

Contra Costa EMS Agency

Continuous Quality Improvement  
Core System Measures  
Annual Report  
2015

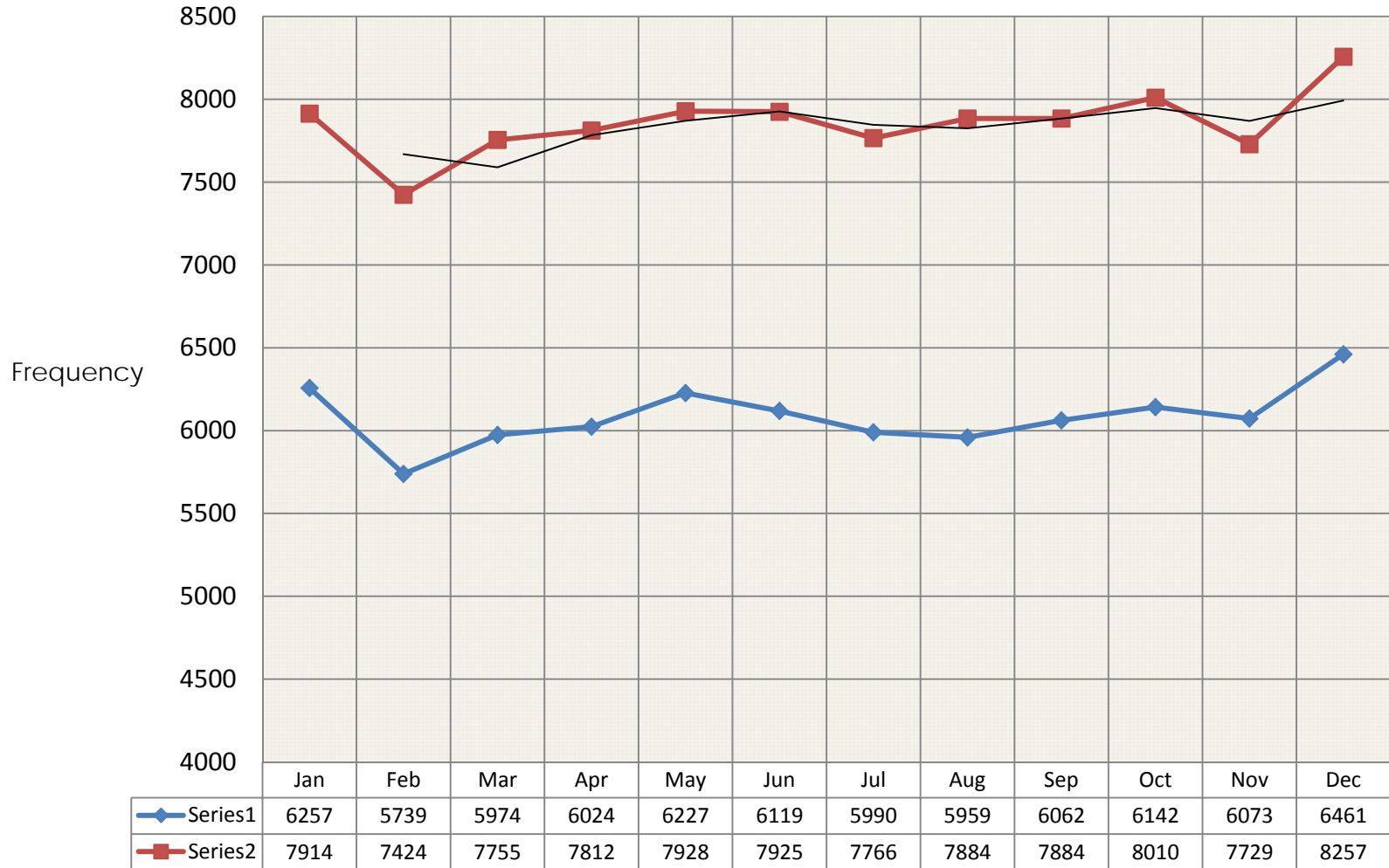
# System Utilization 2015

Data Source: First Watch

# Contra Costa County 911 Ambulance Response and Transport CQI Annual Report 2015

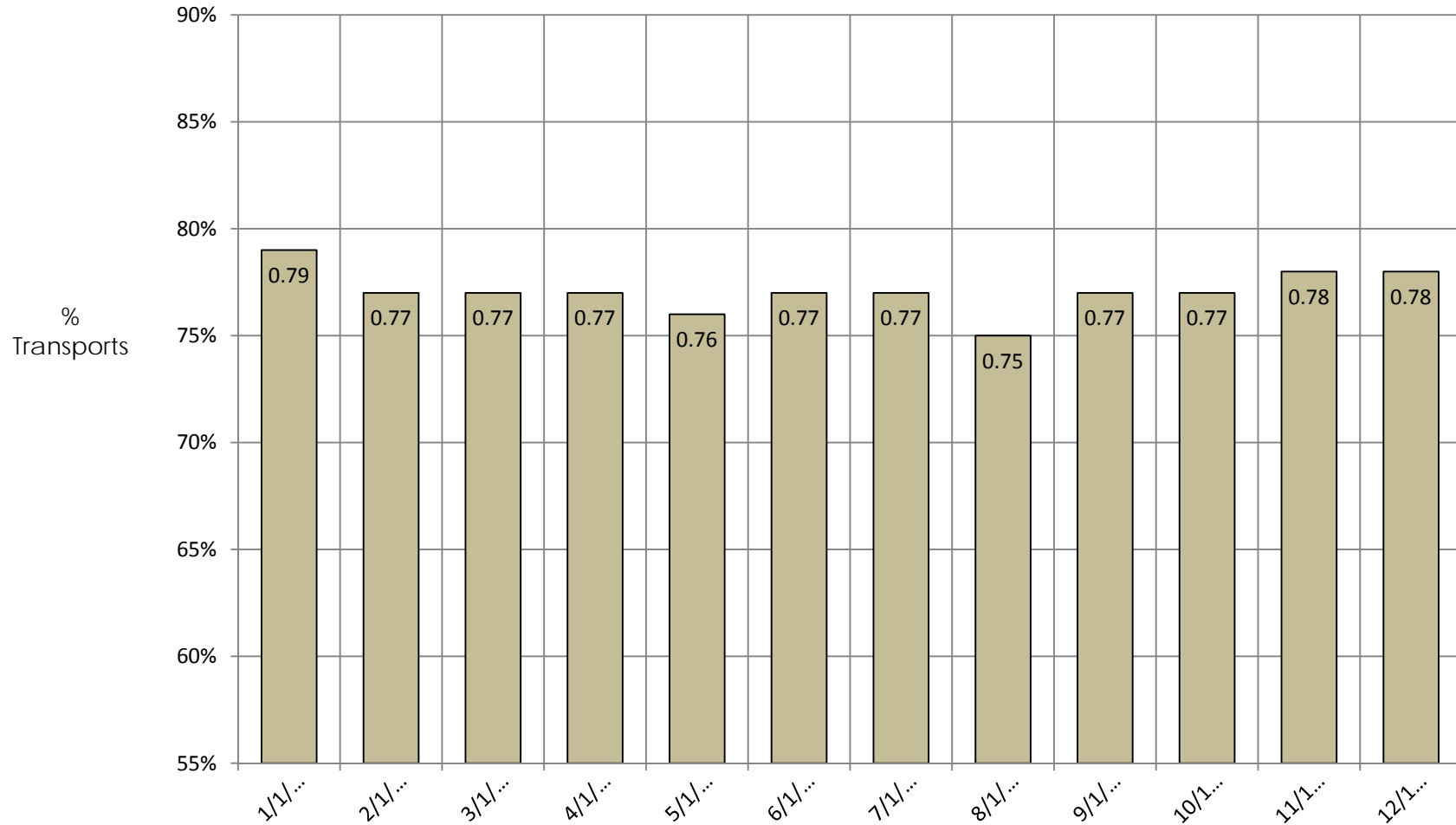
N= 94,278 Responses

N= 73,027 Transports



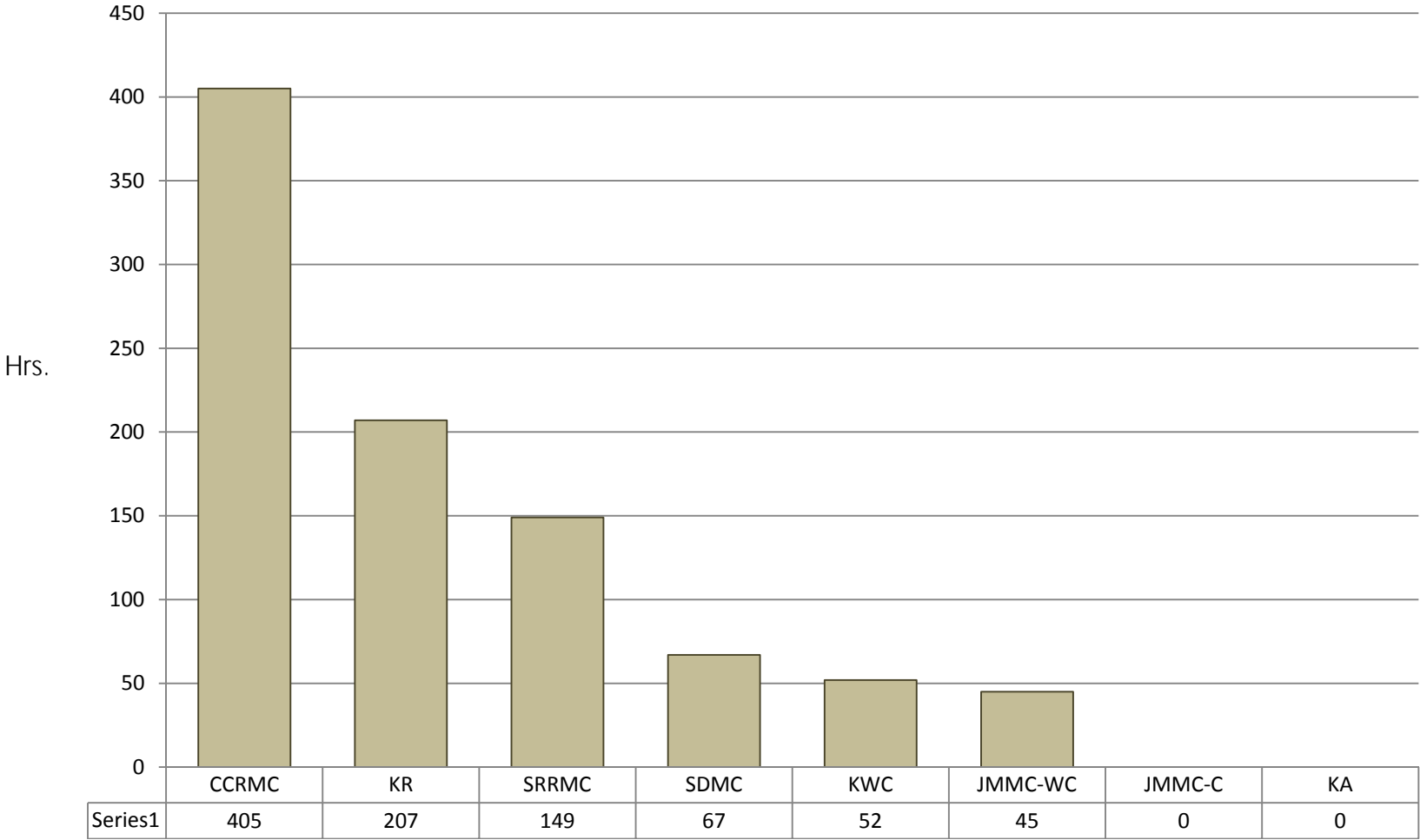
# Contra Costa County 911 Ambulance % Transport per Response by Month CQI Annual 2015

N= 94,278 Responses  
N= 73,027 Transports  
Mean Transport/Response = 77 %

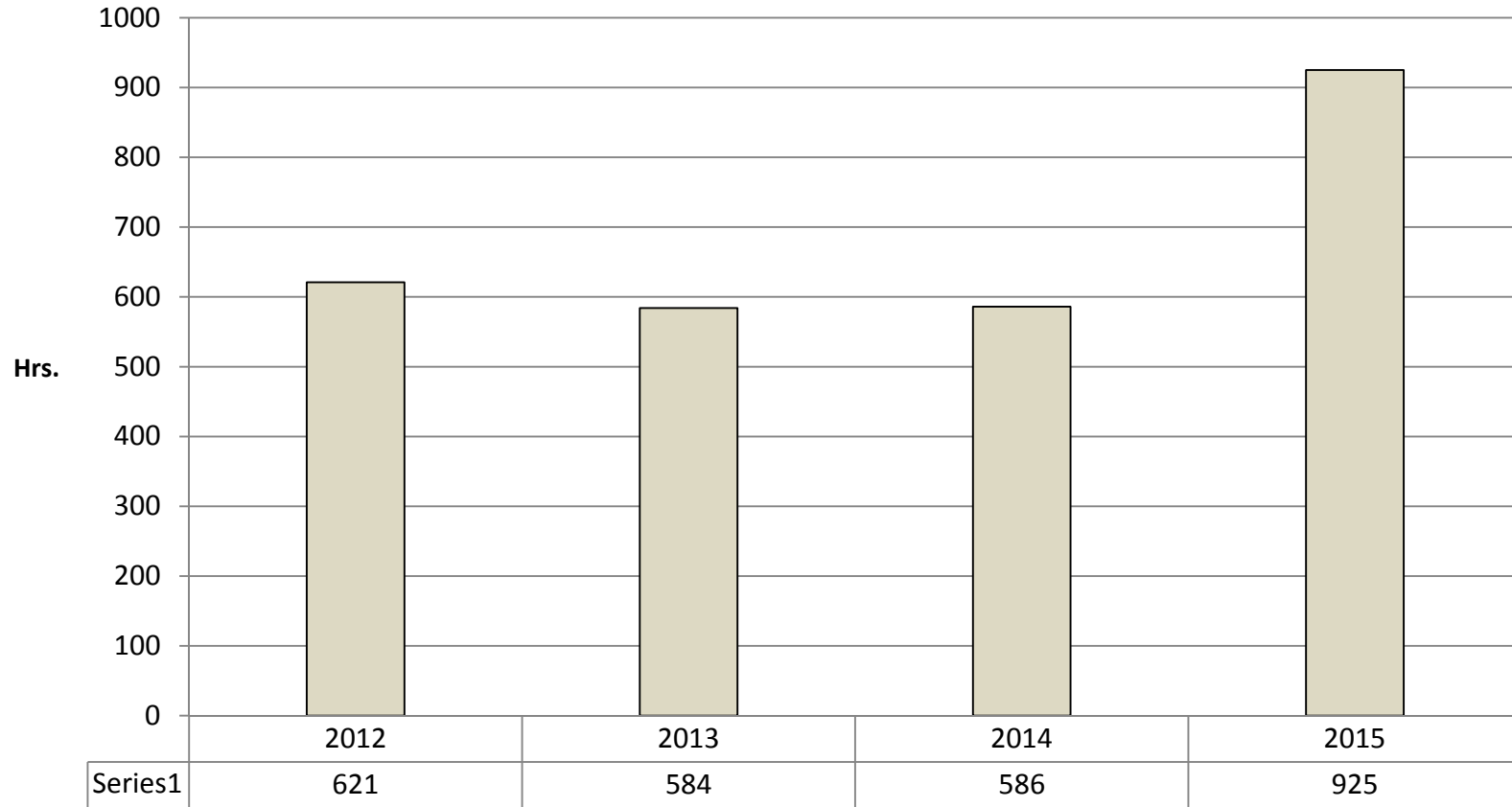


# EMS Diversion By Hospital Cumulative Hours

Jan - Dec 2015  
N=925 Total Hours on Diversion

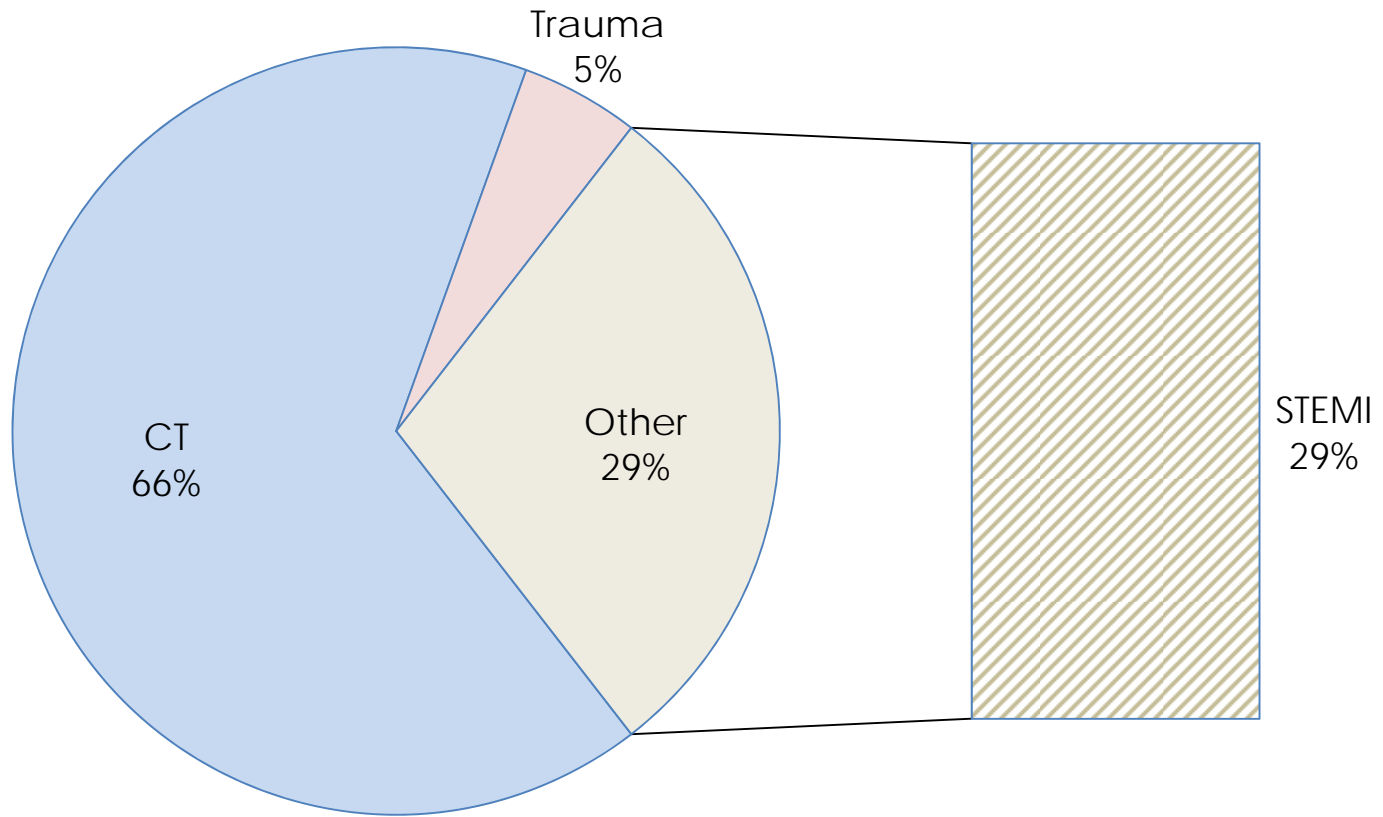


# EMS Diversion Cumulative Hours by Hospital Year 2012 -2015



Contra Costa EMS  
Hospital Diversion Hours % by Cause  
CQI Annual Report 2015

*N= 925 Total Hours on Diversion 2015*

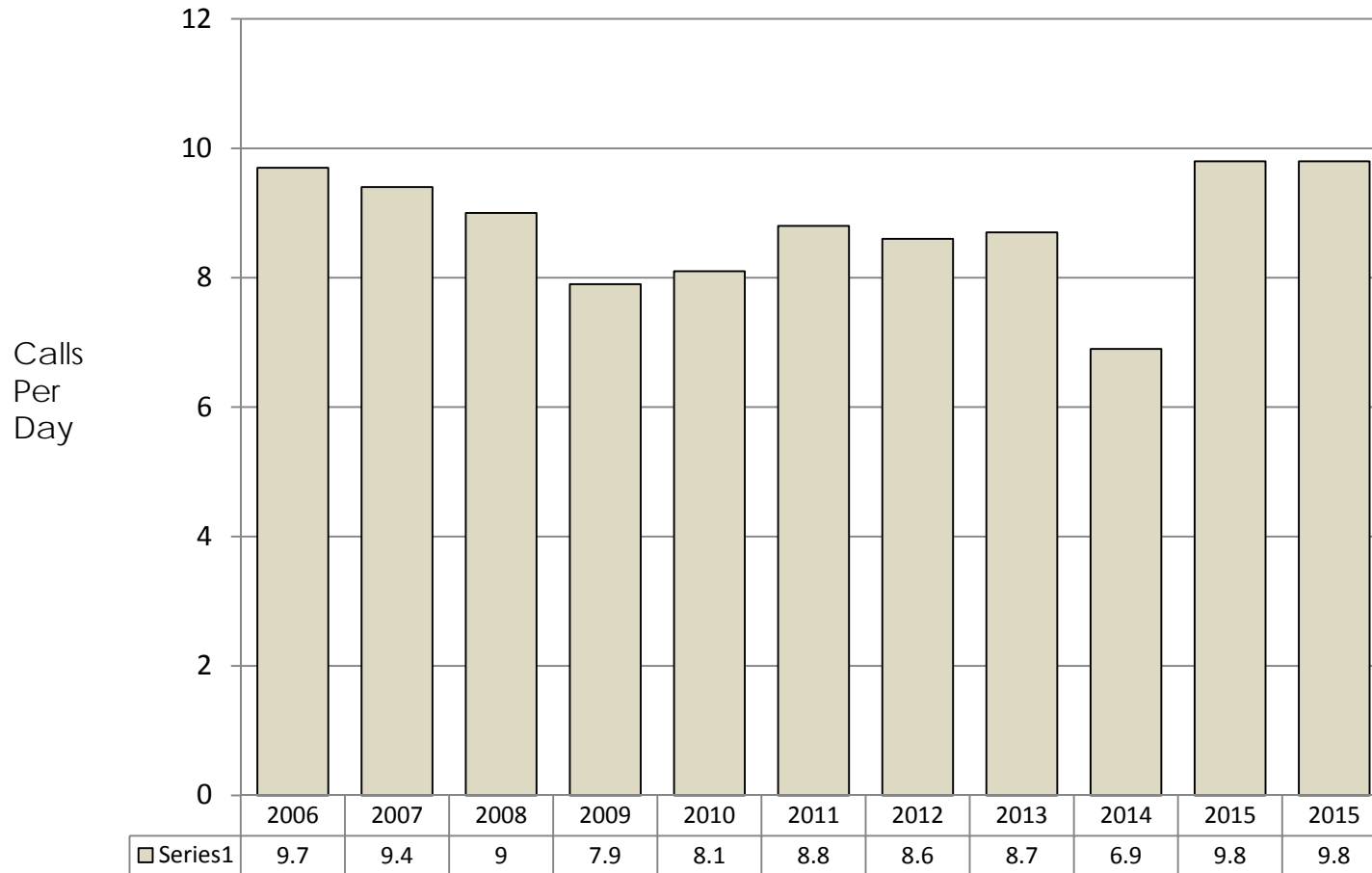


# Base Hospital Annual 2015

Data Source: Base Hosp Log



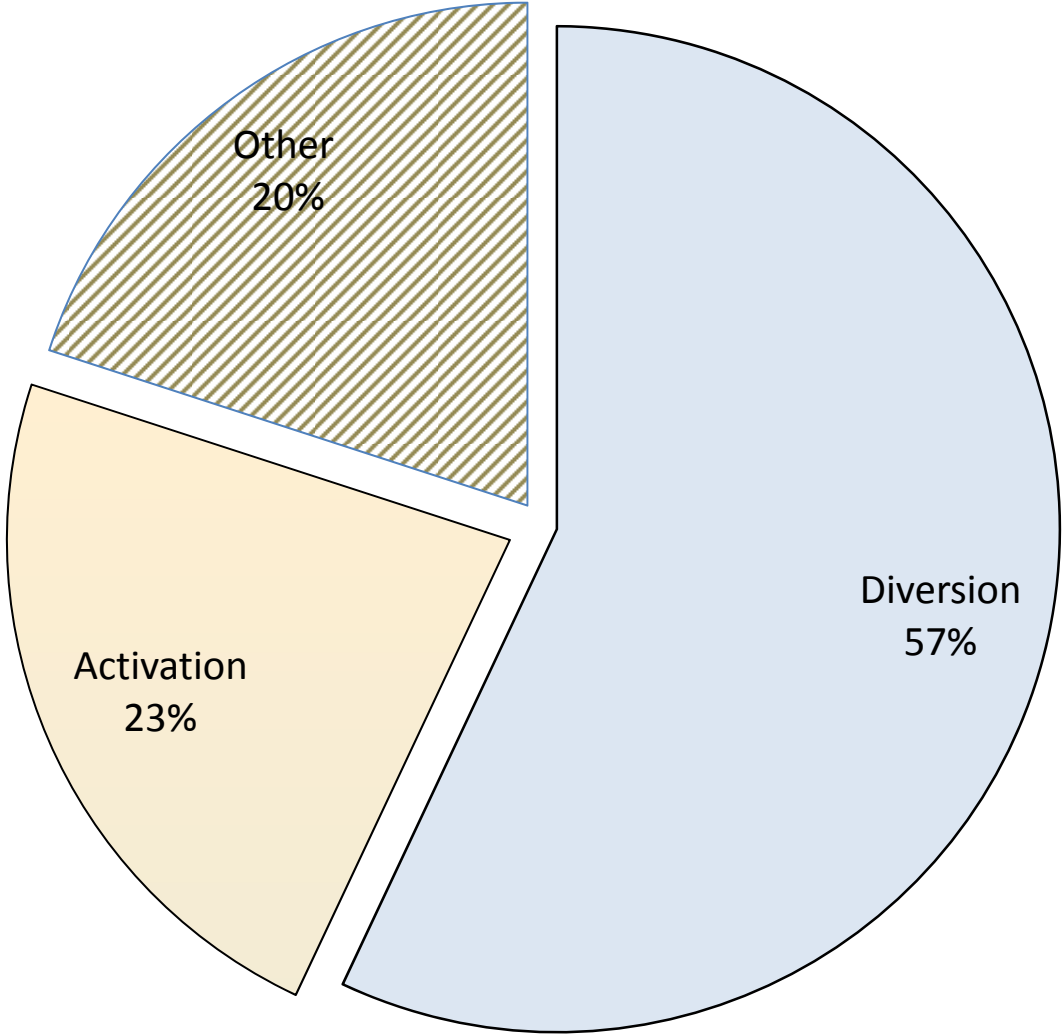
# Base Hospital Mean Daily Calls Annual 2015



CQI Report Annual 2015

% Base Hospital Calls by Type

N=3577 calls



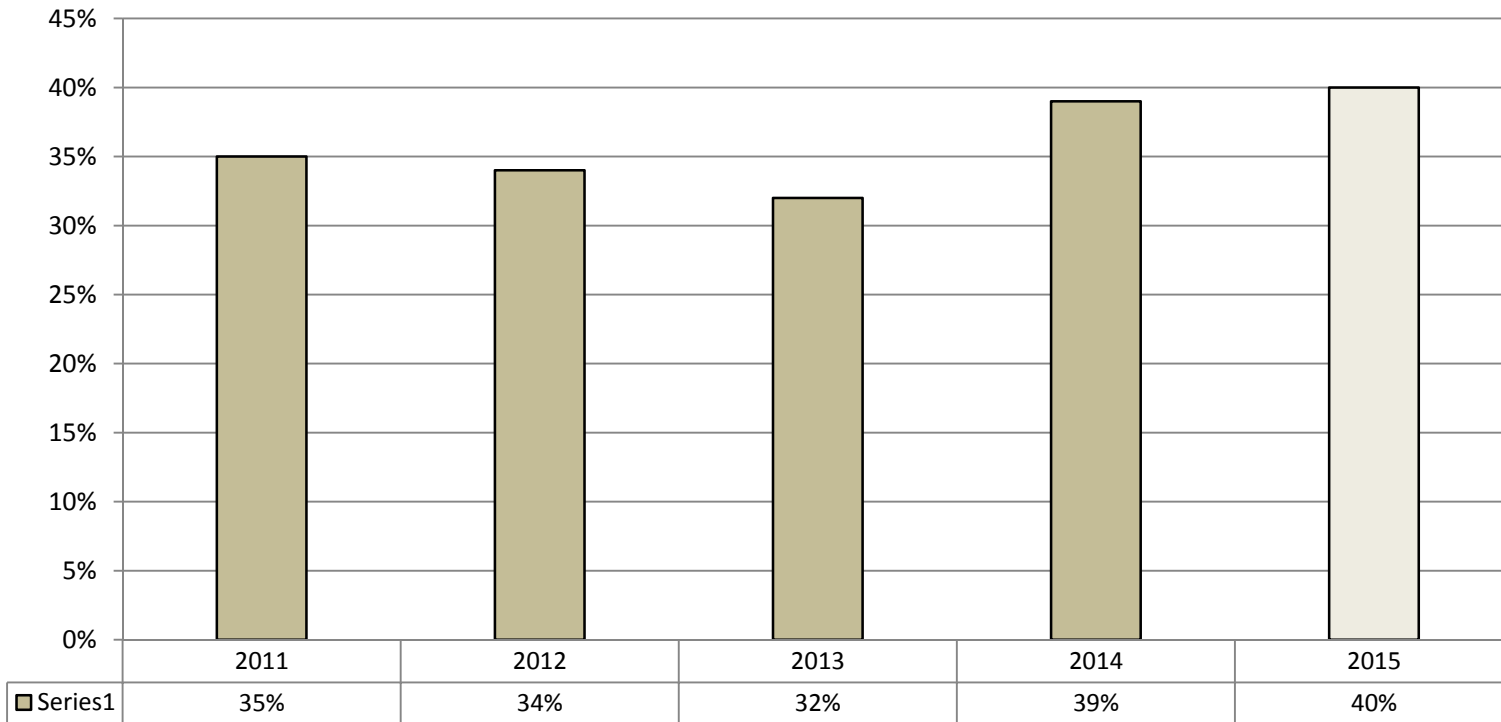
# CQI Report Annual 2015

## Systems of Care Cardiac Arrest

Data Source: CARES Registry 2015.

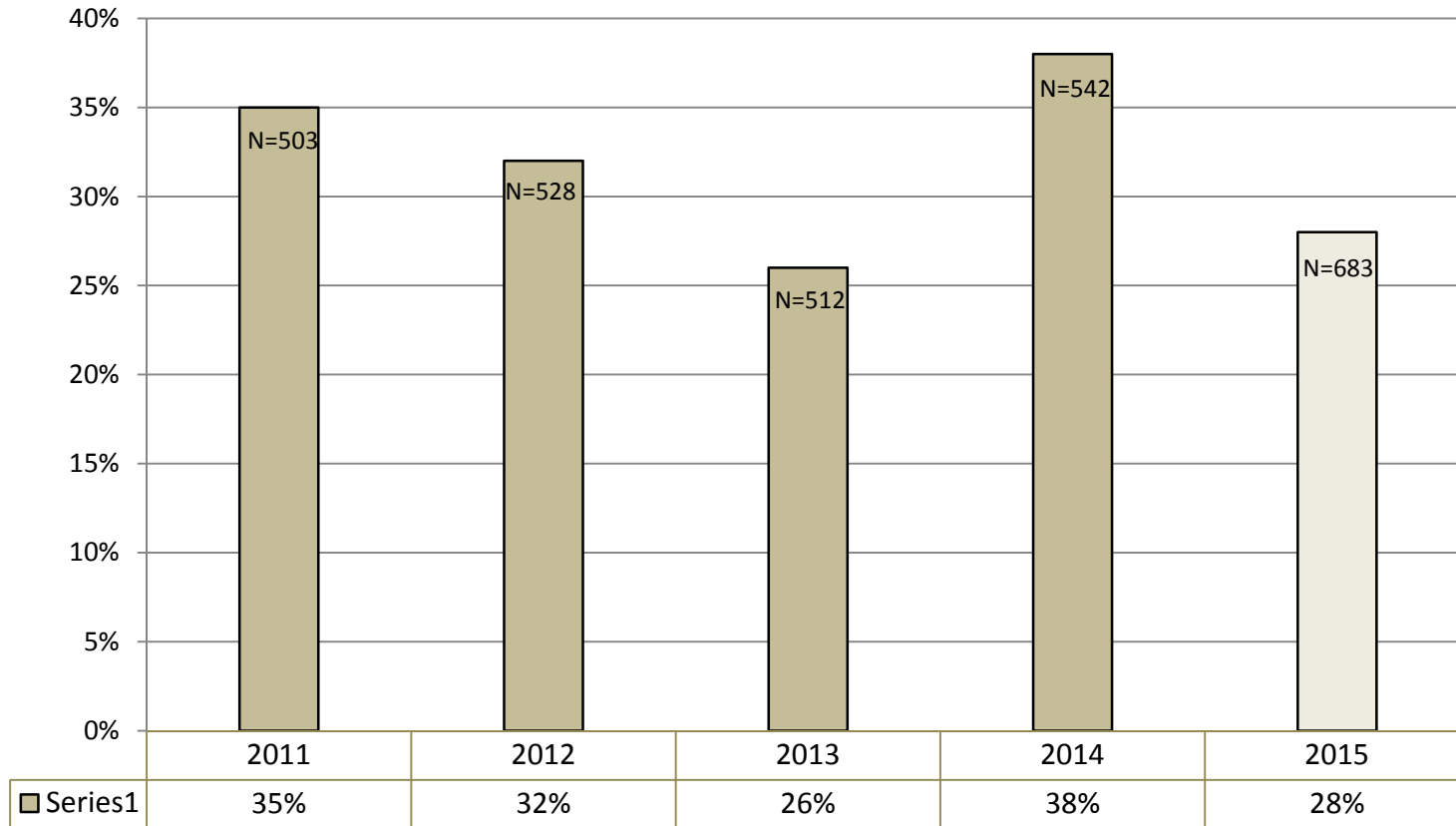
# % Bystander CPR by Year

5 Year Comparison  
2011-2015



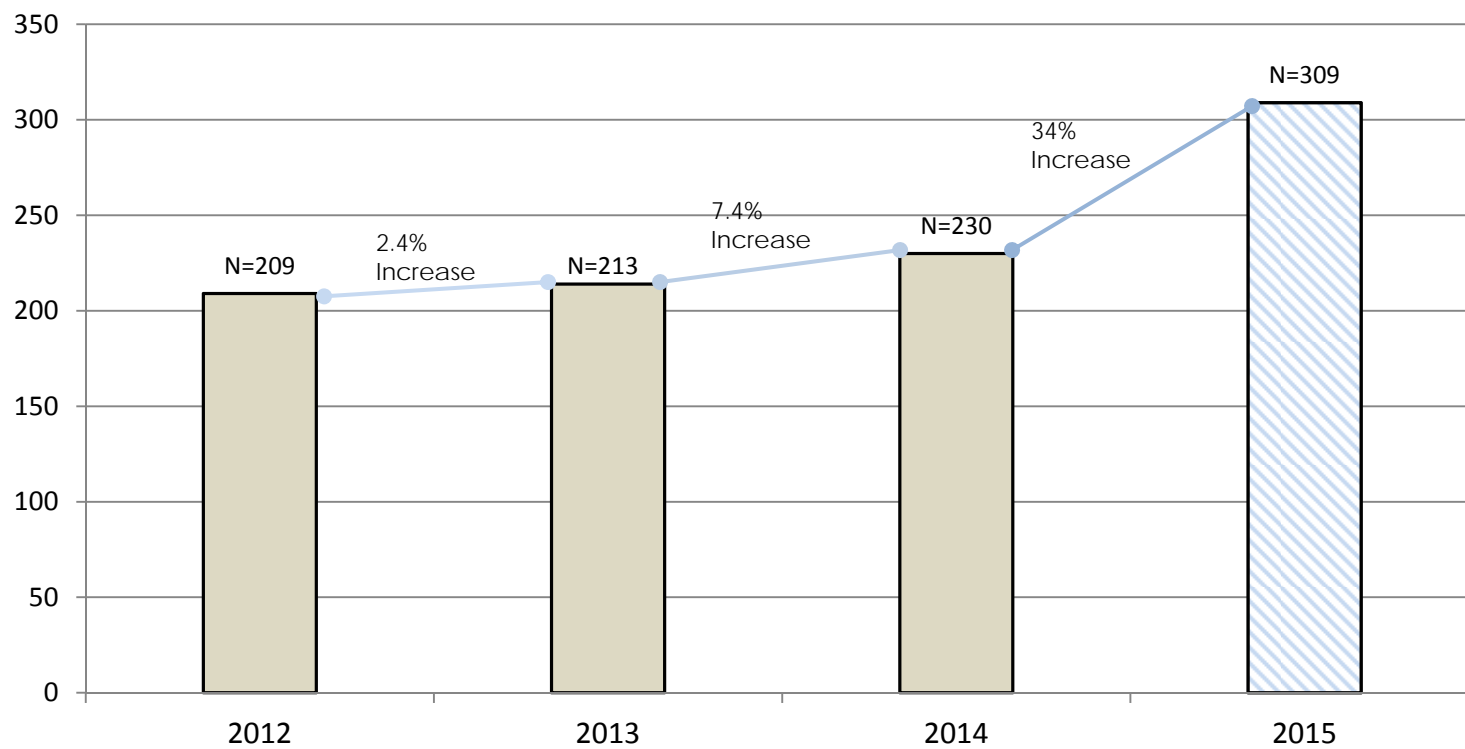
# Cardiac Arrest Survival Utstein Survival by Year

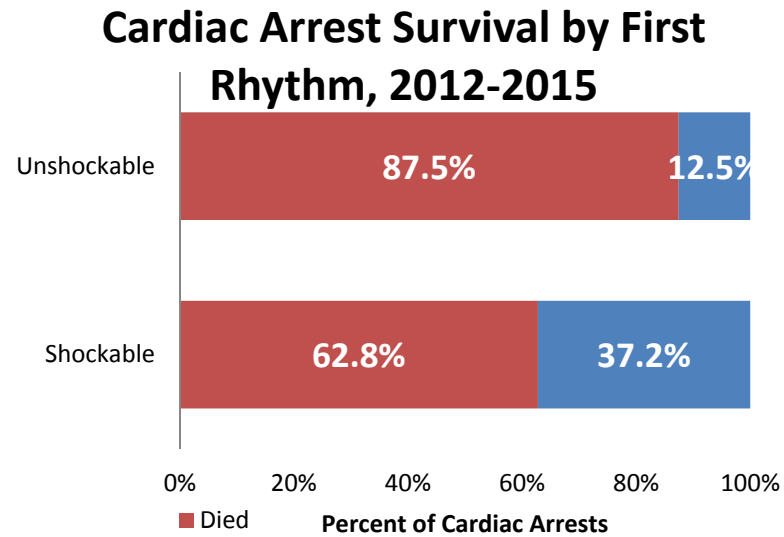
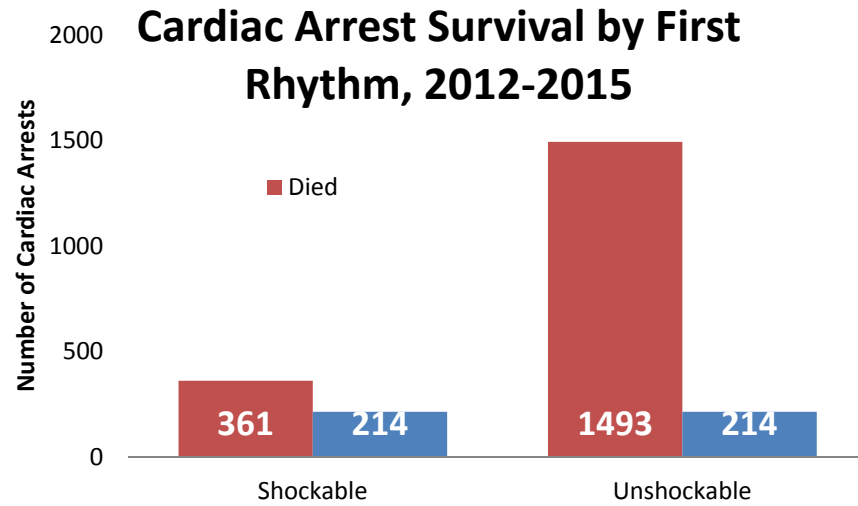
5 Year Comparison  
2011-2015



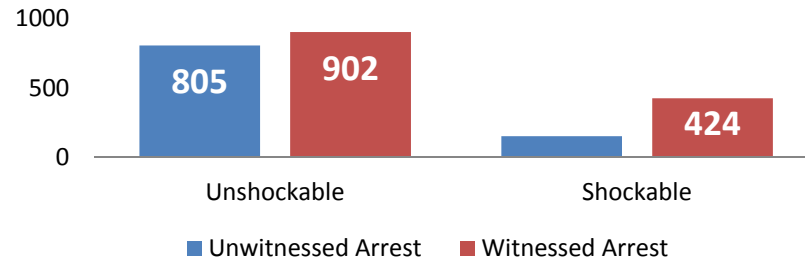
# STEMI ALERTS

Totals by Year  
2012 - 2015

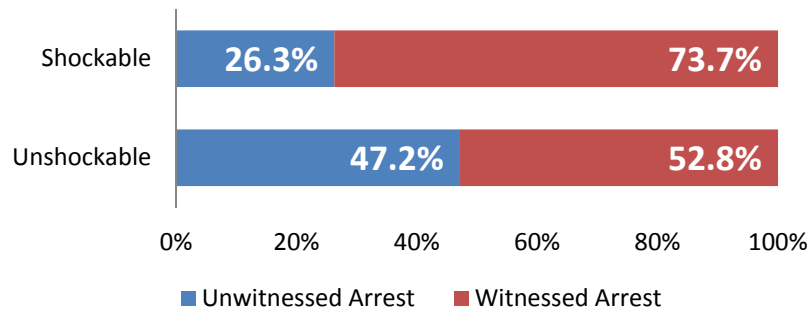




### Cardiac Arrest Rhythm by Witness Status, 2012-2015

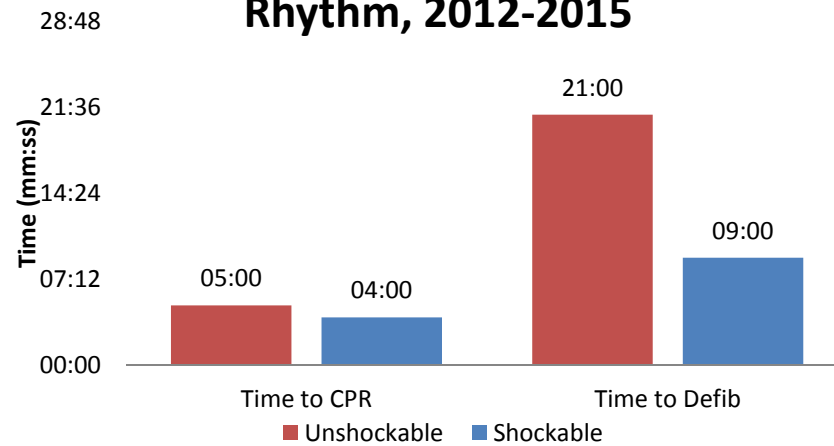


### Cardiac Arrest Rhythm by Witness Status, 2012-2015

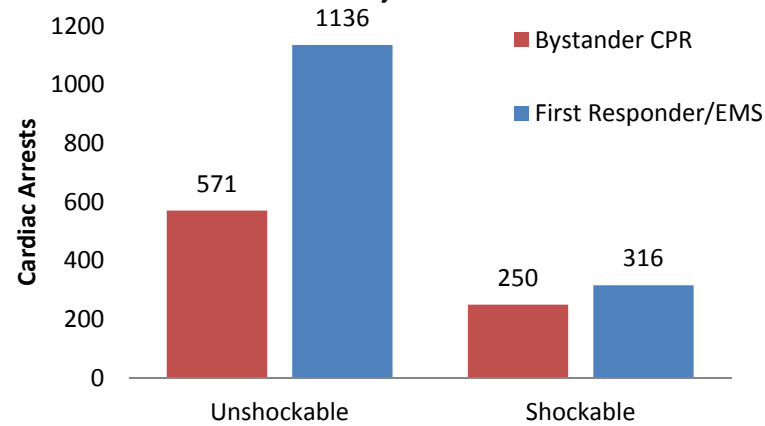




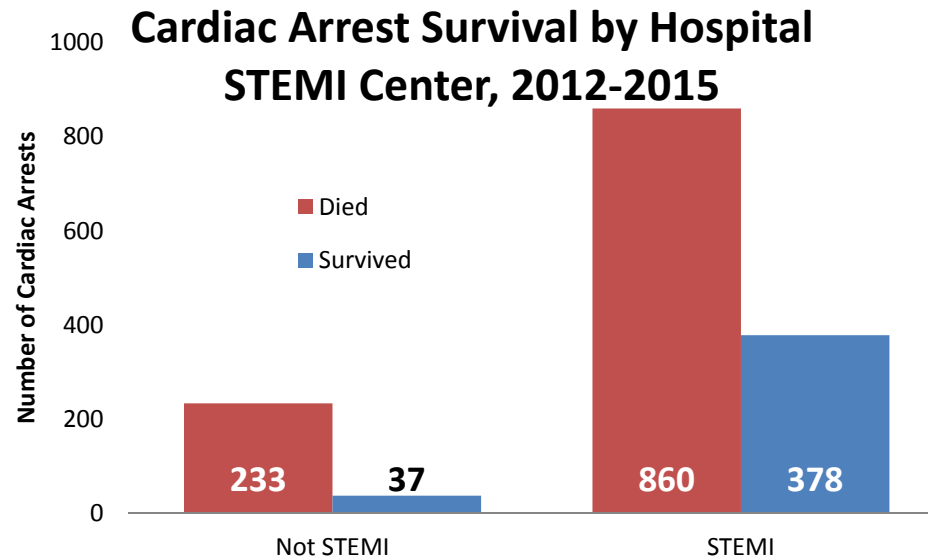
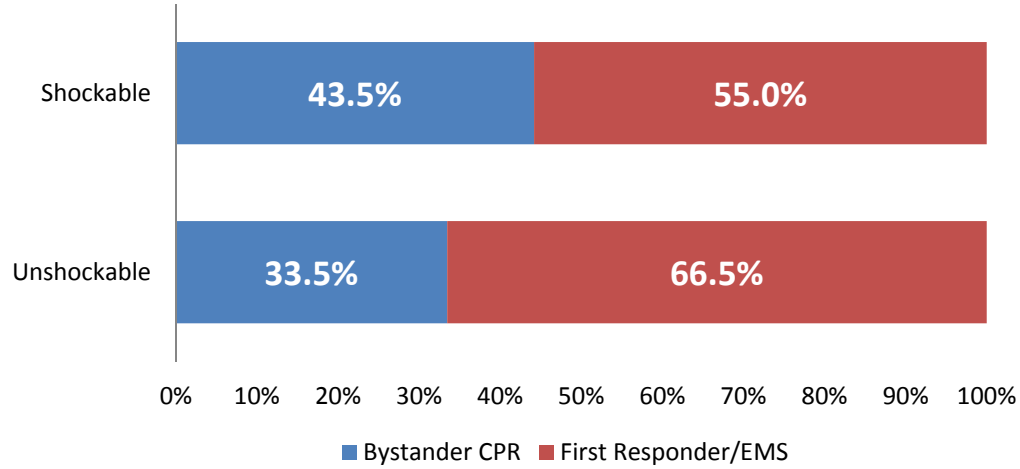
## Median Time to Intervention by Rhythm, 2012-2015



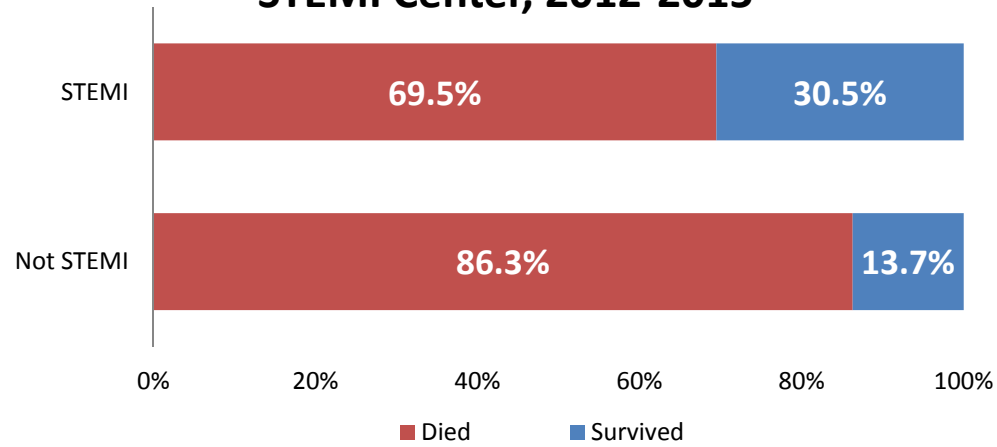
## Shockable Rhythm by Bystander CPR, 2012-2015



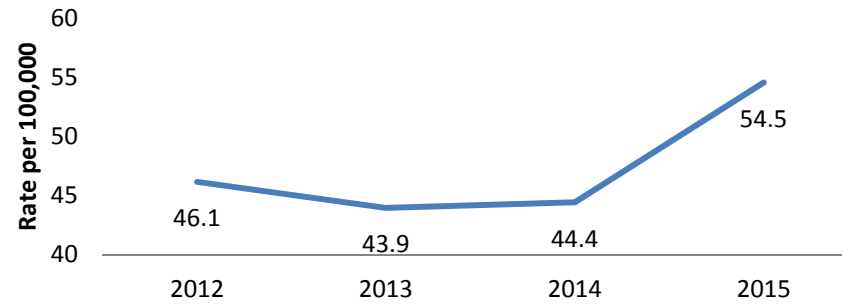
## Shockable Rhythm by Bystander CPR, 2012-2015



## Cardiac Arrest Survival by Hospital STEMI Center, 2012-2015

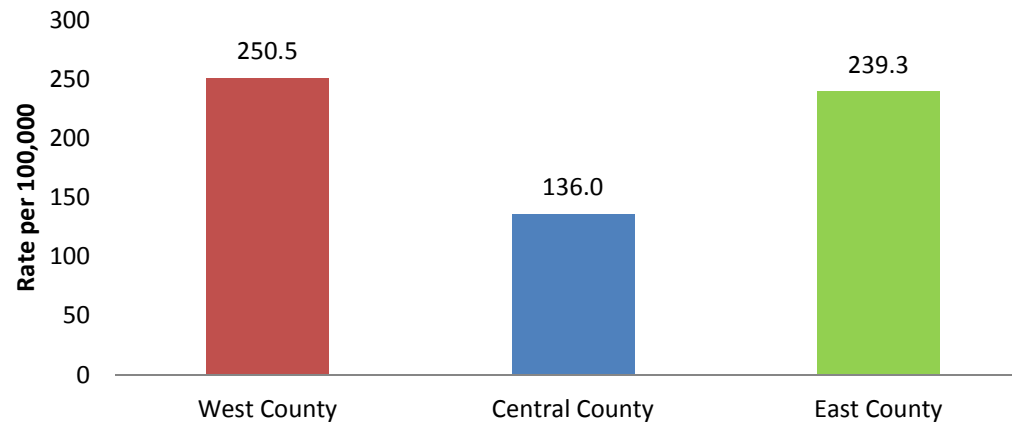


## Age Adjusted Yearly Cardiac Arrest Rate



-Age Adjusted to 2000 U.S. Census

## Age Adjusted 4-Year Cardiac Arrest Rate by Region, 2012-2015

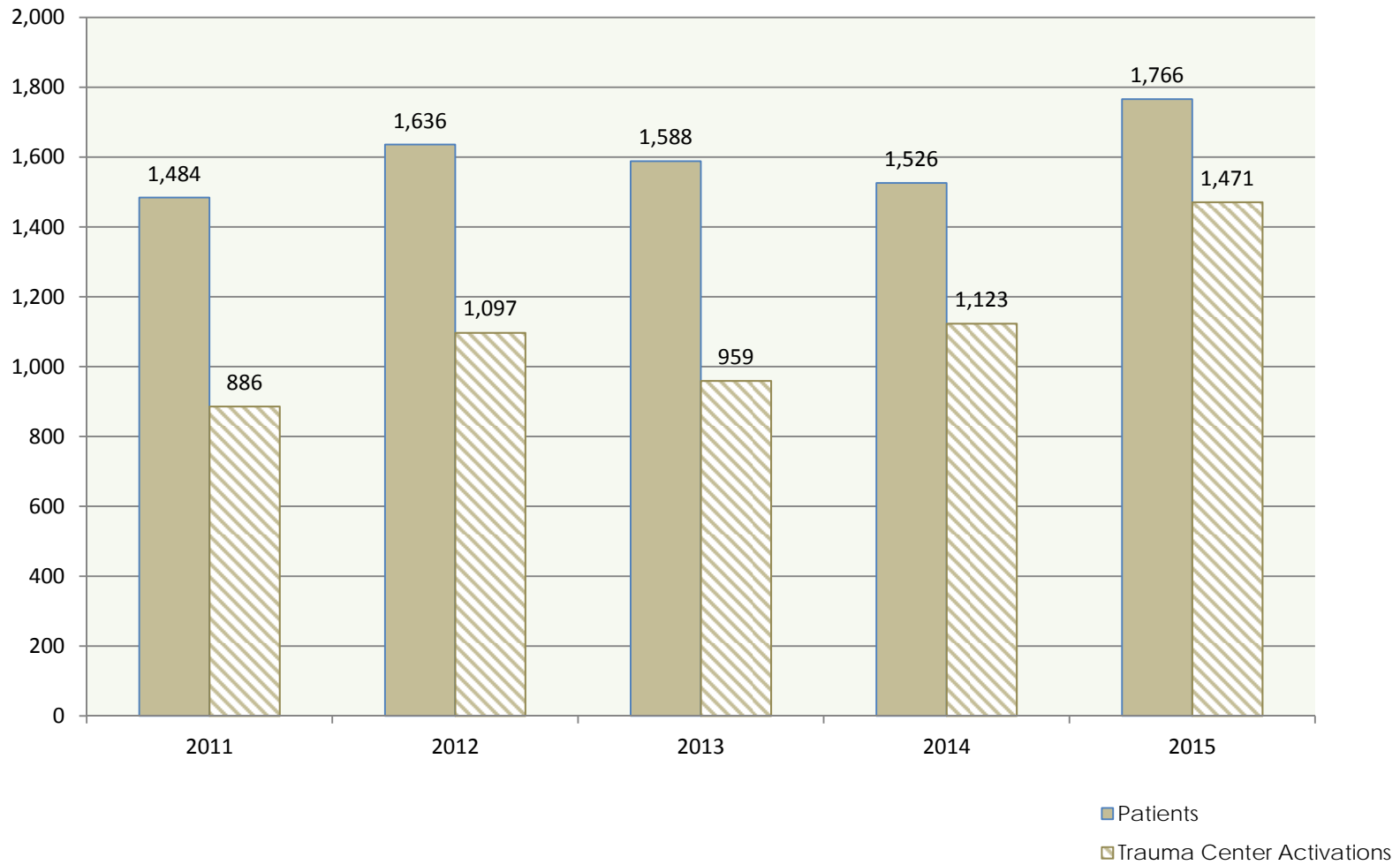


*-Age Adjusted to 2000 U.S. Census. Rates calculated using 2015 population estimates*

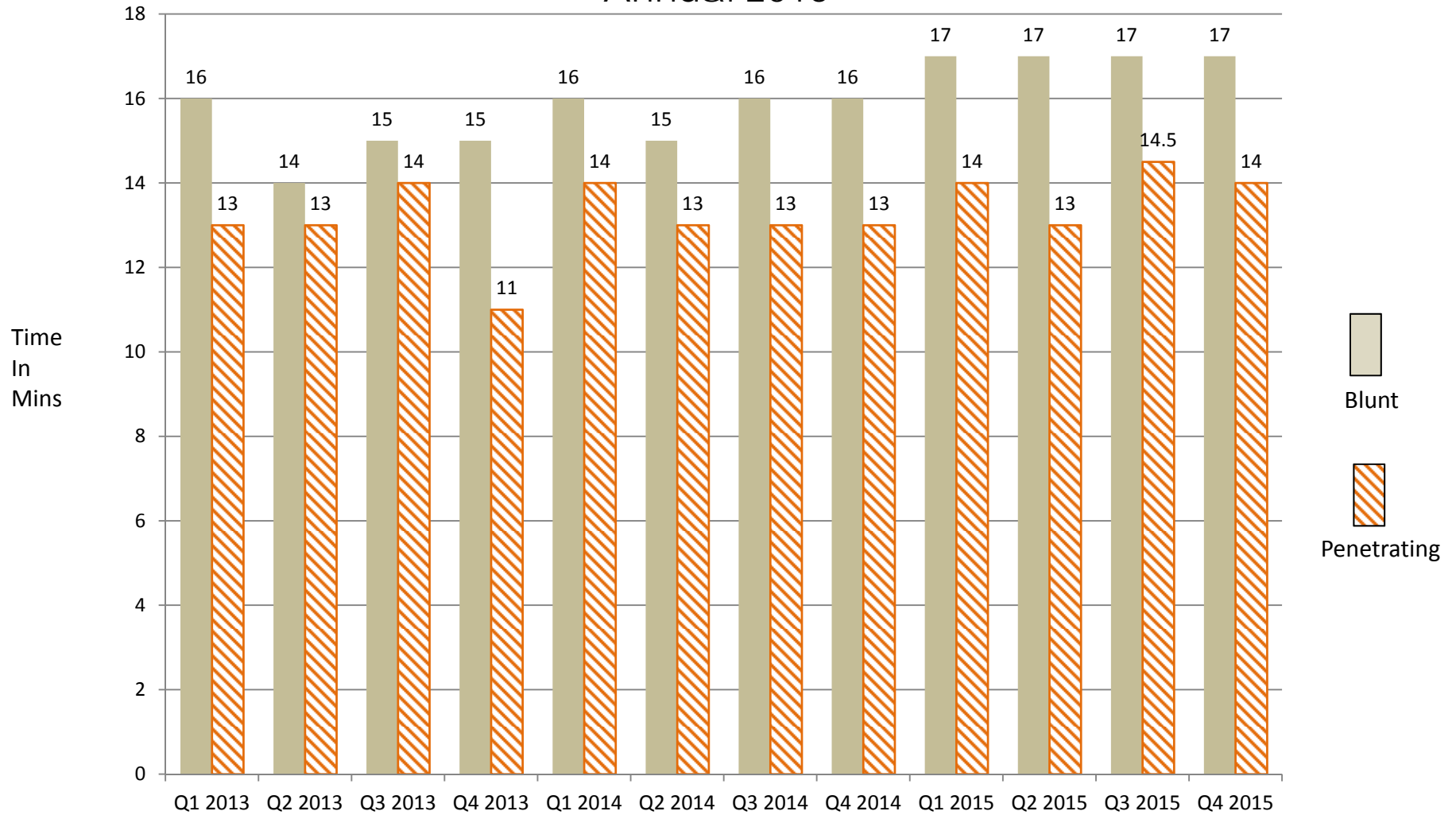
# Trauma System Annual 2014

Data Source: Trauma Registry

Number of Trauma Patients vs. Trauma Center Activations  
by Year



# Median Prehospital On Scene Time Interval Blunt vs. Penetrating Trauma By Quarter Annual 2015



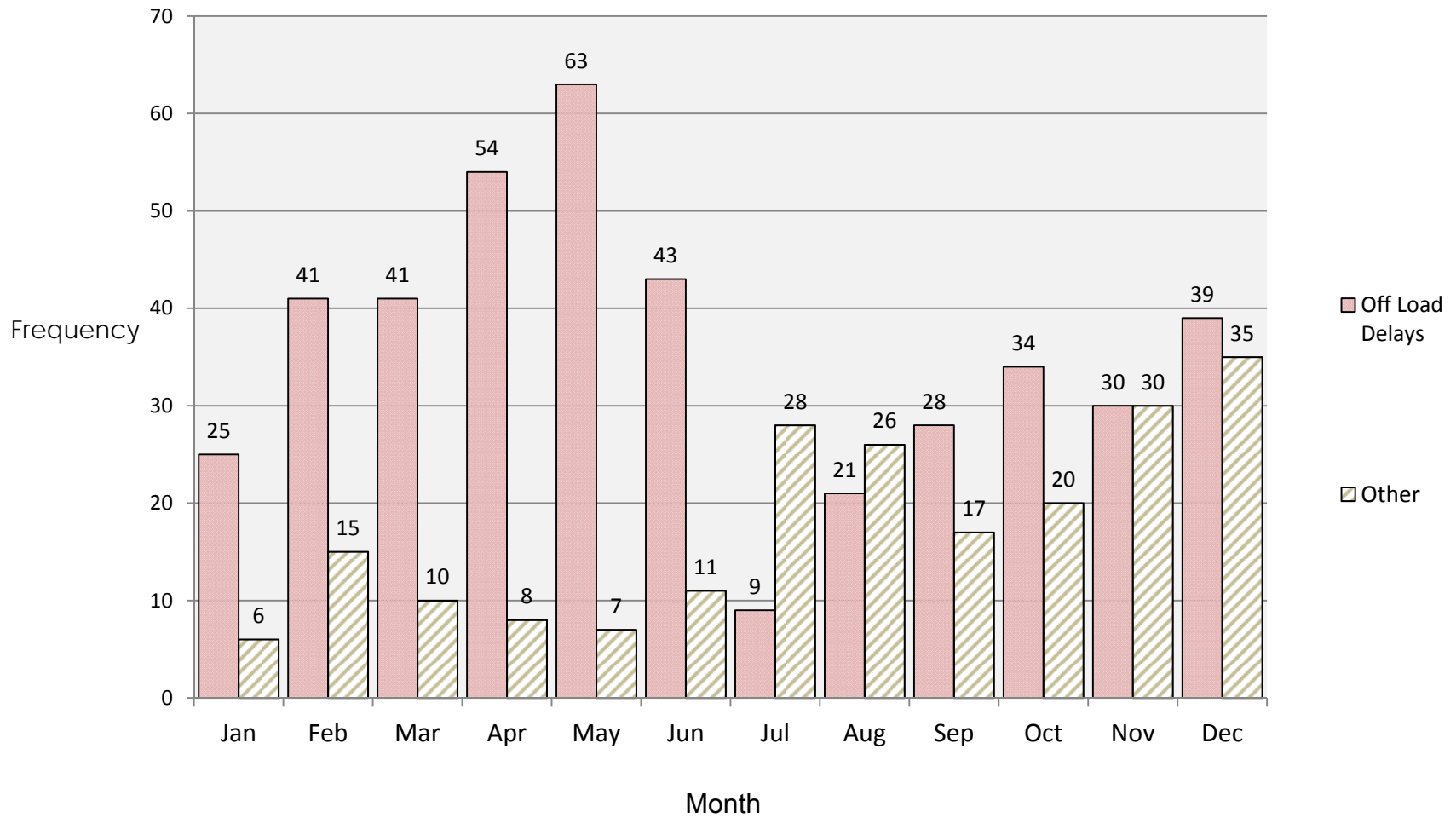
Data Source: AMR MEDS  
Times rounded up

# EMS Events 2015

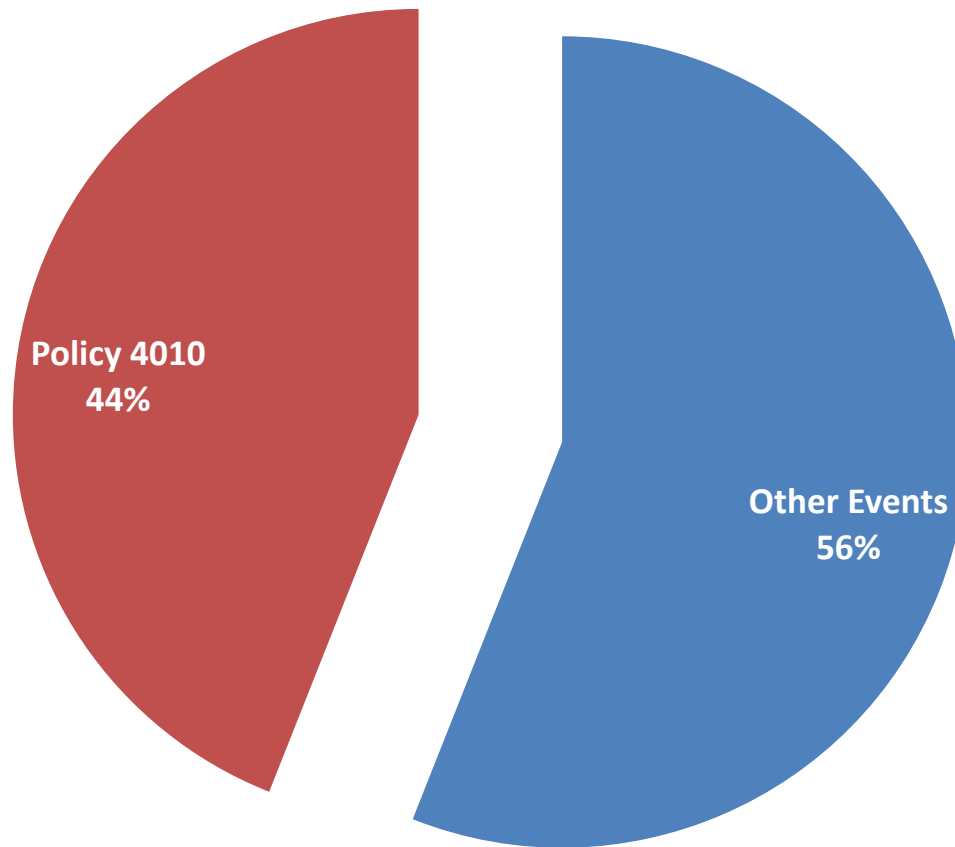


# EMS Events Reported by Month

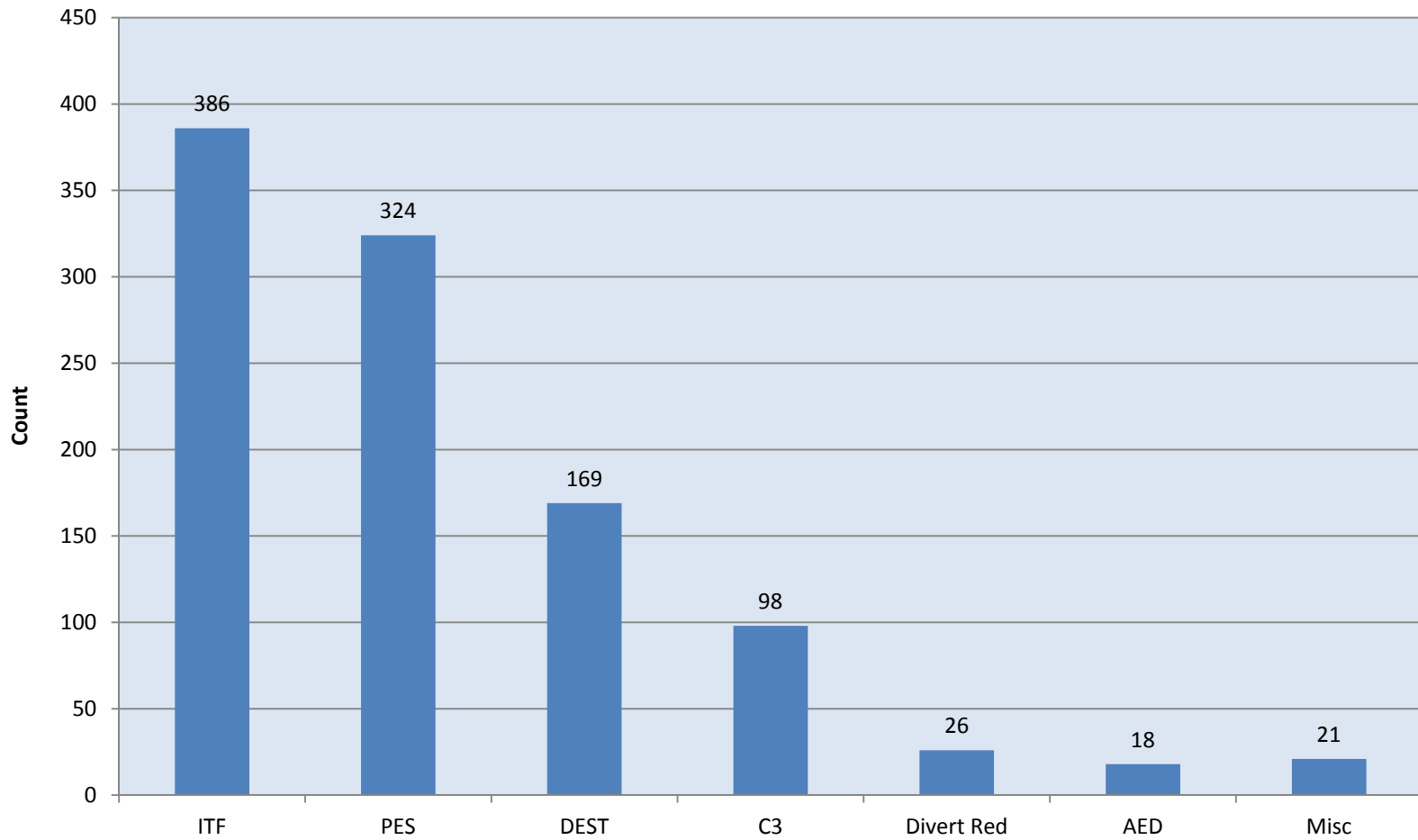
## 2015



EMS Events by General Category  
2015  
% Policy 4010 vs. Other Event



EMS Events by Characteristics  
2015  
Number per Characteristic  
N=1042



END REPORT  
Annual 2015

2015

Quality Improvement Initiatives

## Quality Improvement Initiatives

### **High Performance Cardiac Arrest & CPR (HPCA)**

The purpose of HPCA is to increase the quality of CPR provided to patients in cardiac arrest.

In 2014, indicators to measure quality such as compression, ratios, depth and pauses for shock were developed and deployed. In 2015, the appointed QI Team pulled data to review and determined that our save rate had increased slightly. The program continues to be monitored and new programs are being developed to enhance this project. Further evaluation and reporting will continue in 2016. Sustaining the performance gain will be the top initiative goal in 2016.

## Quality Improvement Initiatives

### **EMS Patient Off-Load Time Reduction**

In 2014, an initiative to monitor and reduce the handoff times between ambulances and hospital emergency departments was implemented by the CCCEMS with the support of the CQI team. Current measures reflect that during high-volume periods, patients arriving at emergency departments by ambulance are often waiting longer than 30 minutes for offloading. Measures and other pertinent information continued to be reviewed by internal staff and the QLC. Reports were updated monthly and hospital leadership continued to be informed.

Outcomes showed some slight decreases in off-load times, however, goals for reduction continue to be a challenge for some hospitals. This initiative will continue to be monitored and acted on for further improvement in the 2016 improvement cycle.

## Quality Improvement Initiatives

### **Pediatric Medication Safety**

The goals and objectives of the Pediatric Medication Safety initiative was to reduce pediatric medication inaccuracies and to measure and sustain improvements. Data was gathered and reviewed by EMS Staff and published in the EMS Best Practices newsletter. A QLC Task Team was appointed and indicators developed. In 2014, we initially found a reduction by introducing a more accurate length based measuring tool for the paramedics to use. In 2015, we began to see an increase return. The length based measuring device was again evaluated, improved and reinstated onto the paramedic ambulances. We will continue to evaluate and look for reductions in 2016. Pursuing a sustaining plan to continue reduced pediatric medications inaccuracies will be a challenge for this initiative in the years 2016-17.