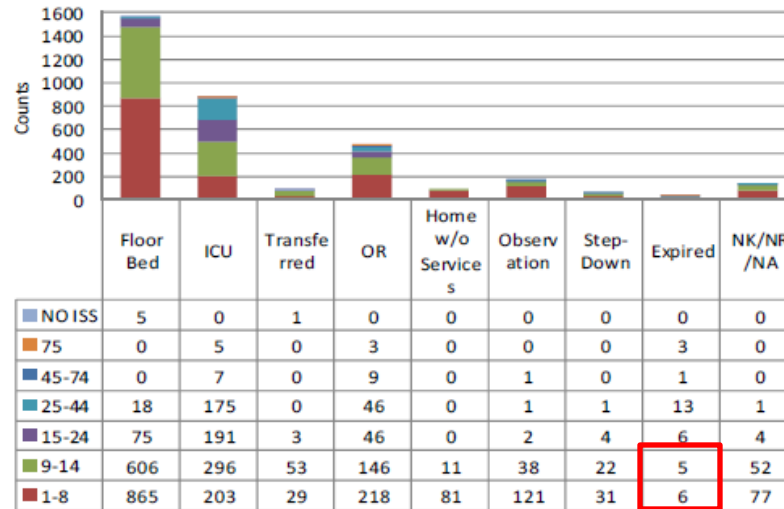


Average ED Length of Stay

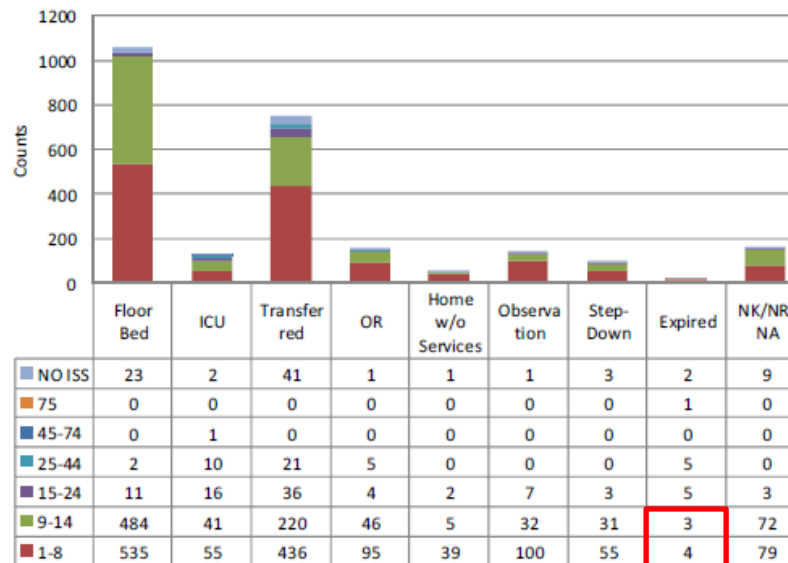
| | Minutes | Hours |
|------------|---------|-------|
| Indiana | 199.07 | 3.32 |
| Trauma | 188.07 | 3.13 |
| Non-Trauma | 213.89 | 3.55 |

ED DISPOSITION BY ISS

ED Disposition by ISS (Trauma Center)



ED Disposition by ISS (Non-Trauma Center)

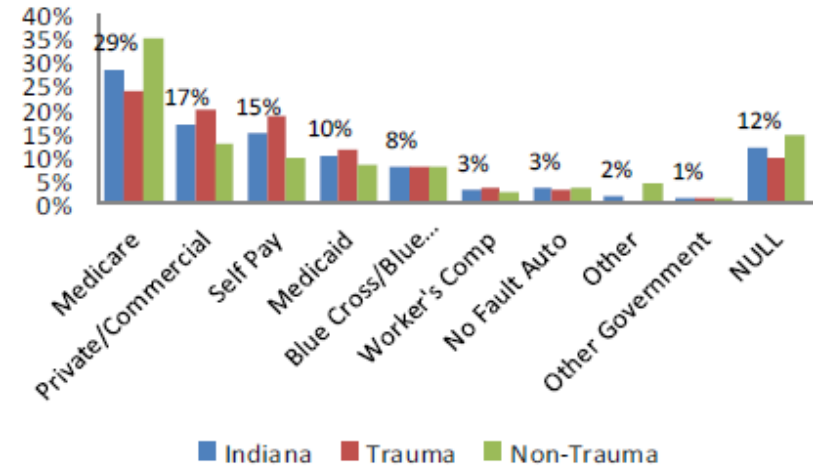


PATIENT OUTCOMES

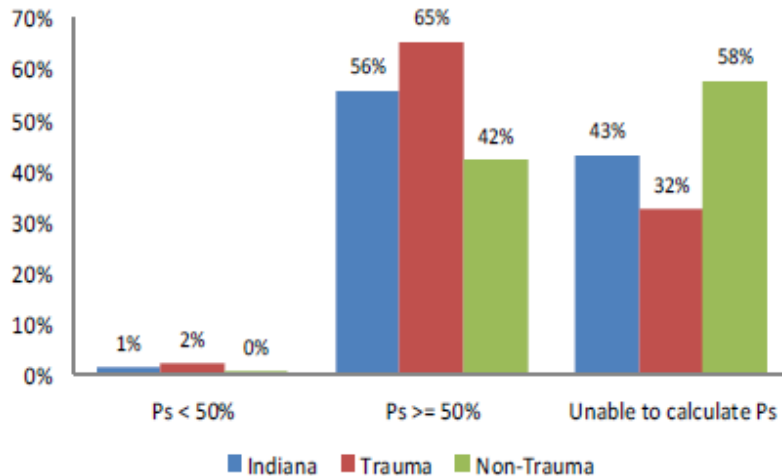
ED LOS by ISS

| ED Length of Stay (minutes) | | | |
|-----------------------------|-----------------|---------------|-------------------|
| ISS Category | Indiana Average | Trauma Center | Non-Trauma Center |
| 1-8 | 203.3 | 186.4 | 222.6 |
| 9-14 | 204.3 | 200.7 | 208.9 |
| 15-24 | 189.4 | 185.0 | 206.1 |
| 25-44 | 149.2 | 149.7 | 145.9 |
| 45-74 | 114.1 | 117.4 | 53.0 |
| 75 | 85.4 | 92.0 | 13.0 |
| No ISS | 180.1 | 331.0 | 168.3 |

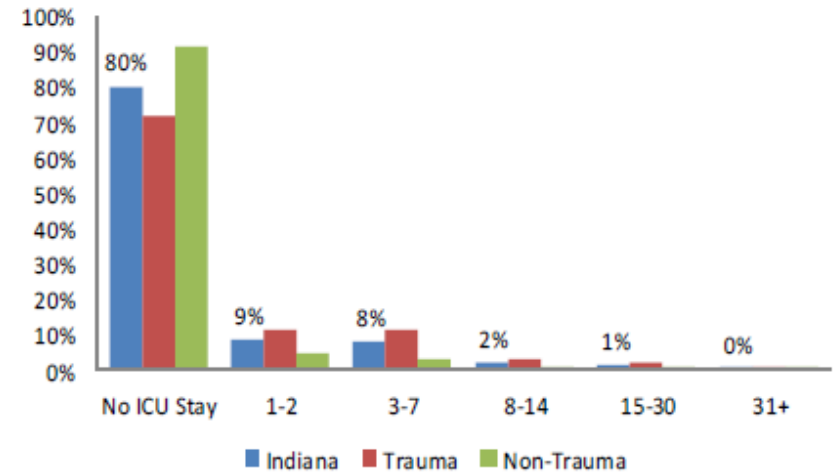
Primary Payer Mix



Probability of Survival (Ps)



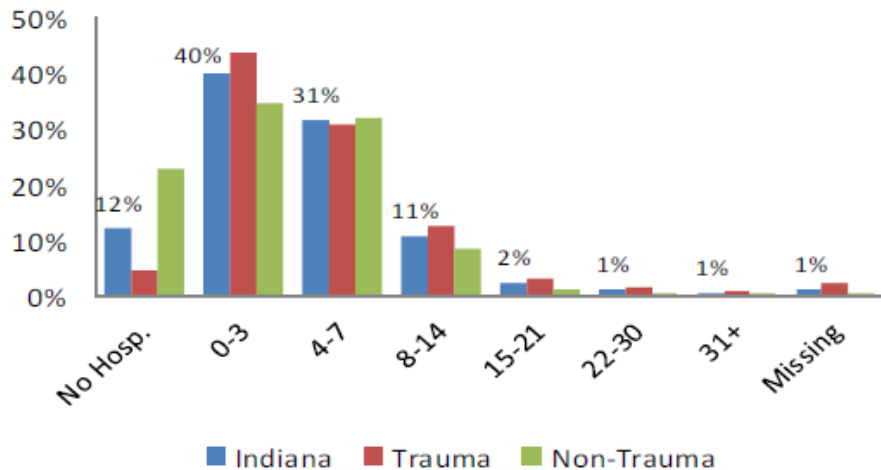
ICU Length of Stay (Days)



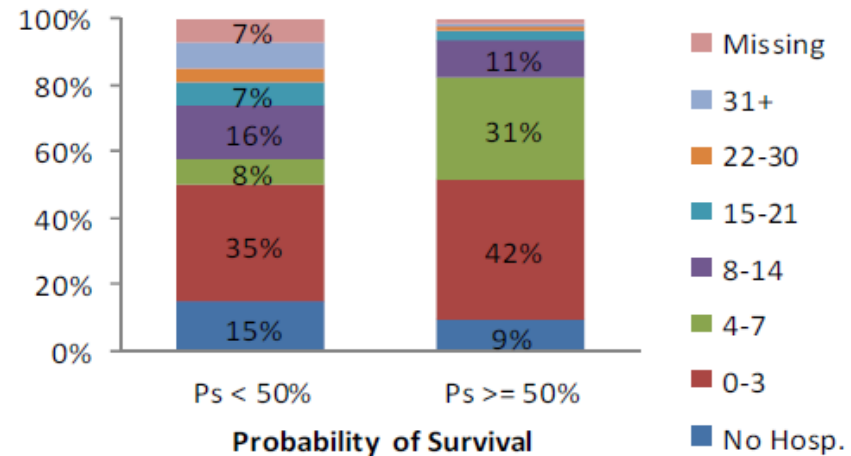
Due to the many data points required to calculate Ps, not every patient has a calculated Ps. This graph represents 2789 incidents with calculated Ps.

HOSPITAL DISPOSITION / LENGTH OF STAY

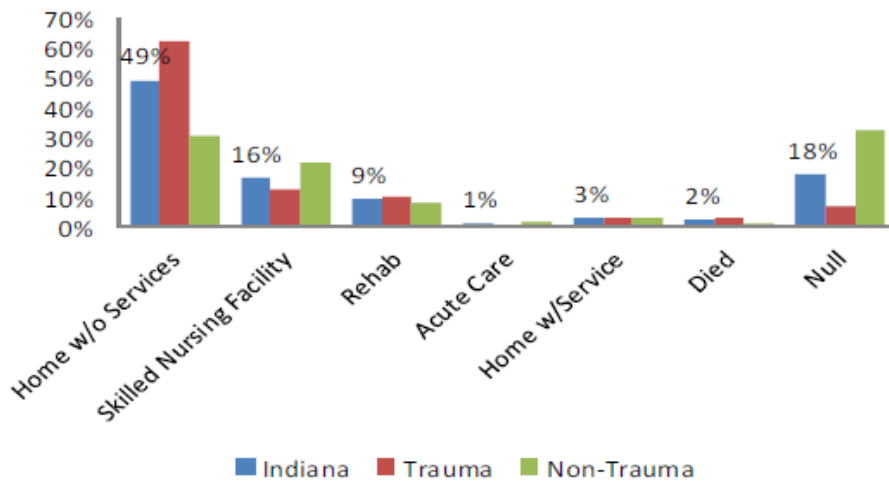
Hospital Length of Stay (Days)



Hospital LOS by Ps



Hospital Disposition



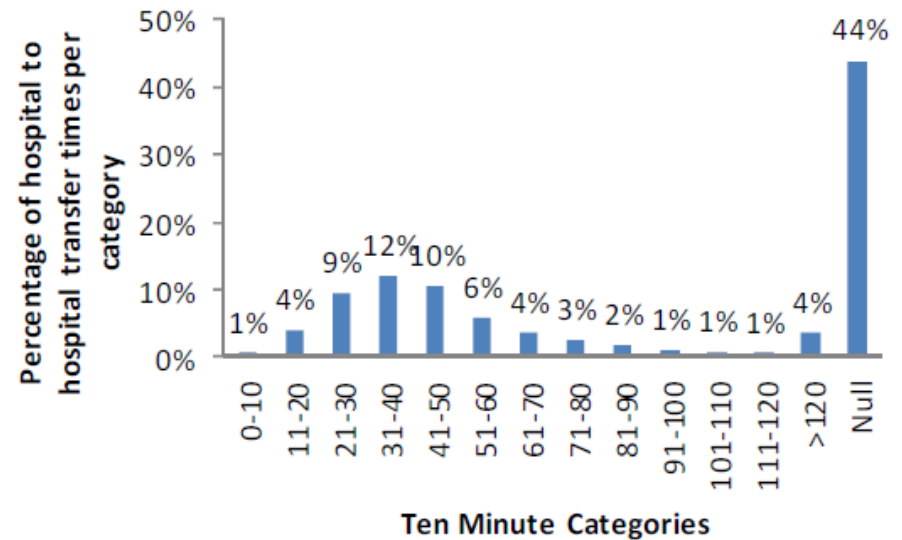
*<1% Hospital Disposition: Intermediate Care Center, Hospice Care, AMA

TRANSFER PATIENT DATA

For Transfer Patients:

| For Transfer Patients: | | |
|--------------------------------|-----------------------------|---------------------------|
| Probability of Survival | ED Length of Stay (minutes) | ED Length of Stay (hours) |
| Ps <50% (n=2) | 74.00 | 1.23 |
| Ps >50% (n=291) | 157.46 | 2.62 |
| Unable to calculate Ps (n=461) | 151.24 | 2.52 |

Hospital to Hospital Transfer



Hospital to hospital transfer time is for patients initially at a hospital and then transferred to a trauma center



TRANSFER PATIENT DATA

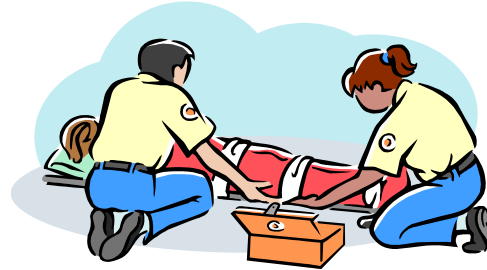
- 355 Cases Linked
 - 205 by Patient's First & Last Name
 - 150 by Patient's DOB & Injury Date
- 6,056 cases reported Q2 2013
 - 2,204 potential for linkage
 - 717 cases transferred OUT from NON-trauma centers
 - 1,424 cases transferred IN to Trauma Centers
- Linked cases make up 14% of Q2 2013 data
 - All 10 public health preparedness districts represented



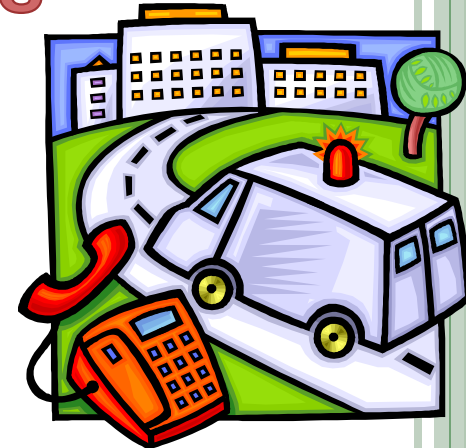
TRANSFER PATIENT DATA - AVERAGES



**8
minutes**



**16
minutes**



TRANSFER PATIENT DATA - AVERAGES



**16
minutes**



**2 Hours
48 minutes**



TRANSFER PATIENT DATA - AVERAGES



**56
minutes**

Ground: 68 minutes

Air: 39 minutes

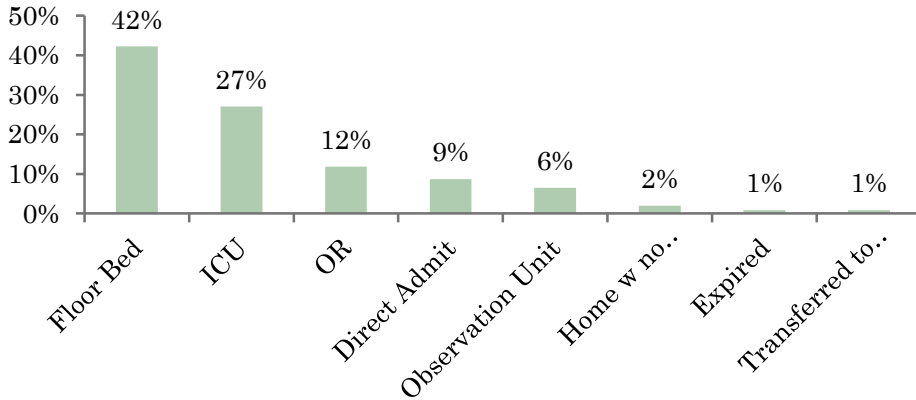


**Total:
4 hours 24
minutes**

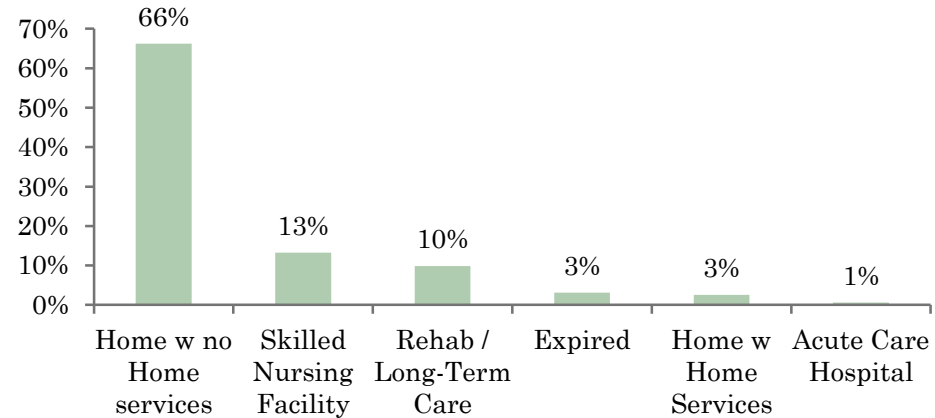


TRANSFER PATIENT DATA – PATIENT OUTCOMES

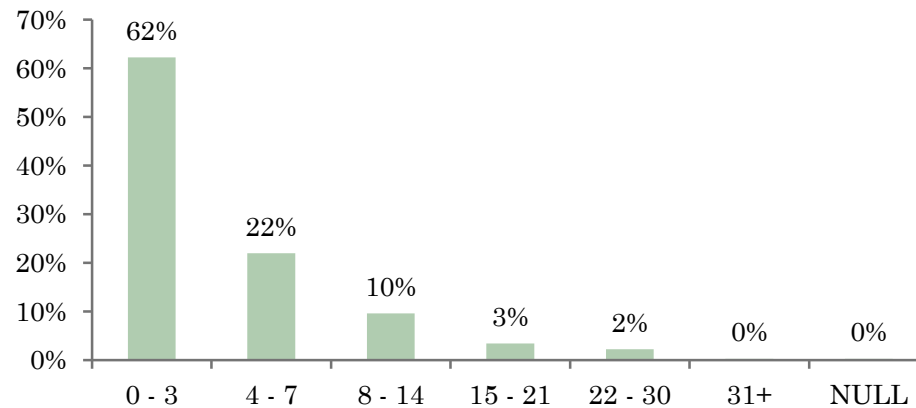
Final Hospital - ED Disposition



Final Hospital - Hospital Disposition



Final Hospital - Hospital LOS (Days)



CRITICAL PATIENT TRANSFER DATA - AVERAGES



8
minutes

Critical Patient defined as:

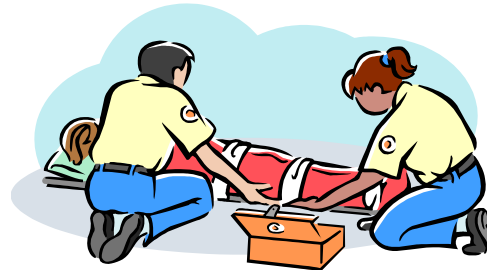
- ISS > 15

OR

- GCS \leq 12

OR

- Shock Index > 0.9



14
minutes



CRITICAL PATIENT TRANSFER DATA - AVERAGES



16
minutes



2 Hours



CRITICAL PATIENT TRANSFER DATA - AVERAGES



**49
minutes**

Ground: 60 minutes

Air: 39 minutes

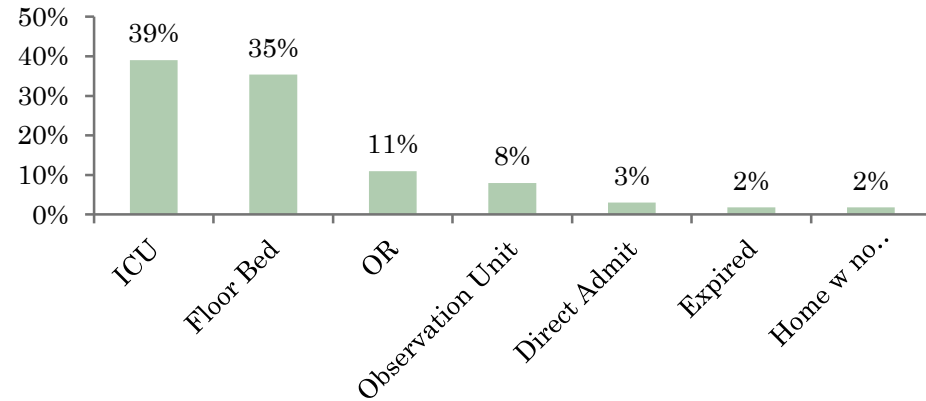


**Total:
3 hours 27
minutes**

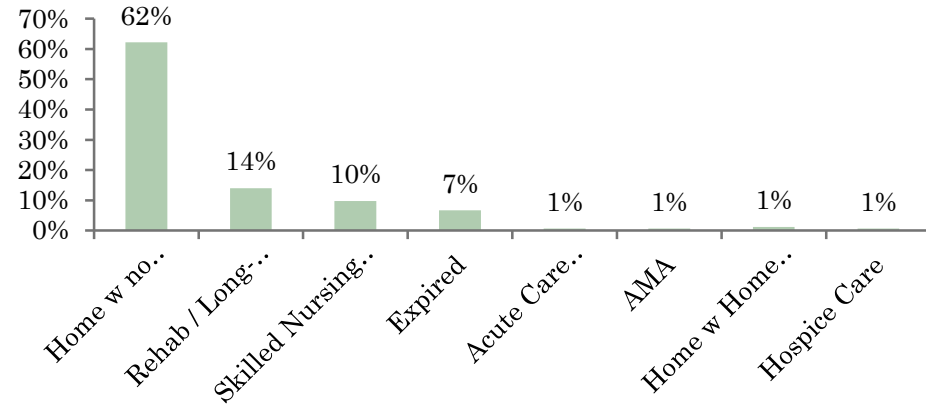


CRITICAL PATIENT TRANSFER DATA – PATIENT OUTCOMES

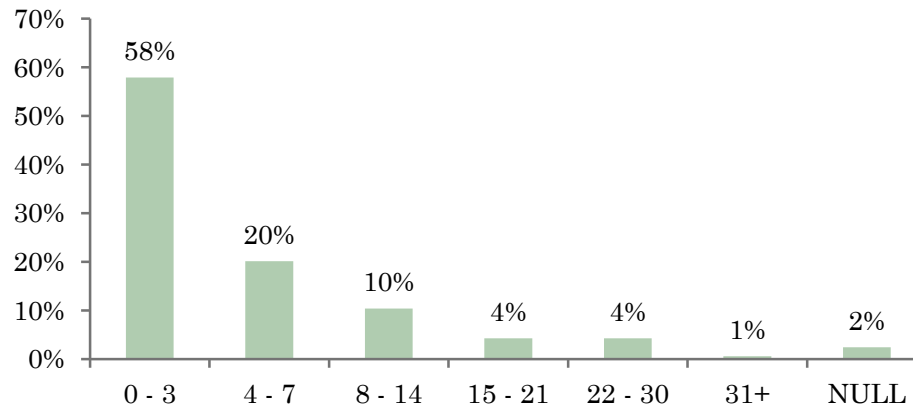
Final Hospital - ED Disposition



Final Hospital - Hospital Disposition



Final Hospital - Hospital LOS (Days)

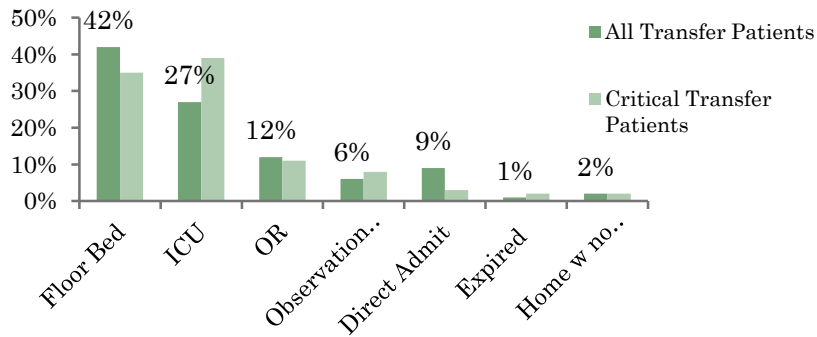


TRANSFER DATA – COMPARISON OF ALL TRAUMA TRANSFERS VS. CRITICAL TRAUMA TRANSFERS

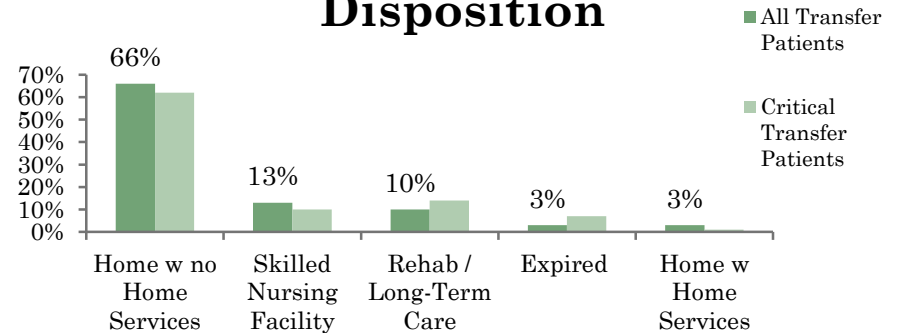
| | All Transfer Patients | Critical Transfer Patients |
|--|---------------------------|----------------------------|
| EMS Notified to Scene | 8 minutes | 8 minutes |
| EMS Scene Arrival to Departure | 16 minutes | 14 minutes |
| EMS Scene Departure to Initial Hospital ED Arrival | 16 minutes | 16 minutes |
| Initial Hospital ED Arrival to Departure | 2 hours 48 minutes | 2 hours |
| Initial Hospital ED Departure to Final Hospital ED Arrival | 56 minutes | 49 minutes |
| TOTAL TIME: | 4 hours 24 minutes | 3 hours 27 minutes |

TRANSFER DATA – COMPARISON OF ALL TRAUMA TRANSFERS VS. CRITICAL TRAUMA TRANSFERS

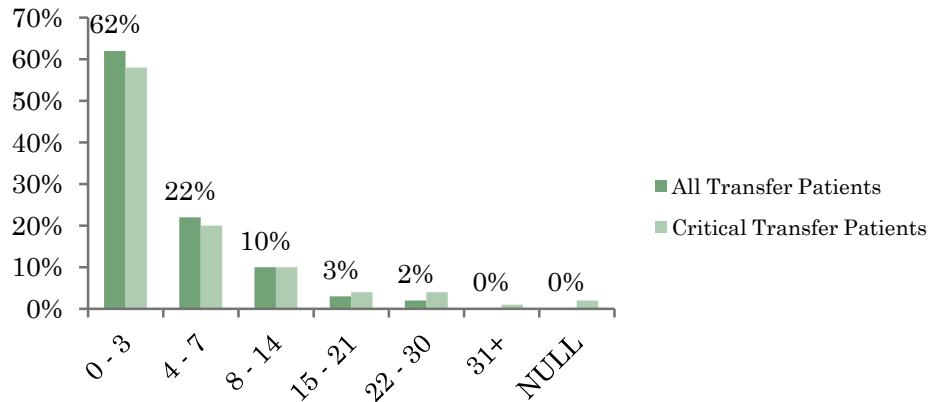
Final Hospital - ED Disposition



Final Hospital - Hospital Disposition



Final Hospital - Hospital LOS (Days)



QUESTIONS?



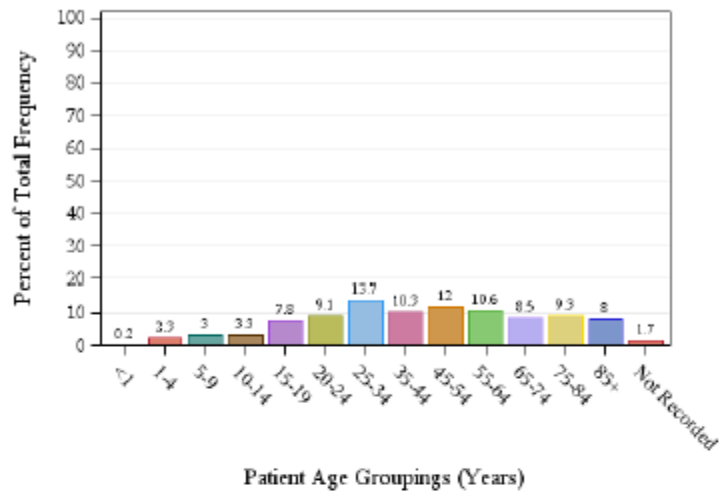
ISDH EMS REGISTRY DATA

- 5,695 traumatic injury incidents
 - Possible Injury indicated
 - Provider Primary Impression
 - Provider Secondary Impression
 - Complaint Reported by Dispatch is trauma injury
- January 1, 2013 to October 8, 2013
- 29 total providers reporting
- Still in the Pilot Project phase

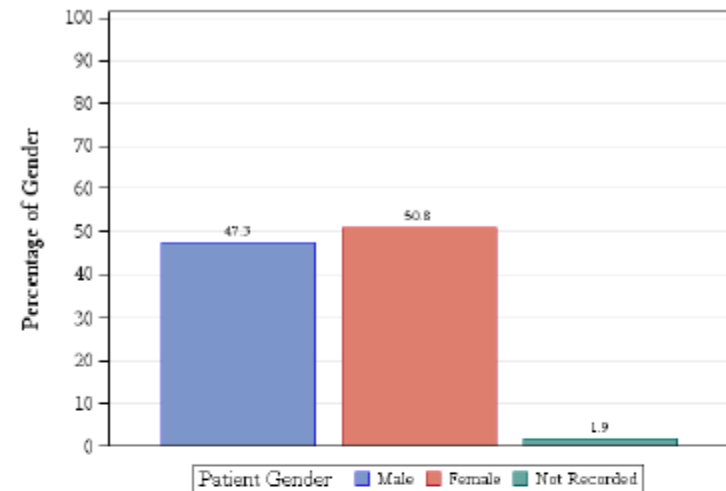
**215,000+ runs in the ISDH
EMS Registry**



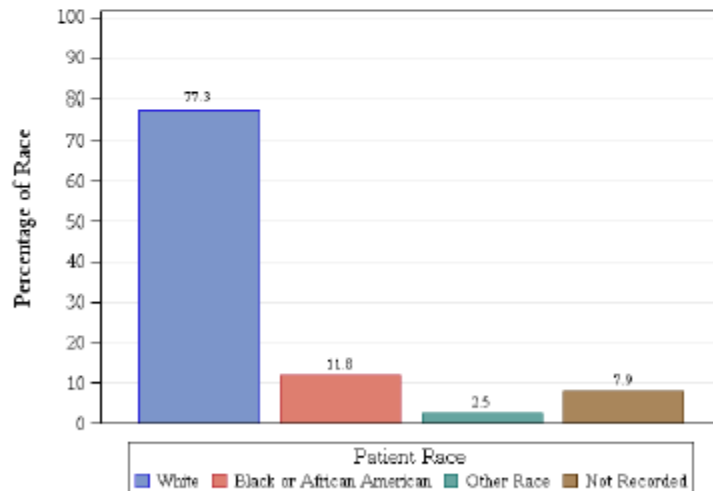
Patient Age Groupings (Years)



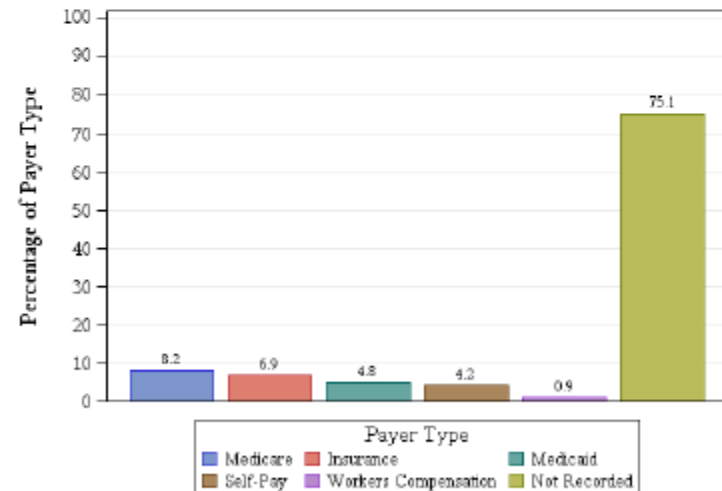
Patient Gender



Patient Race



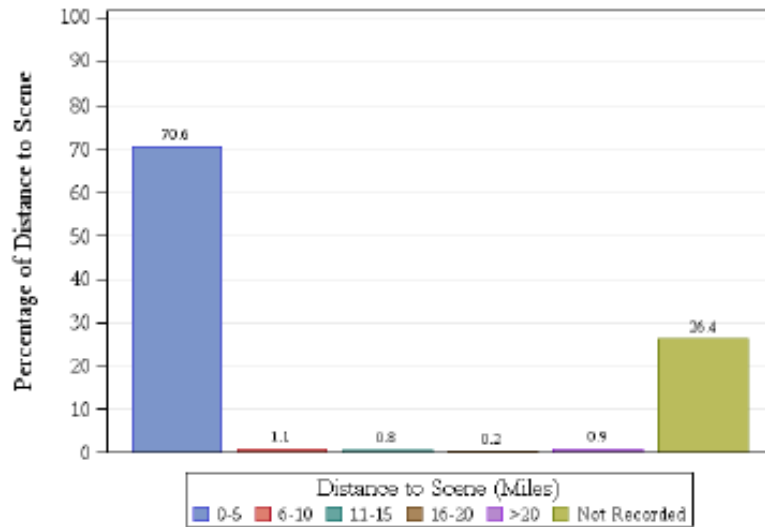
Payer Type



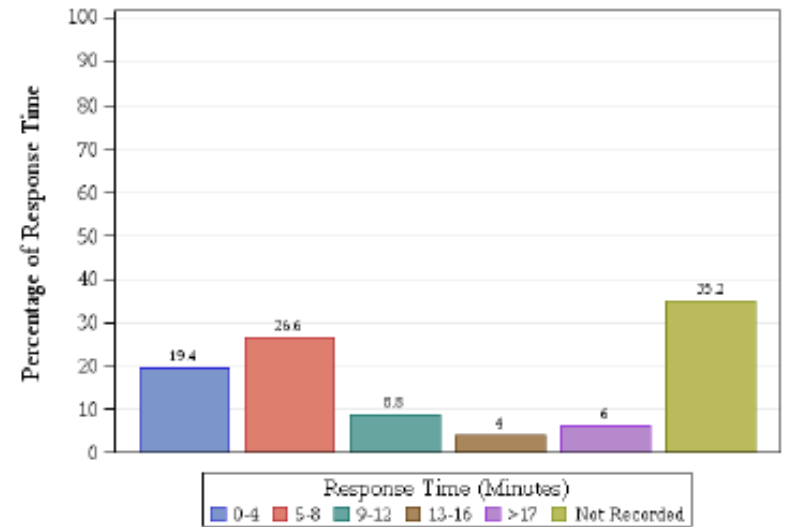
<1% Race: Asian, Native Hawaiian, American Indian/Alaskan Native

*Traumatic Injuries include the following criteria:
Possible Injury indicated, or Provider Primary or Secondary Impression is Traumatic injury, or Complaint Reported by Dispatch is Traumatic injury

Distance to Scene (Miles)

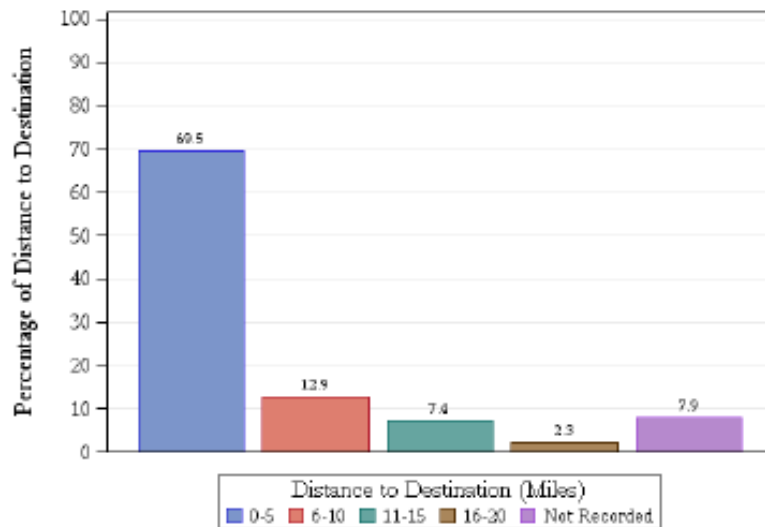


Response Time (Minutes)

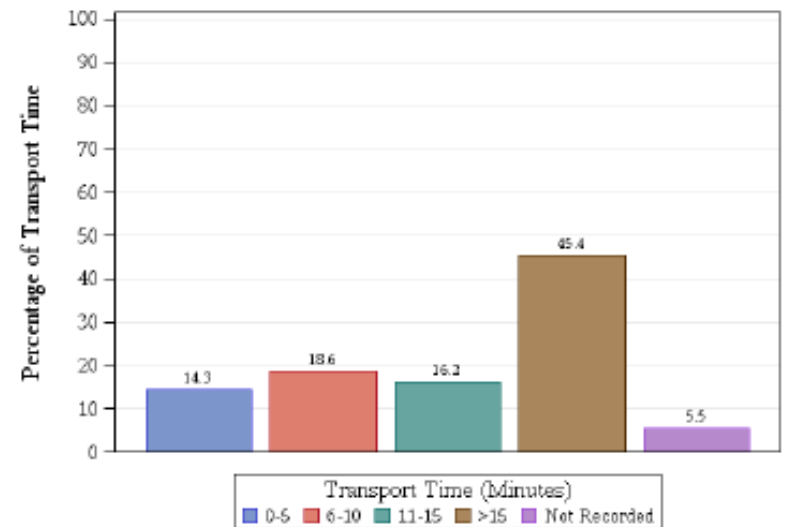


Response Time: Difference in Time from Dispatch to Arrival on Scene

Distance to Destination (Miles)

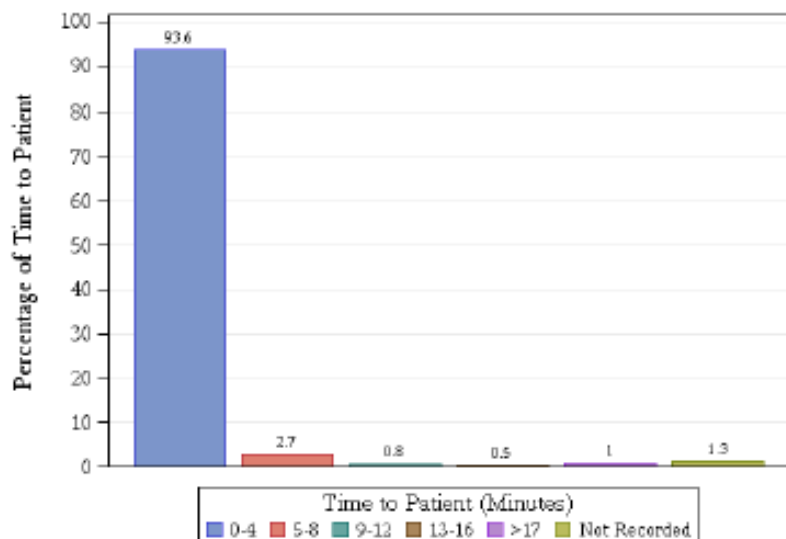


Transport Time (Minutes)



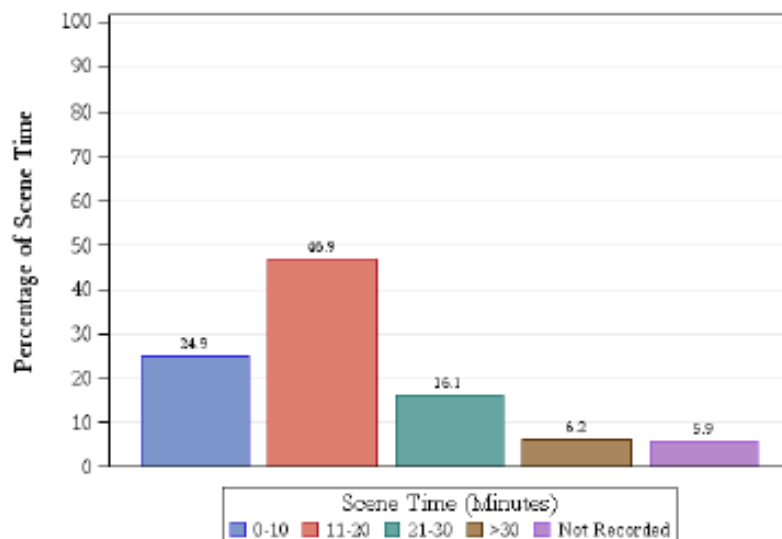
Transport Time: Difference in Time from Departure from Scene to Arrival At Destination

Time to Patient (Minutes)



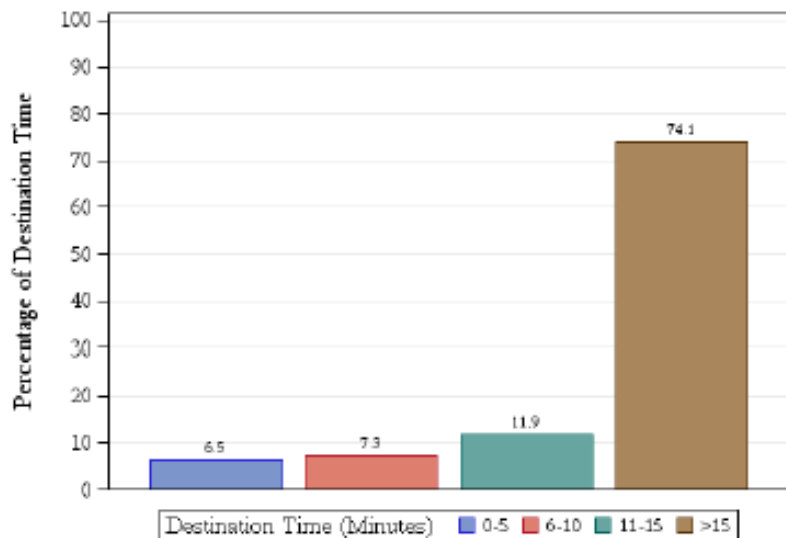
Time To Patient: Difference in Time from Arrival at Scene to Patient Arrival

Scene Time (Minutes)



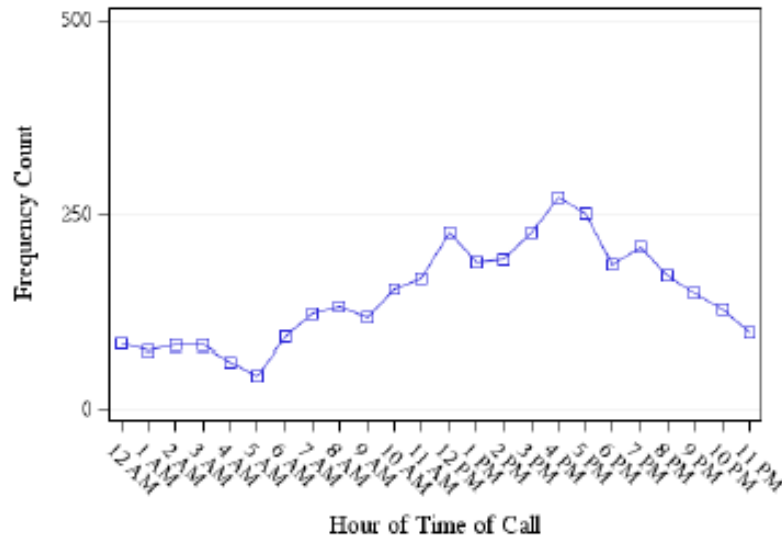
Scene Time: Difference in Time from Arrival at Scene to Leaving Scene

Destination Time (Minutes)



Scene Time: Difference in Time from Arrival at Destination to Unit Back in Service

Time of Call



Time of Call Not Recorded for 2,217 Incidents

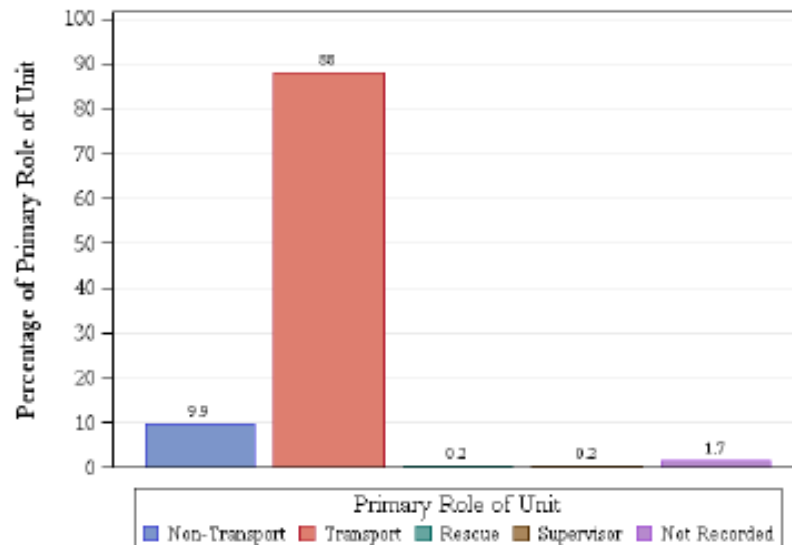
Average Run Mileage

| Obs | Destination | Miles |
|-----|------------------------|-------|
| 1 | Mileage to Scene | 0.9 |
| 2 | Mileage to Destination | 3.4 |
| 3 | Total Mileage | 5.1 |

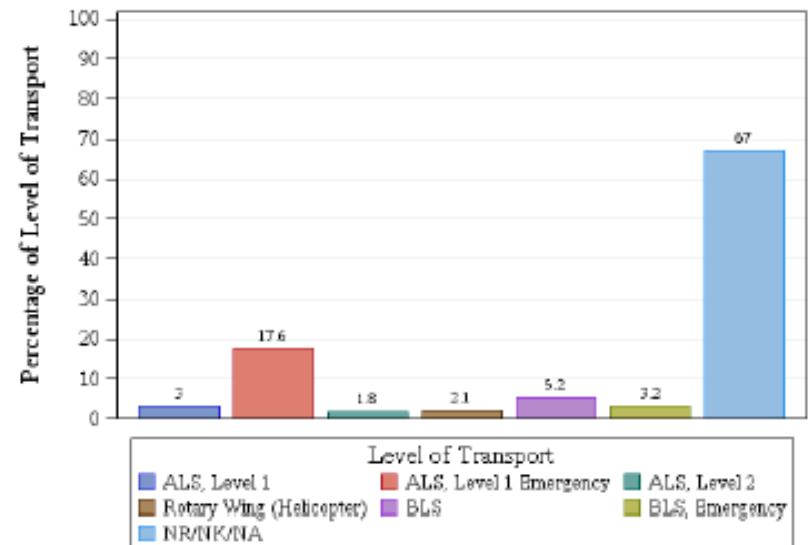
Average Run Time

| Obs | Destination | Minutes |
|-----|---------------------|---------|
| 1 | Time to Scene | 8.67 |
| 2 | Time to Patient | 1.57 |
| 3 | Time at Scene | 16.13 |
| 4 | Time to Destination | 17.29 |
| 5 | Back in Service | 31.44 |
| 6 | Total Run Time | 68.42 |

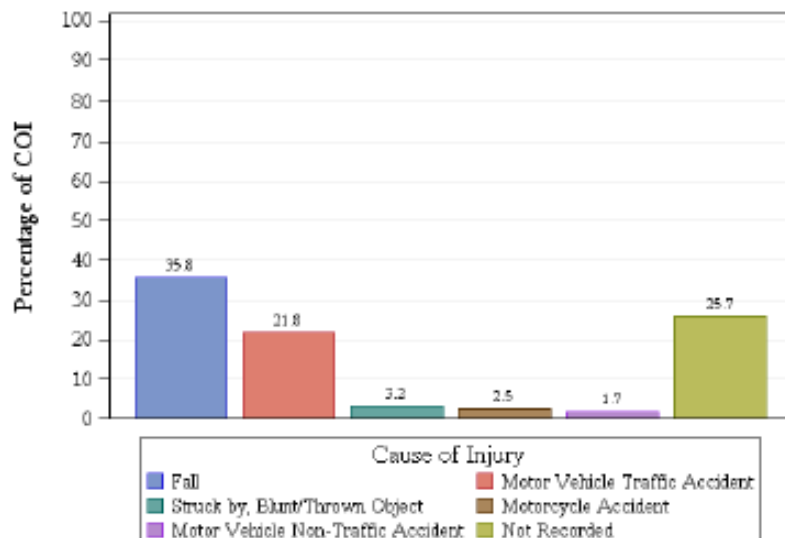
Primary Role of Unit



Level of Transport

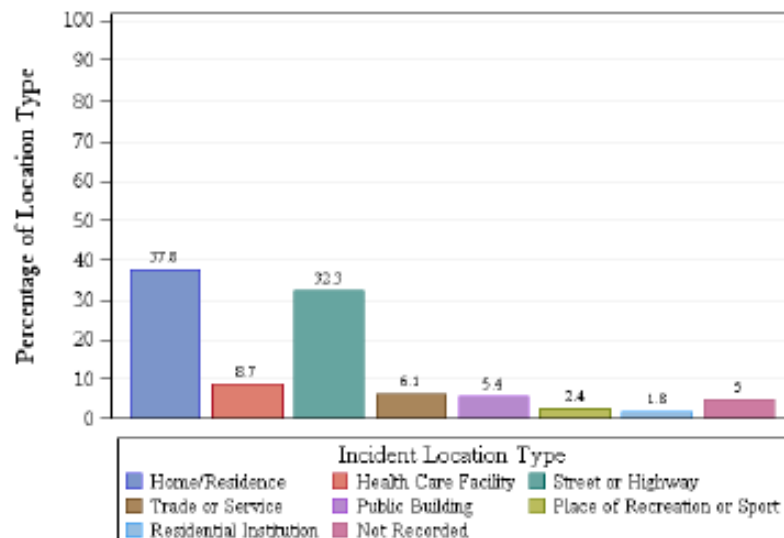


Cause of Injury (COI)



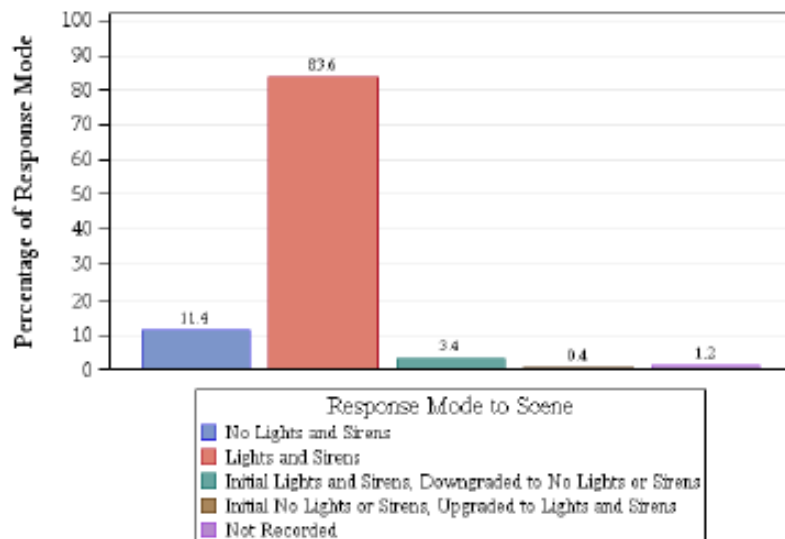
<1.5% COI: Stabbing/Cutting Assault, Pedestrian Traffic, Bites, Machinery Accidents, Fire/Flames, Accident, Bicycle Accident, Firearm Injuries

Incident Location Type

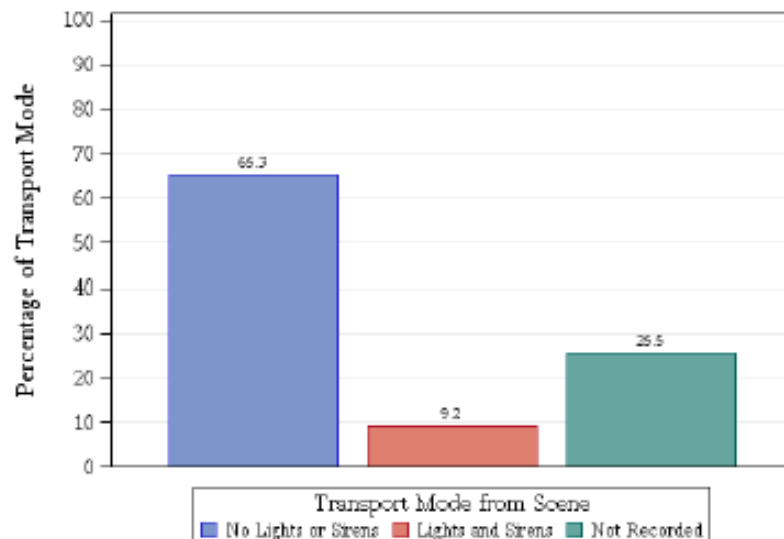


<1% Incident Location Type: Mine or Quarry, Lake/River/Ocean, Place of Recreation of Sport

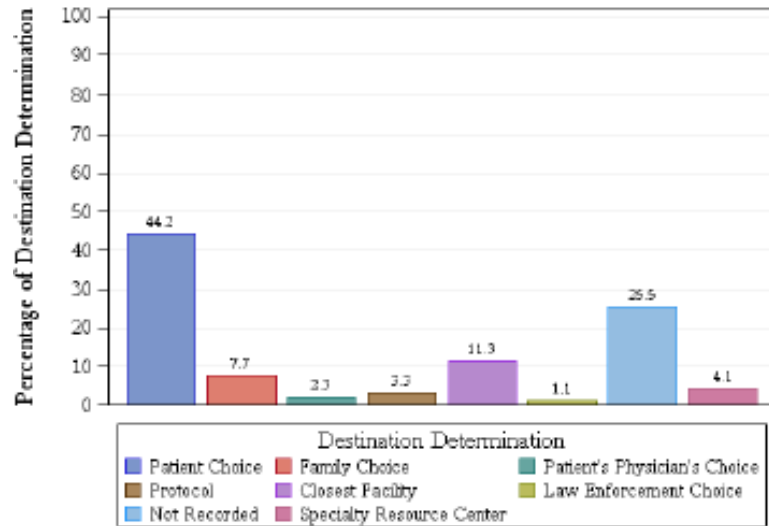
Response Mode to Scene



Transport Mode from Scene

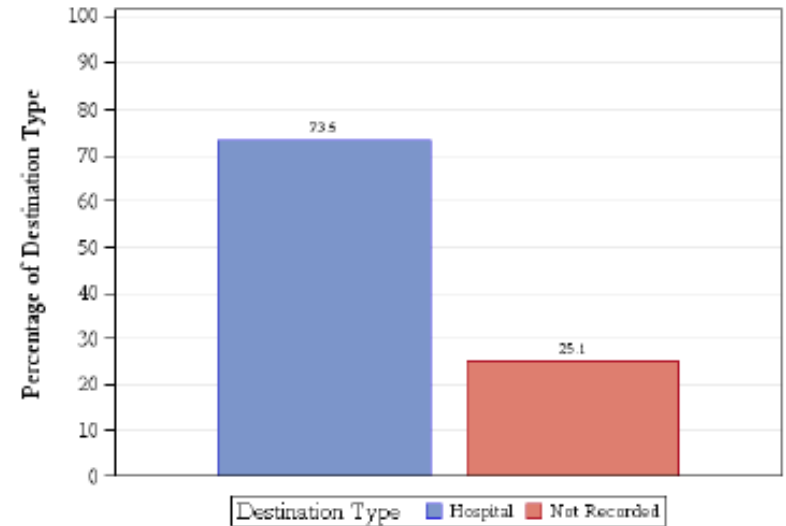


Destination Determination



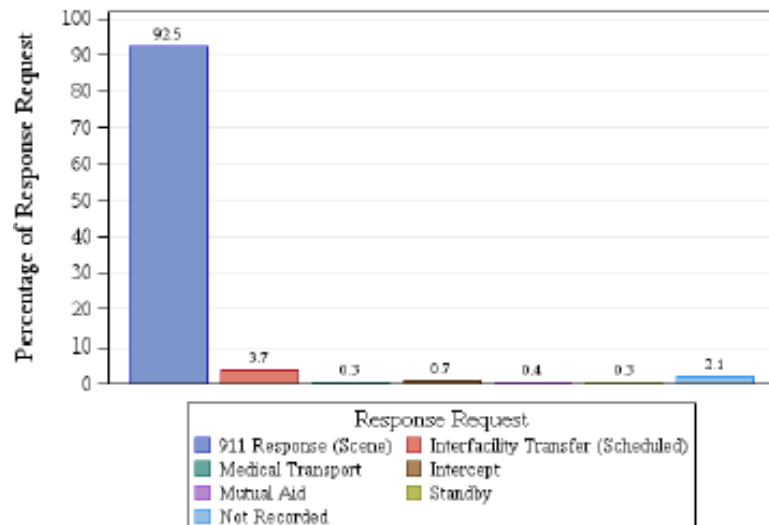
<1% Destination Determination: On-line Medical Direction, Insurance Status, Diversion

Destination Type

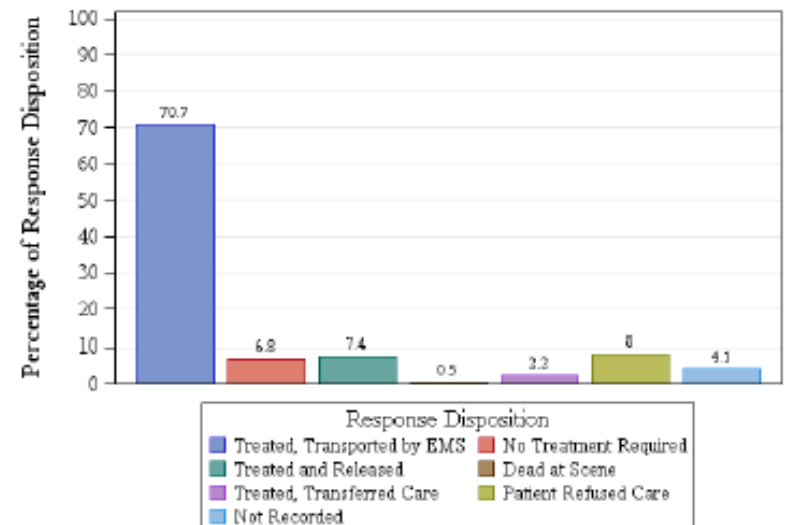


<1% Destination Type: Home, Medical Office/Clinic, Other, Other EMS Responder (Ground), Morgue, Other EMS Responder (Air)

Response Request



Response Disposition



QUESTIONS?

