



# **Indiana Trauma Care Committee Meeting**

August 8, 2014

# HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 1 2014

## District 1

Franciscan St. Anthony –  
Crown Point

Franciscan St. Anthony –  
Michigan City

Franciscan St. Margaret –Dyer

~~Franciscan St. Margaret –  
Hammond~~

IU Health – LaPorte  
Jasper County

Methodist Northlake

Methodist Southlake

Portage

Porter Regional (Valparaiso)

## District 2

Community Hospital of  
Bremen

Elkhart General

IU Health – Goshen

Kosciusko Community

Memorial Hospital South Bend

Pulaski Memorial

St. Joseph RMC-Mishawaka



# HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 1 2014

## **District 3**

Cameron Memorial

**DeKalb Health**

Dukes Memorial

**Dupont**

Lutheran

Parkview Huntington

Parkview LaGrange

Parkview Noble

Parkview Randallia

Parkview Regional Medical  
Center

Parkview Whitley

## **District 4**

**Franciscan St. Elizabeth -  
Crawfordsville**

Franciscan St. Elizabeth –  
Lafayette Central

Franciscan St. Elizabeth –  
Lafayette East

IU Health – Arnett

IU Health – White Memorial

**St. Vincent Williamsport**



# HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 1 2014

## **District 5**

### **Community East**

Johnson Memorial

### **Community North**

Major Hospital

### **Community South**

St. Vincent - Indianapolis

Eskenazi Health

Witham Health Services

St. Francis – Indianapolis

Witham at Anson

St. Francis – Mooresville

### **Hancock Regional**

Hendricks Regional Health

IU Health – Methodist

IU Health – North

IU Health – Riley for Children



# HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 1 2014

## **District 6**

Community Hospital of  
Anderson & Madison Co.

**Community Howard**

Henry County

IU Health – Ball Memorial

**IU Health - Blackford**

IU Health – Tipton×

Marion General

Reid Hospital

**Rush Memorial**

St. Vincent Anderson

**St. Vincent Mercy**

## **District 7**

Greene County General

**Putnam County**

St. Vincent Clay

**Sullivan County Community**

Terre Haute Regional

Union Hospital

Union - Clinton



# HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 1 2014

## **District 8**

### **Columbus Regional**

IU Health - Bedford

IU Health – Bloomington

### **IU Health – Paoli**

Monroe Hospital

Schneck Medical Center

### **St. Vincent Salem**

## **District 9**

### **Clark Memorial**

Floyd Memorial

### **King's Daughters' Health**

### **Margaret Mary Community**

### **St. Catherine Regional**

### **Scott County Memorial**



# HOSPITALS REPORTING TO THE INDIANA TRAUMA REGISTRY – QUARTER 1 2014

## **District 10**

Daviess Community

Deaconess

Deaconess Gateway

**Gibson General**

Good Samaritan

Memorial Hospital & Health  
Care Center

Perry County Memorial

St. Mary's Medical Center

St. Mary's Warrick



# SUMMARY OF HOSPITALS REPORTING STATUS – Q1 2014

## New to Reporting / Started Reporting Again

- Clark Memorial\*
- Columbus Regional\*
- Community East\*
- Community Howard\*
- Community North\*
- Community South\*
- DeKalb Health\*
- Dupont\*
- Franciscan St. Anthony – Michigan City\*
- Gibson General
- Hancock Regional\*
- IU Health – Blackford\*
- IU Health – Goshen\*
- IU Health – LaPorte
- IU Health – Paoli\*
- Jasper County\*

\* = New to Reporting

## New to Reporting / Started Reporting Again

- Kings' Daughters' Health\*
- Margaret Mary Community\*
- Portage\*
- Putnam County\*
- Rush Memorial\*
- Scott County Memorial
- St. Catherine Regional\*
- St. Elizabeth – Crawfordsville\*
- St. Joseph RMC – Mishawaka\*
- St. Vincent Mercy\*
- St. Vincent Salem\*
- St. Vincent Williamsport\*
- Sullivan County Community

\* = New to Reporting

## Dropped off

- St. Margaret - Hammond



# HOSPITALS TRAINED ON THE TRAUMA REGISTRY (YTD)

- Adams Memorial
- Clark Memorial
- Community – Anderson
- Community – East
- Community – Howard
- Community – North
- Community – South
- Daviess Community
- Deaconess Gateway
- DeKalb Memorial
- Dupont Hospital
- Floyd Memorial
- Gibson General
- Good Samaritan
- Greene County General
- Hancock Regional
- IU Health – Bedford
- IU Health – Blackford
- IU Health - LaPorte
- IU Health - Morgan
- IU Health – Paoli
- Jasper County
- Jay County
- King’s Daughters’ Health
- Kosciusko Community
- Margaret Mary Health
- Memorial (Jasper)
- Memorial (Logansport)
- Perry County Memorial
- Porter Regional
- Pulaski Memorial
- Putnam County
- Rush Memorial
- Scott Memorial
- Schneck Medical Center
- St. Anthony – Michigan City
- St. Catherine Regional (Charlestown)
- St. Joseph (Kokomo)
- St. Joseph RMC – Mishawaka
- St. Joseph RMC – Plymouth
- St. Mary’s (Hobart)
- St. Mary’s Warrick
- St. Vincent – Anderson
- St. Vincent – Carmel
- St. Vincent – Frankfort
- St. Vincent – Mercy
- St. Vincent – Randolph
- St. Vincent – Salem
- St. Vincent – Williamsport
- Sullivan County
- Wabash County
- Woodlawn Hospital



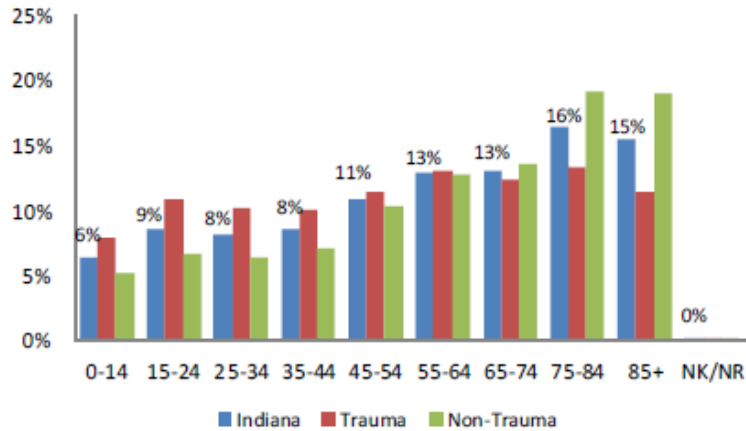
# QUARTER 1 2014 STATEWIDE REPORT

- 6,824 incidents
- January 1, 2014 to March 31, 2014
- 88 total hospitals reporting
  - 9 trauma centers
  - 79 hospitals

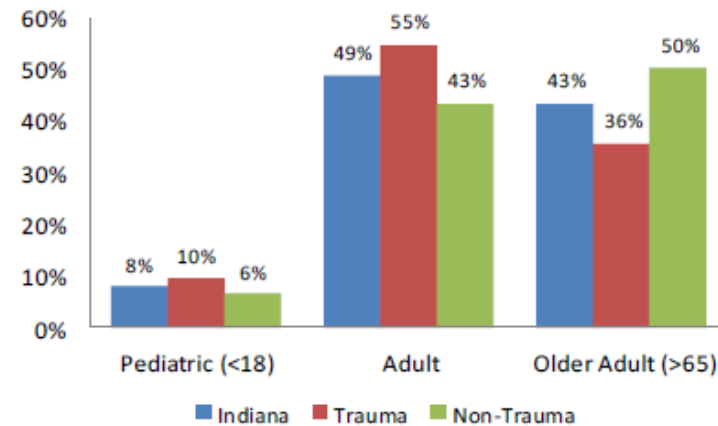


# PATIENT DEMOGRAPHICS – PAGE 2

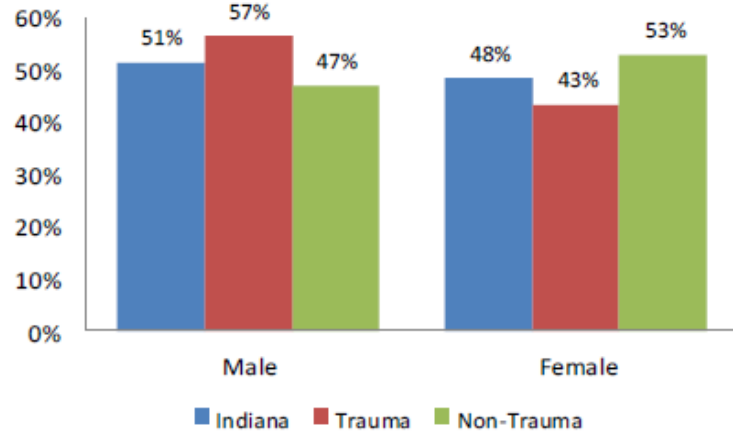
## Patient Age (Years)



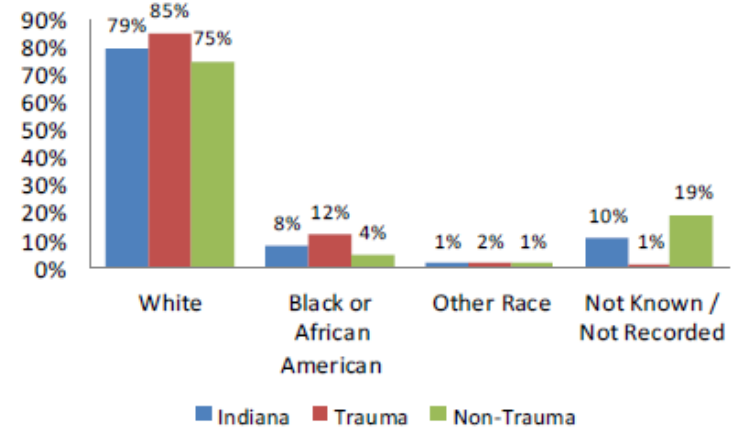
## Patient Age Groupings



## Patient Gender



## Patient Race



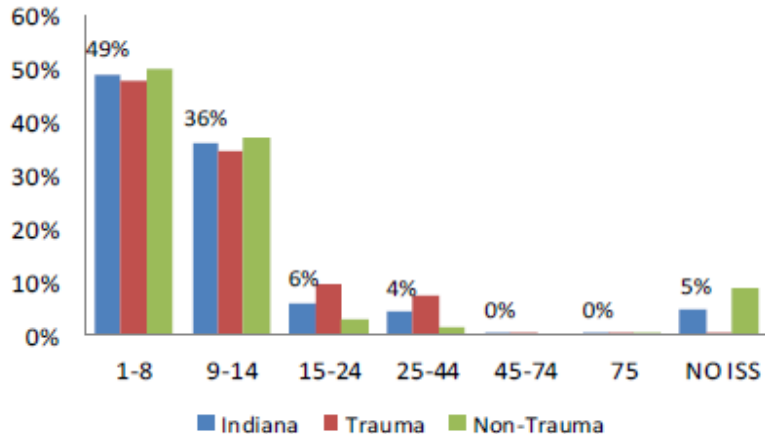
There were five unknown ages reported, which represents 0.07% of the data.

<1% Race - Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native

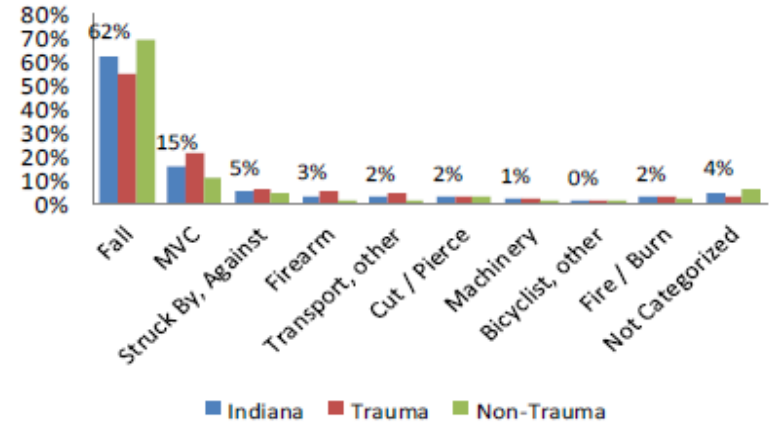


# INJURY – PAGE 3

## Injury Severity Score (ISS)

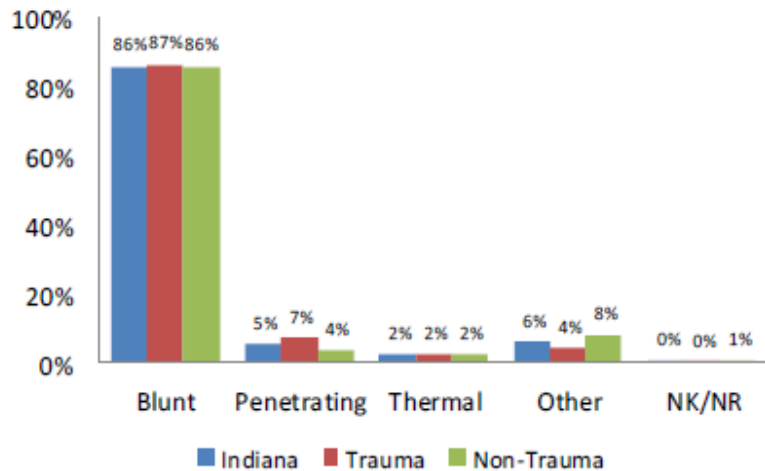


## Cause of Injury

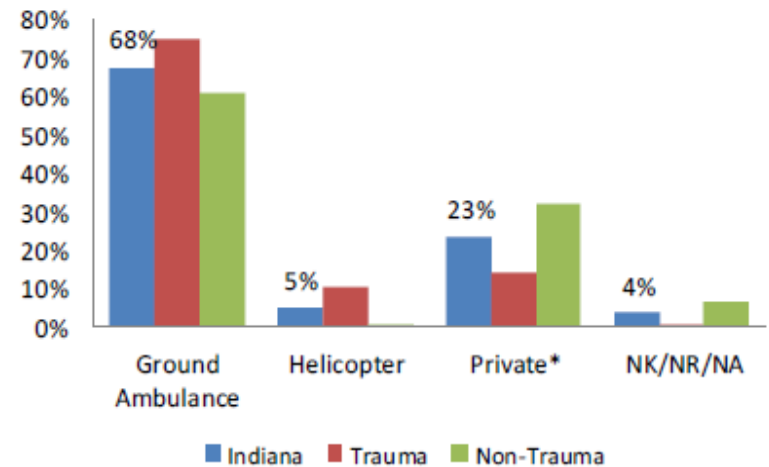


<1% COI: Pedestrian Traffic Accident, Natural/Environment, Fire/Burn, Overexertion, Bites/Stings, No E-Code

## Trauma Type



## Transport Mode

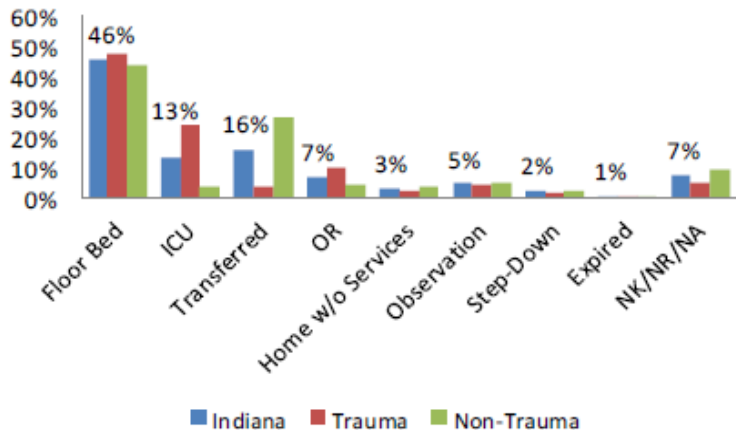


<1% Transport Mode: Police, Other

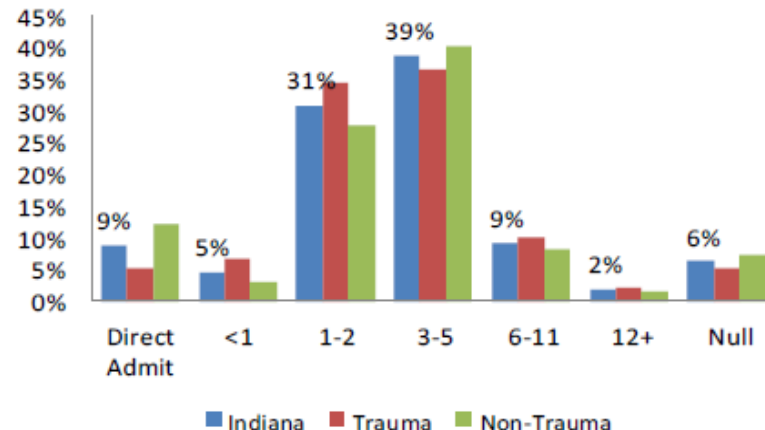
\* Indicates Private/ Public Vehicle, Walk-in

# ED: DISPOSITION / LENGTH OF STAY – PAGE 4

## ED Disposition by Percentage

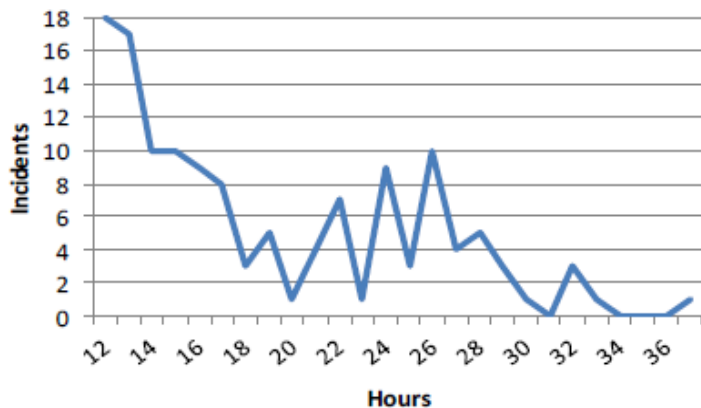


## ED Length of Stay (Hours)

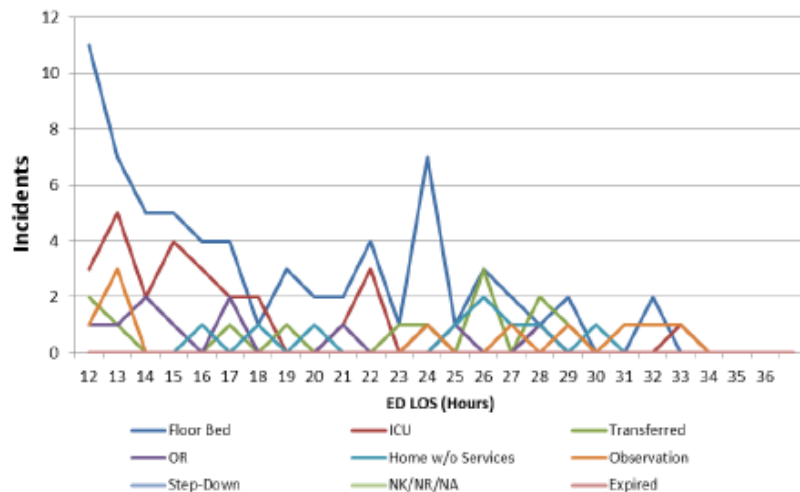


<1% ED Disposition: AMA; Home with Services; Other

## ED LOS >12 Hours



## ED Disposition for ED LOS >12 Hours

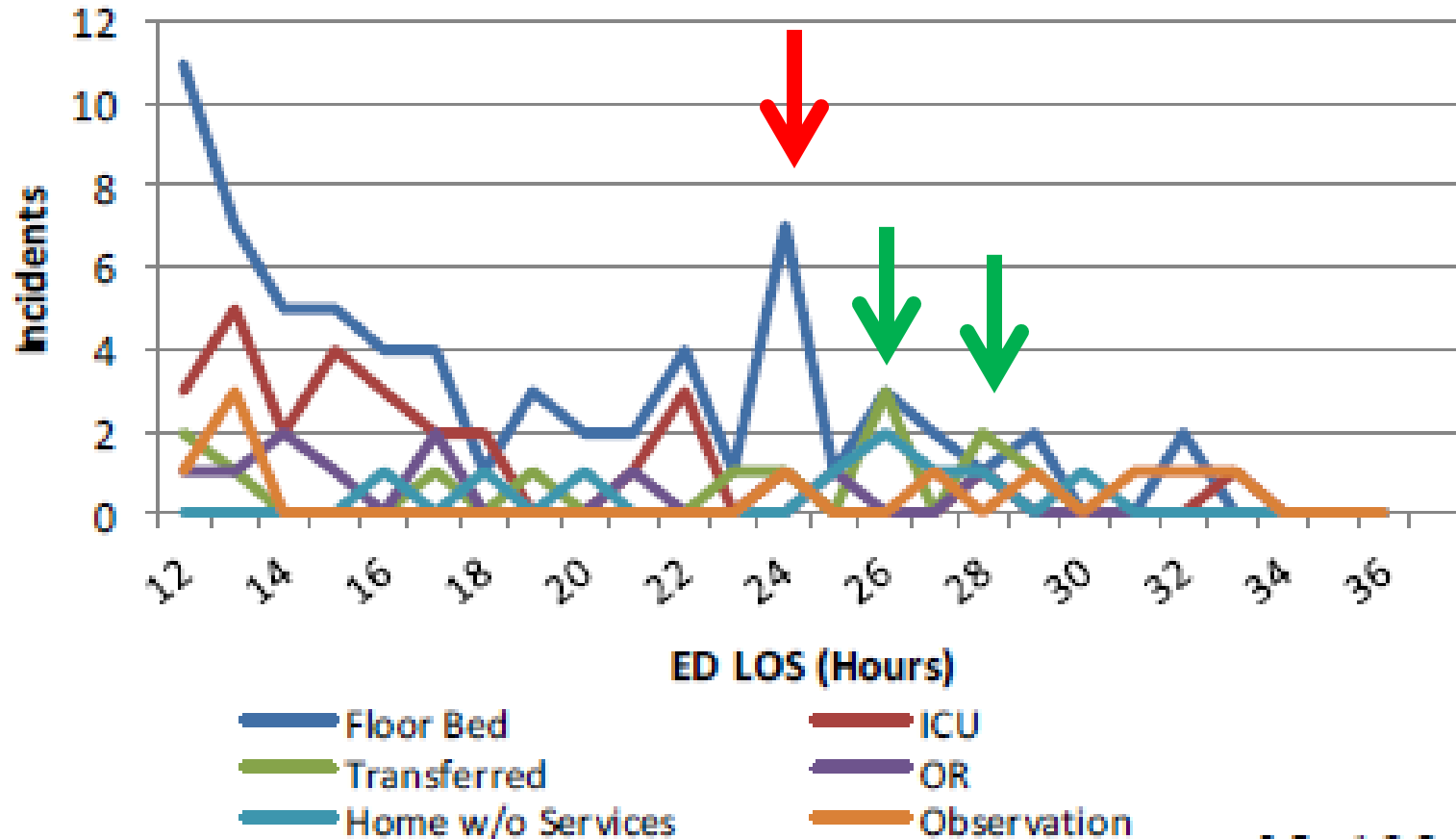


N=133

\*One case expired at 19 hours

N=128

# ED Disposition for ED LOS >12 Hours

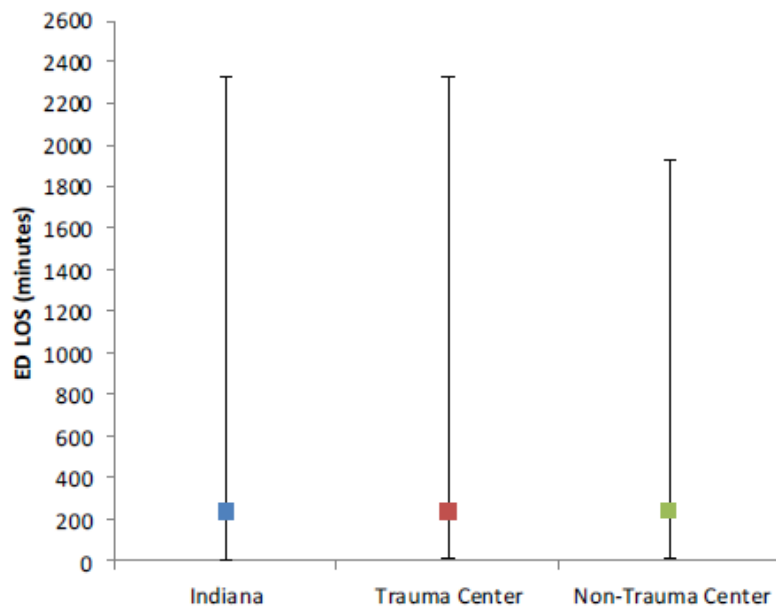


N=128

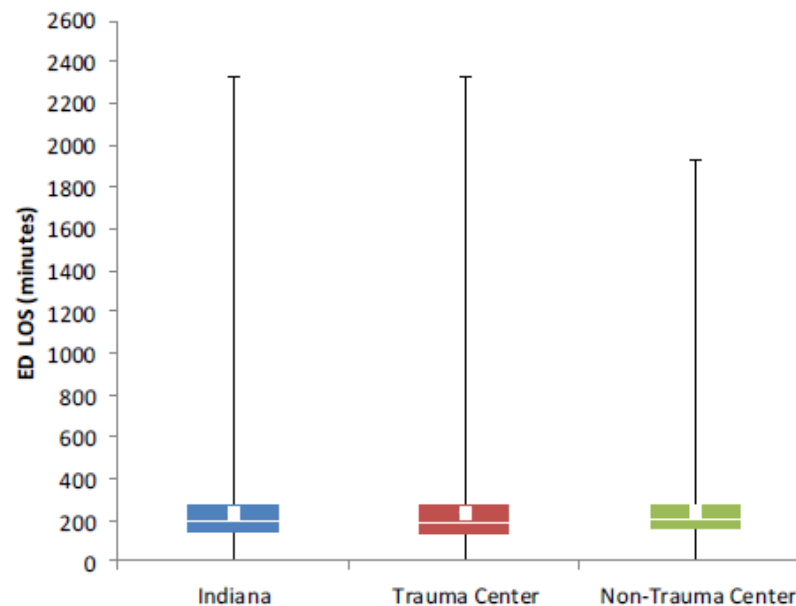
\*One case expired at 19 hours

# ED LENGTH OF STAY: BAR & WHISKER – PAGE 5

## ED LOS (Minutes)- All Patients

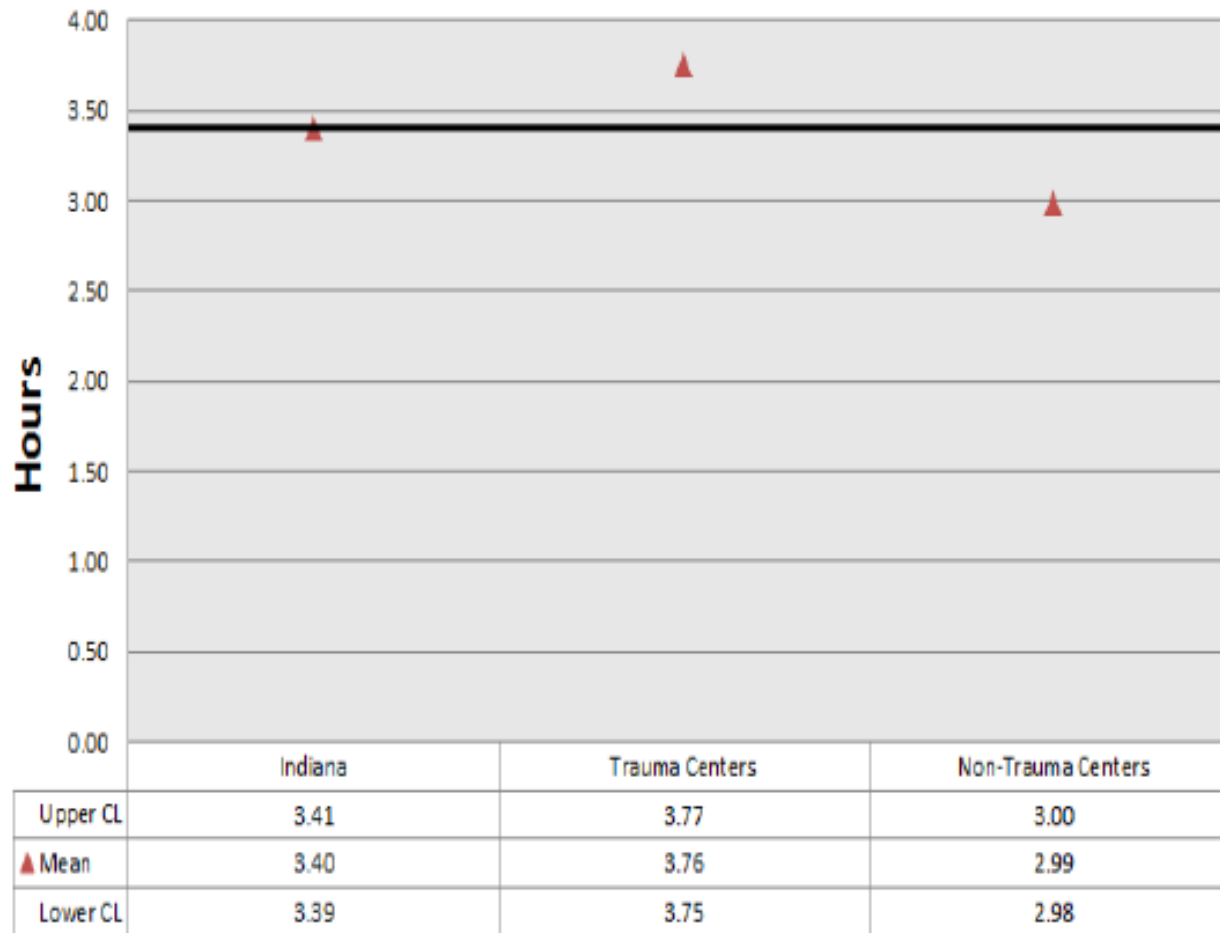


## ED LOS (Minutes)- All Patients



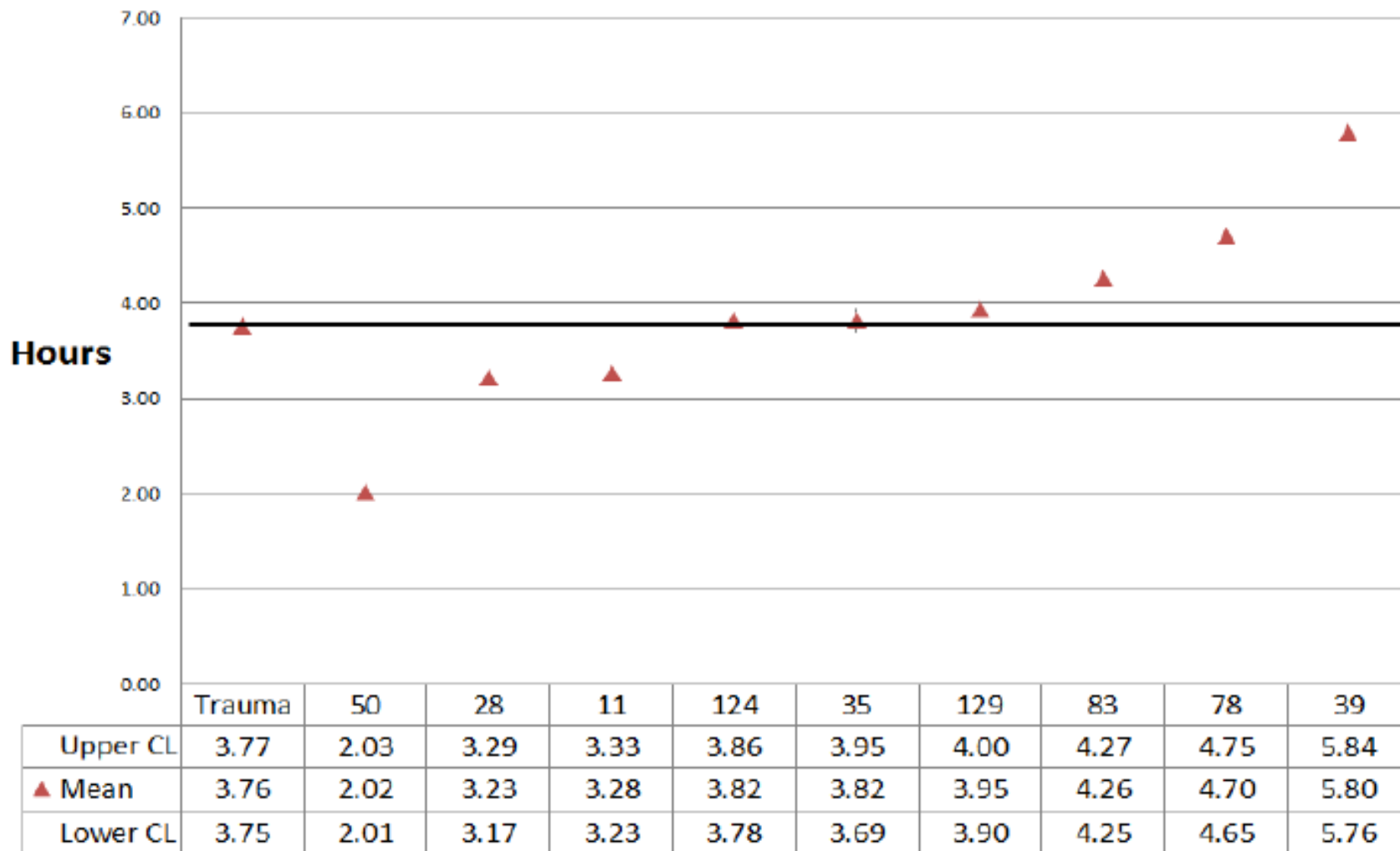
# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 6

## Average ED LOS (Hours)



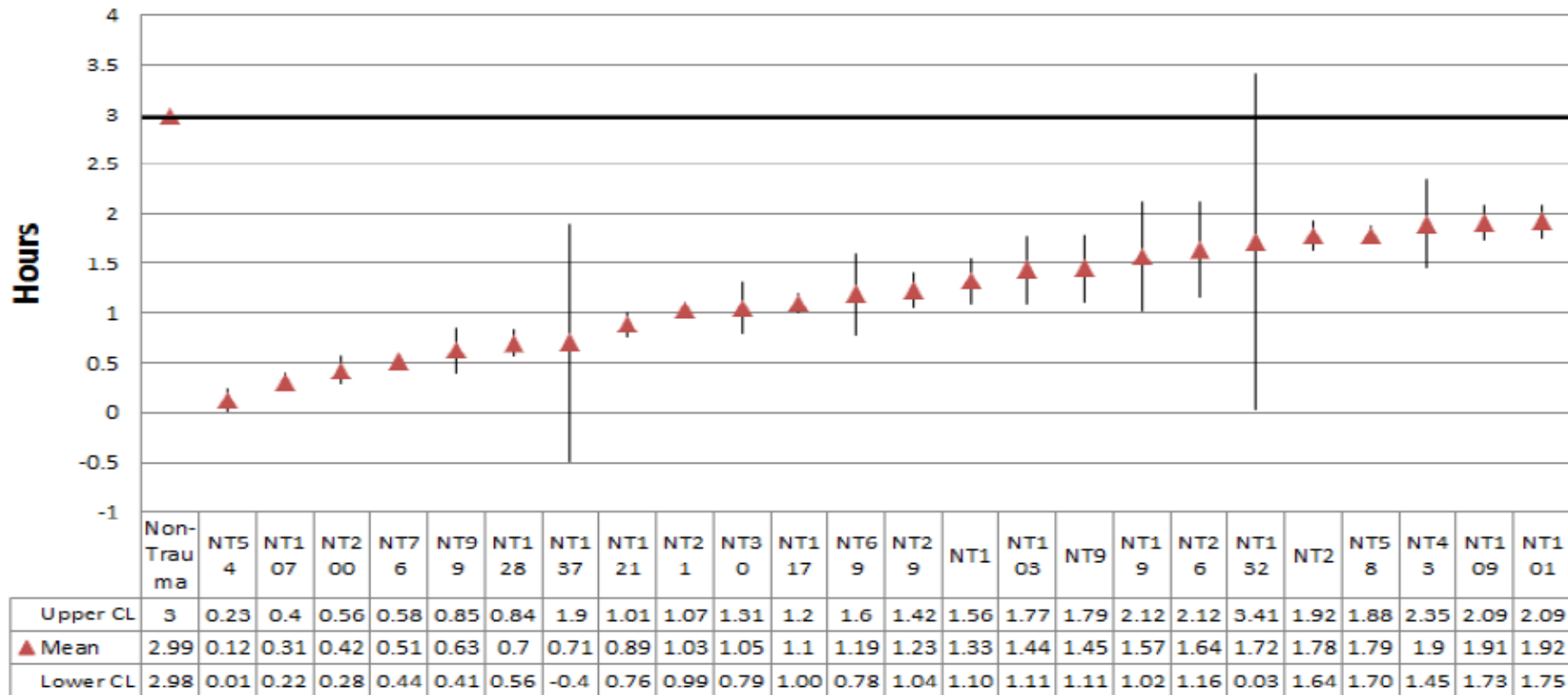


## Trauma Centers-Average ED LOS (Hours)



# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 7

## All Patients Non-Trauma Centers- Average ED LOS (Hours)

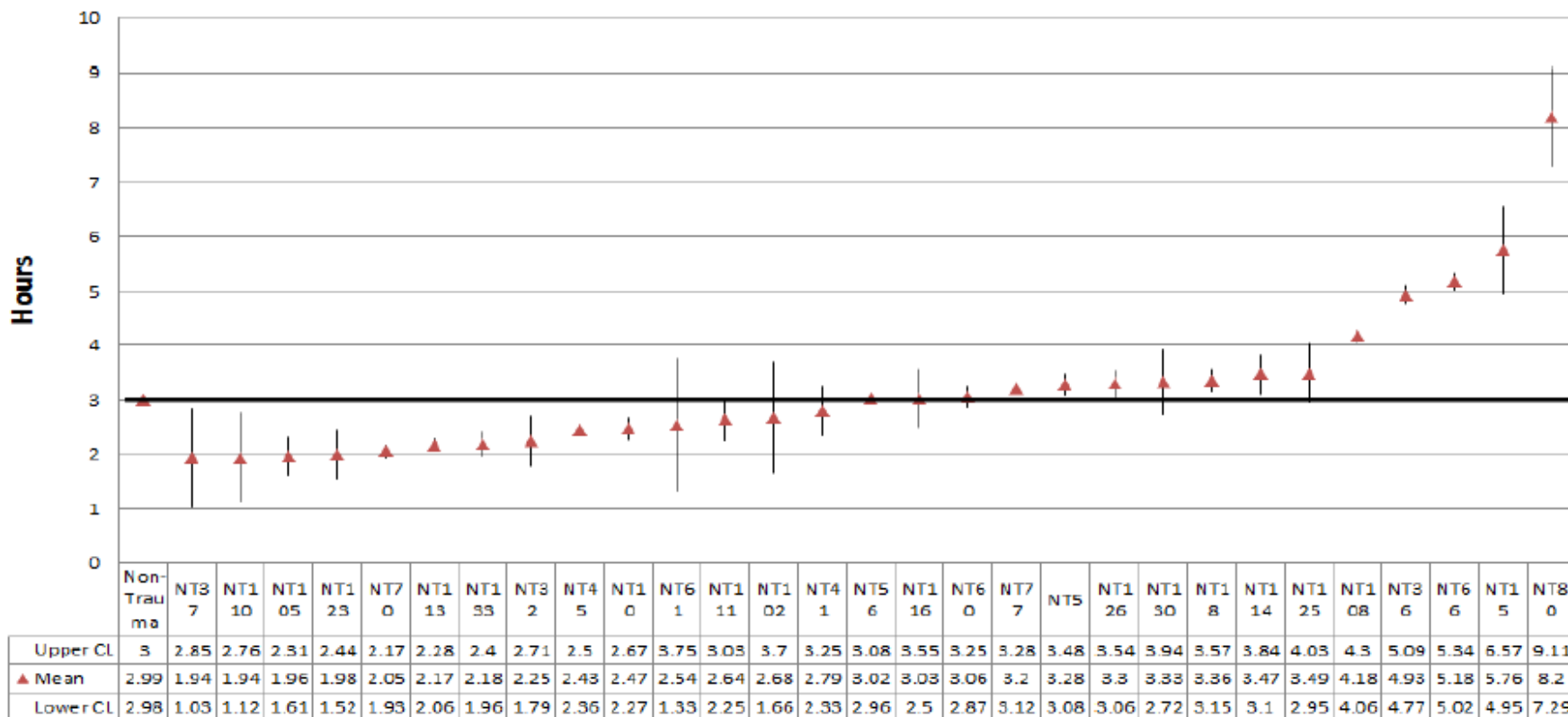


The purpose of the caterpillar graphs is to compare different groups to the average ED LOS. The Indiana mean is the comparison group, which is represented by the black line.

In the chart above, the data is for the non-trauma centers. The non-trauma center average is in the first column on the left side. Each non-trauma center has been assigned a random number for confidentiality. The mean, 95% confidence limit and lower confidence limit is listed for each group.

# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 8

## All Patients Non-Trauma Centers- Average ED LOS (Hours)



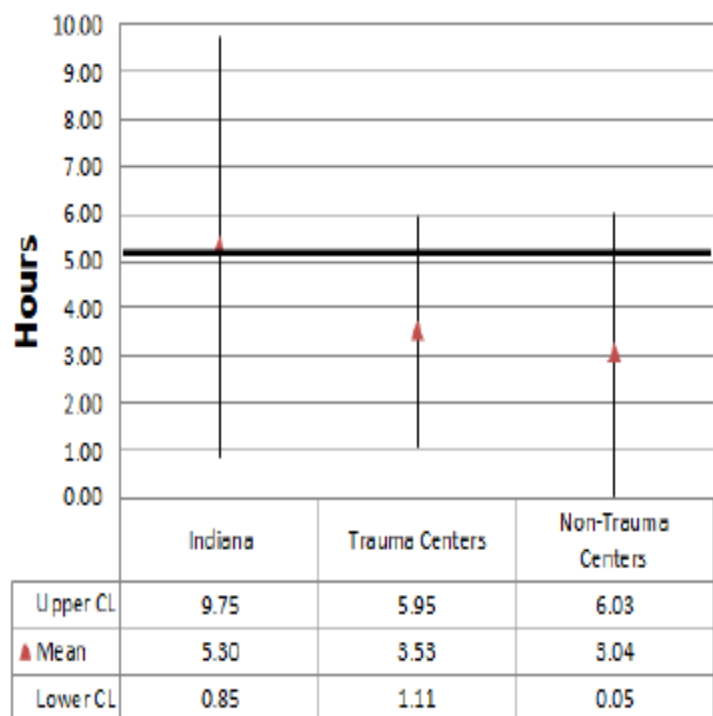
The purpose of the caterpillar graphs is to compare different groups to the average ED LOS. The Indiana mean is the comparison group, which is represented by the black line.

In the chart above, the data is for the non-trauma centers. The non-trauma center average is in the first column on the left side. Each non-trauma center has been assigned a random number for confidentiality. The mean, 95% confidence limit and lower confidence limit is listed for each group.

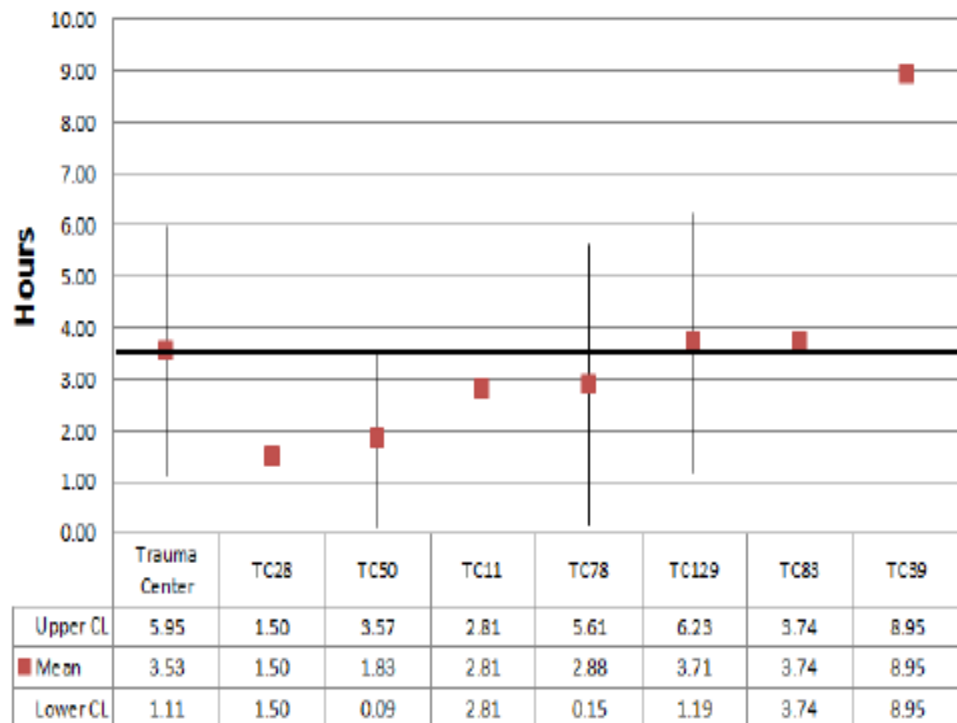
# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 9

## Transferred Patients

### Average ED LOS (Hours)

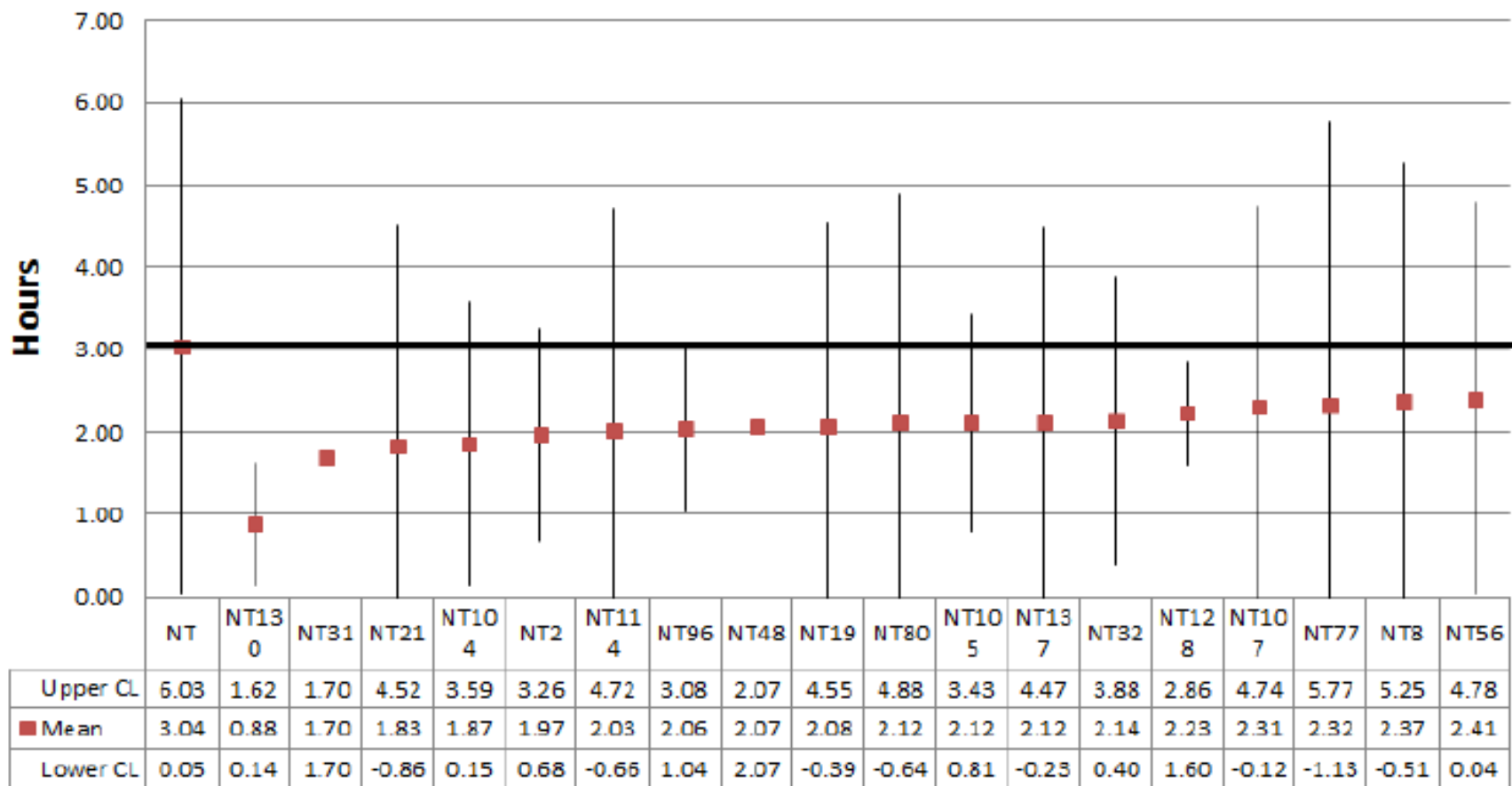


### Trauma Centers-Average ED LOS (Hours)



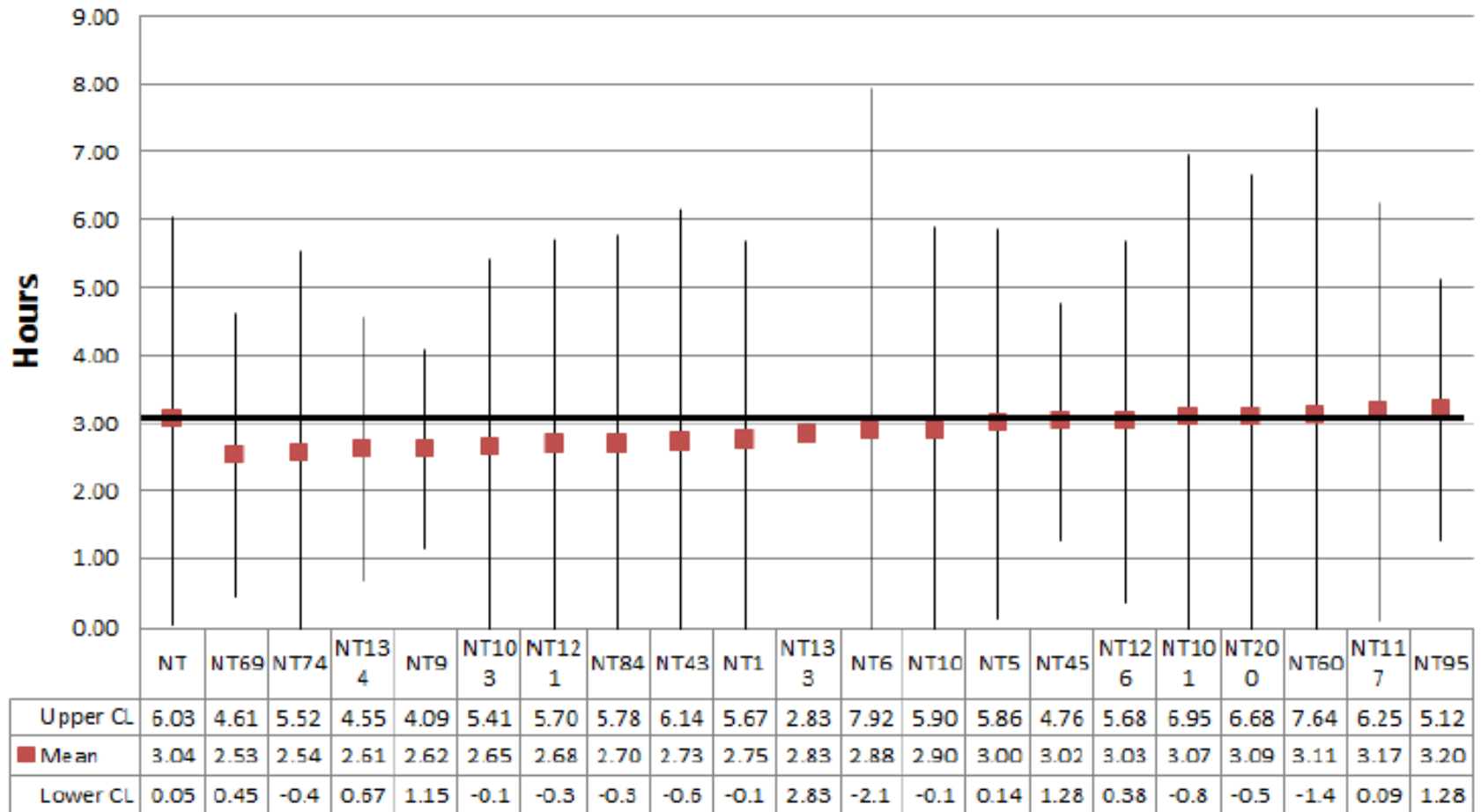
# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 10

## Transferred Patients Non-Trauma Centers- Average ED LOS (Hours)



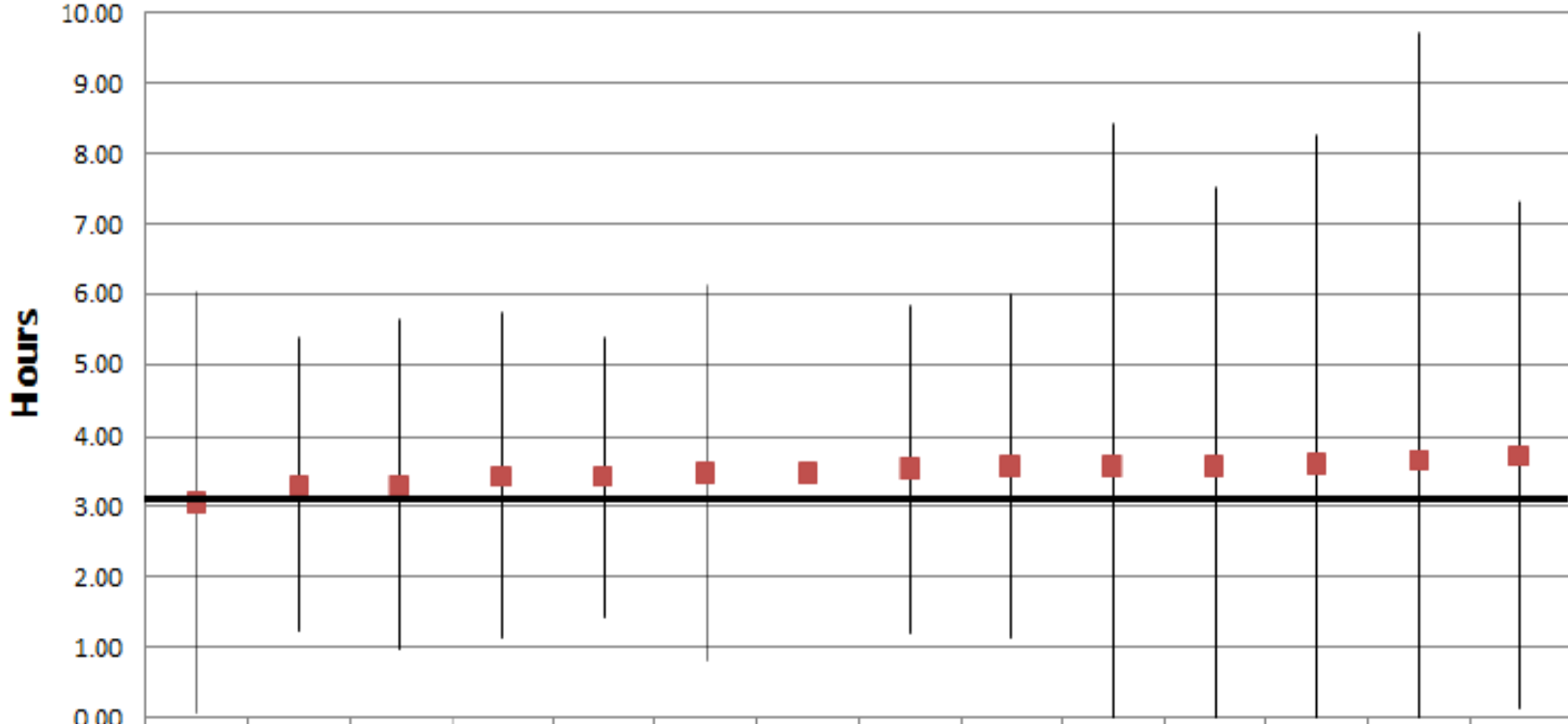
# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 11

## *Transferred* Patients Non-Trauma Centers- Average ED LOS (Hours)



# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 12

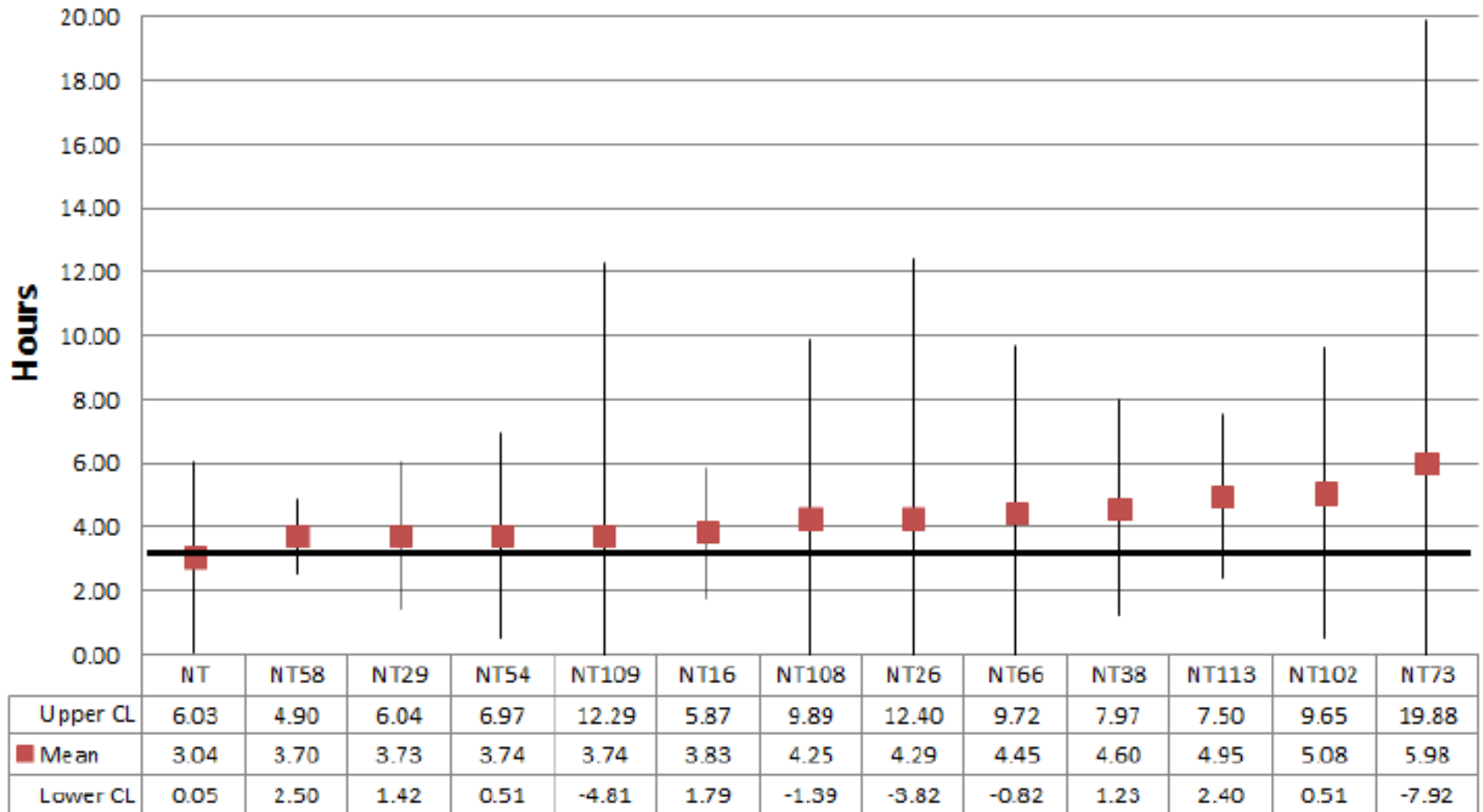
## *Transferred* Patients Non-Trauma Centers- Average ED LOS (Hours)



	NT	NT76	NT116	NT70	NT100	NT36	NT57	NT18	NT99	NT30	NT110	NT123	NT125	NT25
Upper CL	6.03	5.40	5.63	5.71	5.40	6.13	3.48	5.85	5.98	8.42	7.53	8.25	9.70	7.29
■ Mean	3.04	3.30	3.30	3.42	3.42	3.48	3.48	3.52	3.55	3.56	3.57	3.59	3.64	3.70
Lower CL	0.05	1.20	0.97	1.13	1.44	0.83	3.48	1.19	1.12	-1.30	-0.39	-1.07	-2.42	0.11

# AVERAGE ED LOS: CATERPILLAR GRAPH – PAGE 13

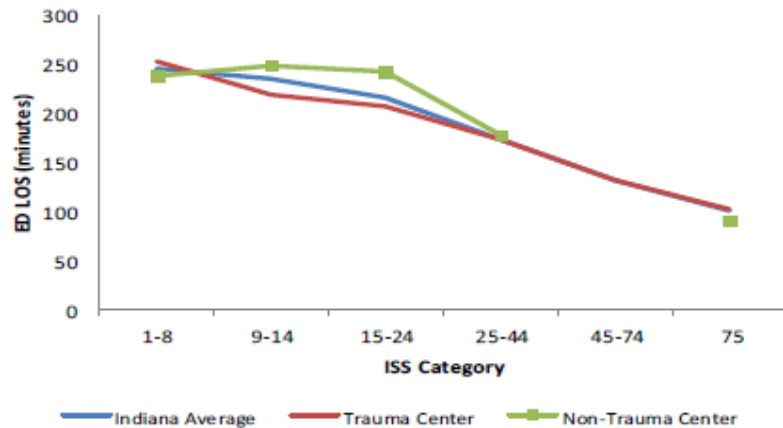
## *Transferred* Patients Non-Trauma Centers- Average ED LOS (Hours)



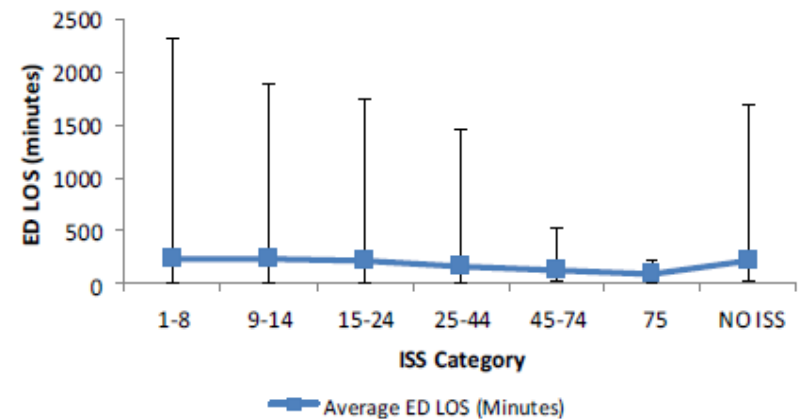


# ED LOS BY ISS – PAGE 14

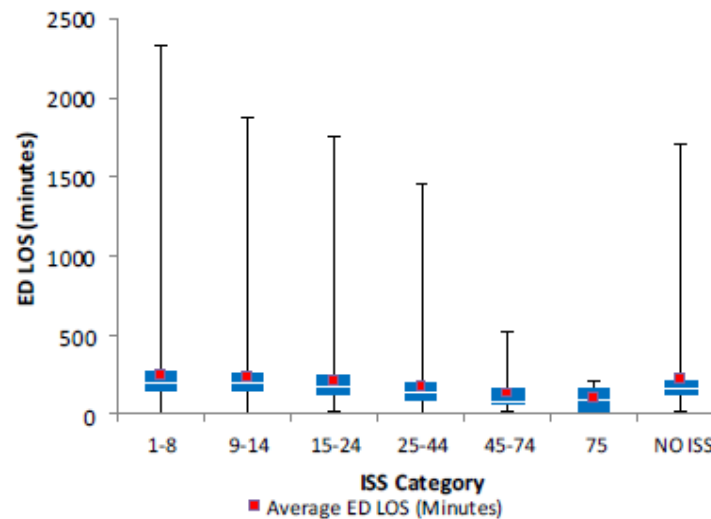
## ED LOS (Minutes) by ISS



## ED LOS (Minutes) by ISS



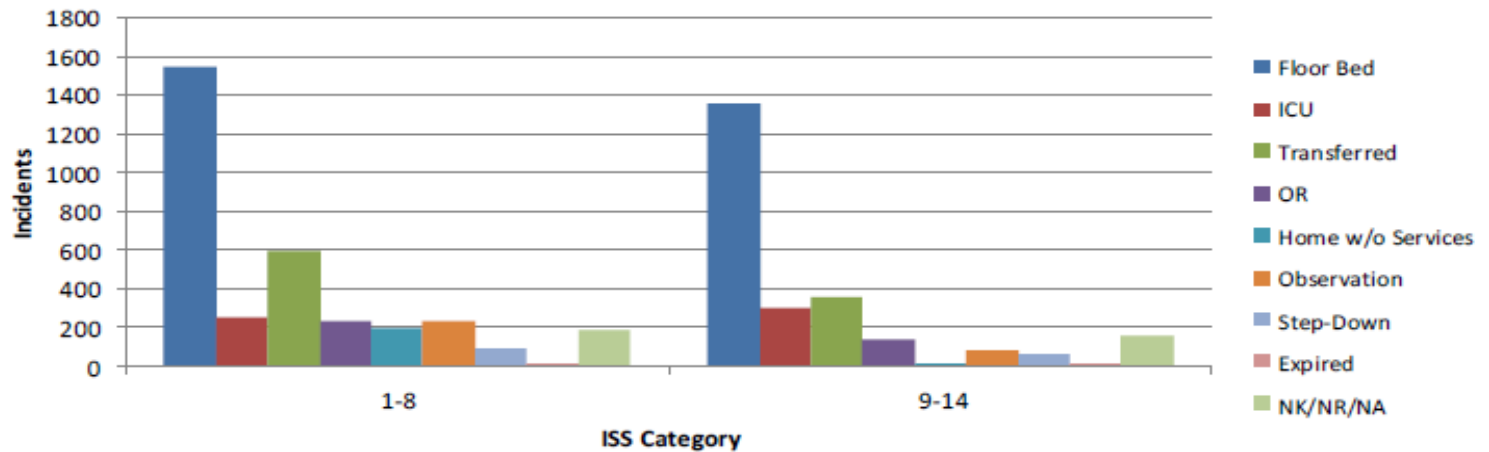
## ED LOS (Minutes) by ISS



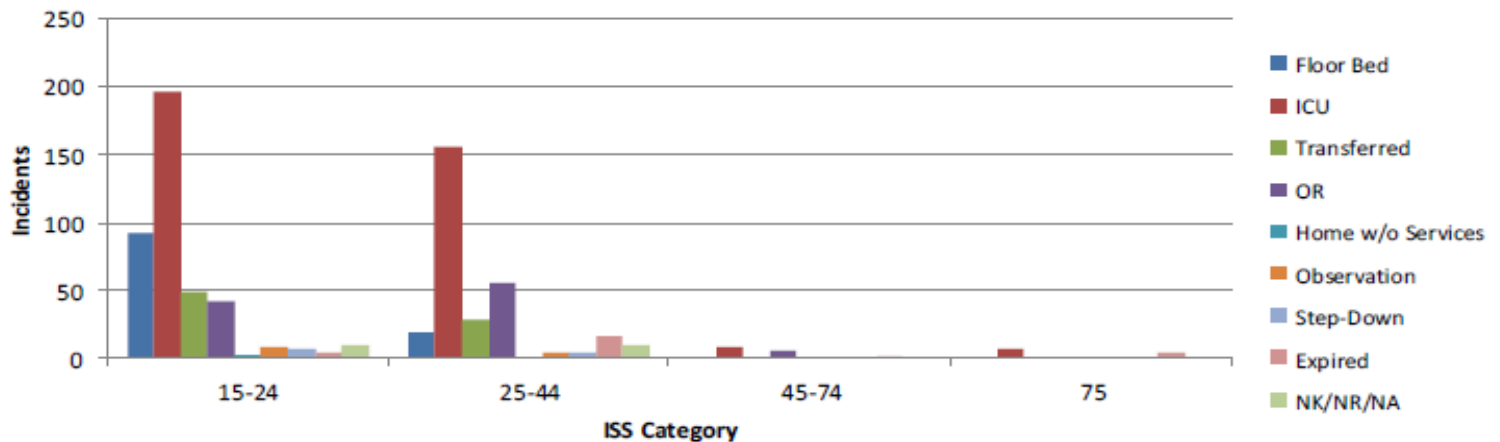
\*A table with values for ED LOS by ISS is found on page 28. Note for ED LOS by ISS, there were 22 cases at Non-Trauma Centers with ISS greater than 45.

# ED DISPOSITION BY ISS – PAGE 15

## ED Disposition by ISS



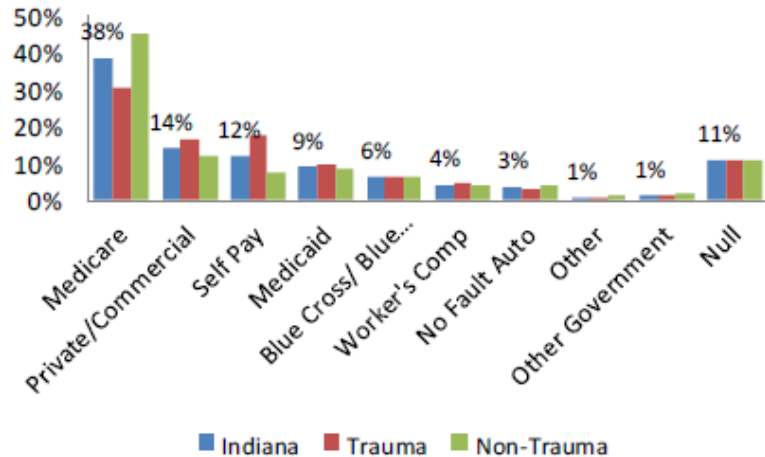
## ED Disposition by ISS 15-75



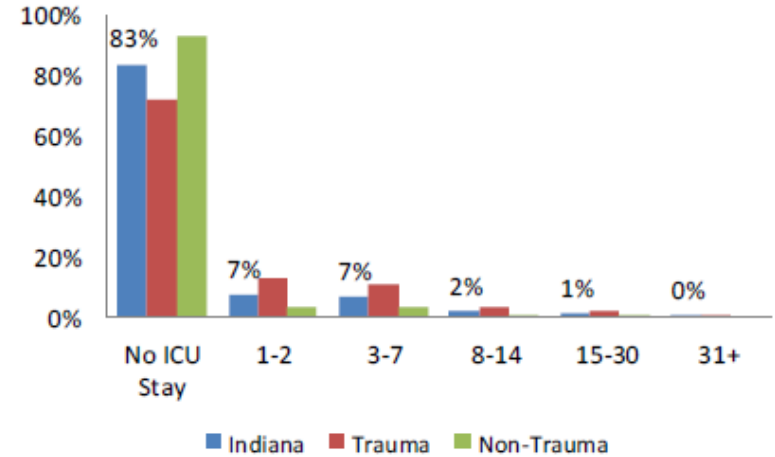
ED Disposition <1%: AMA; Home with services; Other (Jail, Mental Institution, etc.). Please note the difference in axis scale between the top and bottom graphs.  
 \*A table with values for ED Disposition by ISS is found on page 28.

# PATIENT OUTCOMES— PAGE 16

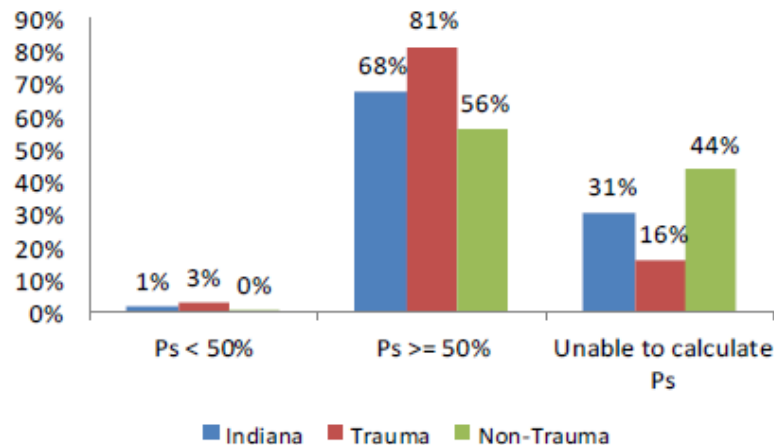
## Primary Payer Mix



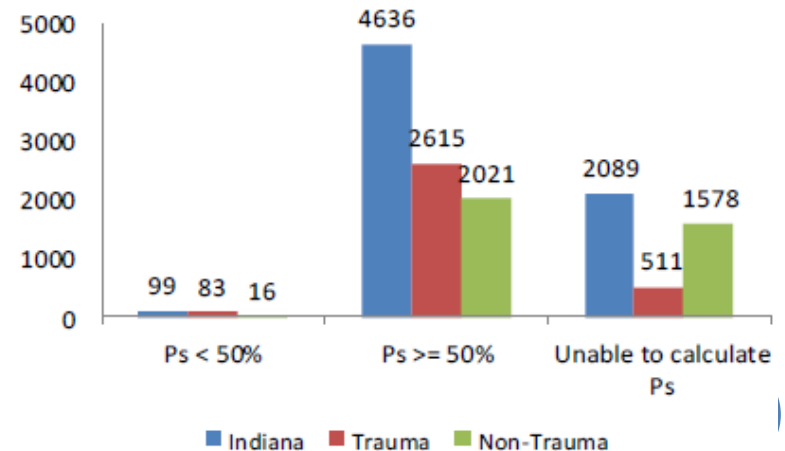
## ICU Length of Stay (Days)



## Probability of Survival (Ps) by Percent



## Probability of Survival (Ps) by Count



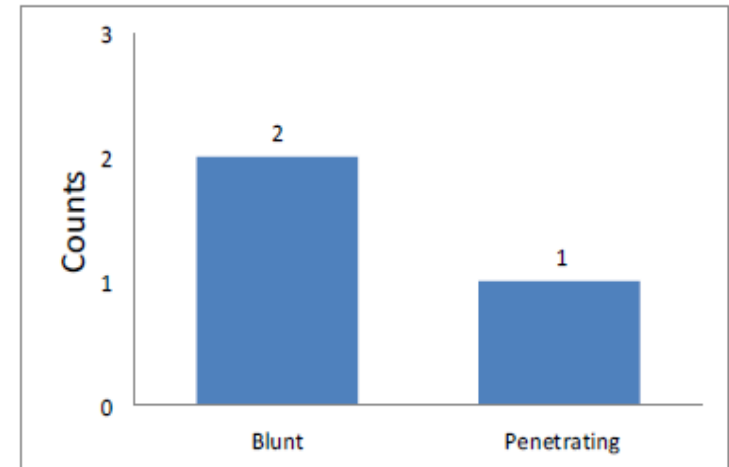
Due to the many data points required to calculate Ps, not every patient has a calculated Ps. These two graph represents 4,735 incidents with calculated Ps.

# CASES TO REVIEW – PAGE 17

## ED Disposition of Expired for Ps $\geq 50\%$ , N=3

Patients with Ps $\geq 50\%$ Expired in ED, N=3	
Gender	1 Female, 2 Males
Average Age	65.3 years (30-89 years)
Facilities	2 Non-Trauma Centers 1 Trauma Center
Transport Type	2 Ground ambulance; 1 Not Known
Cause of Injury	2 Falls, 1 Firearm
Inter-Facility Transfer	1 Yes; 2 No
Average Distance from Scene to Facility	13 miles (4.9-28.8 miles)
Signs of Life	3 Arrived with signs of life

### Trauma Type



	Trauma Type	ISS	RTS- GCS Scale	RTS- Systolic Scale	RTS- Respiratory Scale	Revised Trauma Score (RTS)	B Value	PS	Signs of life
1	Blunt	17	4	4	3	7.55	2.49	0.9234	Arrived with signs of Life
2	Penetrating	9	0	4	3	3.8	0.66	0.6584	Arrived with signs of Life
3	Blunt	10	4	4	3	7.55	3.08	0.9559	Arrived with signs of Life

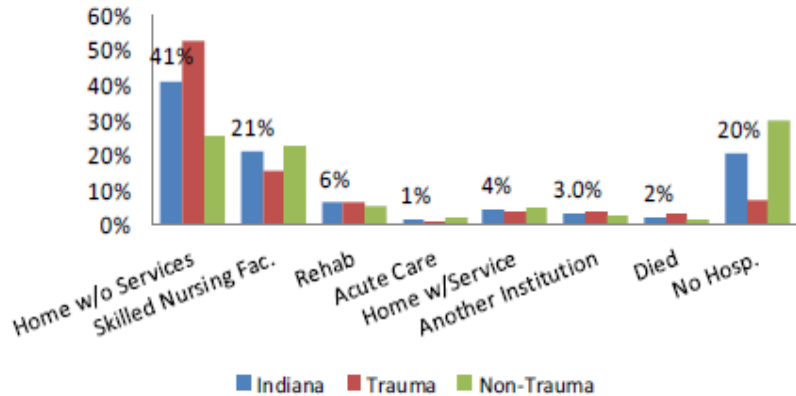
# ED DISPOSITION = EXPIRED

- When should we present these to the TCC?
  - Past: When  $P_s \geq 50$
- What variables should we look at?
  - ISS
  - $P_s$
  - What is useful?

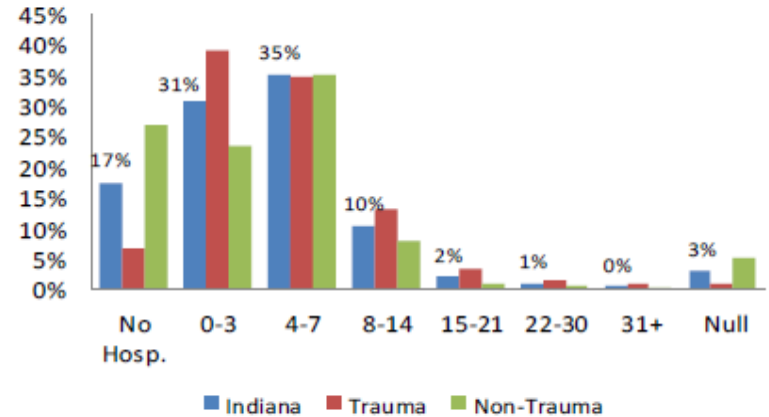


# HOSPITAL DISPOSITION / LENGTH OF STAY – PAGE 18

## Hospital Disposition

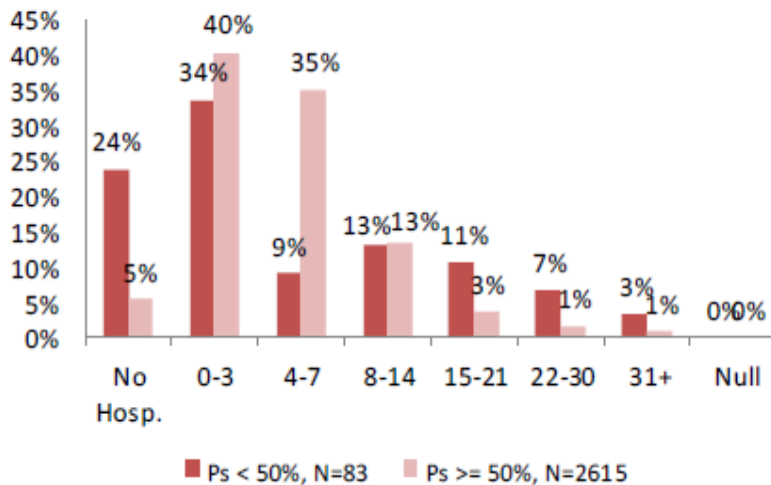


## Hospital Length of Stay (days)

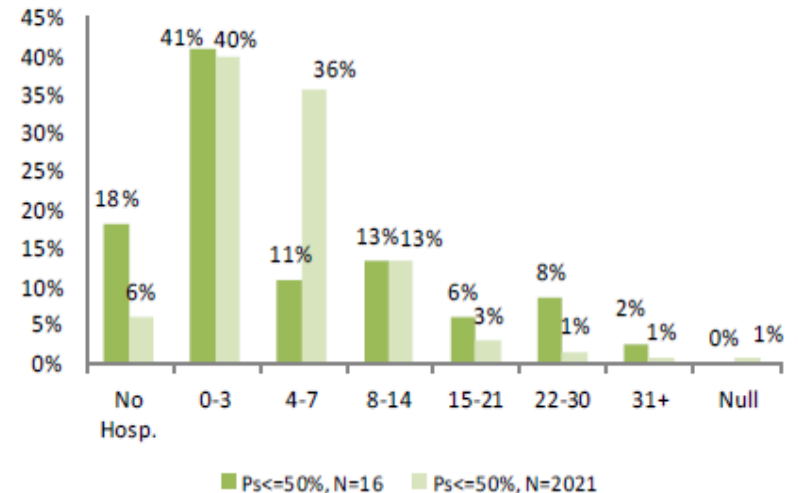


\*There are new categories for the Hospital Disposition for the 2014 Data Dictionary  
 <1%: null, psych., long term care hospital, AMS, hospice, intermediate care

## Hospital LOS (days) by Ps Trauma Centers



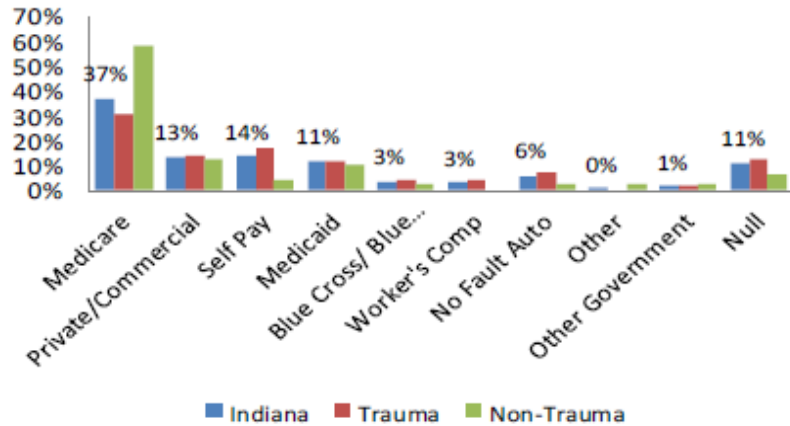
## Hospital LOS (days) by Ps Non-Trauma Centers



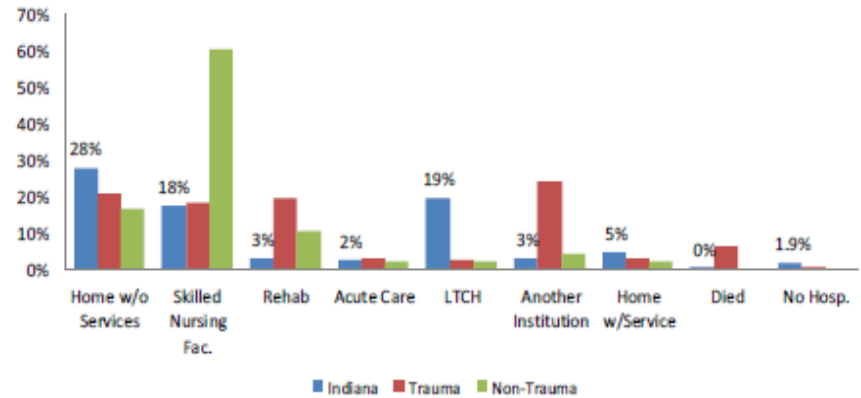
# HOSPITAL LENGTH OF STAY > 15 DAYS – PAGE 19

Hospital Length of Stay > 15 days, N=230

Primary Payer Mix

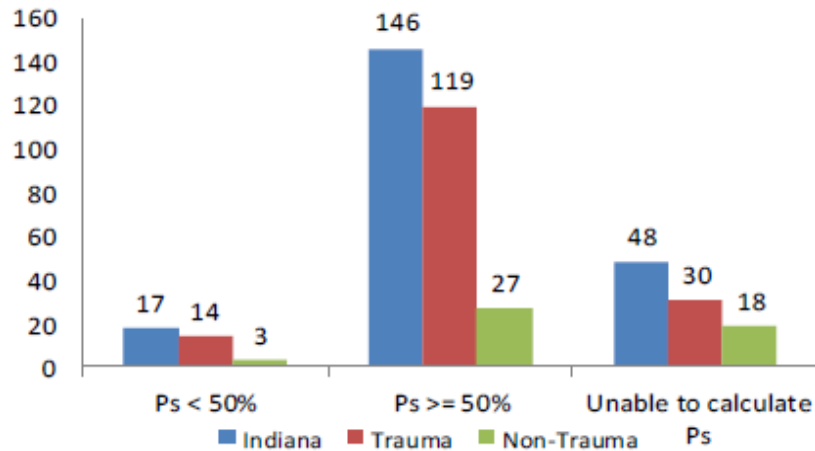


Hospital Disposition

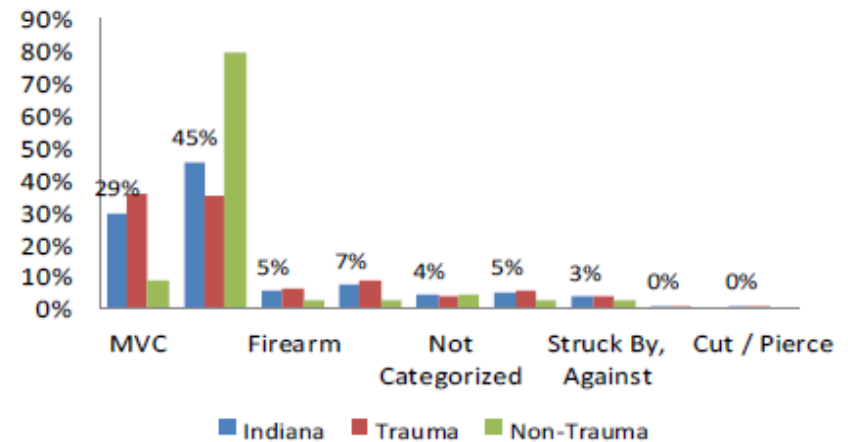


\*There are new categories for the Hospital Disposition for the 2014 Data Dictionary

Probability of Survival



Cause of Injury



# TRANSFER CASES COVER PAGE – PAGE 20

## Indiana Trauma Registry

### Statewide Quarter 1 Data Report

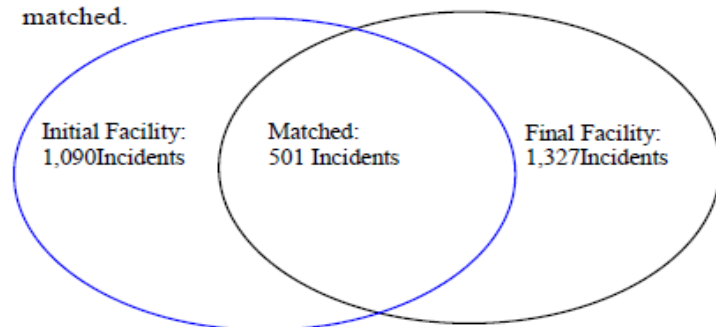
January 1, 2014 to March 31, 2014

6,824 Incidents

88 Total Hospitals Reporting

Trauma Centers: 9 facilities 47.03% of data  
(Non-Trauma) Hospitals: 79 facilities 52.97% of data

For Quarter 1 2014, of the 6,824 incidents reported to the Indiana Trauma Registry, 1,090 cases that had an ED Disposition of “Transferred to another acute care facility” at the initial facility or that had the Inter-Facility Transfer equal to “Yes” at the Trauma Center. Of those transferred, 501 cases were probabilistically matched. The linked cases make up 14.7% of the Q1 2014 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.



The initial facility in which transfers come from may be considered Critical Access Hospitals (CAHs). All Indiana CAHs are considered Rural, and must meet additional requirements to have a CAH designation, such as having no more than 25 inpatient beds and being located in a rural area. Facilities that are highlighted indicate that this facility reported data for Quarter 1, 2014.

Within this transfer data section, the purple columns represent the transfer cases and the single percentages represent the percent for the transfer cases. For two demographic variables, patient age groupings and gender, the Indiana average is included to provide more insight to this transfer population.

#### Indiana Critical Access Hospitals (CAHs)

Adams Memorial Hospital	Pulaski Memorial Hospital
Cameron Memorial Community Hospital	Putnam County Hospital
Community Hospital of Bremen	Rush Memorial Hospital
Decatur County Memorial Hospital	Scott Memorial Hospital
Dukes Memorial Hospital	St. Mary's Warrick Hospital
Gibson General Hospital	St. Vincent – Clay Hospital
Greene County General Hospital	St. Vincent – Dunn Hospital
Harrison County Hospital	St. Vincent – Frankfort Hospital
IU Health – Bedford Hospital	St. Vincent – Jennings Hospital
IU Health – Blackford Hospital	St. Vincent – Mercy Hospital
IU Health – Paoli Hospital	St. Vincent – Randolph Hospital
IU Health – Tipton Hospital	St. Vincent- Salem Hospital
IU Health – White Memorial Hospital	St. Vincent – Williamsport Hospital
Jasper County Hospital	Sullivan County Community Hospital
Jay County Hospital	Union Hospital Clinton
Margaret Mary Community Hospital	Wabash County Hospital
Parkview LaGrange Hospital	Woodlawn Hospital
Perry County Memorial Hospital	

#### Indiana Rural Hospitals

Columbus Regional Hospital	Kosciusko Community Hospital
Fayette Regional Health System	Marion General Hospital
Franciscan St. Anthony Health – Michigan City	Memorial Hospital (Logansport)
Franciscan St. Elizabeth Health – Crawfordsville	Memorial Hospital & Health Care Center (Jasper)
Good Samaritan Hospital	Parkview Noble Hospital
Henry County Memorial Hospital	Reid Hospital & Health Care Services
IU Health – LaPorte Hospital	St. Joseph's Regional Medical Center – Plymouth
IU Health – Starke Hospital	Schneck Medical Center
King's Daughters' Health	

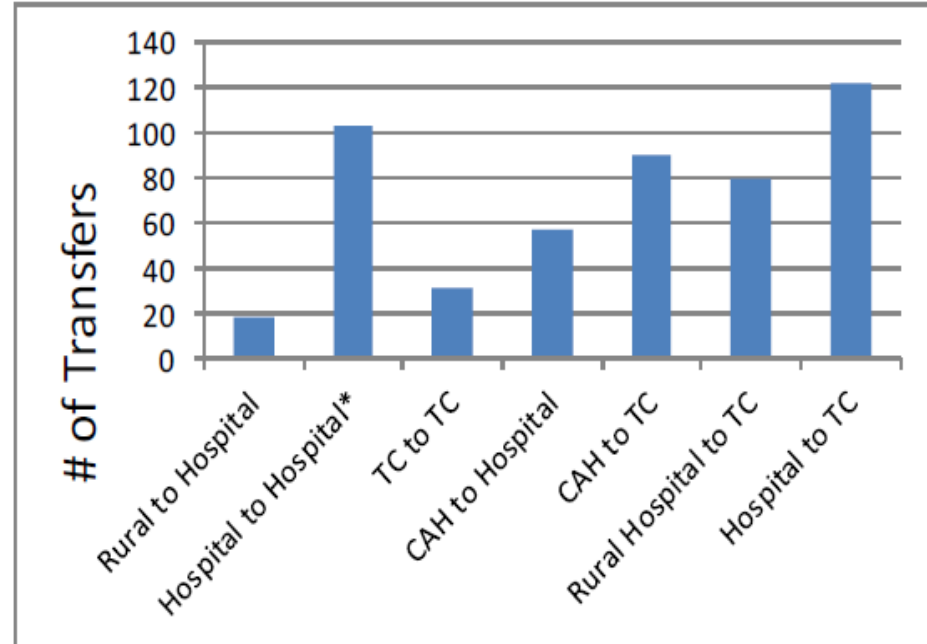


# TRANSFER PATIENT: FACILITY TYPE – PAGE 21

## Facility to Facility Transfers

For Transfer Patients:		
Initial Hospital Type	Final Hospital Type	Incident Counts
Rural Hospital	Hospital	18
Hospital	Hospital	103
Trauma Center	Trauma Center	31
Critical Access Hospital	Hospital	57
Critical Access Hospital	Trauma Center	90
Rural Hospital	Trauma Center	79
Hospital	Trauma Center	122

## Facility Transfer Type



Rural = Rural Hospital; TC = ACS Verified Trauma Center; CAH = Critical Access Hospital; Hospital = does not fall into above categories



# TRANSFER PATIENT DATA AVERAGES – PAGE 22

## For Linked Transfer Patients:

For Transfer Patients:			
	All Transfer Patients	<u>Critical*</u> Transfer Patients	<u>Physiological Critical**</u> Transfer Patients
Number of Patients	501	315	300
EMS Notified to Scene	8.7 minutes	8.9 minutes	9.1 minutes
EMS Scene Arrival to Departure	16.7 minutes	16.6 minutes	16.8 minutes
EMS Scene Departure to Initial Hospital ED Arrival	21.8.0 minutes	58.6 minutes	63.4 minutes
Initial Hospital ED Arrival to Departure	2 hours 59 minutes	2 hours 54 minutes	2 hours 54 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	1 hour 5 minutes	1 hour 3 minutes	1 hour 5 minutes
<b>TOTAL TIME</b>	4 hours 51 minutes	4 hours 44 minutes	4 hours 47 minutes

\*Critical patient is defined as having a GCS  $\leq$  12, OR Shock Index  $>$  0.9 OR ISS  $>$ 15 at the initial hospital.

\*\*Physiological Critical Transfer patient is defined as having a Shock Index  $>$  0.9 OR GCS  $\leq$  12 at the initial hospital.

# TRANSFER PATIENT DATA AVERAGES – PAGE 22

<b>For Transfer Patients:</b>	
	All Transfer Patients
<b>Number of Patients</b>	501
<b>EMS Notified to Scene</b>	8.7 minutes
<b>EMS Scene Arrival to Departure</b>	16.7 minutes
<b>EMS Scene Departure to Initial Hospital ED Arrival</b>	21.8.0 minutes
<b>Initial Hospital ED Arrival to Departure</b>	2 hours 59 minutes
<b>Initial Hospital ED Departure to Final Hospital ED Arrival</b>	1 hour 5 minutes
<b>TOTAL TIME</b>	4 hours 51 minutes



# TRANSFER PATIENT DATA AVERAGES – PAGE 22

	<u>Critical* Transfer Patients</u>
Number of Patients	315
EMS Notified to Scene	8.9 minutes
EMS Scene Arrival to Departure	16.6 minutes
EMS Scene Departure to Initial Hospital ED Arrival	58. minutes
Initial Hospital ED Arrival to Departure	2 hours 42 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	59 minutes
<b>TOTAL TIME</b>	<b>4 hours 25 minutes</b>

Critical Patient defined as:

- ISS > 15
- OR
- GCS ≤ 12
- OR
- Shock Index > 0.9



# TRANSFER PATIENT DATA AVERAGES – PAGE 22

	<u>Physiological Critical** Transfer Patients</u>
Number of Patients	64
EMS Notified to Scene	8 minutes
EMS Scene Arrival to Departure	14 minutes
EMS Scene Departure to Initial Hospital ED Arrival	16 minutes
Initial Hospital ED Arrival to Departure	2 hours 35 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	56 minutes
<b>TOTAL TIME</b>	<b>4 hours 6 minutes</b>

Physiological Critical Patient defined as:

- GCS  $\leq$  12
- OR
- Shock Index  $>$  0.9



# TRANSFER PATIENT DATA – PAGE 23

For Transfer Patients:		
Public Health Preparedness District Initial Hospital	Public Health Preparedness District Final Hospital	Incident Counts
1	1	6
1	2	7
1	5	5
2	2	11
2	3	13
2	5	2
3	3	73
3	5	2
4	4	9
4	5	26
5	5	69

For Transfer Patients:		
Public Health Preparedness District Initial Hospital	Public Health Preparedness District Final Hospital	Incident Counts
6	3	13
6	5	48
6	6	5
7	5	48
7	7	13
7	8	9
7	10	1
8	5	27
8	8	24
8	10	1
10	5	7
10	10	48



# TRANSFER PATIENT DATA – PAGE 24

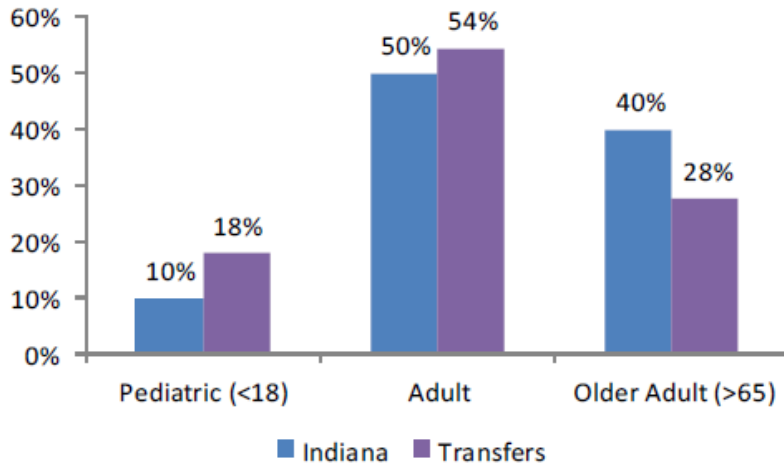
## For Linked Transfer Patients:

For All Transfer Patients:			
	All Transfer Patients	<u>Critical*</u> Transfer Patients	<u>Physiological Critical**</u> Transfer Patients
Number of Patients	337	101	64
Total Time	4 hours 52 minutes	4 hours 25 minutes	4 hours 6 minutes
Total Mileage	59.67	74	72
Injury Scene to Initial Hospital Mileage***	9.98	15	14
Initial Hospital to Final Facility Mileage	49.69	59	58

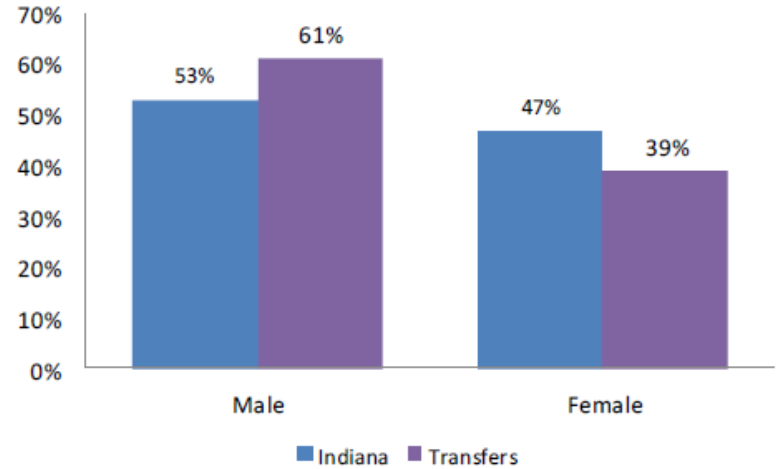
Estimated Average Distance (miles) by Region (region of final hospital):					
Region	Injury Scene to Initial Facility Mileage*	Initial Facility to Final Facility Mileage	Total Mileage	Drive Count	Air Count
Indiana Average	9.98	49.69**	59.67	273	57
North Region	6.27	32.61	38.88	79	6
Central Region	10.51	54.60	65.11	176	50
South Region	20.34	46.44	66.78	18	1

# TRANSFER PATIENT POPULATION – PAGE 25

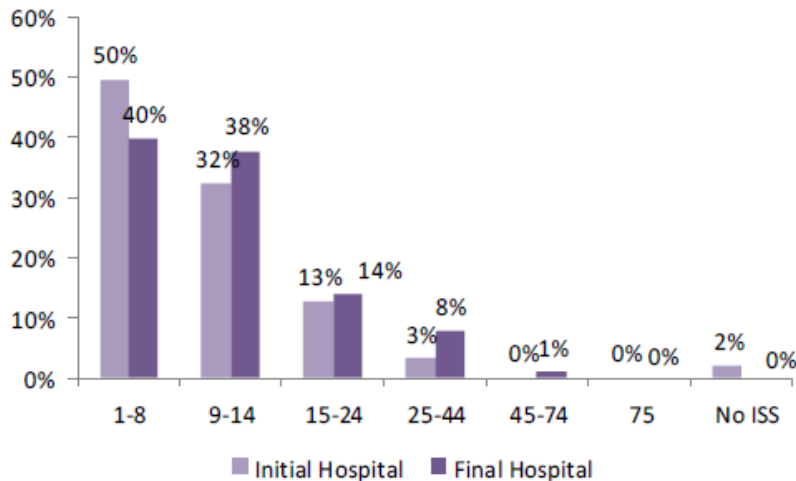
## Patient Age Groupings



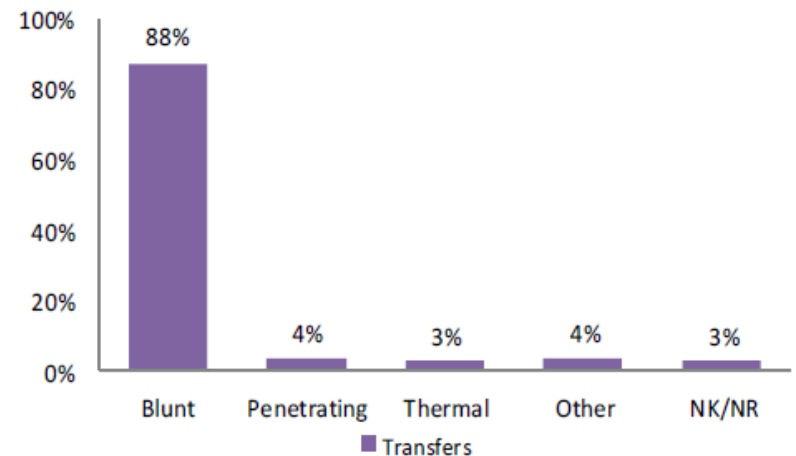
## Patient Gender



## Injury Severity Score (ISS)



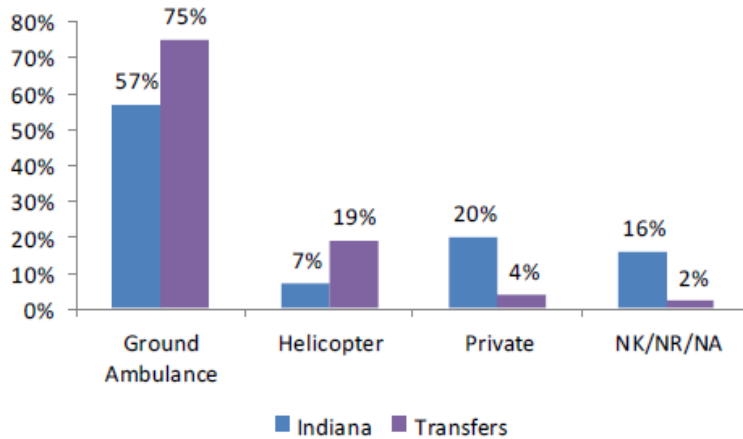
## Trauma Type- Final Hospital





# TRANSFER PATIENT POPULATION – PAGE 26

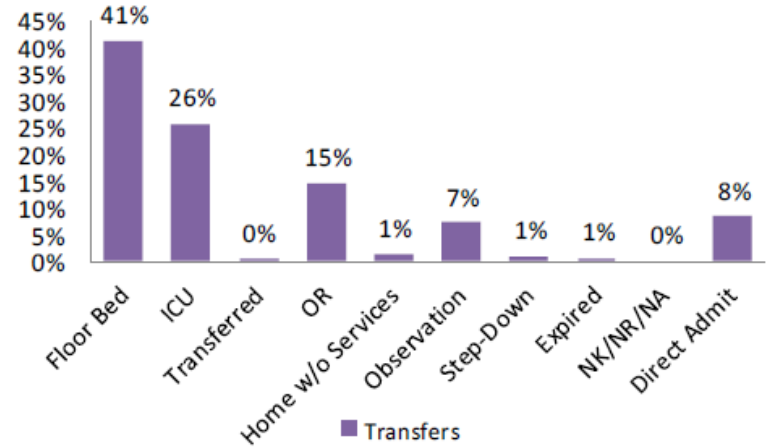
## Transport Mode– Final Hospital



<1% Transport Mode: Police, Other

\* Indicates Private/ Public Vehicle, Walk-in

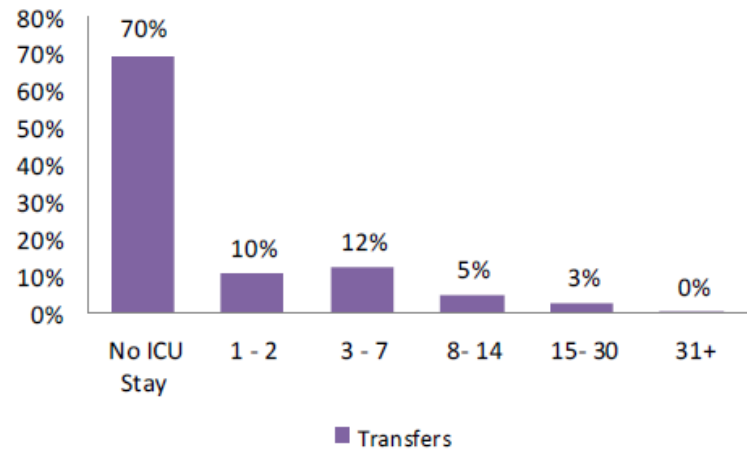
## ED Disposition by Percentage- Final Hospital



## ED Length of Stay (hours)- Final Hospital

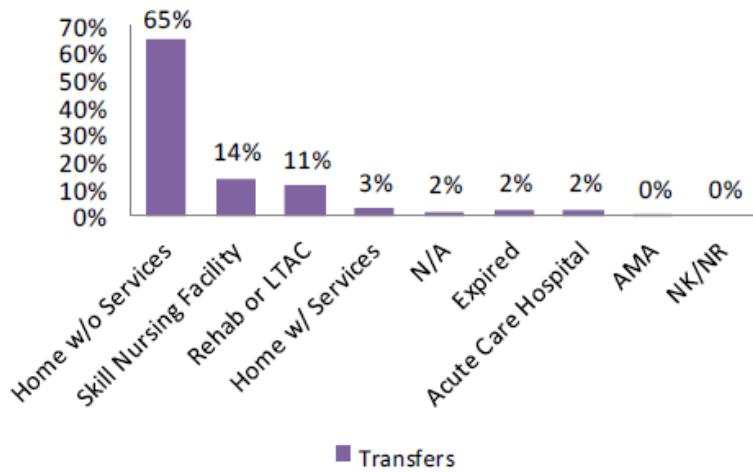


## ICU Length of Stay (days)- Final Hospital

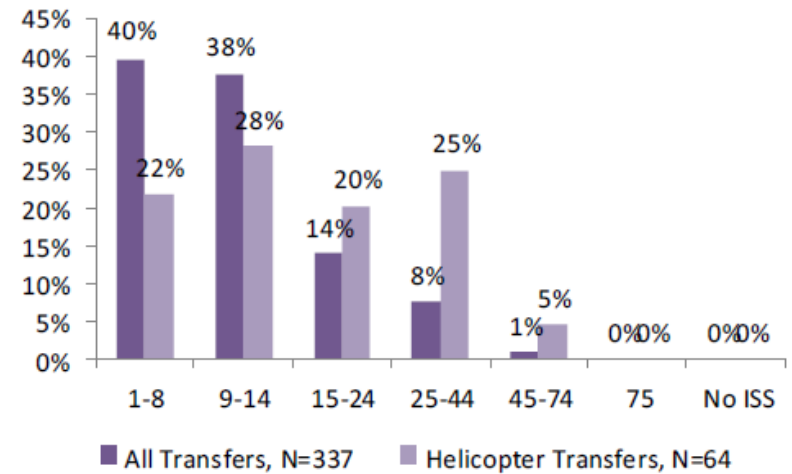


# TRANSFER PATIENT POPULATION – PAGE 27

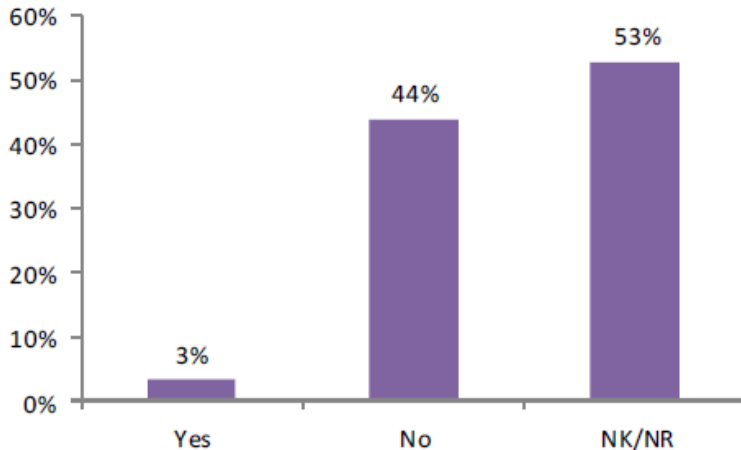
## Discharge Disposition– Final Hospital



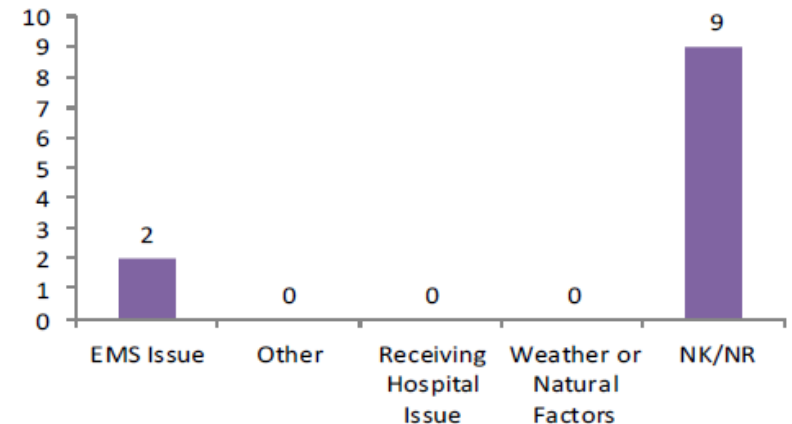
## Helicopter Transfers by ISS



## Transfer Delay Indicated- Initial Hospital



## Initial Facility Transfer Delay Reason- Initial Hospital



# TRAUMA CARE COMMITTEE REQUESTS – PAGE 30

## Indiana State Department of Health Indiana Trauma Registry

Hospitals Reporting Trauma Data  
Quarter 4, 2013

### Trauma Centers

Deaconess Hospital  
Eskenazi Health  
IU Health - Methodist Hospital  
Lutheran Hospital of Indiana  
Memorial Hospital of South Bend  
Parkview Regional Medical Center  
Riley Hospital for Children at IU Health  
St. Mary's Medical Center of Evansville  
St. Vincent Indianapolis Hospital

### "In the Process" Hospital\*

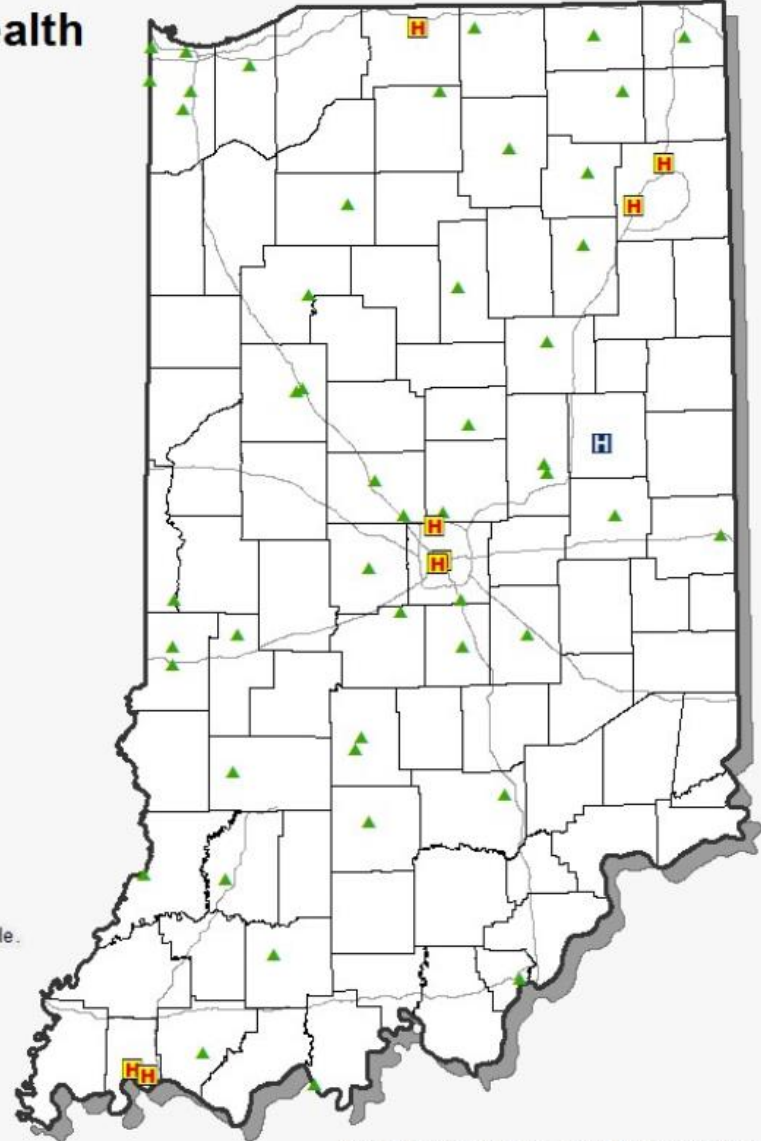
IU Health - Ball Memorial Hospital

### Non-Trauma Hospitals

50 Non-Trauma Hospitals

Quarter 4 2013:  
October 1- December 31, 2013

\* Considered a trauma center for purposes of the triage and transport rule.



QUESTIONS?



# LINKED DATA BETWEEN TRAUMA & EMS

- 756 probabilistically linked cases for Q1 2014 between the EMS Registry and Trauma Registry!!!



# WHAT TO DO NOW?

Total GCS 1-10			Total GCS 11+		
Medication Given by EMS	Frequency	Percent	Medication Given by EMS	Frequency	Percent
Albuterol Sulfate	0	0.0%	Albuterol Sulfate	1	0.2%
Amiodorone (Cordarone)	0	0.0%	Amiodorone (Cordarone)	1	0.2%
Amyl Nitrate	0	0.0%	Amyl Nitrate	1	0.2%
Aspirin (ASA)	0	0.0%	Aspirin (ASA)	6	1.1%
Dextrose 10% (D10)	0	0.0%	Dextrose 10% (D10)	1	0.2%
Dextrose 50% (D50)	0	0.0%	Dextrose 50% (D50)	1	0.2%
Diphenhydramine (Benadryl)	0	0.0%	Diphenhydramine (Benadryl)	1	0.2%
Dopamine	1	1.9%	Dopamine	2	0.4%
Epinephrine 1:10,000	2	3.7%	Epinephrine 1:10,000	1	0.2%
Etomidate	0	0.0%	Etomidate	1	0.2%
Fentanyl	1	2.0%	Fentanyl	11	2.0%
Furosemide (Lasix)	0	0.0%	Furosemide (Lasix)	1	0.2%
Glucagon	0	0.0%	Glucagon	1	0.2%
Glucose (Oral)	0	0.0%	Glucose (Oral)	2	0.4%
Heparin	0	0.0%	Heparin	1	0.2%
Lactated Ringers	0	0.0%	Lactated Ringers	1	0.2%
Hydromorphone (Dilaudid)	0	0.0%	Hydromorphone (Dilaudid)	10	1.8%
Lorazepam (Ativan)	0	0.0%	Lorazepam (Ativan)	1	0.2%
Morphine Sulfate	0	0.0%	Morphine Sulfate	5	0.9%
Nitroglycerin	0	0.0%	Nitroglycerin	6	1.1%
Normal Saline	0	0.0%	Normal Saline	11	2.0%
Not Applicable	28	51.9%	Not Applicable	263	46.9%
Not Available	0	0.0%	Not Available	5	0.9%
Not Known	13	24.1%	Not Known	130	23.2%
Ondansetron (Zofran)	0	0.0%	Ondansetron (Zofran)	19	3.4%
Oxygen	7	13.0%	Oxygen	68	12.1%
Oxygen (non-rebreather mask)	0	0.0%	Oxygen (non-rebreather mask)	1	0.2%
Oxygen by Blow By	0	0.0%	Oxygen by Blow By	0	0.0%
Oxygen by Nasal Cannula	0	0.0%	Oxygen by Nasal Cannula	8	1.4%
Terbutaline (Brethine)	1	2.0%	Terbutaline (Brethine)	0	0.0%
Thiamine	1	2.0%	Thiamine	0	0.0%
Vasopressin	0	0.0%	Vasopressin	1	0.2%
	54	100%		561	100%



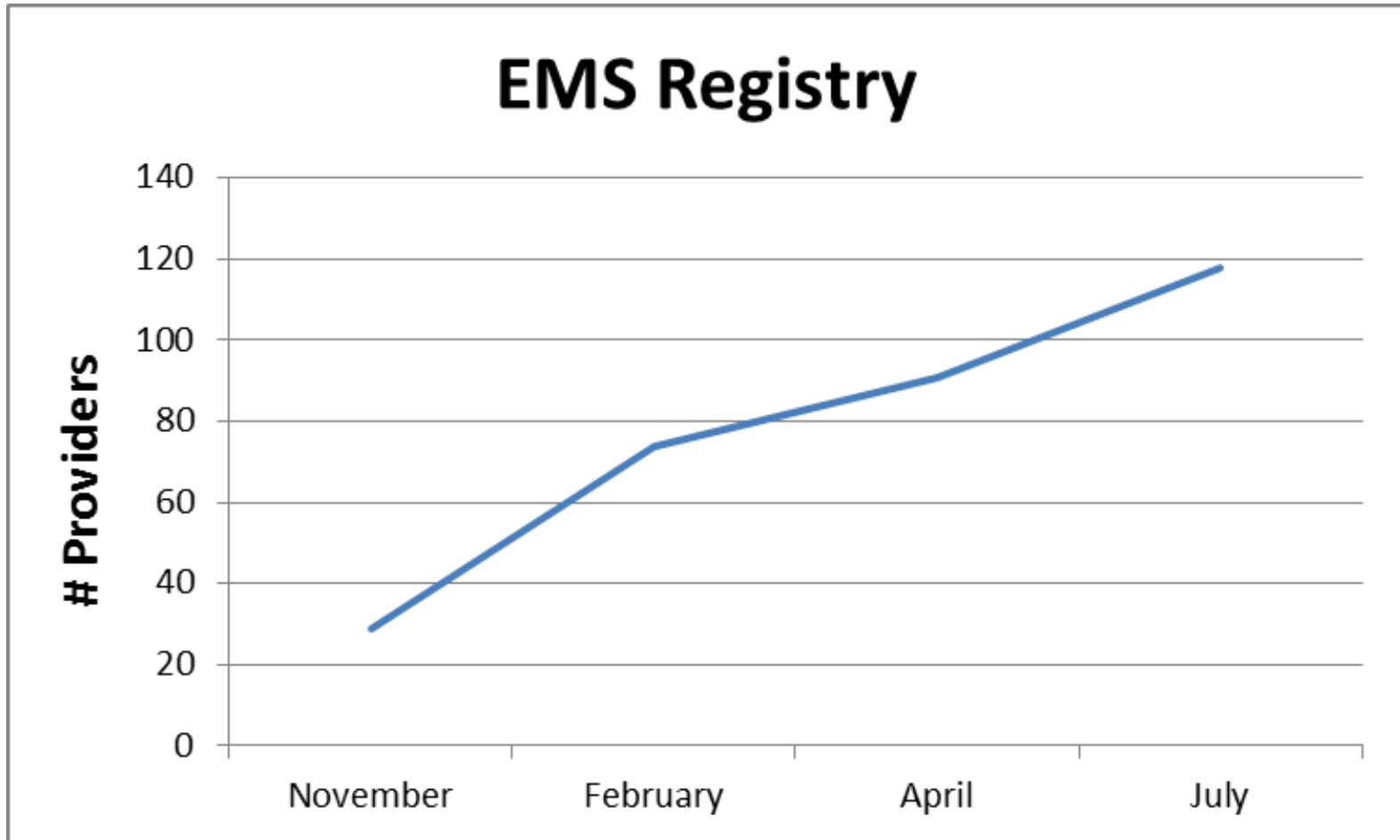
# ISDH EMS REGISTRY DATA

- 36,890 traumatic injury incidents
  - Possible Injury indicated
  - Provider Primary Impression
  - Provider Secondary Impression
  - Complaint Reported by Dispatch is trauma injury
- January 1, 2013 to July 1, 2014
- **118** total providers reporting

**426,923+ runs in the**  
**ISDH EMS Registry**



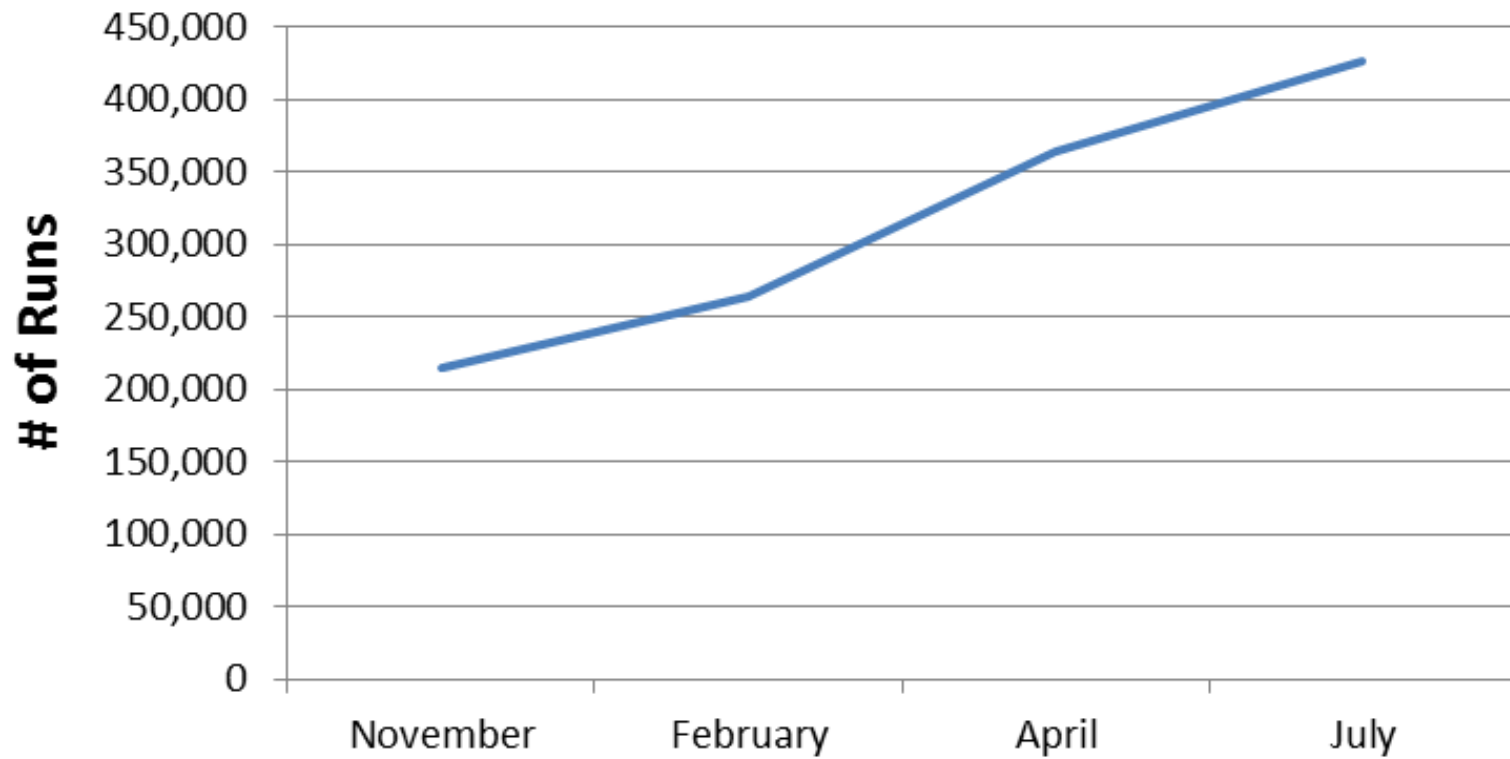
# ISDH EMS REGISTRY DATA



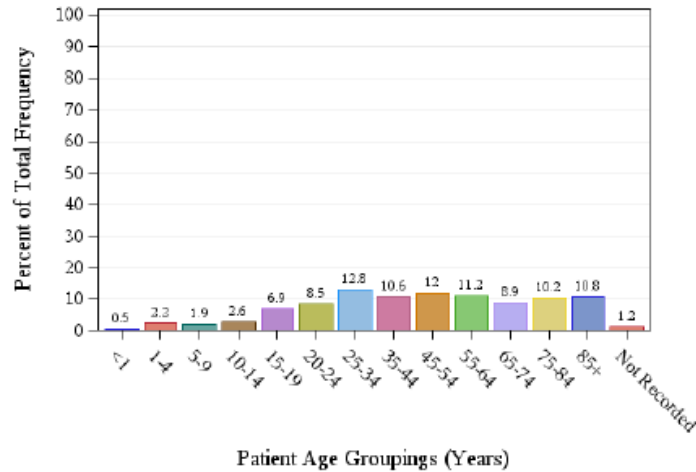


# ISDH EMS REGISTRY DATA

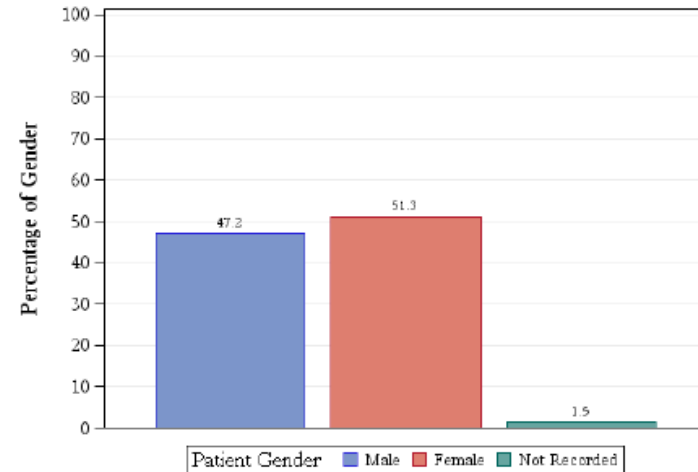
## EMS Registry



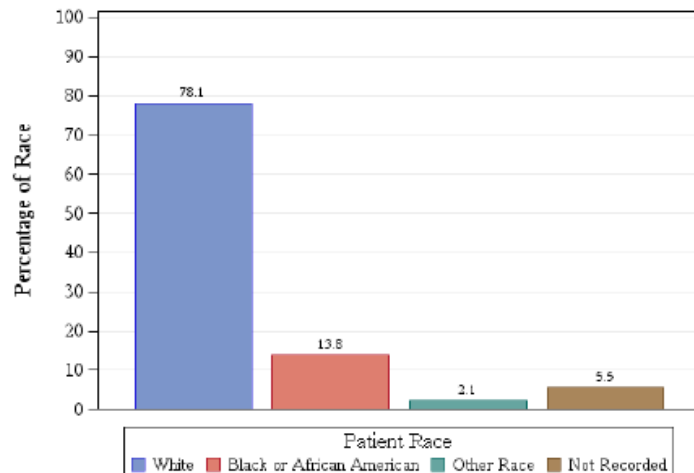
### Patient Age Groupings (Years)



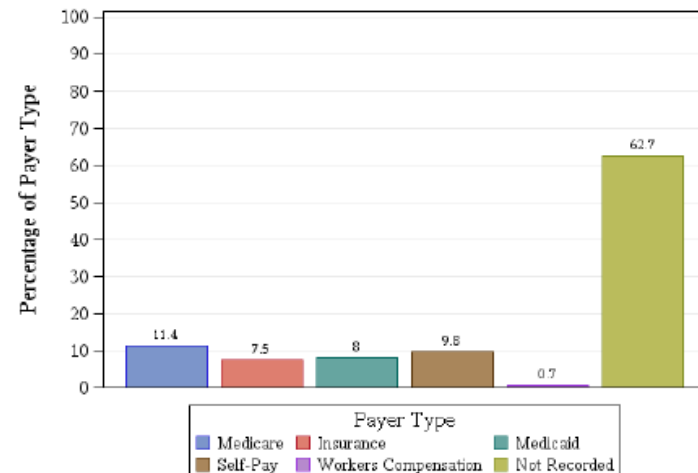
### Patient Gender



### Patient Race



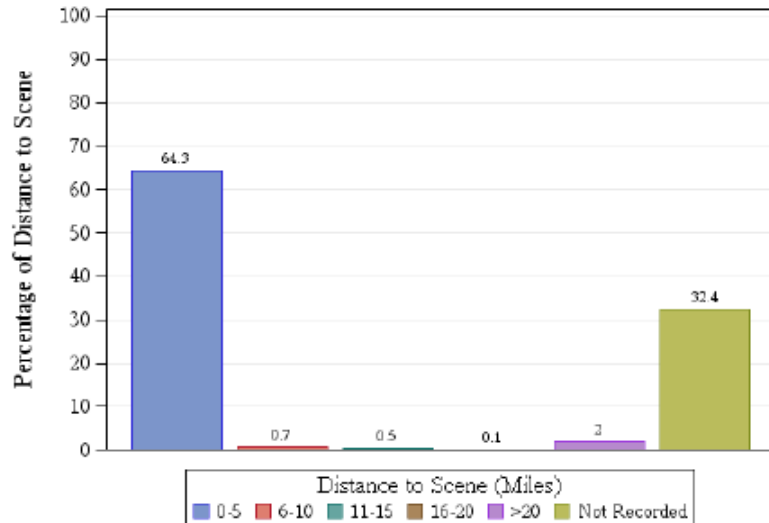
### Payer Type



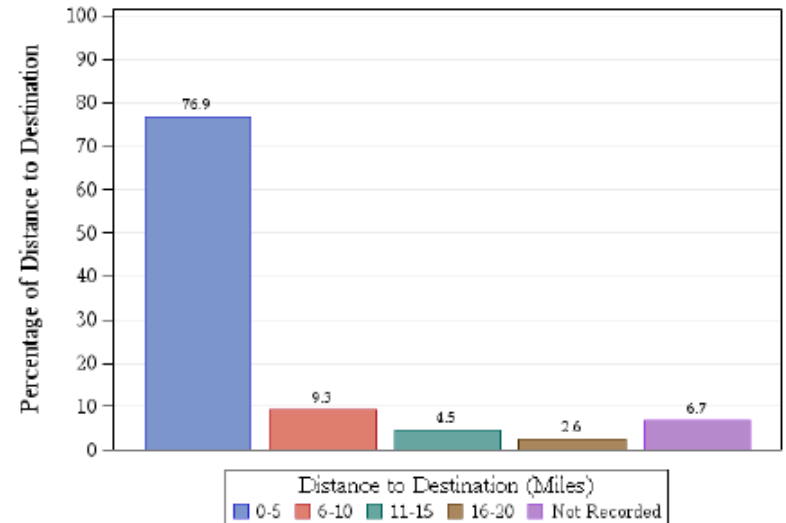
<1% Race: Asian, Native Hawaiian, American Indian/Alaskan Native

\*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

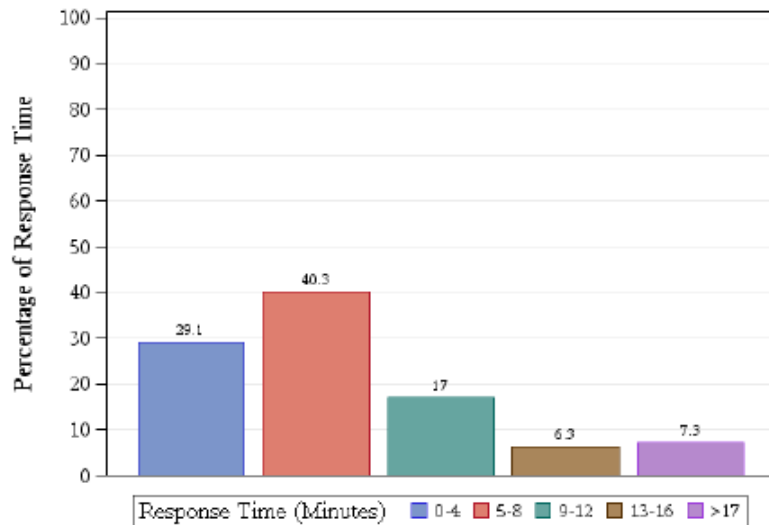
## Distance to Scene (Miles)



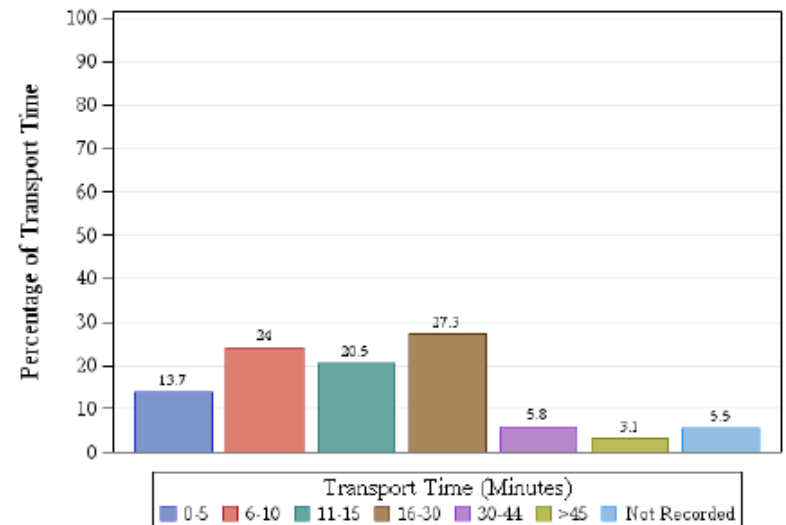
## Distance to Destination (Miles)



## Response Time (Minutes)



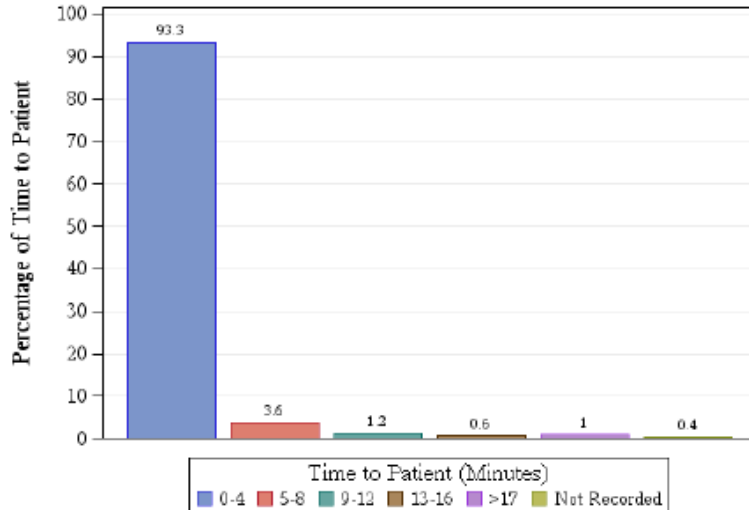
## Transport Time (Minutes)



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

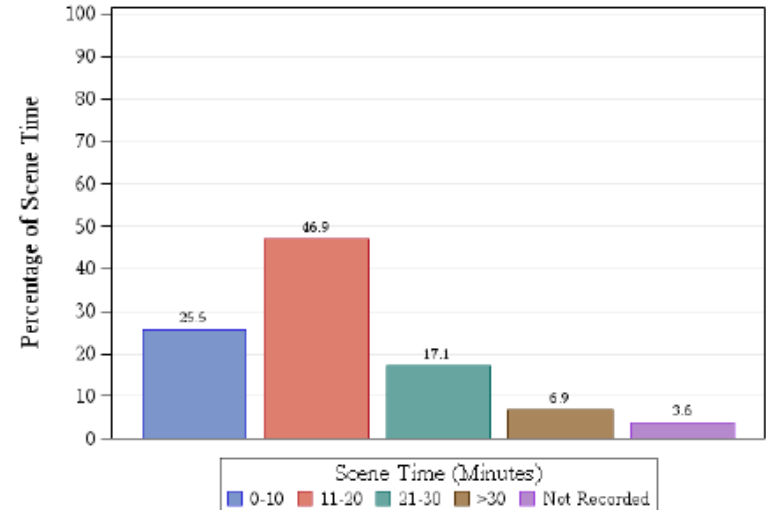
Transport Time: Difference in Time from Departure from Scene to Arrival At Destination

## Time to Patient (Minutes)



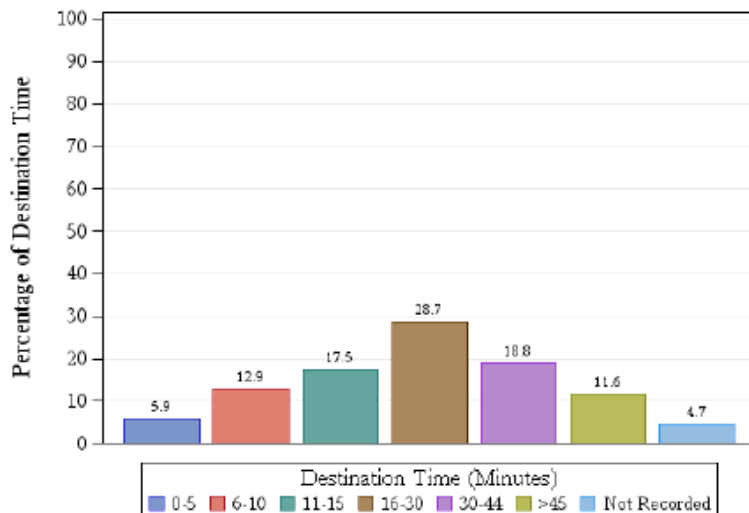
Time To Patient: Difference in Time from Arrival at Scene

## Scene Time (Minutes)



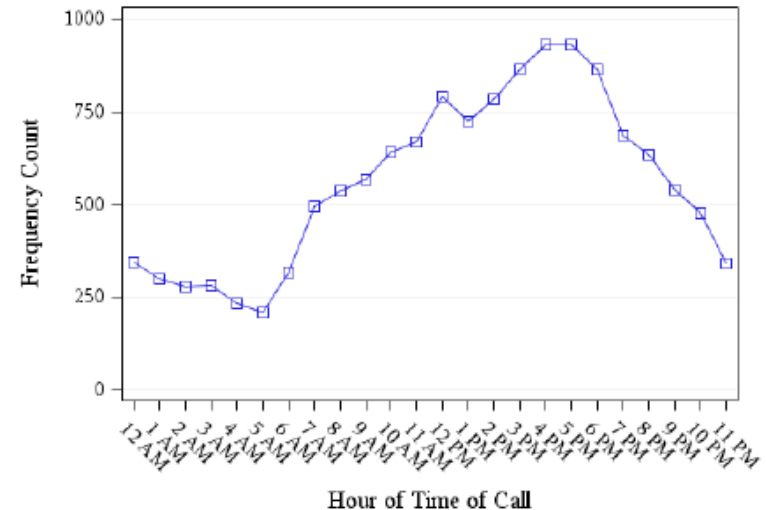
Scene Time: Difference in Time from Arrival at Scene

## 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 14,894 Incidents

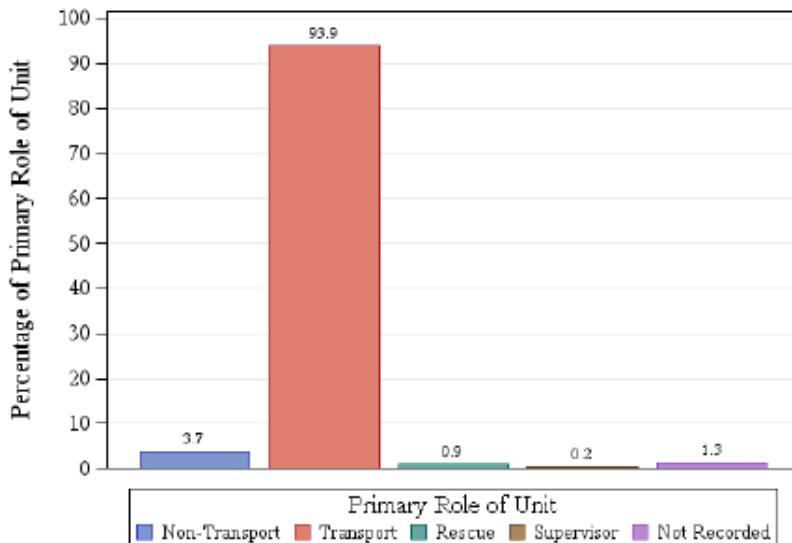
## Average Run Mileage

Obs	Destination	Miles
1	Mileage to Scene	1.4
2	Mileage to Destination	2.8
3	Total Mileage	5.4

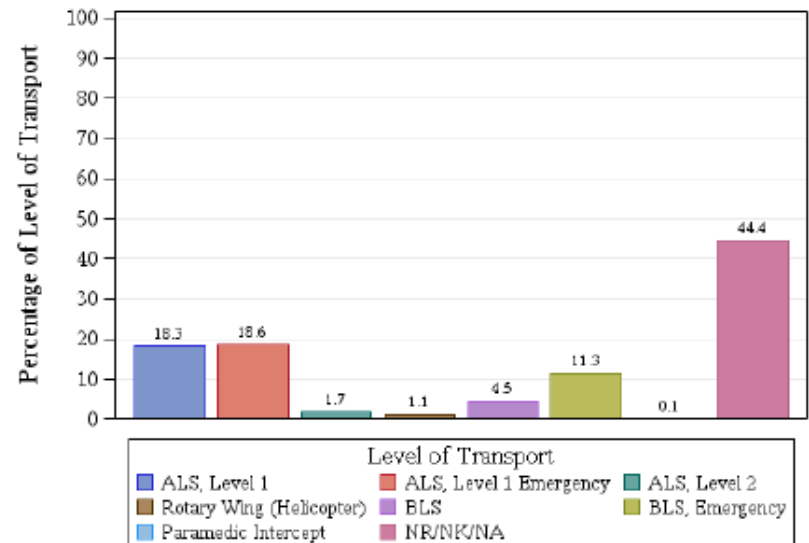
## Average Run Time (Minutes)

Obs	Destination	Minutes
1	Time to Scene	8.19
2	Time to Patient	1.91
3	Time at Scene	16.45
4	Time to Destination	15.67
5	Back in Service	25.21
6	Total Run Time	59.77

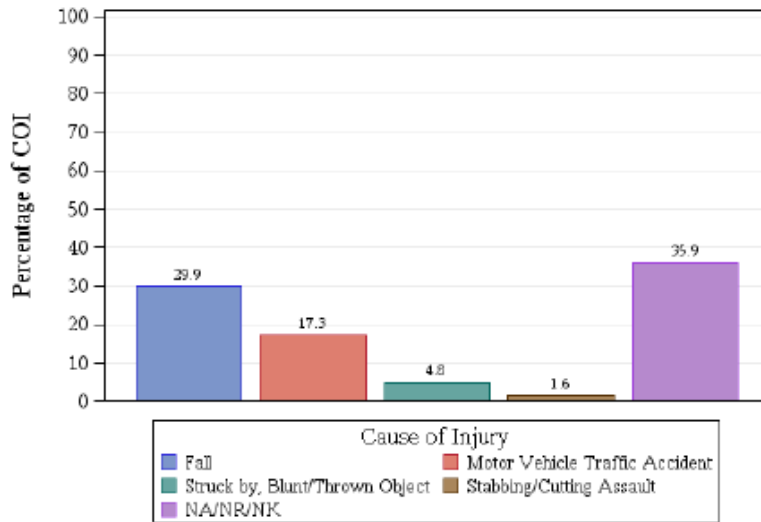
## Primary Role of Unit



## Level of Transport

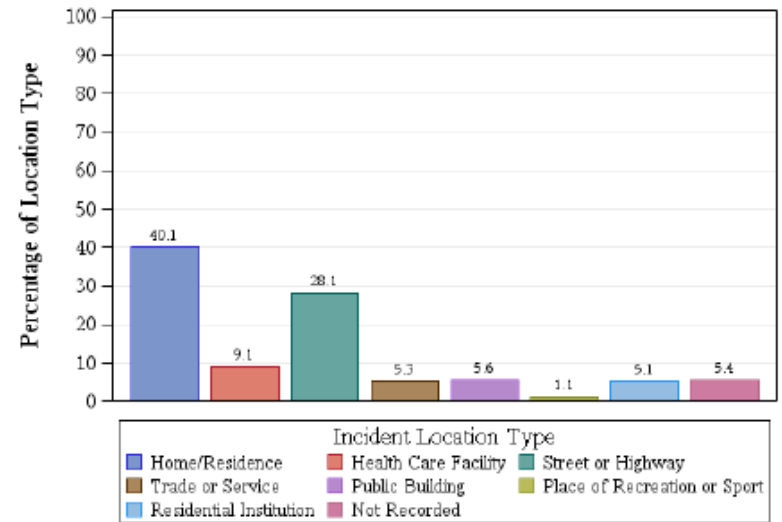


## Cause of Injury (COI)



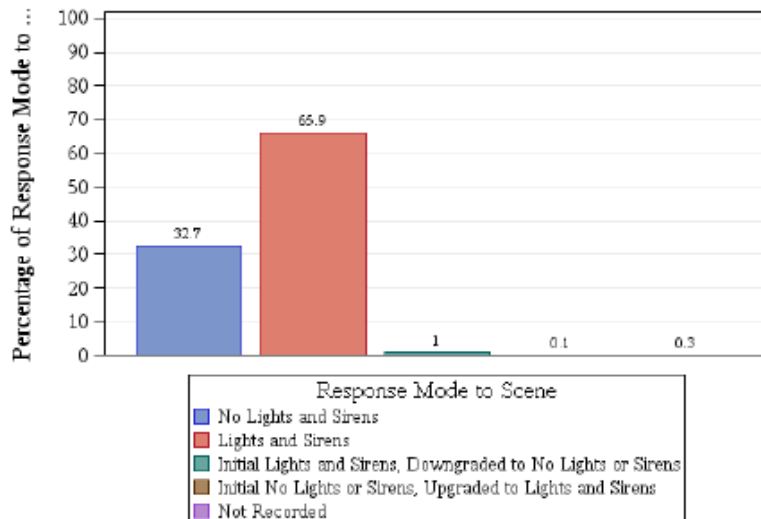
Causes of Injury <1.5% Not Listed

## Incident Location Type

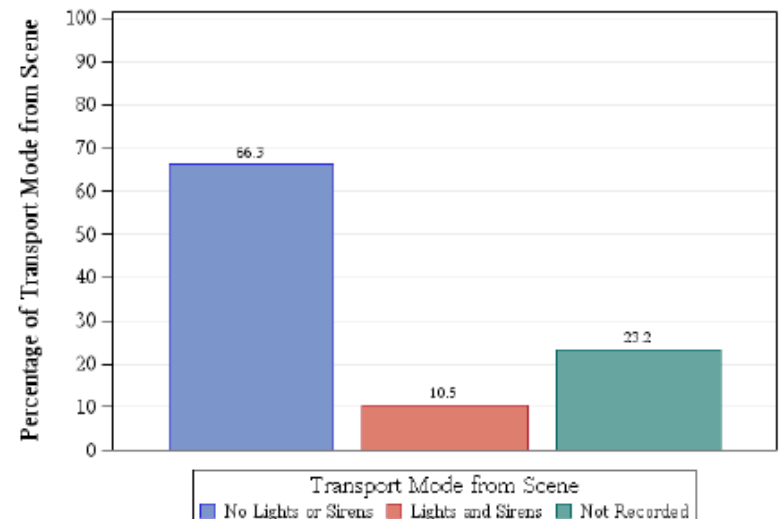


Incident Location Type <1% Not Listed

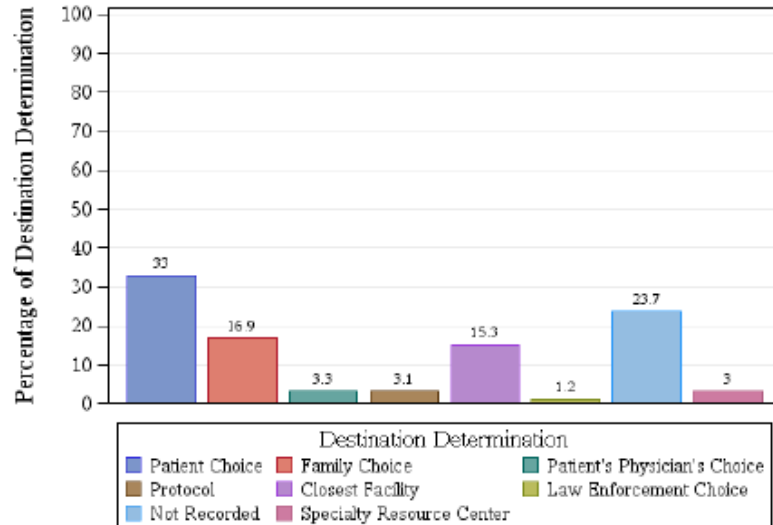
## Response Mode to Scene



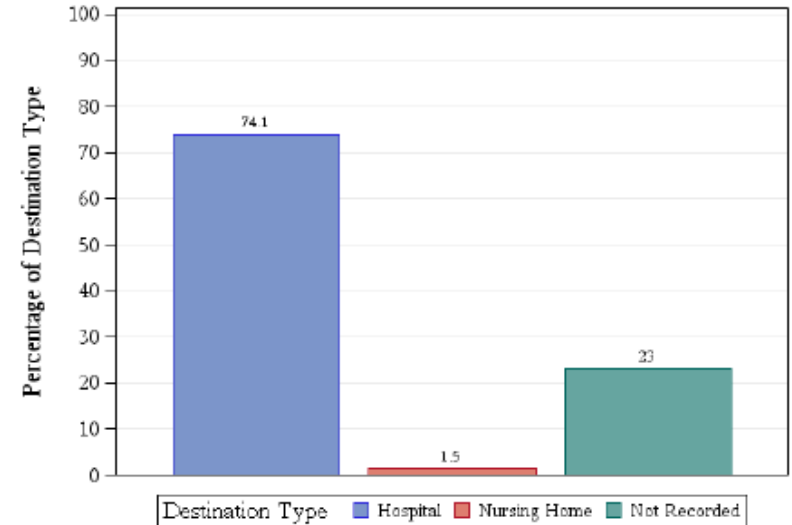
## Transport Mode from Scene



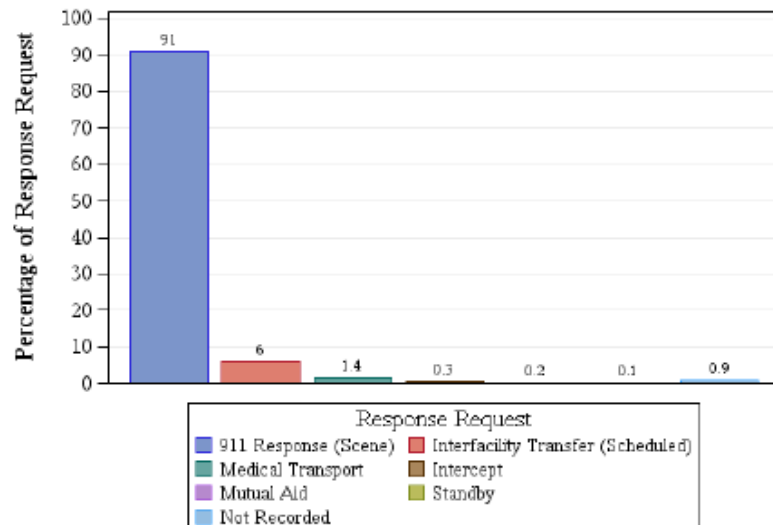
## Destination Determination



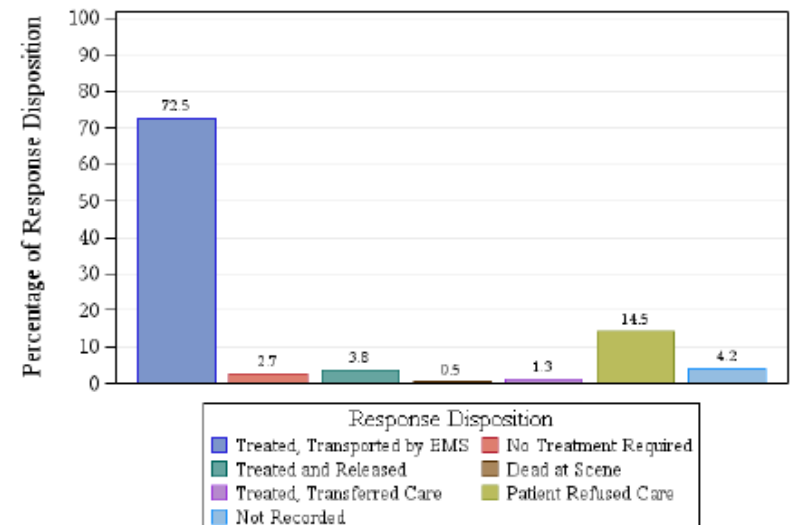
## Destination Type



## Response Request



## Response Disposition



Response Disposition <0.5% Not Listed

QUESTIONS?

