

EMS and Trauma Response to Falls in the ≥ 55 Year Age Group

Maureen Brophy, MPH

Rogelio Martinez, MPH

Bureau of EMS & Trauma System



Health and Wellness for all Arizonans

azdhs.gov



Pre-Injury

Pre-hospital

Hospitalization

Post-Acute Care

Data Collection

Data Analysis



Injury

Injury prevention

Communications Infrastructure

- 911 training policies
- Resource allocation, direction and guidance

EMS Infrastructure

- Protocols
- Medical Direction
- Triage and transport guidelines

Hospital infrastructure

- Policies
- Resources
- Triage and transport
- CQI, MM reviews, outreach



- Rehabilitation plans
- Community reintegration



Quality Assurance

Additional Data Sources:
 Transportation
 Vital Statistics
 Economic
 Geographical



AZ-PIERS is a voluntary pre-hospital data registry used for performance improvement and quality assurance, with growing participation from emergency medical service agencies around the state. In 2013, there were a total of reporting 45 agencies.

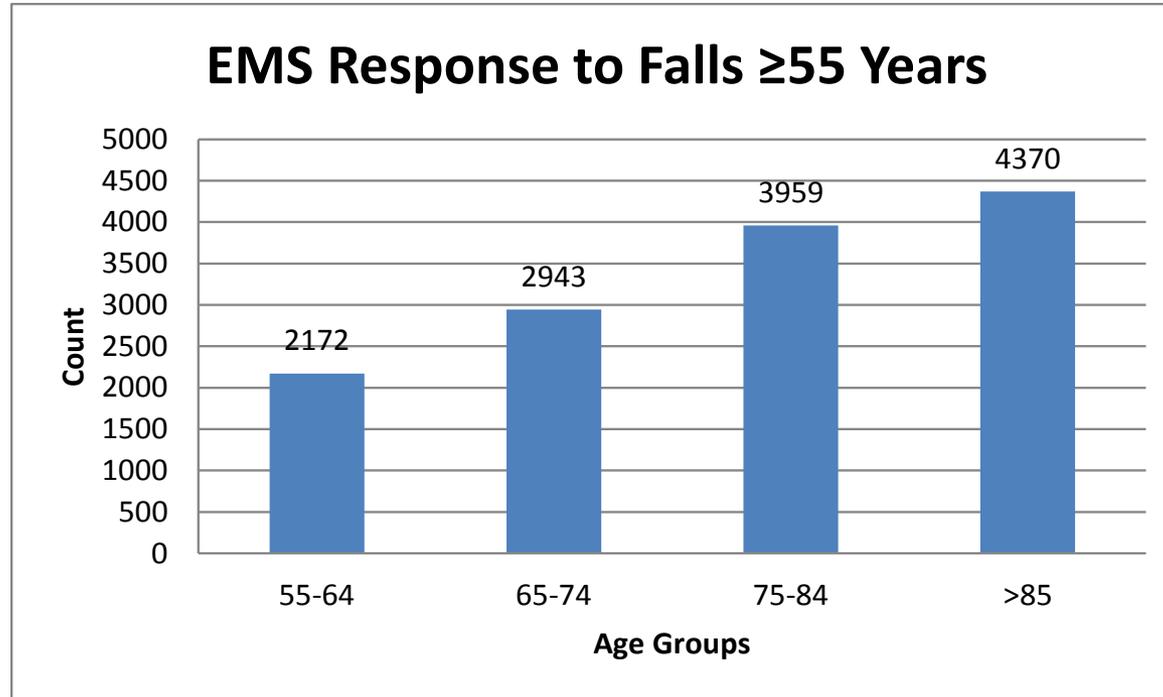
EMERGENCY RESPONSE TO FALLS

≥55 YEARS

Inclusion Criteria

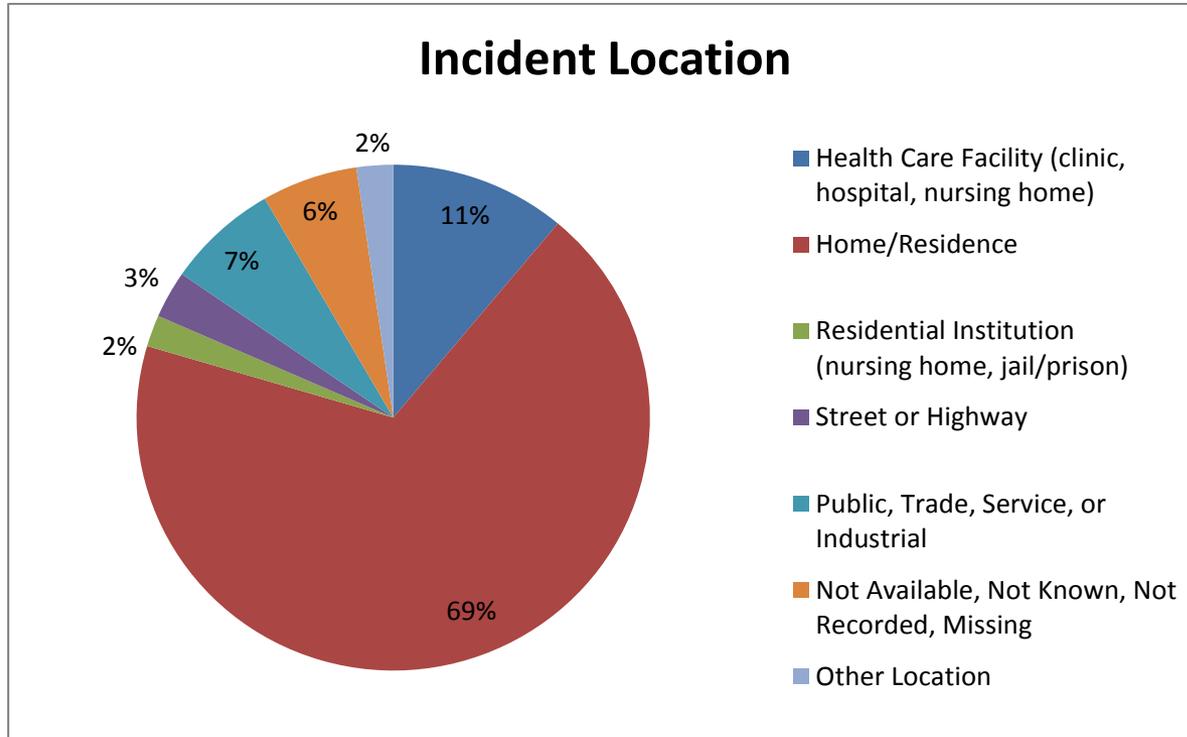
- **Date Range: Calendar year of 2013**
- **Restricted to: Dispatch Complaint = 'Fall Victim' or Cause of Injury contains 'fall', type of service = '911 response', age > 54**
- **Data pulled on 1/27/14**

Age Ranges



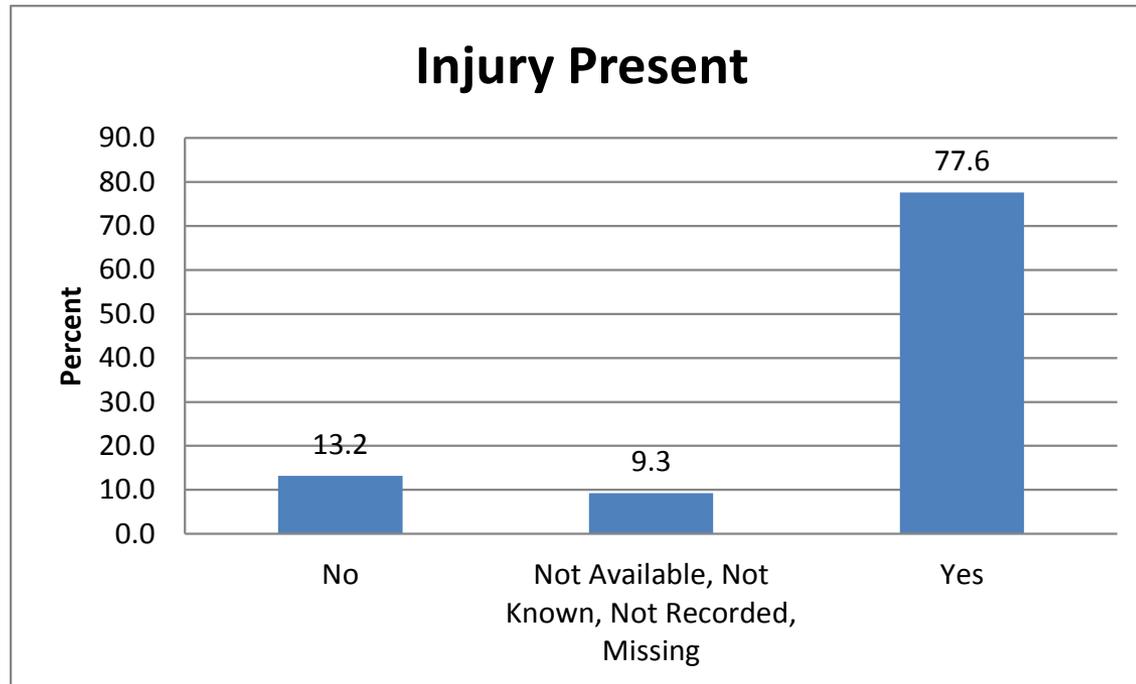
- Of the 13,444 fall-related EMS calls in 2013, 1/3 of patients were 85 or older.

Incident Location



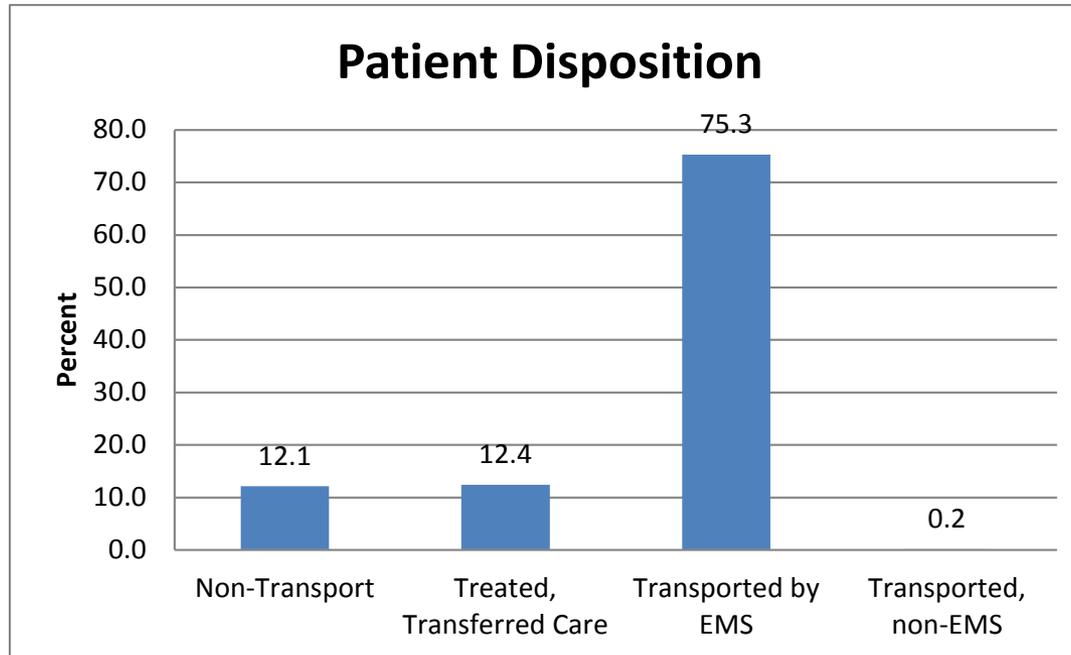
- 69% at home
- 11% at a health care facility

Injury Present



- Majority of falls where an ambulance was called resulted in injury

Patient Disposition



- $\frac{3}{4}$ were transported to the hospital by EMS

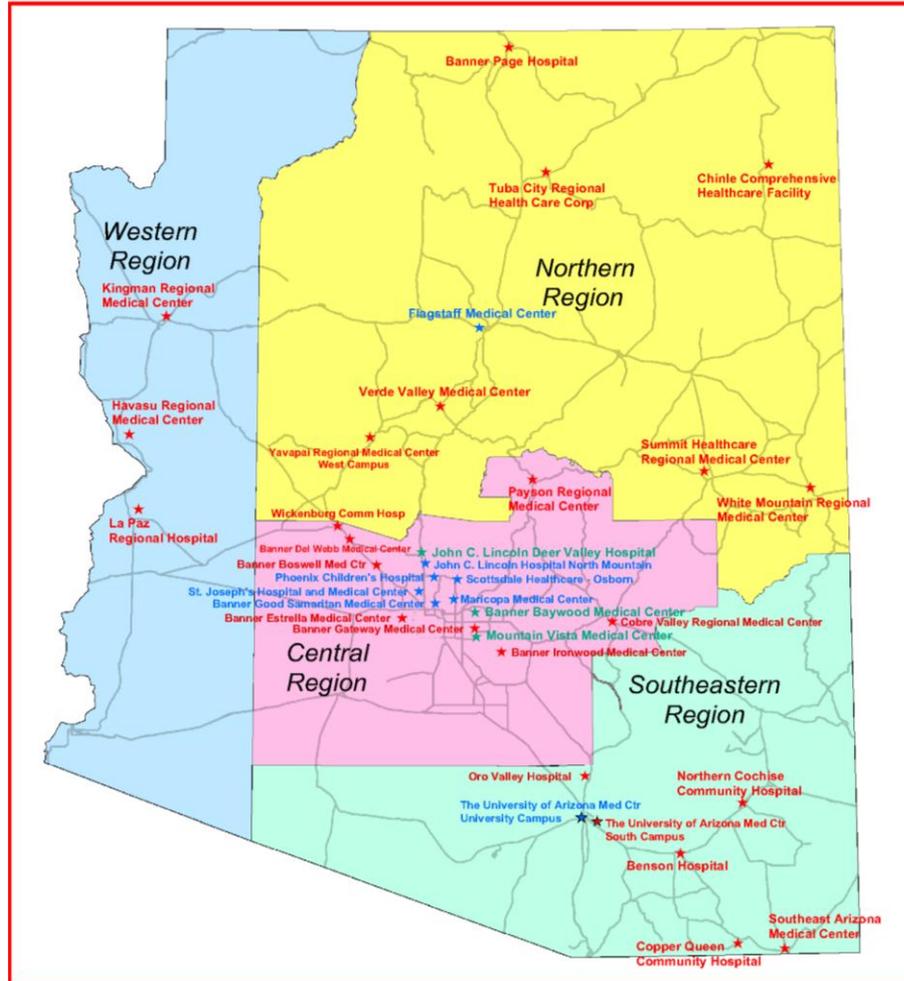


ASTR is a data registry using data from state designated trauma centers used for performance improvement and quality assurance. In 2012, there were 31 hospitals reporting to ASTR, including 8 Level I Trauma Centers, 3 Level III Trauma Centers, 16 Level IV Trauma Centers, and 4 non-designated hospitals

TRAUMATIC INJURIES DUE TO FALLS ≥55 YEARS

EMS REGIONS AND TRAUMA CENTERS

January 10, 2014



Level I Trauma Center

Level III Trauma Center (Provisional)

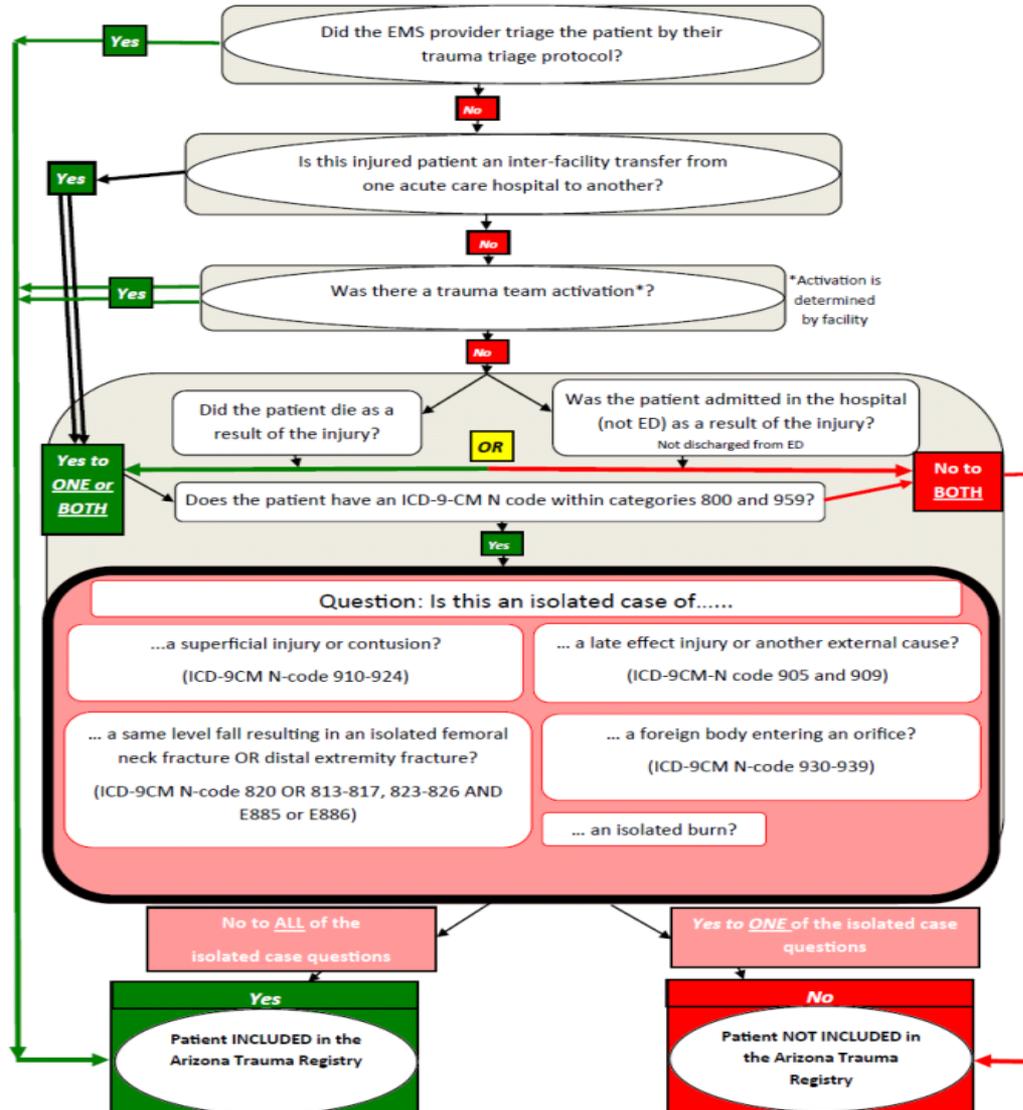
Level IV Trauma Center

Inclusion Criteria

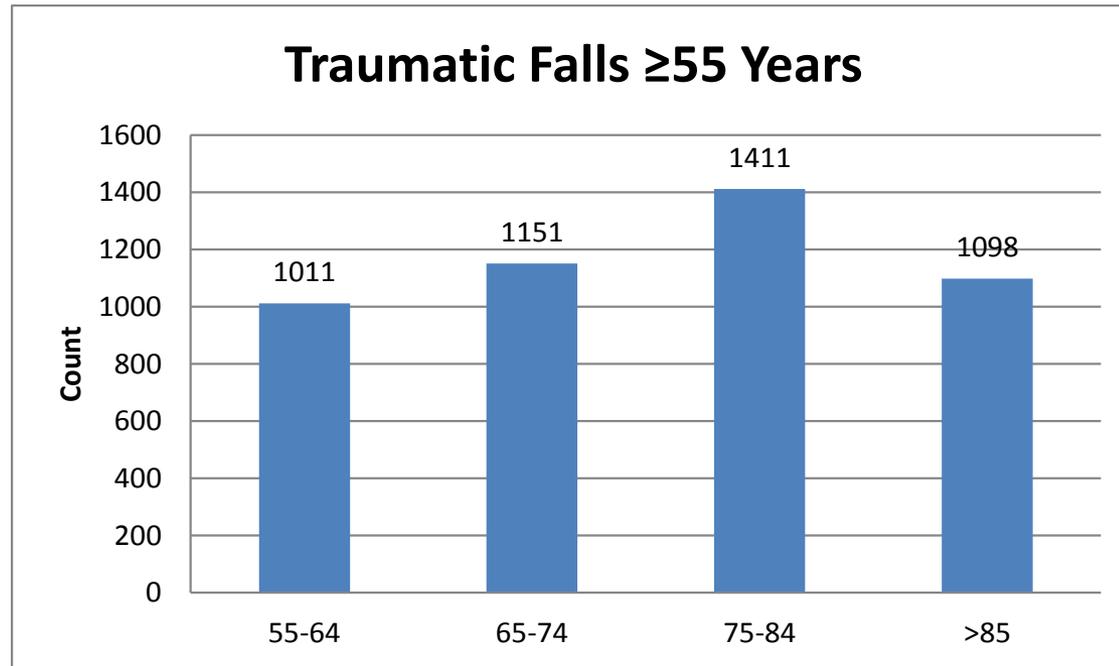
- **Source: AZ State Trauma Registry**
- **Date Range: Year of 2012**
- **Restricted to: Falls, Age \geq 55 Years**

Inclusion Criteria

2013 Arizona Trauma Registry Inclusion Criteria

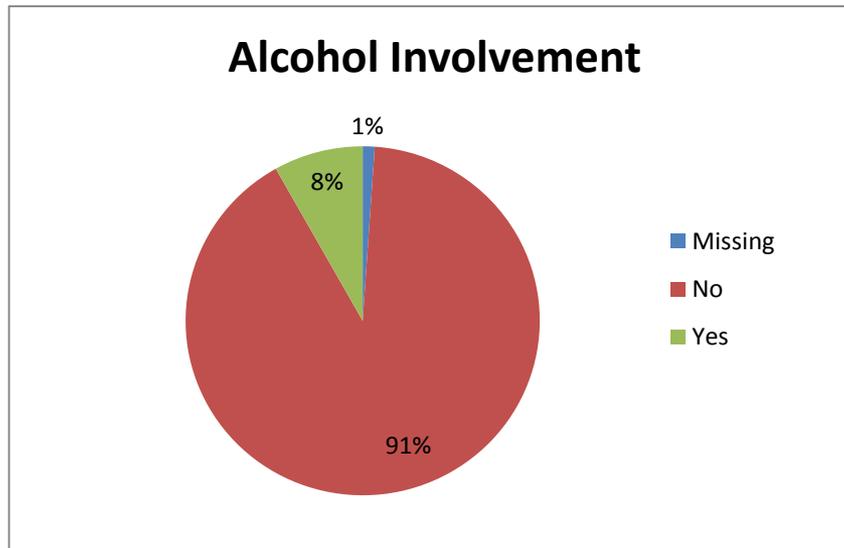


Age Ranges



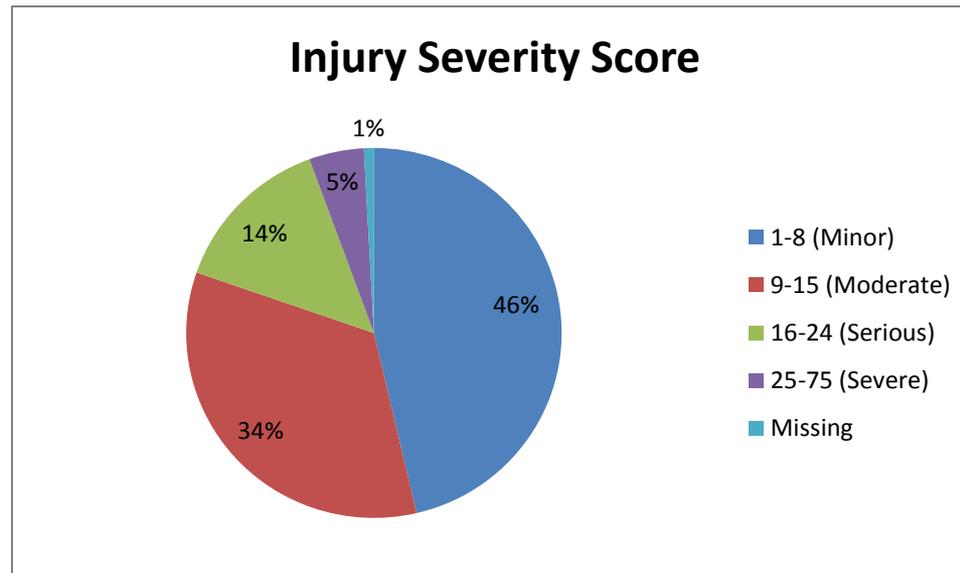
- Of the 4,671 fall-related traumas in 2012, 30% of patients were 75-84.

Alcohol Involvement



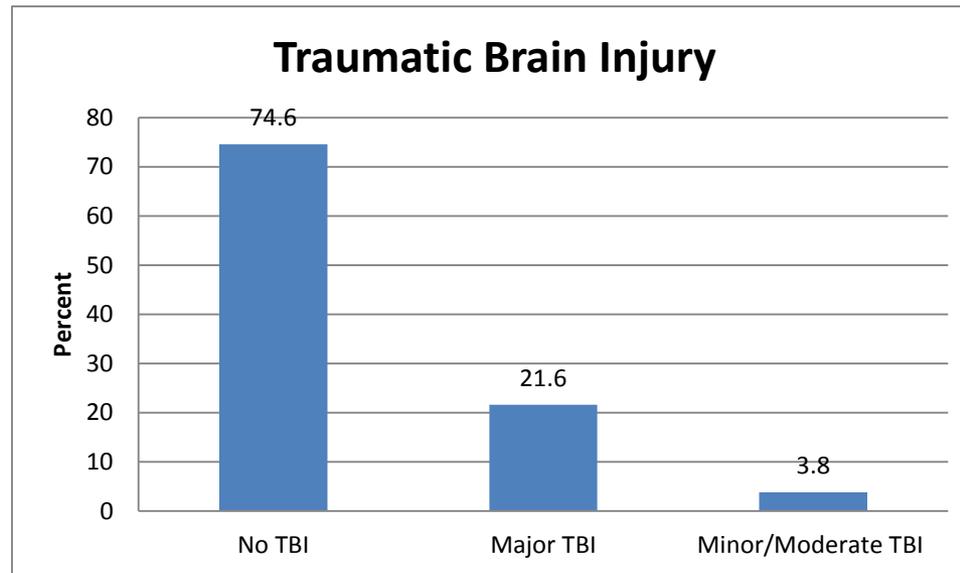
- Alcohol was involved in 8% of fall-related traumas in the 55+ age group

Injury Severity Score



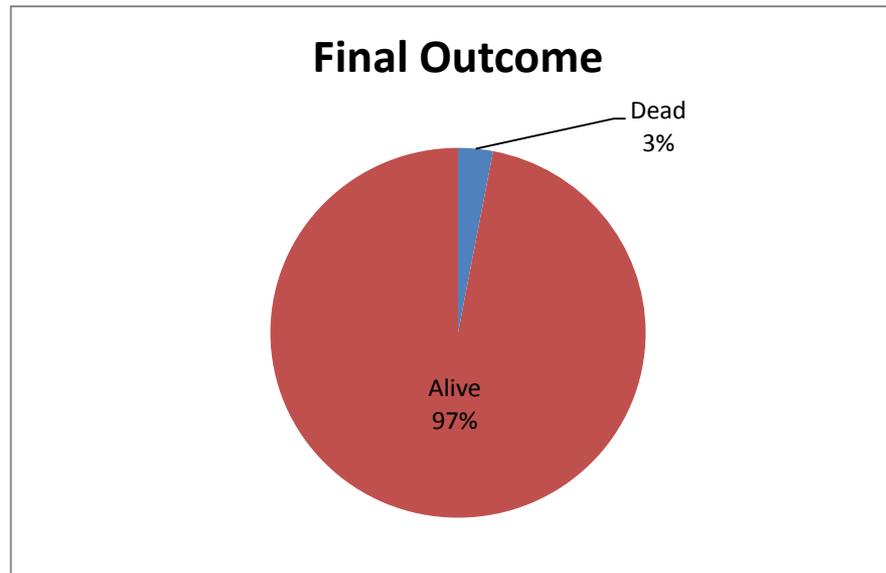
- More than half of traumatic falls result in moderate to severe injuries

Traumatic Brain Injury



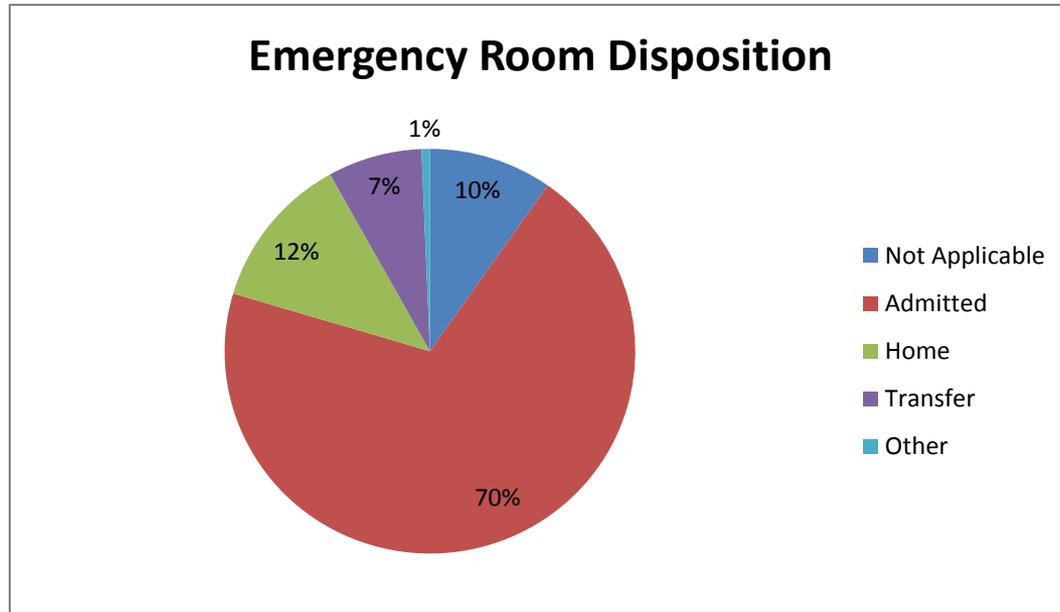
- $\frac{1}{4}$ traumatic falls result in a traumatic brain injury

Final Outcome



- 140 (3%) traumatic fall patients did not survive their injuries

Emergency Room Disposition



- The majority of traumatic falls patients were admitted to the hospital
- Only 12% were discharged home

Total Hospital Charges

\$29,193

- The median hospital charge for an episode of care at a trauma center for fall victims ≥ 55 years old in 2012
- Refers to the whole dollar amount charged by the trauma facility, not the actual reimbursement received