

Outcomes following cardiac arrest in remote areas of the Northern Territory

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CareFlight



Background

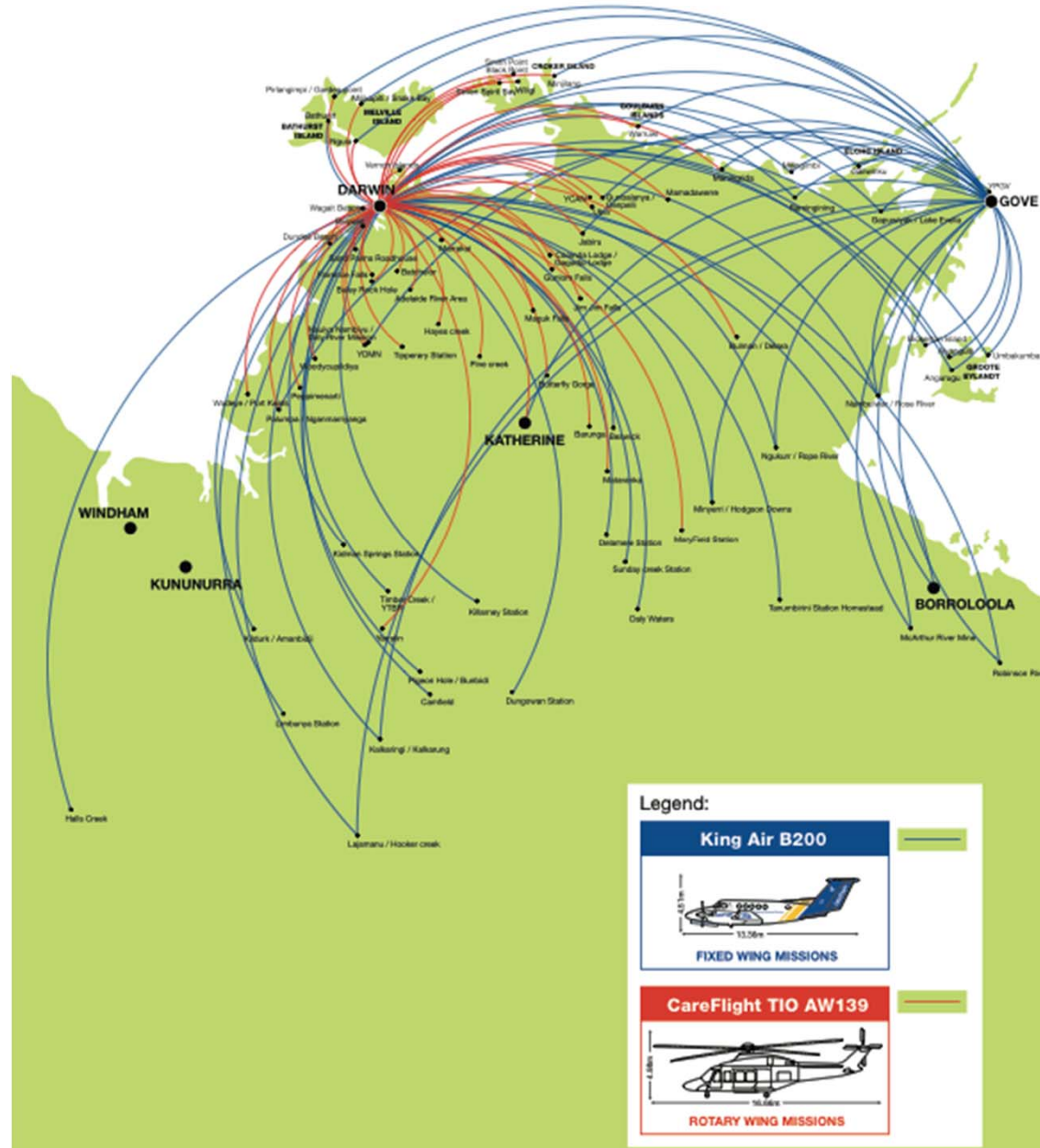
- Common cause of death
- Poor survival
 - Worldwide mean 7%
 - Australian mean 11%
- Some research looking at rural outcomes
 - Significantly higher mortality for rural/lower population density
- No research looking at remote outcomes
- Presumably would have worse outcomes



The Scene

- Significant difference to road based ambulance service
- Emergency response structure
 - Primary: Remote health clinic
 - Retrieval: Top End Medical Retrieval Service
- Prolonged time to hospital
- CareFlight aim:
 - Bring critical care management to the patient in the remote community





It's about the patient

CareFlight

Aim

- Identify all cardiac arrest referrals
- Primary rhythm
- Team composition
- Response times
- Interventions
- Timings to CPR/ALS
- Duration of CPR
- Location
- Indigenous status
- Outcome
 - ROSC
 - ROSC Maintained
 - Survived Event
 - Survival at 24 hours
 - Survival to Discharge
 - Survival at 28 days



Method

- Retrospective
 - Jan 2012 to Dec 2014
- Retrieval medical database
 - Diagnosis of cardiac arrest
 - Intervention of CPR
 - All patients not transported due to death
- JADECARE computer based patient records
- Only primary cardiac causes included

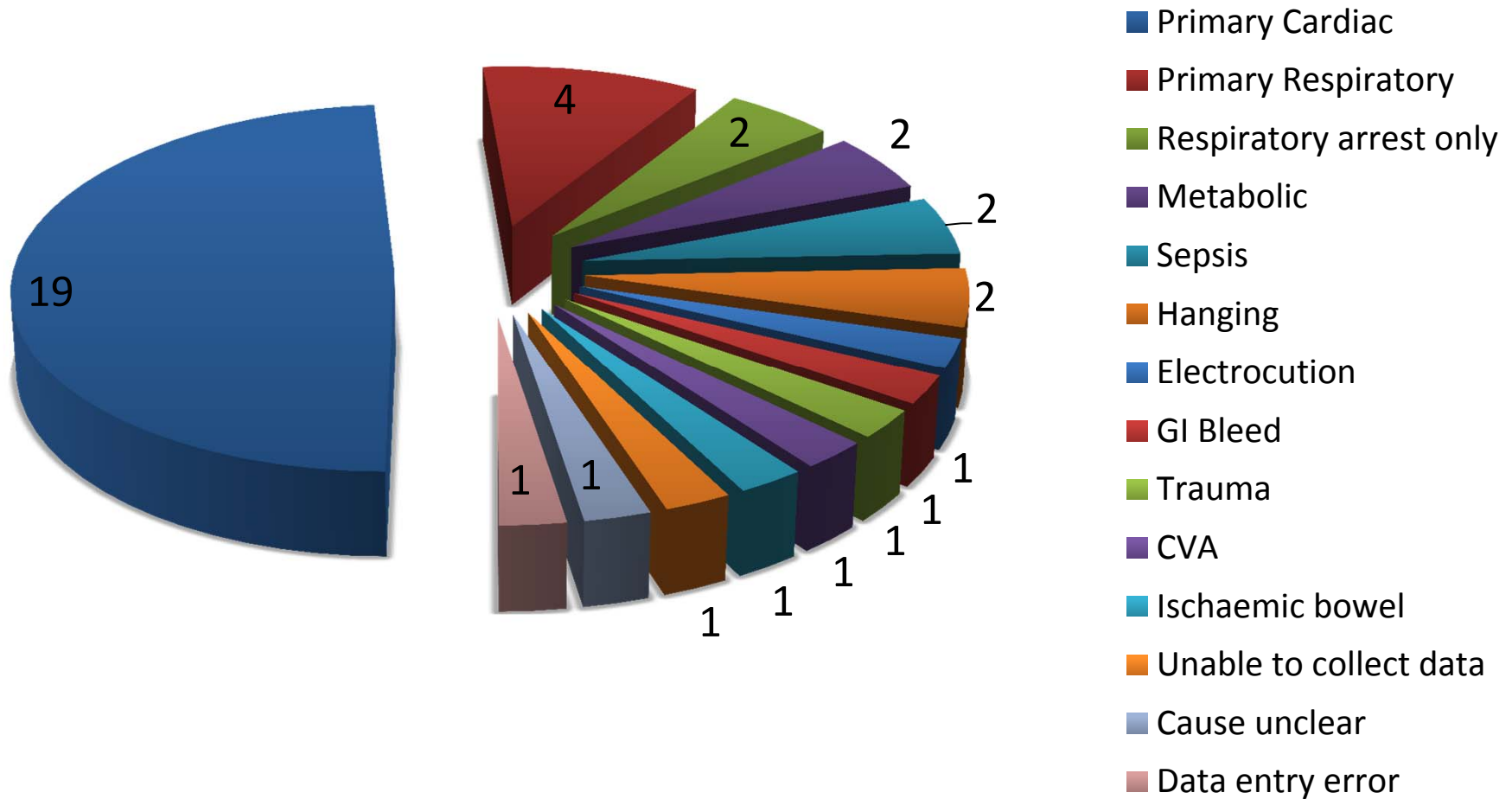


Demographics

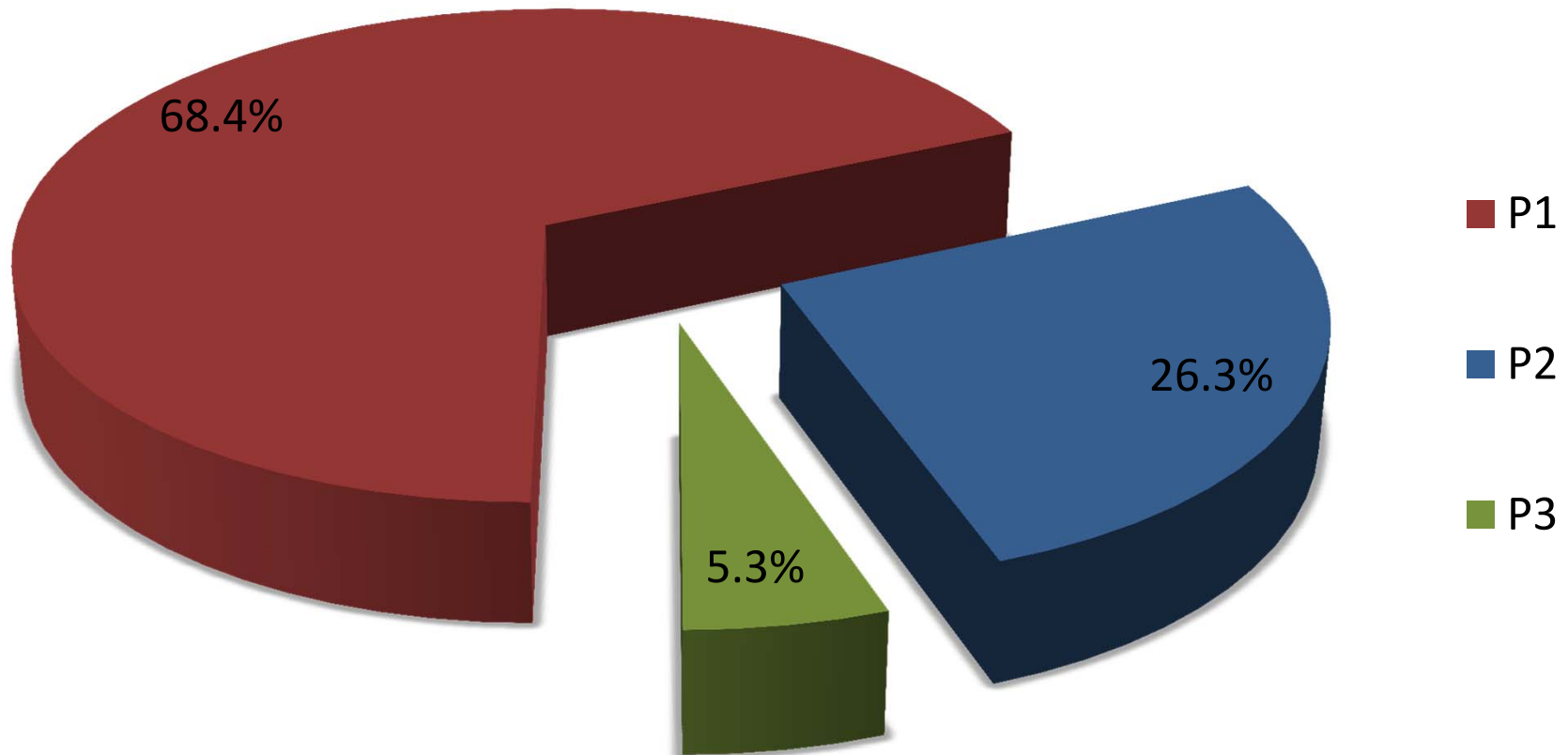
- 39 cases identified
- 19 cardiac aetiology
- 10:9 Male:Female
- 89.5% Indigenous Australians
- Median Age – 40 years



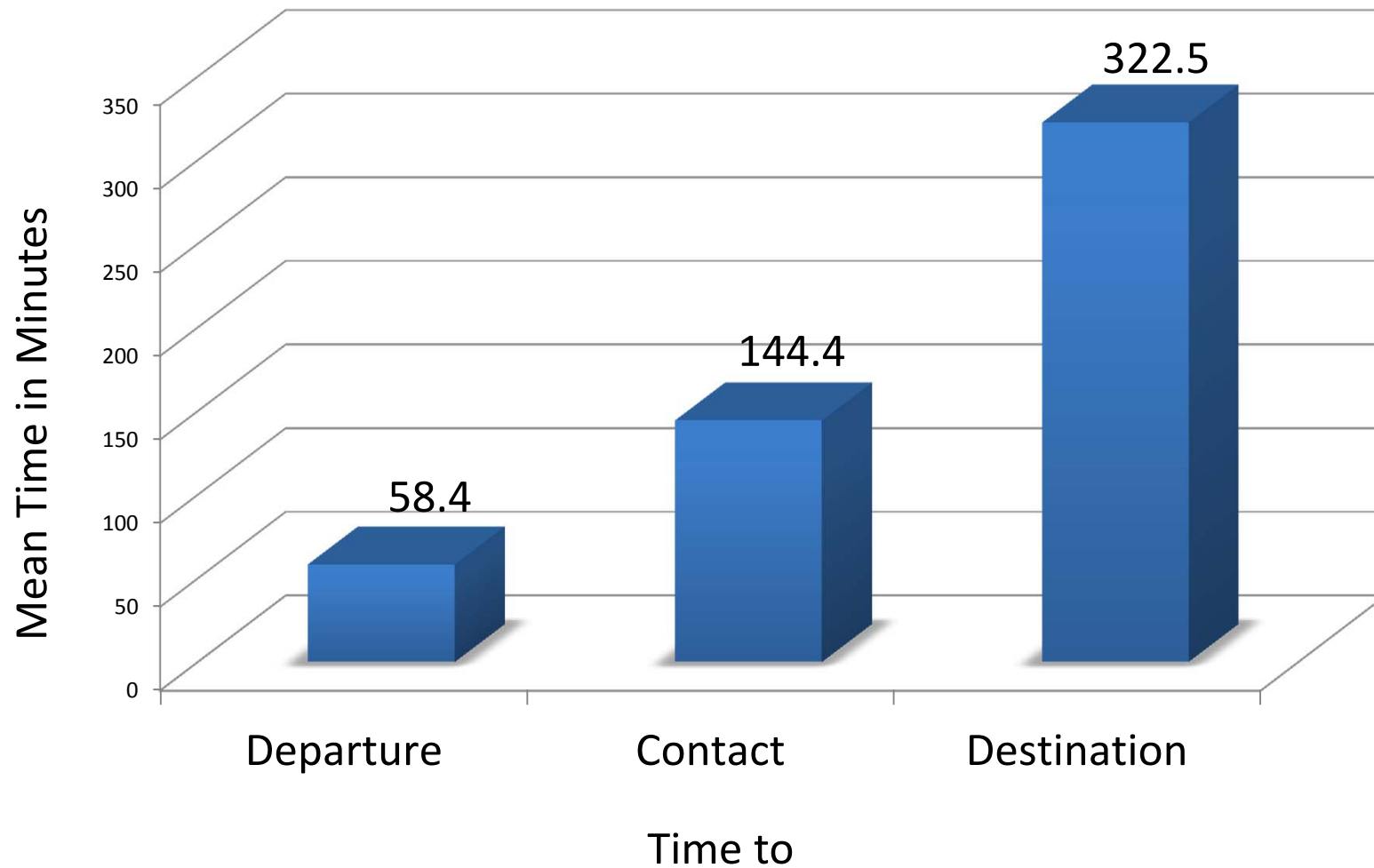
All Causes of Arrest



Prioritisations



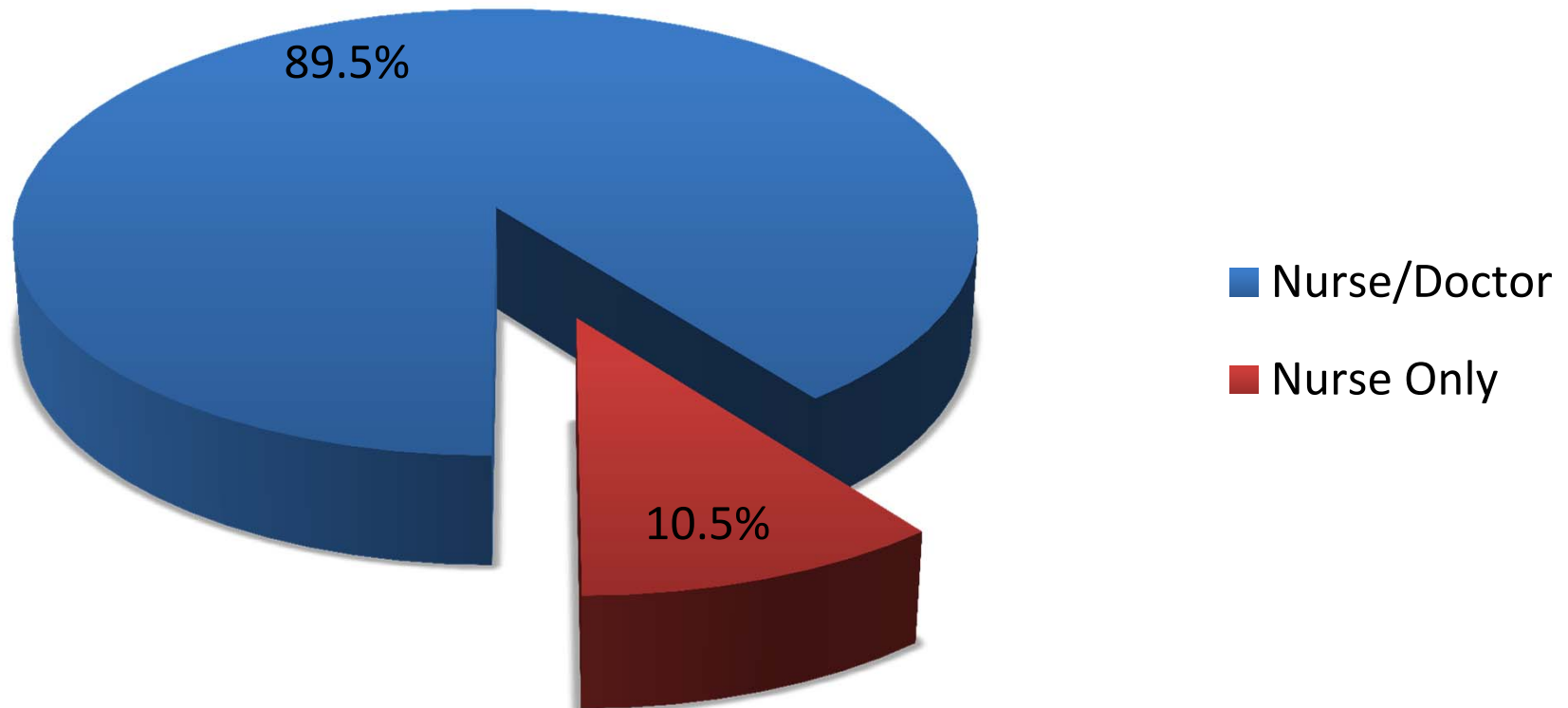
Timings



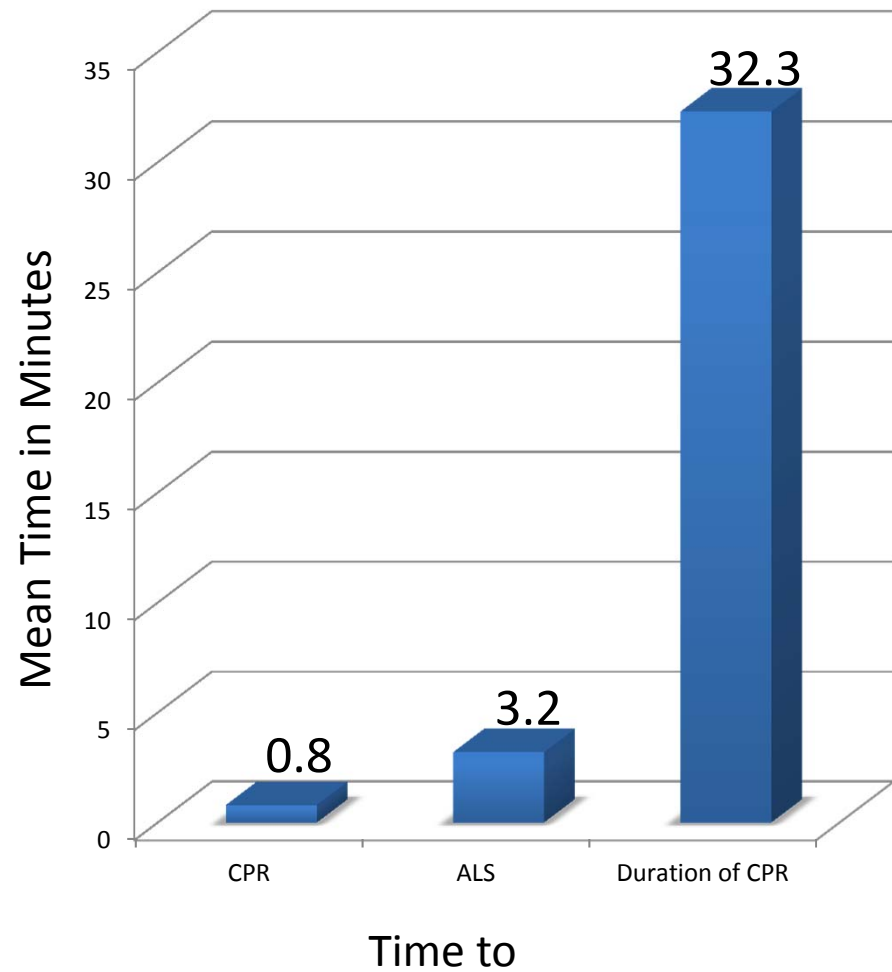
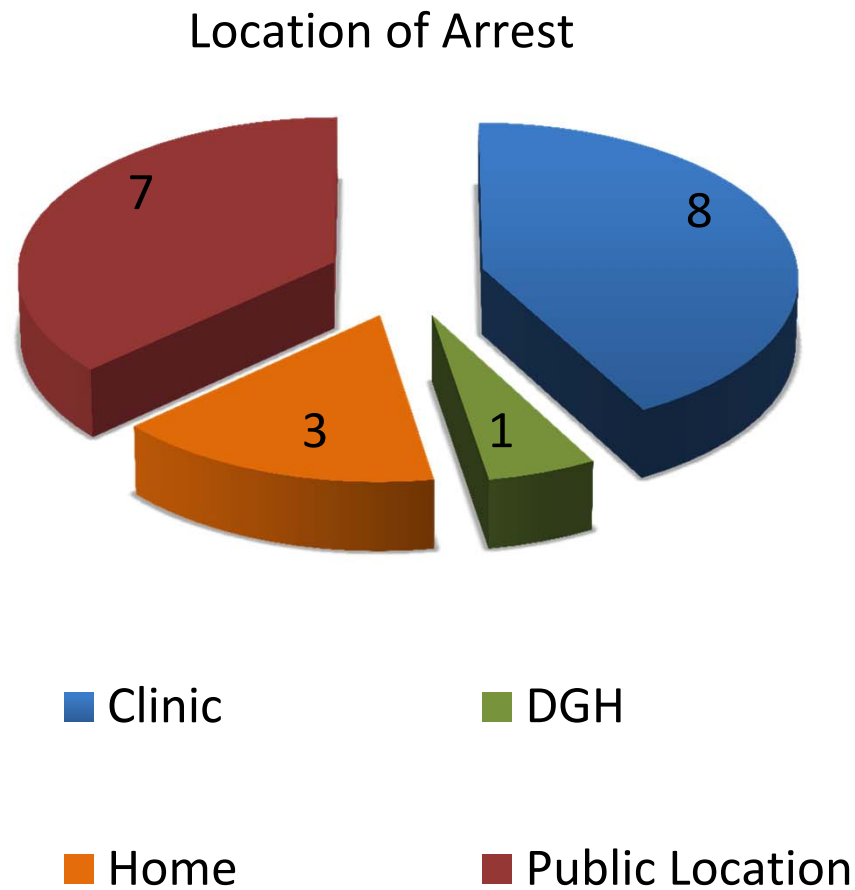
It's about the patient



Team Composition

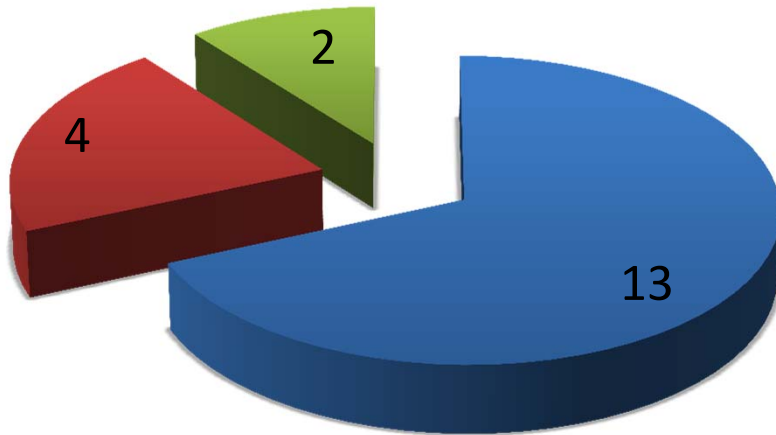


Arrest Details

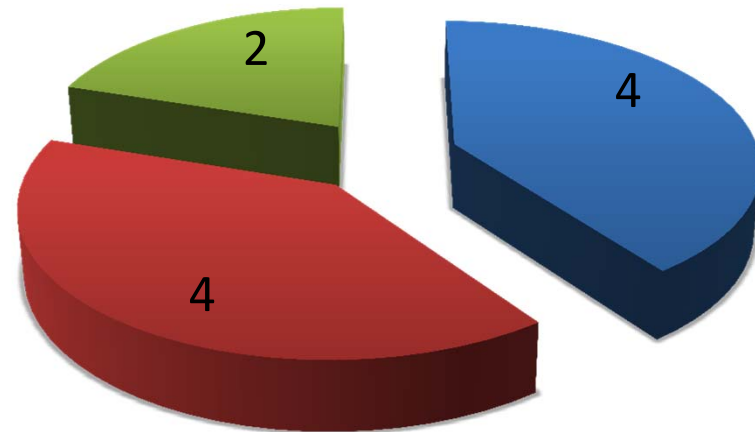


Bystander CPR

Overall

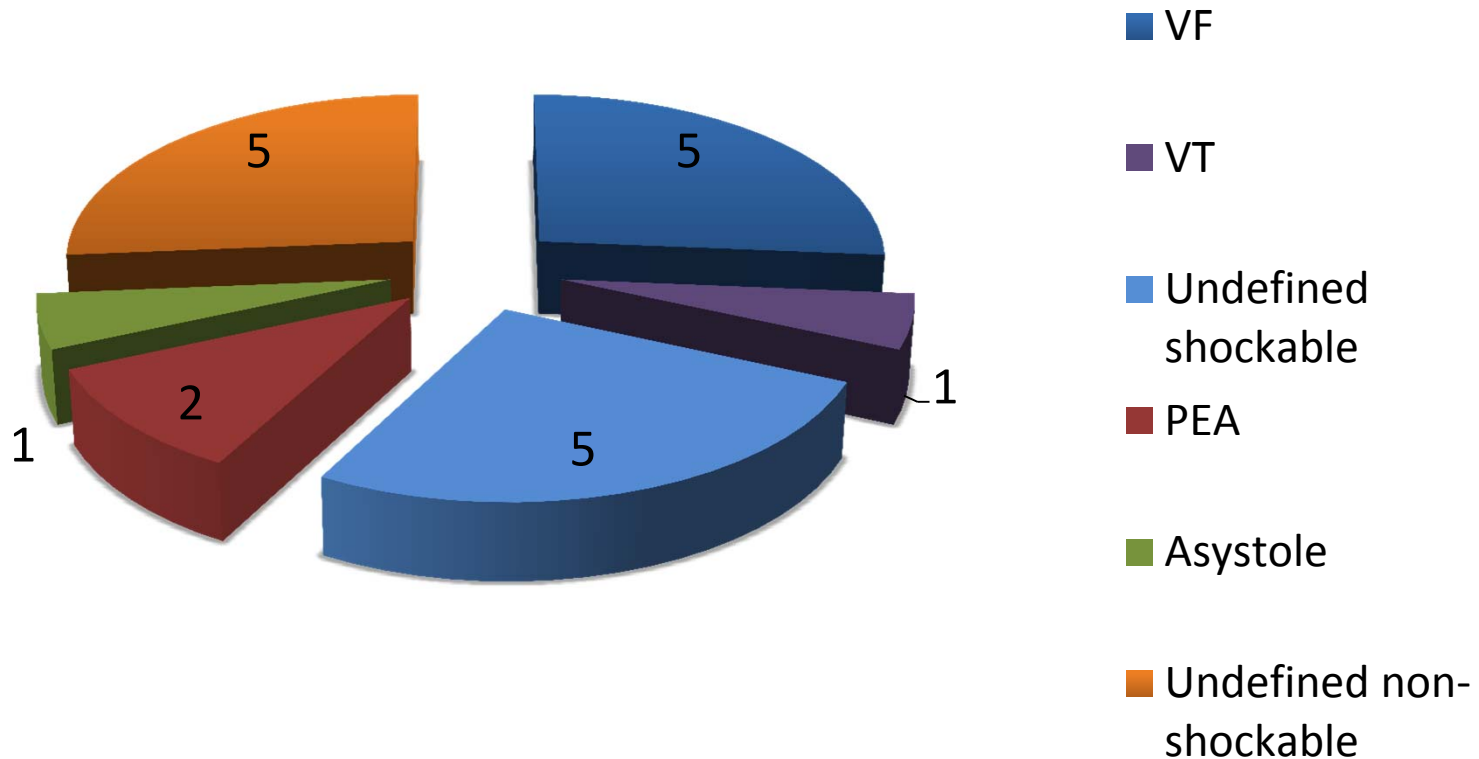


Home/Public locations



■ Bystander CPR ■ No Bystander CPR ■ Unknown

Presenting Rhythm



Interventions

- Mean 2.6 shocks
- Mean 1.7 doses Adrenaline
- Amiodarone in 4 cases
- Atropine in 2 cases
- Thrombolysis in 3 cases
- Prior to retrieval
 - Intubation in 5 cases
 - LMA in 2 cases
- By retrieval team
 - Intubation in 5 cases
 - LMA in 1 case

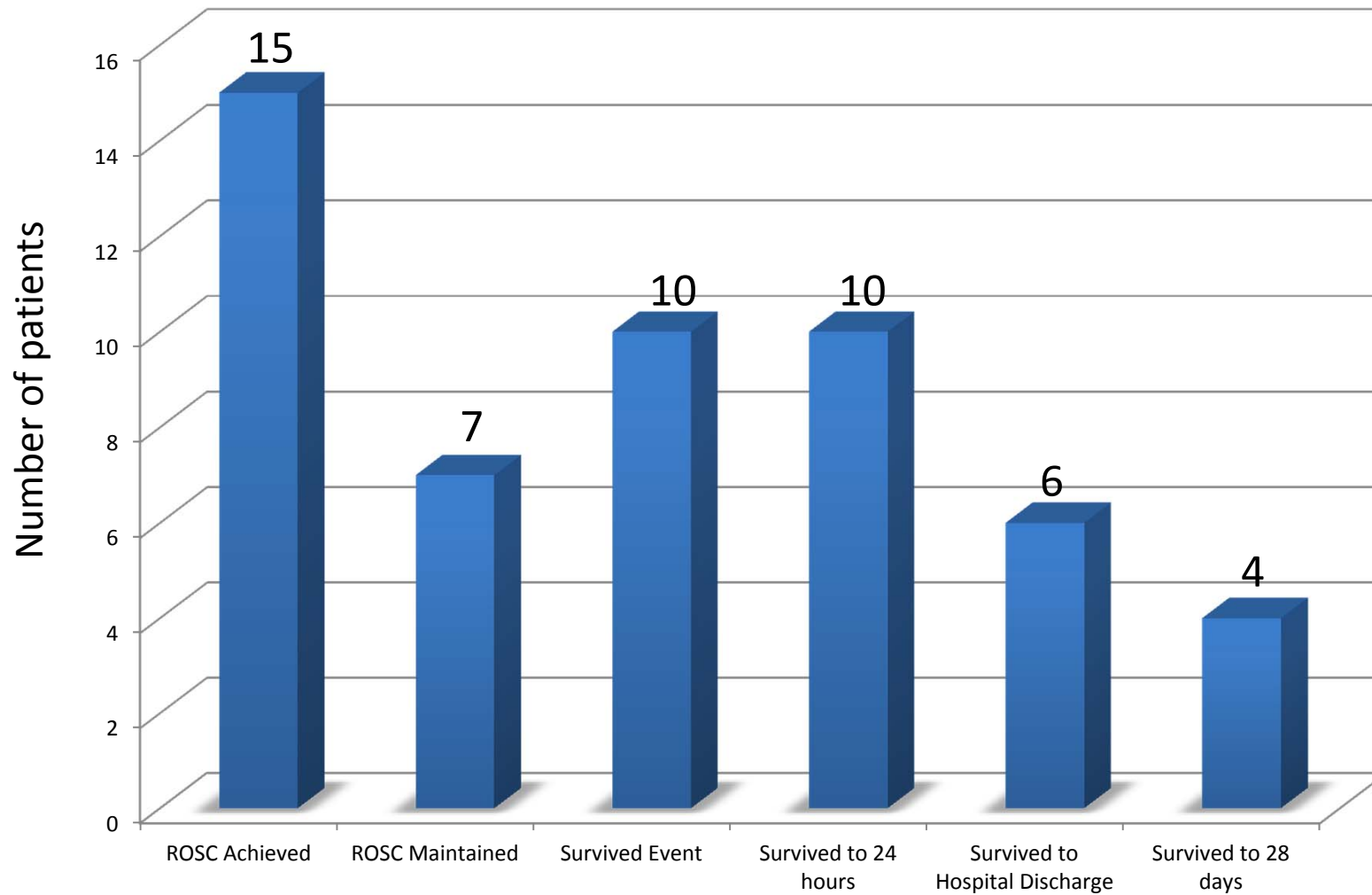


Admission Information

- 10 Cases Survived to hospital
- 6 to ED, 4 to ICU
- 9 had ITU admission
- Mean ITU stay – 5.2 days
- Mean Hospital stay – 14.3 days



Survival



It's about the patient



Summary

- Limited by small sample size
- Survival rate appears good
 - At least comparable to survival rate reported worldwide
- To increase sample size
 - Extend period of data collection
 - Introduce state wide cardiac arrest registry
- Other recommendations
 - Continued public education in recognition & CPR
 - Regular BLS training for remote health clinicians

