Indiana Trauma Registry

During the month of June, the ISDH division of trauma and injury prevention trauma registry manager traveled to several hospitals to train them on the Indiana trauma registry. On June 11th, Katie Gatz traveled to Gibson General Hospital (Princeton) and St. Mary's Warrick Hospital (Boonville). On June 14th, Katie Gatz traveled to IU Health—Bedford Hospital in Bedford. On June 26th, Katie Gatz and Jessica Skiba (injury prevention epidemiologist) traveled to St. Vincent Jennings Hospital in North Vernon.

During the week of June 17th to the 21st, Katie Gatz traveled to cities in Southern Indiana to support the EMS registry training tour events in: Terre Haute (17th), Evansville (18th), Scottsburg (19th), Columbus (20th), and Indianapolis (21st). The EMS registry training tour event consisted of two unique training sessions per day in each city. The training was led by ImageTrend who traveled to Indiana and supported by the ISDH division of trauma and injury prevention.

The Indiana Trauma Registry (ITR) monthly report is a dashboard style report for the Indiana Criminal Justice Institute (ICJI) and any other party concerned about trauma in Indiana. This report highlights the three data quality measures for the ICJI grant: completeness, timeliness, and uniformity. This report uses data within the ITR, with an emphasis on motor vehicle collisions (MVC).

Completeness

The Hospital Discharge database, also maintained by the ISDH, contains all records of patients cared for in Indiana hospitals. We compared patient records from the ITR with the Hospital Discharge database to know how complete ITR's data is. We have received preliminary 2012 hospital discharge data which may not be complete.
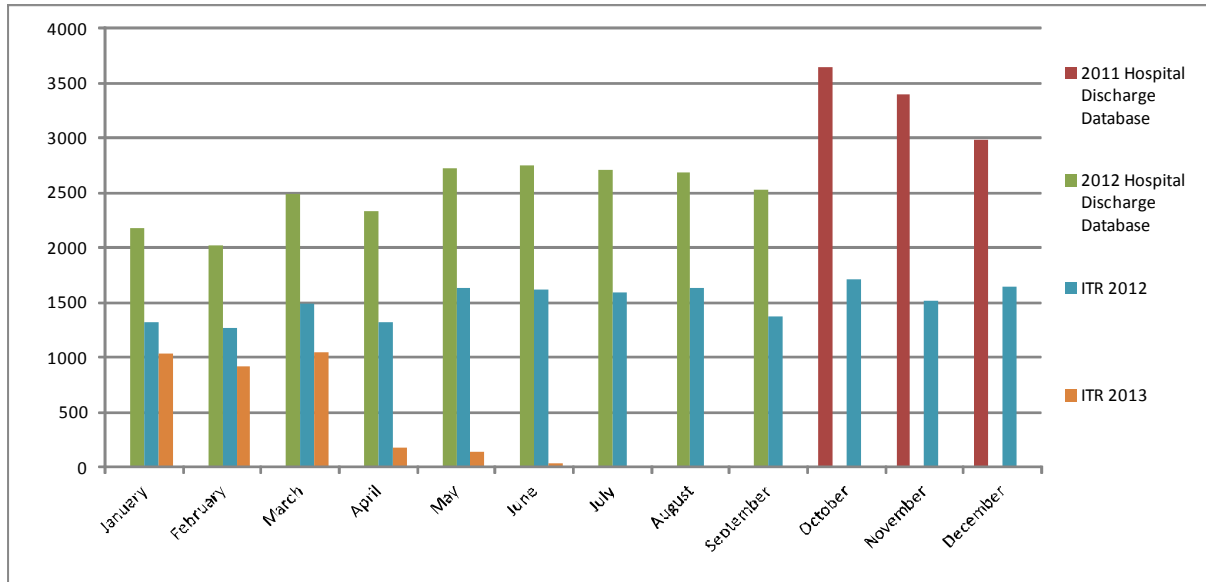
Timeliness
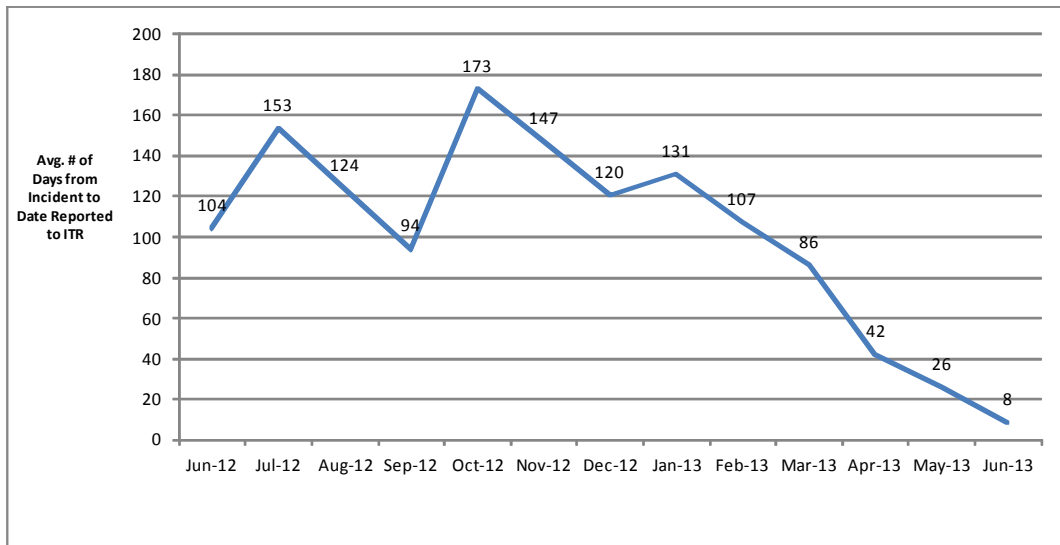
Timeliness increases as facilities wait until the data submission deadline to submit data to the ITR. Hospitals are asked to report data on the national trauma (TQIP) reporting schedule.

The decrease in timeliness from January 2012 until June 2013 is due to only timely reports being provided to the ITR during this time frame, typically from non-trauma hospitals and early reporting trauma centers.
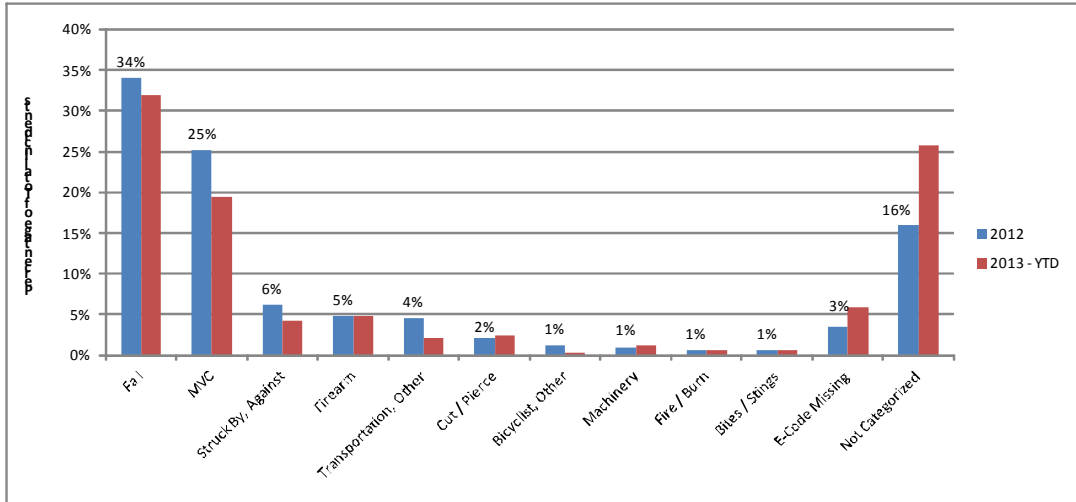
Uniformity

Actions to improve uniformity of data in the Indiana Trauma Registry:
- Conducted baseline inter-rater reliability study in 2012
- Will schedule follow-up inter-rater reliability study in 2013
    - Working to perform one study in 2013
    - Working with American Trauma Society to provide cases for study
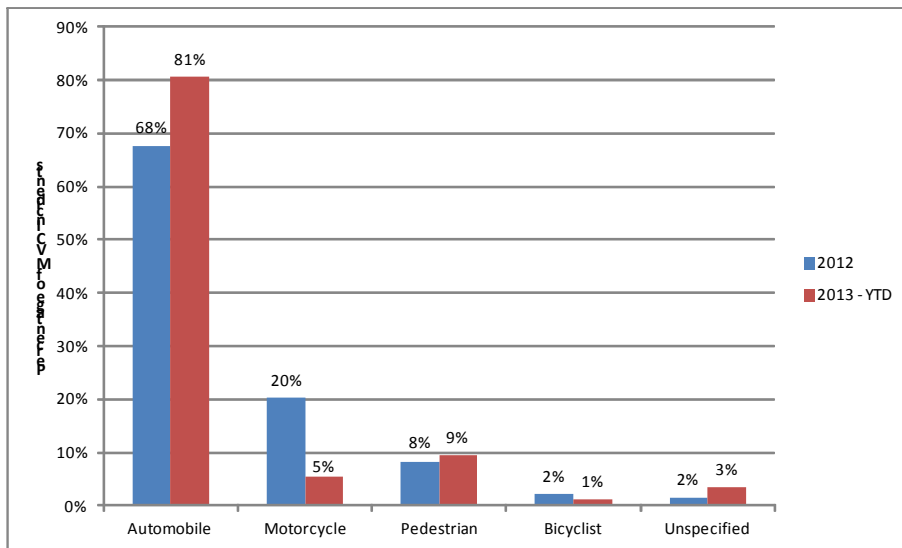   - Looking at other sources of cases for study

January 2012 to June 2013
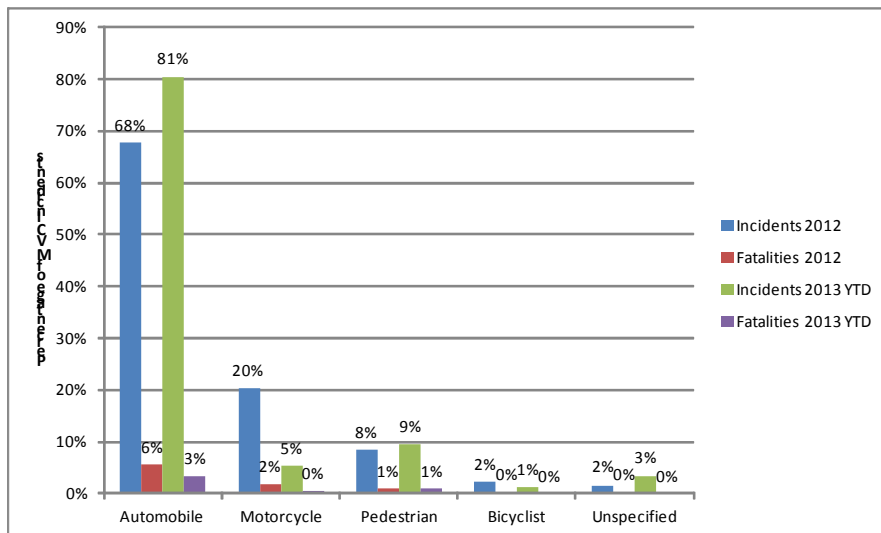
Cause of Injury (COI)

Bar chart with 2012 (blue) and 2013 - YTD (red):
- Fall: 34%, 32%
- MVC: 25%, 19%
- Struck By, Against: 6%, 4%
- Firearm: 5%, 5%
- Transportation, Other: 4%, 2%
- Cut / Pierce: 2%, 2%
- Bicyclist, Other: 1%, <1%
- Machinery: 1%, 1%
- Fire / Burn: 1%, 1%
- Bites / Stings: 1%, 1%
- E-Code Missing: 3%, 6%
- Not Categorized: 16%, 26%

* <1% COI: Pedestrian (Other), Natural / Environment, Overexertion

COI - Motor Vehicle Collision (MVC)

Bar chart with 2012 (blue) and 2013 - YTD (red):
- Automobile: 68%, 81%
- Motorcycle: 20%, 5%
- Pedestrian: 8%, 9%
- Bicyclist: 2%, 1%
- Unspecified: 2%, 3%

COI - MVC
Incidents vs. Fatalities

Bar chart with Incidents 2012 (blue), Fatalities 2012 (red), Incidents 2013 YTD (green), Fatalities 2013 YTD (purple):
- Automobile: 68%, 6%, 81%, 3%
- Motorcycle: 20%, 2%, 5%, 0%
- Pedestrian: 8%, 1%, 9%, 1%
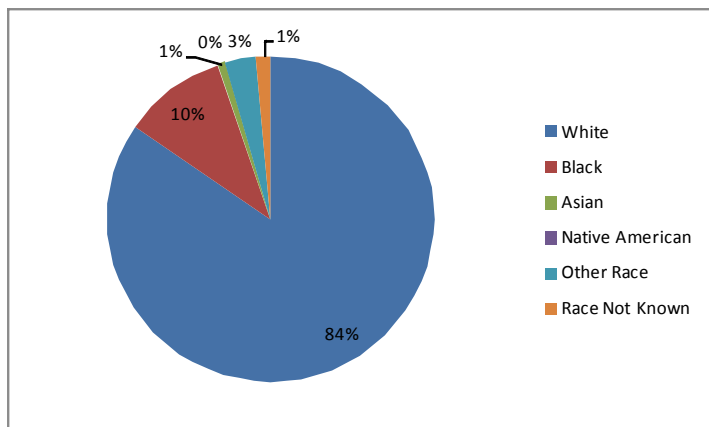- Bicyclist: 2%, 0%, 1%, 0%
- Unspecified: 2%, 0%, 3%, 0%

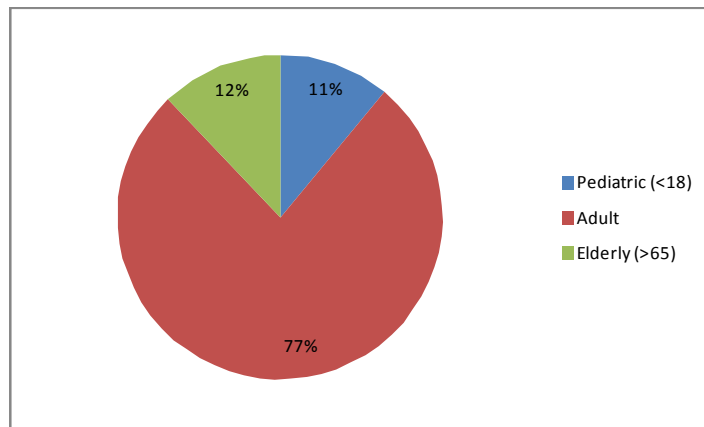# Indiana Trauma Registry

Motor Vehicle Collisions

July 2012 to June 2013
3483 Incidents

9 Trauma Centers
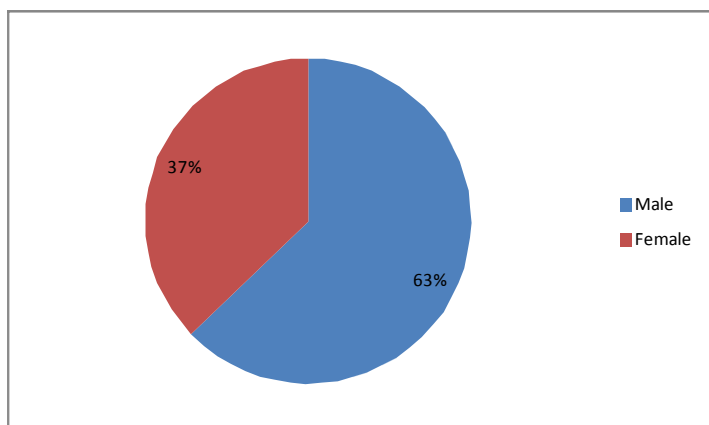42 (Non-Trauma) Hospitals
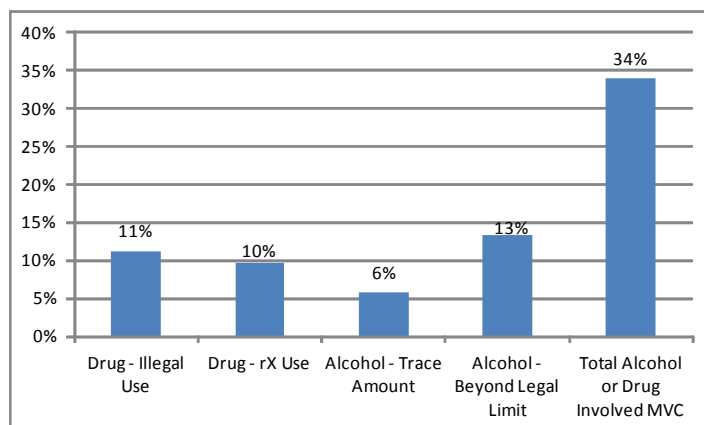51 Total Hospitals Reporting

Race

- White — 84%
- Black — 10%
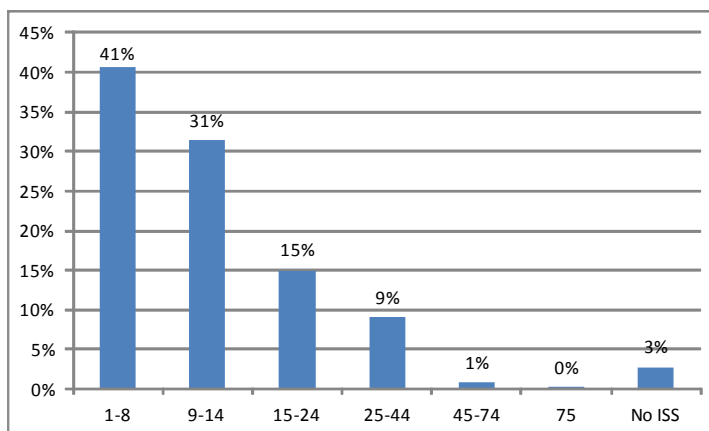- Asian — 1%
- Native American — 0%
- Other Race — 3%
- Race Not Known — 1%

Age

- Pediatric (<18) — 11%
- Adult — 77%
- Elderly (>65) — 12%

Gender

- Male — 63%
- Female — 37%

Drug & Alcohol Use

- Drug - Illegal Use — 11%
- Drug - rX Use — 10%
- Alcohol - Trace Amount — 6%
- Alcohol - Beyond Legal Limit — 13%
- Total Alcohol or Drug Involved MVC — 34%

Injury Severity Score

- 1-8 — 41%
- 9-14 — 31%
- 15-24 — 15%
- 25-44 — 9%
- 45-74 — 1%
- 75 — 0%
- No ISS — 3%

Protective Devices

- Airbag Use — 14%
- Seatbelt Use — 21%
- Child Restraint Use — 1%
- Helmet Use — 2%
- Protective Clothing / Gear Use — 0%
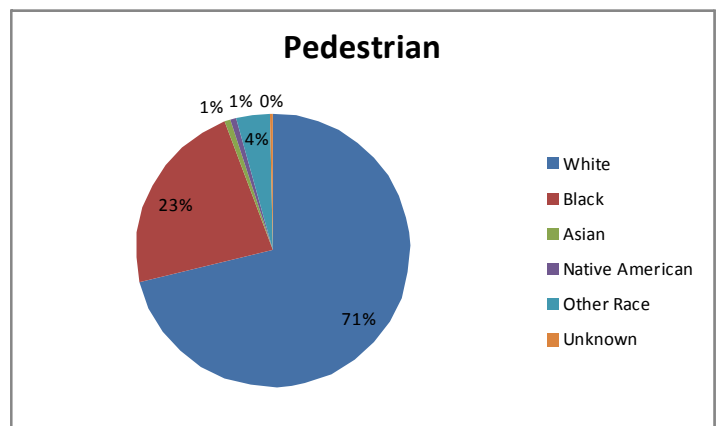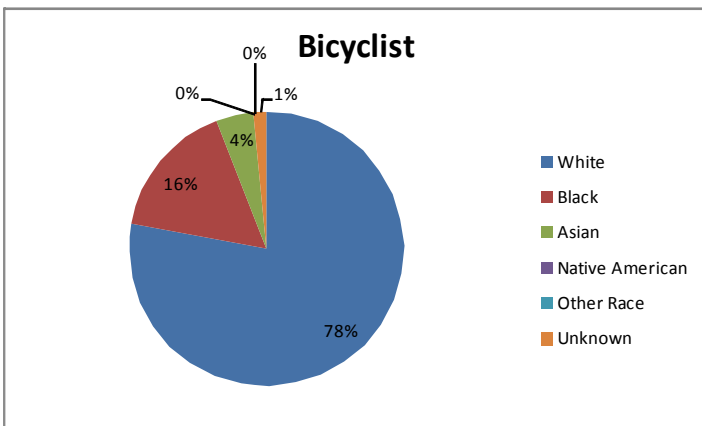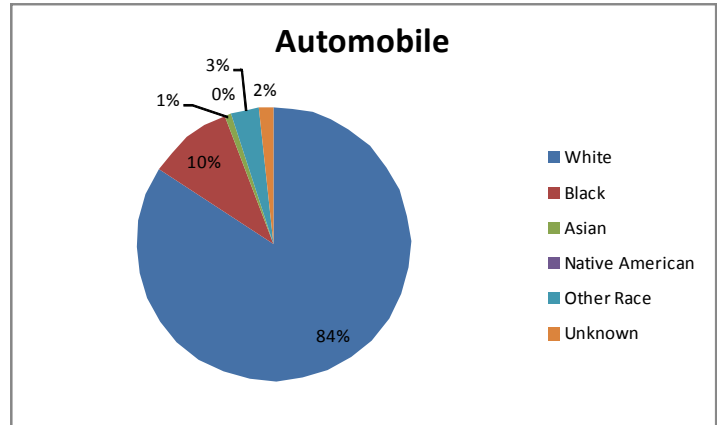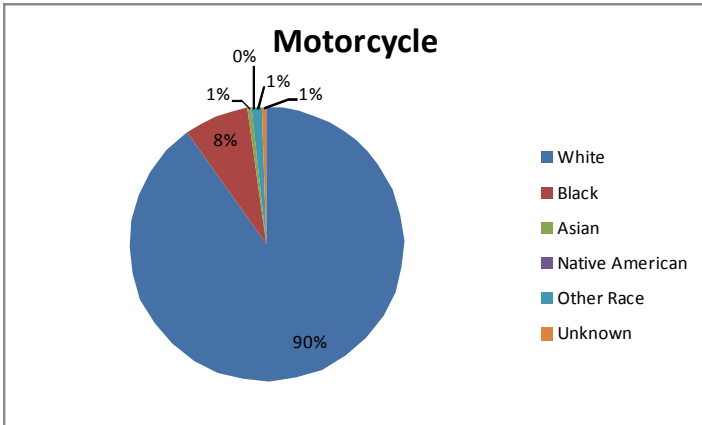- Any Safety Equipment Use — 28%
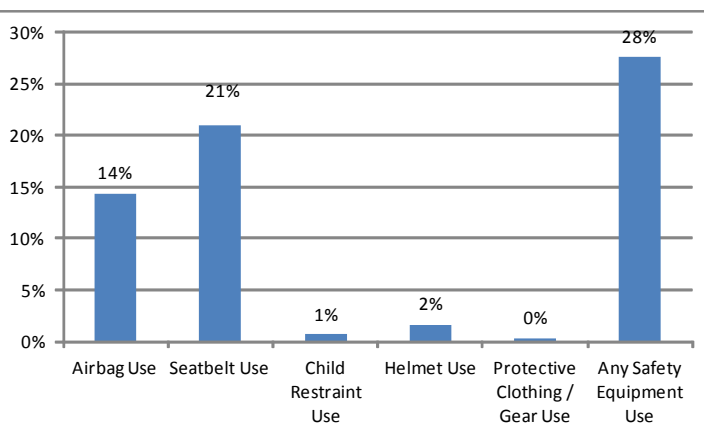
Injury Severity Score (ISS) is a measure of how bad the injury is. Scores over 15 are considered major trauma. A score of 75 is considered not survivable.
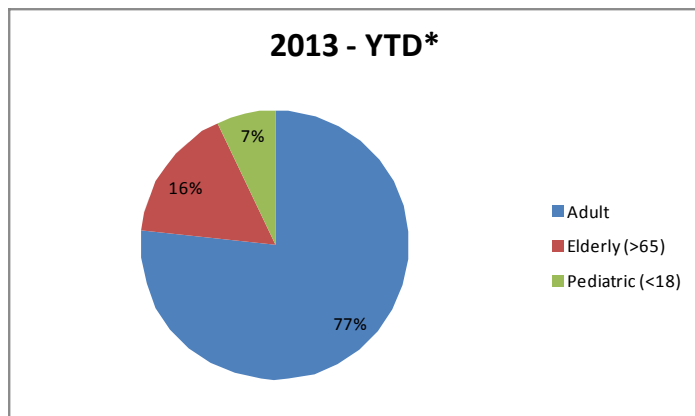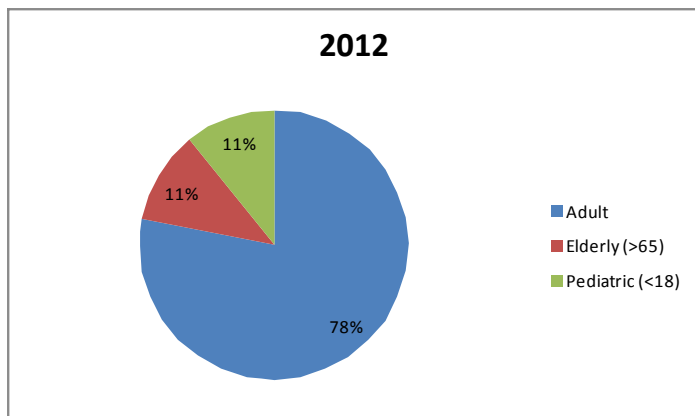
Motor Vehicle Collision

2012

- White
- Black
- Asian
- Native American
- Other Race
- Unknown

0% 3% 1% 1%
10%
85%

2013 - YTD*

- White
- Black
- Asian
- Native American
- Other Race
- Unknown

3% 1% 0% 1%
15%
80%

* May not constitute a representative view of 2013 trauma.

2012 - 2013 (YTD)

Motorcycle

- White
- Black
- Asian
- Native American
- Other Race
- Unknown

0% 1% 1% 1%
8%
90%

Automobile

- White
- Black
- Asian
- Native American
- Other Race
- Unknown

3% 1% 0% 2%
10%
84%

Bicyclist

- White
- Black
- Asian
- Native American
- Other Race
- Unknown

0% 0% 0% 1%
16%
4%
78%

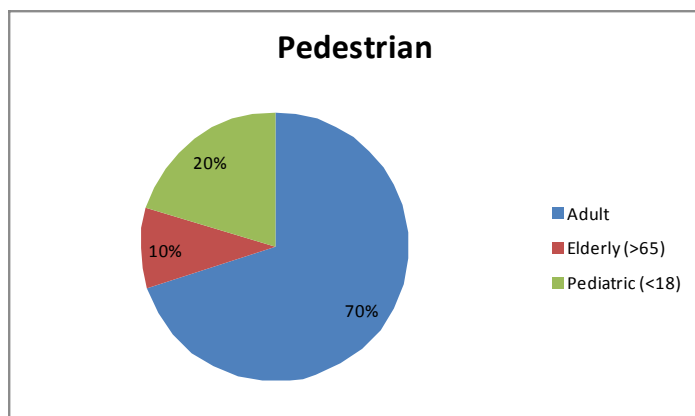### Pedestrian

- White
- Black
- Asian
- Native American
- Other Race
- Unknown

1% 1% 0%
23%
4%
71%

Motor Vehicle Collision

2012

- Adult
- Elderly (>65)
- Pediatric (<18)

11% · 11% · 78%

2013 - YTD*

- Adult
- Elderly (>65)
- Pediatric (<18)

7% · 16% · 77%

* May not constitute a representative view of 2013 trauma.

2012 - 2013 (YTD)

Motorcycle

- Adult
- Elderly (>65)
- Pediatric (<18)

6% · 4% · 90%

Automobile

- Adult
- Elderly (>65)
- Pediatric (<18)

10% · 15% · 76%

Bicyclist

- Adult
- Elderly (>65)
- Pediatric (<18)

26% · 3% · 71%

Pedestrian
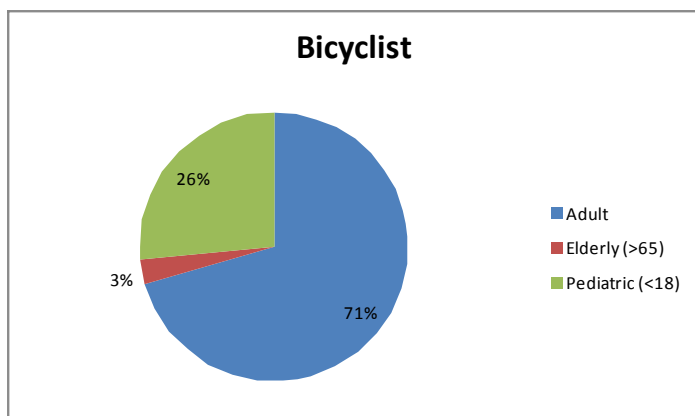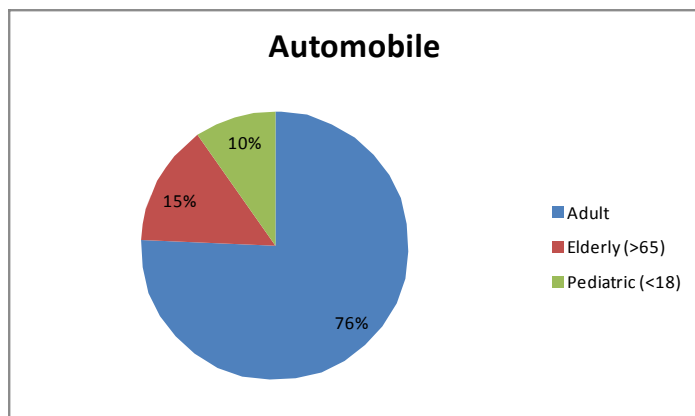

- Adult
- Elderly (>65)
- Pediatric (<18)

20% · 10% · 70%

Indiana Trauma Registry

Motor Vehicle Collision

2012

Male 64%
Female 36%

2013 - YTD*

Male 61%
Female 39%

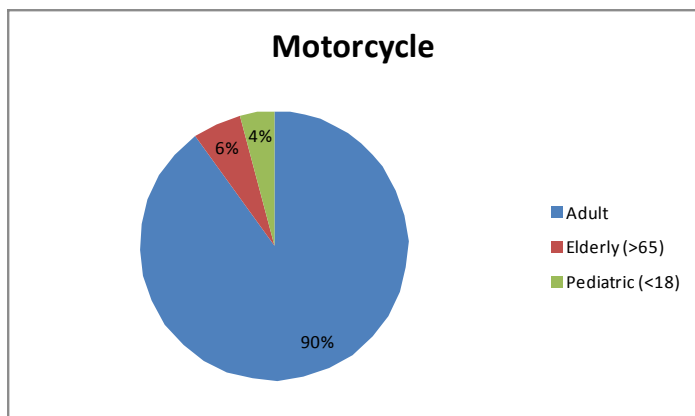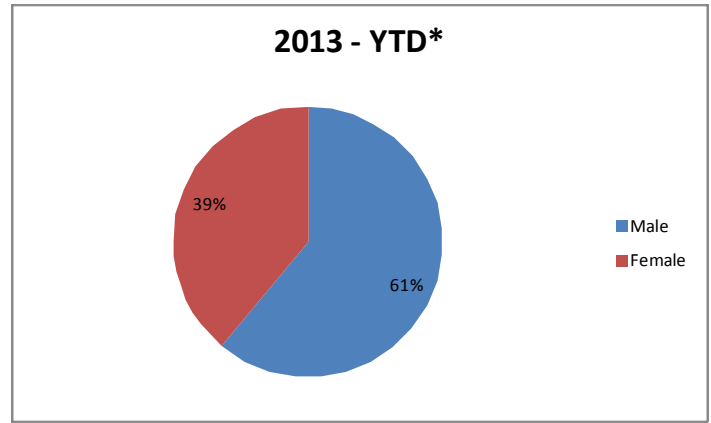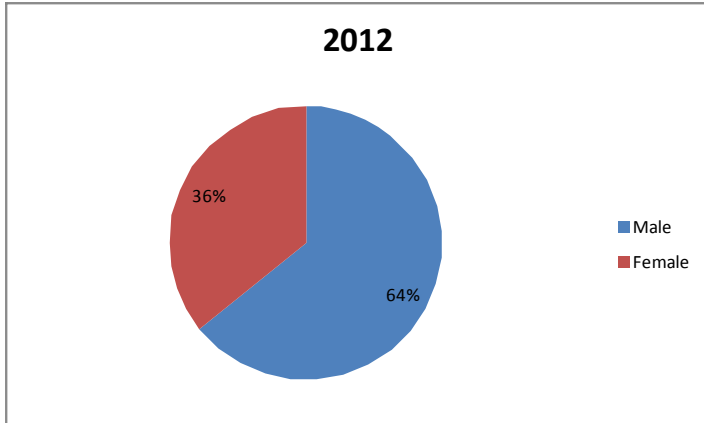* May not constitute a representative view of 2013 trauma.

2012 - 2013 (YTD)

Motorcycle

Male 85%
Female 15%

Automobile
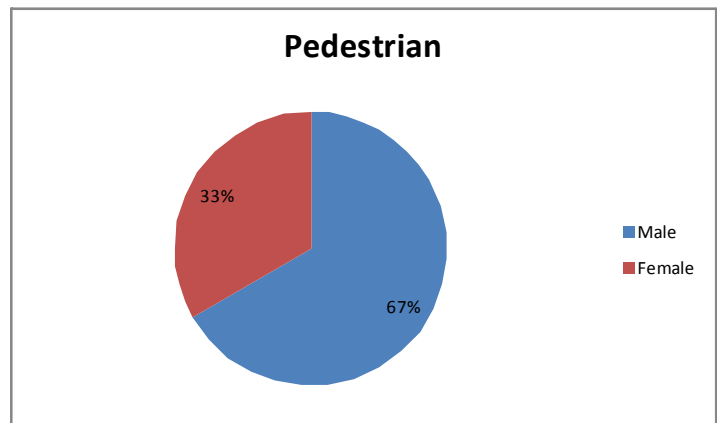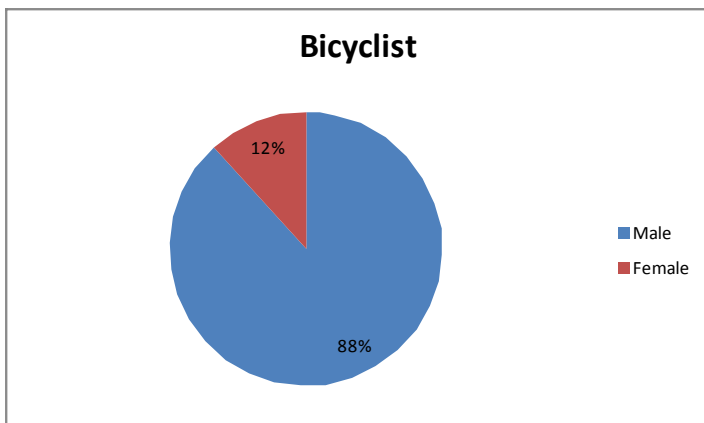
Male 57%
Female 43%

Bicyclist

Male 88%
Female 12%

Pedestrian

Male 67%
Female 33%

Motor Vehicle Collision

2012

- Alcohol Involved — 13%
- Drugs Involved — 14%
- Both Drugs & Alcohol Involved — 5%
- No Drugs or Alcohol Involved — 67%

2013 - YTD*

- Alcohol Involved — 13%
- Drugs Involved — 13%
- Both Drugs & Alcohol Involved — 7%
- No Drugs or Alcohol Involved — 68%

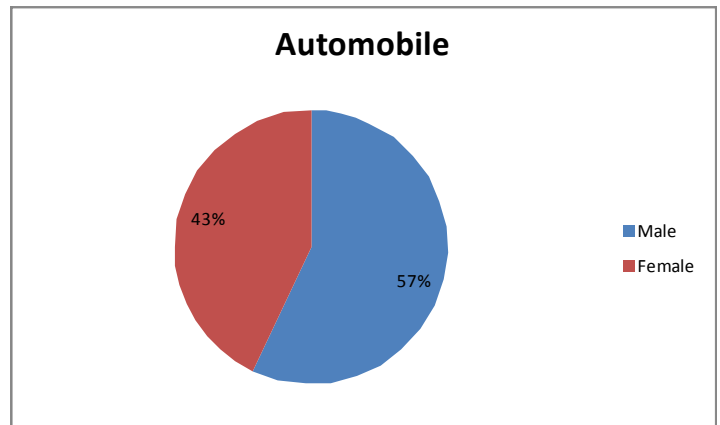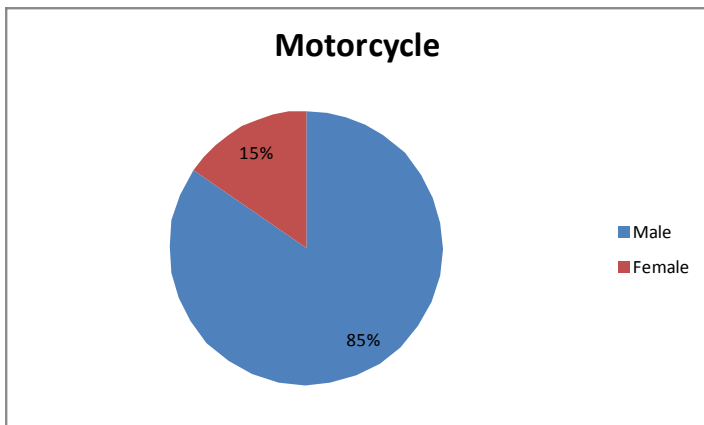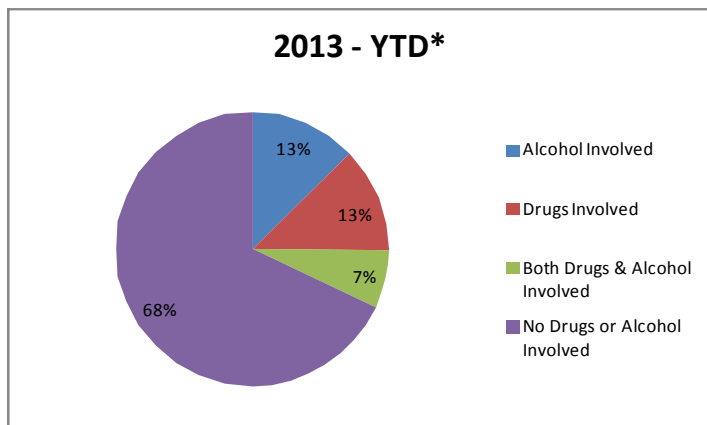* May not constitute a representative view of 2013 trauma.

2012 - 2013 (YTD)

Motorcycle

- Alcohol Involved — 16%
- Drugs Involved — 14%
- Both Drugs & Alcohol Involved — 7%
- No Drugs or Alcohol Involved — 63%

Automobile

- Alcohol Involved — 12%
- Drugs Involved — 15%
- Both Drugs & Alcohol Involved — 5%
- No Drugs or Alcohol Involved — 68%

Bicyclist

- Alcohol Involved — 7%
- Drugs Involved — 4%
- Both Drugs & Alcohol Involved — 3%
- No Drugs or Alcohol Involved — 85%

Pedestrian

- Alcohol Involved — 12%
- Drugs Involved — 10%
- Both Drugs & Alcohol Involved — 7%
- No Drugs or Alcohol Involved — 72%

2012

ISS	Percent
1 - 8	40%
9 - 14	33%
15 - 24	15%
25 - 44	9%
45 - 74	1%
75	0%
No ISS	2%

2013 - YTD*

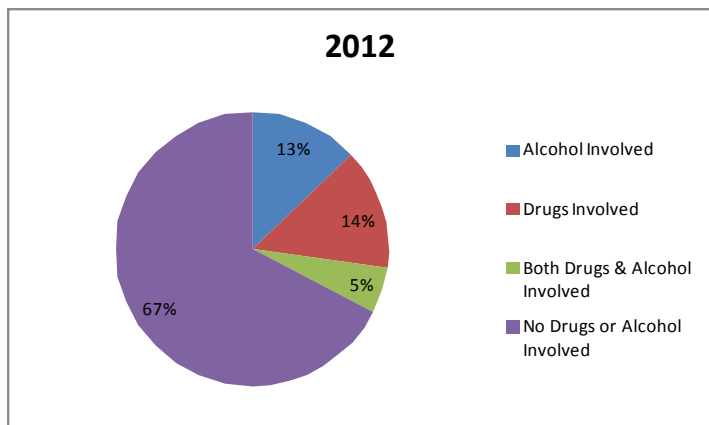| ISS	Percent
1 - 8	43%
9 - 14	30%
15 - 24	15%
25 - 44	8%
45 - 74	1%
75	0%
No ISS	3%

* May not constitute a representative view of 2013 trauma.

2012 - 2013 (YTD)

Motorcycle

ISS	Percent
1 - 8	33%
9 - 14	37%
15 - 24	16%
25 - 44	11%
45 - 74	1%
75	0%
No ISS	3%

Automobile

ISS	Percent
1 - 8	42%
9 - 14	32%
15 - 24	14%
25 - 44	8%
45 - 74	1%
75	0%
No ISS	2%

Bicyclist

ISS	Percent
1 - 8	49%
9 - 14	26%
15 - 24	18%
25 - 44	6%
45 - 74	0%
75	0%
No ISS	1%

Pedestrian

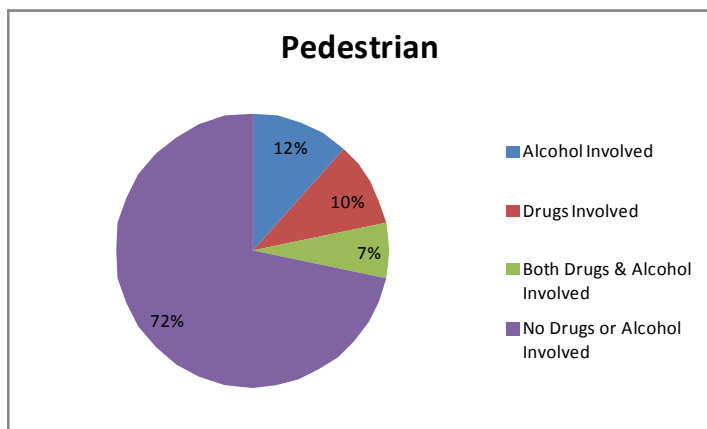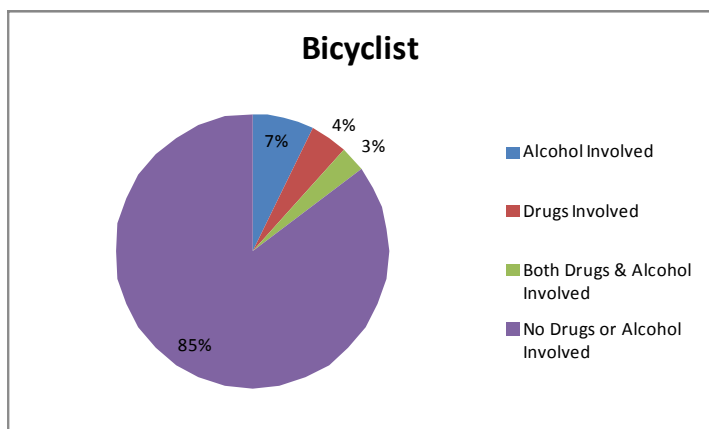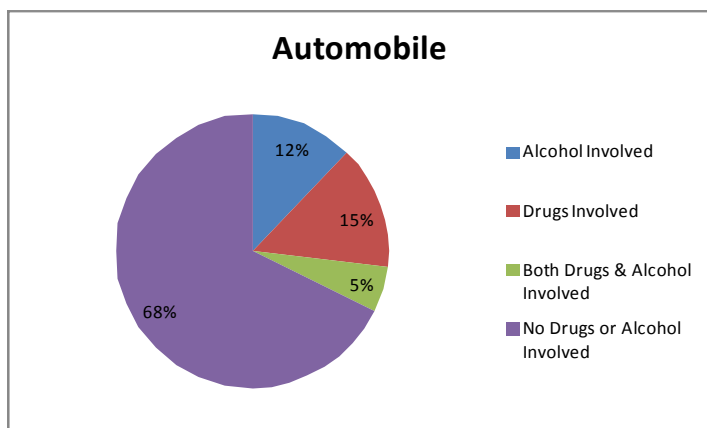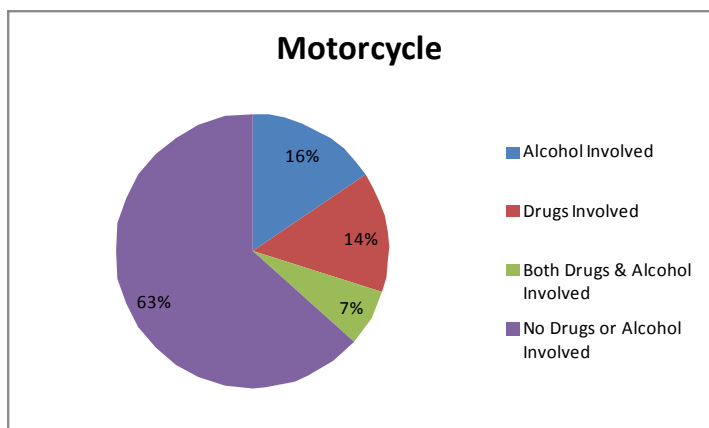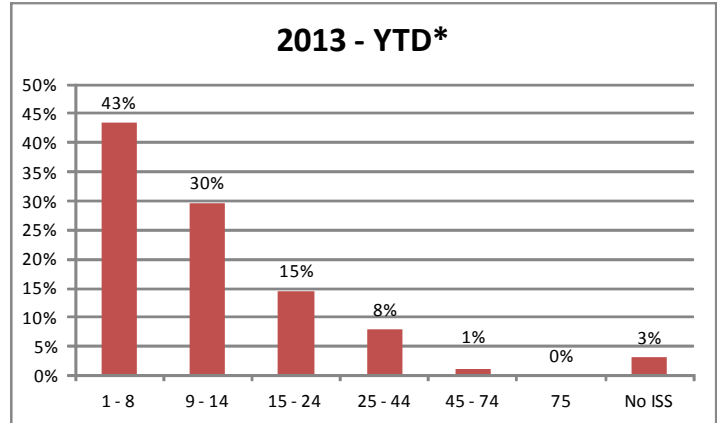| ISS	Percent
1 - 8	42%
9 - 14	31%
15 - 24	15%
25 - 44	10%
45 - 74	1%
75	1%
No ISS	1%

Motor Vehicle Collision

2012

- Airbag: 13%
- Seatbelt Use: 10%
- Child Restraint: 0%
- Helmet: 2%
- No Safety Equipment: 76%

2013 - YTD*

- Airbag: 31%
- Seatbelt Use: 21%
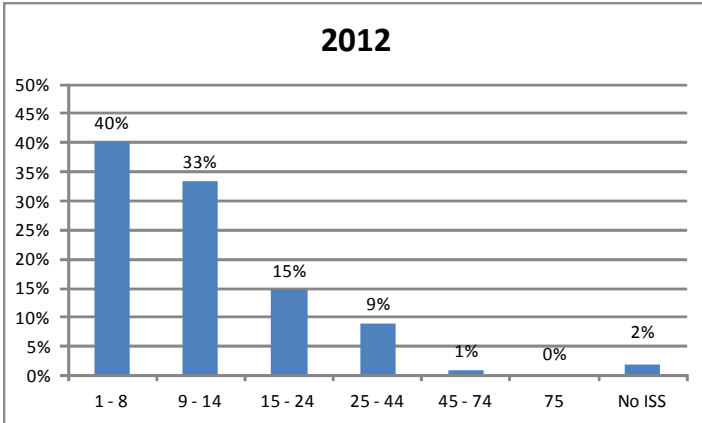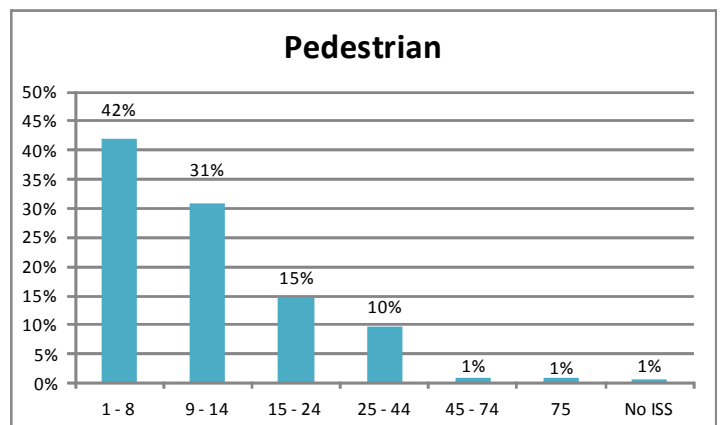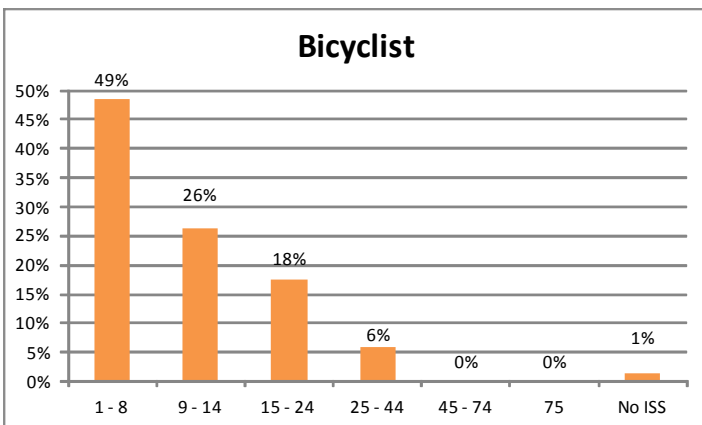- Child Restraint: 0%
- Helmet: 2%
- No Safety Equipment: 45%

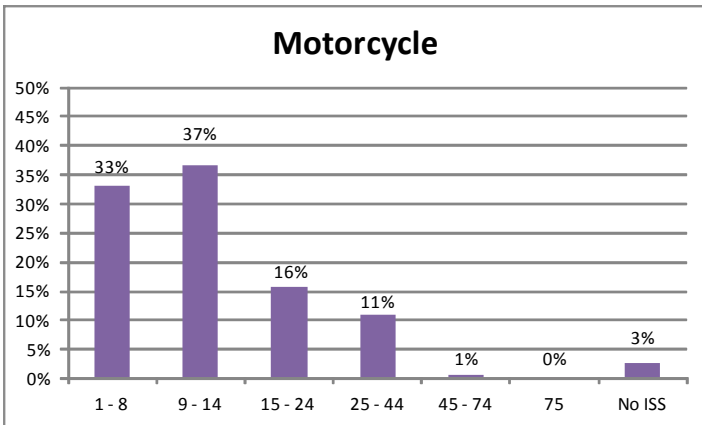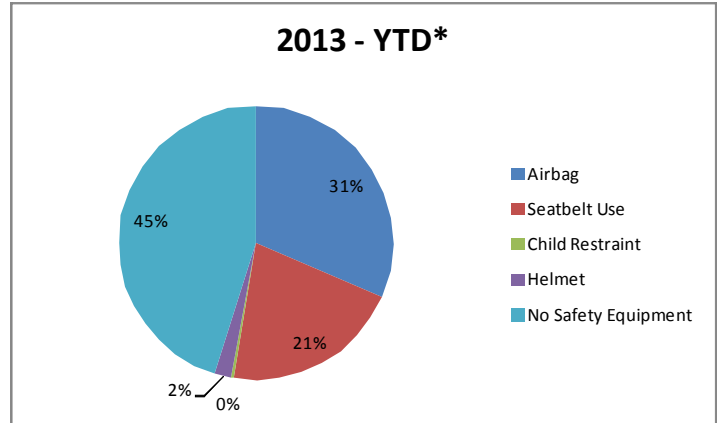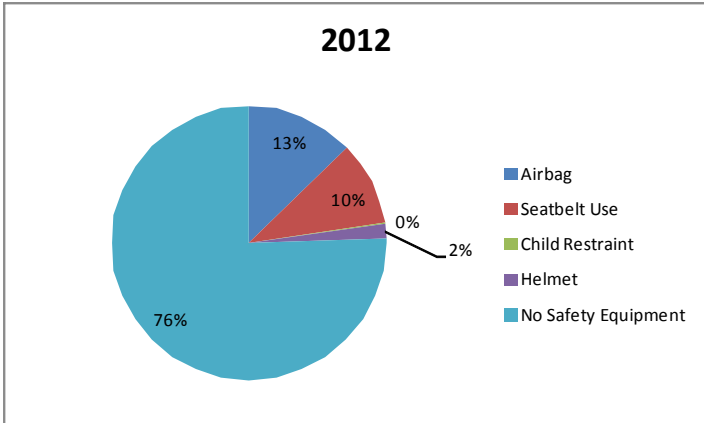* May not constitute a representative view of 2013 trauma.

2012 - 2013 (YTD)

Motorcycle

- Airbag: 0%
- Seatbelt Use: 0%
- Child Restraint: 0%
- Helmet: 9%
- No Safety Equipment: 91%

Automobile

- Airbag: 23%
- Seatbelt Use: 18%
- Child Restraint: 0%
- Helmet: 0%
- No Safety Equipment: 59%

Bicyclist

- Airbag: 0%
- Seatbelt Use: 0%
- Child Restraint: 0%
- Helmet: 10%
- No Safety Equipment: 90%

Pedestrian

- Airbag: 0%
- Seatbelt Use: 0%
- Child Restraint: 0%
- Helmet: 0%
- No Safety Equipment: 100%

The previous software error where protective devices were not being properly mapped has been corrected.

Indiana Trauma Registry

MVC involving Drugs or Alcohol

3483 incidents from July 1, 2012 to June 30, 2013
By Public Health Preparedness Districts

Indiana Average

District 1   n=143

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 1	21%	3%	17%	13%
Indiana Average	11%	8%	5%	15%

District 2   n=240

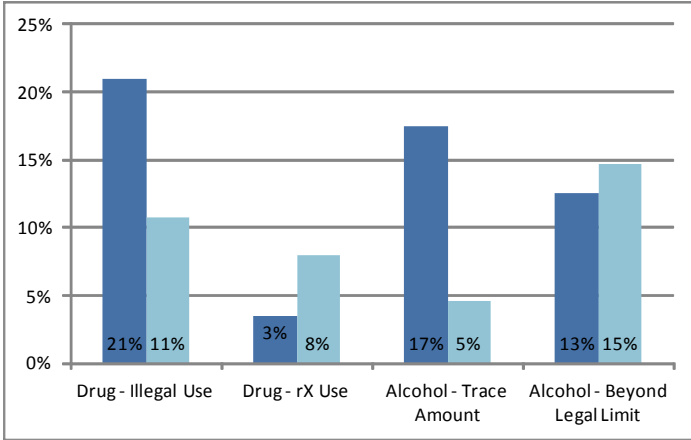|	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 2	11%	3%	2%	20%
Indiana Average	11%	8%	5%	15%

District 3   n=414

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 3	7%	7%	2%	17%
Indiana Average	11%	8%	5%	15%

District 4   n=192

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 4	9%	8%	4%	17%
Indiana Average	11%	8%	5%	15%

District 5   n=871

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 5	7%	7%	3%	14%
Indiana Average	11%	8%	5%	15%

District 6   n=243

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 6	9%	14%	3%	9%
Indiana Average	11%	8%	5%	15%

Percentage of MVC incidents where the patients tested positive for drugs or alcohol

Indiana Trauma Registry

MVC involving Drugs or Alcohol

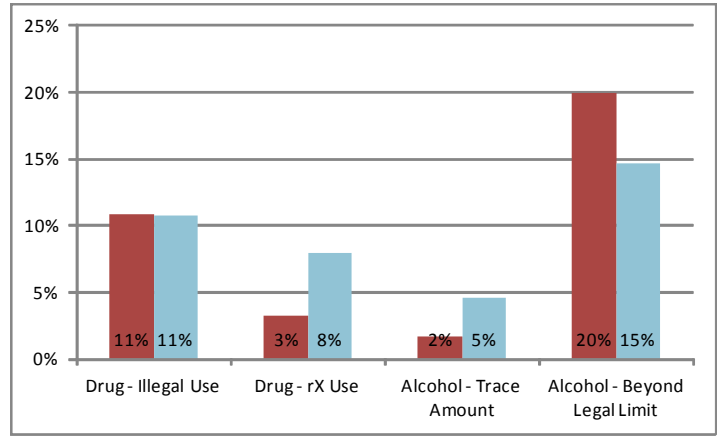**3483 incidents from July 1, 2012 to June 30, 2013**
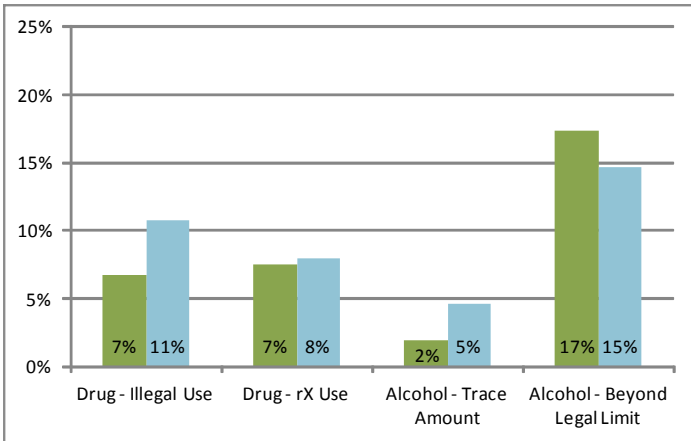**By Public Health Preparedness Districts**
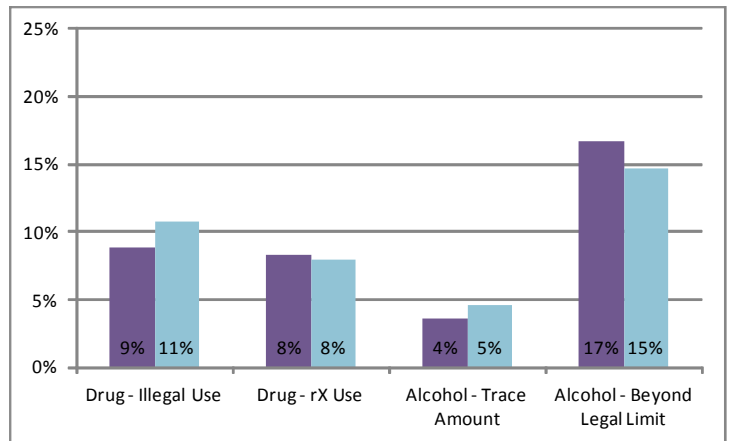
Indiana Average

District 7   n=141

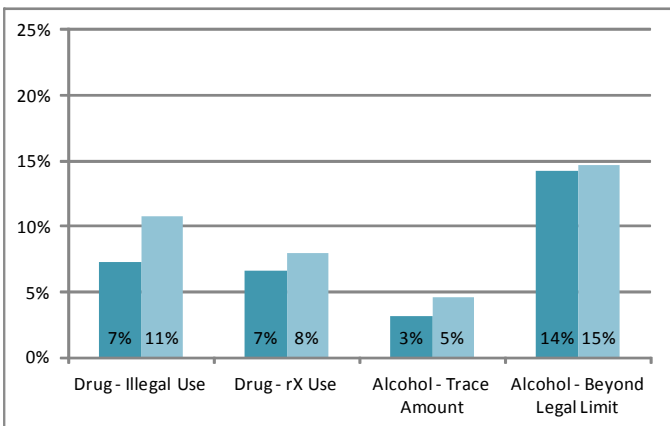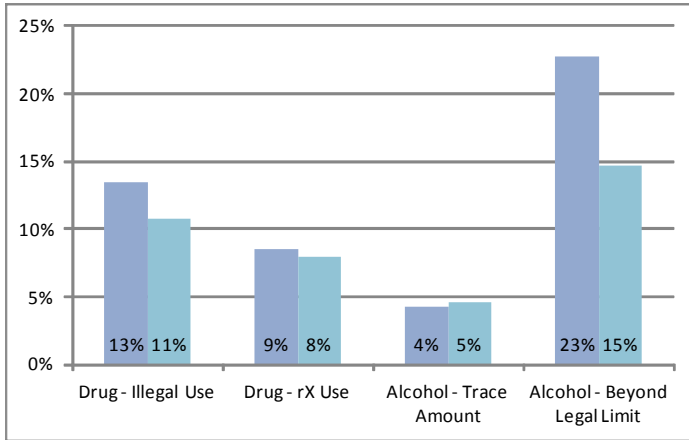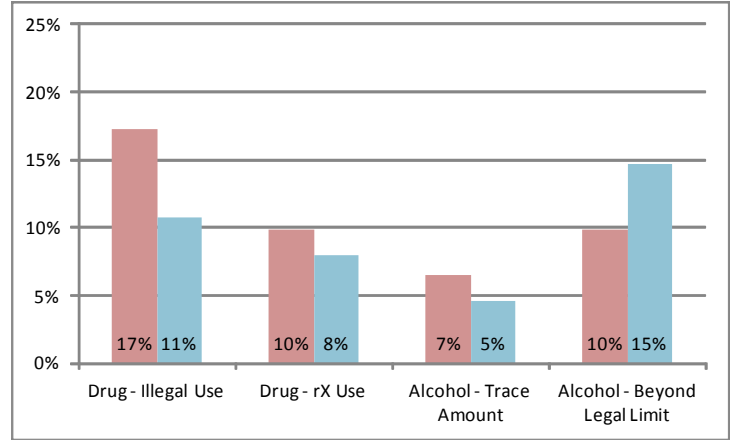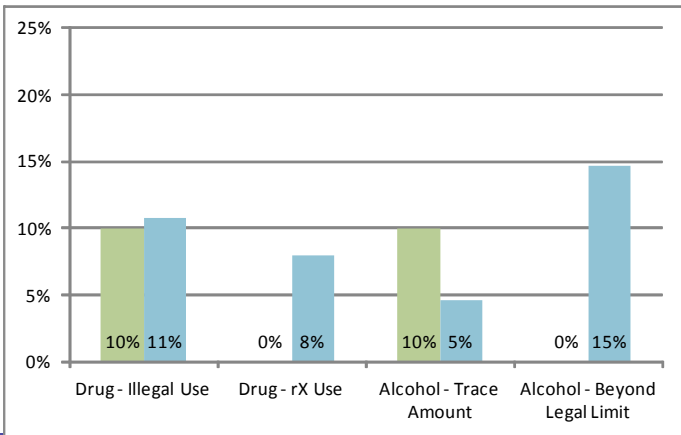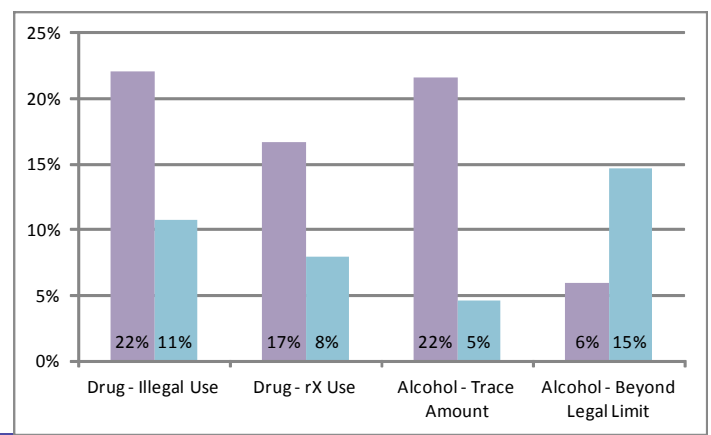|	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 7	13%	9%	4%	23%
Indiana Average	11%	8%	5%	15%

District 8   n=122

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 8	17%	10%	7%	10%
Indiana Average	11%	8%	5%	15%

District 9   n=10

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 9	10%	0%	10%	0%
Indiana Average	11%	8%	5%	15%

District 10   n=240

	Drug - Illegal Use	Drug - rX Use	Alcohol - Trace Amount	Alcohol - Beyond Legal Limit
District 10	22%	17%	22%	6%
Indiana Average	11%	8%	5%	15%

Percentage of MVC incidents where the patients tested positive for drugs or alcohol