

***The OPALS  
Prehospital Research  
Group***



**ONTARIO PREHOSPITAL ADVANCED LIFE SUPPORT STUDY**

***Annual Site Investigators Meeting - 2007***

***The Resuscitation Outcomes  
Consortium Studies:  
The ROC Epistry***



# ***ROC Epistry Primary Aims***

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- **A comprehensive ongoing data infrastructure to facilitate ROC clinical trials**
- **Define the incidence and outcome of major trauma and out-of-hospital cardiac arrest**
- **Describe the relationships between resuscitation performance and EMS structure**
- **Evaluate relationships between outcome and patient, EMS, regional, and temporal factors**

# ***Primary Aims Continued...***



- **Will become world's largest traumatic injury and cardiac resuscitation data sets:**
  - **10,000/year major trauma**
  - **17,500/year cardiac arrest**
- **Opportunity to develop and assure quality of data collection and communication systems among EMS systems, sites, and DCC**
- **Will facilitate subsequent clinical trials where timely acquisition of quality data is essential**

# ***Purpose of the ROC Epistry***

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- **Launched in December 2005**
- **EMS providers are becoming familiar with rigorous data gathering and quality control**
- **ROC DCC staff conducted field visits to all sites to review sample cases**
- **Employs both web-based or batch upload data entry**
- **Comprehensive operations manual with detailed definitions of all variables**

# *ROC Site Epistry Update*

## *November 6, 2007*

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- **47,007 cases** enrolled since December 2005
- **12,774 cardiac arrests** enrolled since January 2007
  - 7,456 were treated
- **5,196 trauma cases** enrolled since January 2007
  - 4,458 were treated

# Inclusion Criteria

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## Cardiac Arrest

- All ages
- treated by EMS & non-treated (code 5)
- DNR patients
- Non-cardiac etiology (i.e. hanging, drug OD, drowning etc.)

## Trauma

- SBP  $\leq$  90
- RR  $<$  10 or  $>$  29
- GCS  $\leq$  12
- Intubated
- Died in the field

*\* Any one or more of the above with a blunt , penetrating or burn injury*

# *What Do We Capture?*

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- EMS time intervals
- EMS medical and operational variables
- Utstein variables
  - trauma and cardiac
- CPR process variables
  - Hands off, CPR frequency, ventilations

Complete this form for:  
 -each episode meeting the trauma or cardiac arrest  
 definition as outlined in question 2  
 Main data source: PCR/Dispatch



Date of episode: [ ] / [ ] / [ ] (mm/dd/yyyy)  
 Time call received at dispatch (24hr clock): [ ] : [ ] : [ ] (hh:mm:ss)  
 Incident Number: (Optional) [ ] - [ ] - [ ]  
 Episode ID: (always use when referring to this episode)  
 [ ] - [ ] - [ ]  
 From PCR/other  
 From dispatch

**1) EMS response:**

Arriving Vehicle	Agency Name	Vehicle ID	Number of Personnel	Service Level				Time of Arrival (hh:mm:ss, 24hr)
				BLS	BLS-D	BLS+	ALS	
1 <sup>st</sup>	[ ]	[ ]	[ ]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[ ] : [ ] : [ ]
2 <sup>nd</sup>	[ ]	[ ]	[ ]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[ ] : [ ] : [ ]
3 <sup>rd</sup>	[ ]	[ ]	[ ]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[ ] : [ ] : [ ]
4 <sup>th</sup>	[ ]	[ ]	[ ]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[ ] : [ ] : [ ]

**2) Episode characteristics: (check all that apply)**

Cardiac arrest: Definition  
 Out-of-hospital cardiac arrest (from any cause), evaluated by organized EMS personnel and:  
 Treated by EMS - receive attempts at external defibrillation (by lay responders or emergency personnel), or receive chest compressions by organized EMS personnel; OR  
 Not treated by EMS - are pulseless but do not receive attempts to defibrillate or CPR by EMS personnel. This group will include patients with do not attempt resuscitative directive signed and dated by a physician, extensive history of terminal illness or intractable disease, or request from the patient's family.

Traumatic injury: Definition  
 Out-of-hospital injury, evaluated by organized EMS personnel and:  
 Treated - meet one or more of the following physiologic criteria: (check all that apply)  
 Systolic blood pressure  $\leq$  90 mmHg  
 Respiratory rate < 10, > 29  
 Intubated  
 Glasgow Coma Scale score  $\leq$  12  
 Died in field  
 Dead at scene without EMS treatment  
 Number of patients on scene including current patient: [ ]

**3) Any indication that the patient was enrolled in another clinical trial?**

No  
 Yes, ROC clinical trial  
 Cardiac study → ROC Episode ID: [ ] - [ ] - [ ]  
 Trauma study → ROC Episode ID: [ ] - [ ] - [ ]  
 Yes, non-ROC clinical trial → Specify: [ ] (60)

Name of person responsible for data on this form

Name: [ ]

Enroll  
 draft version  
 10/31/05

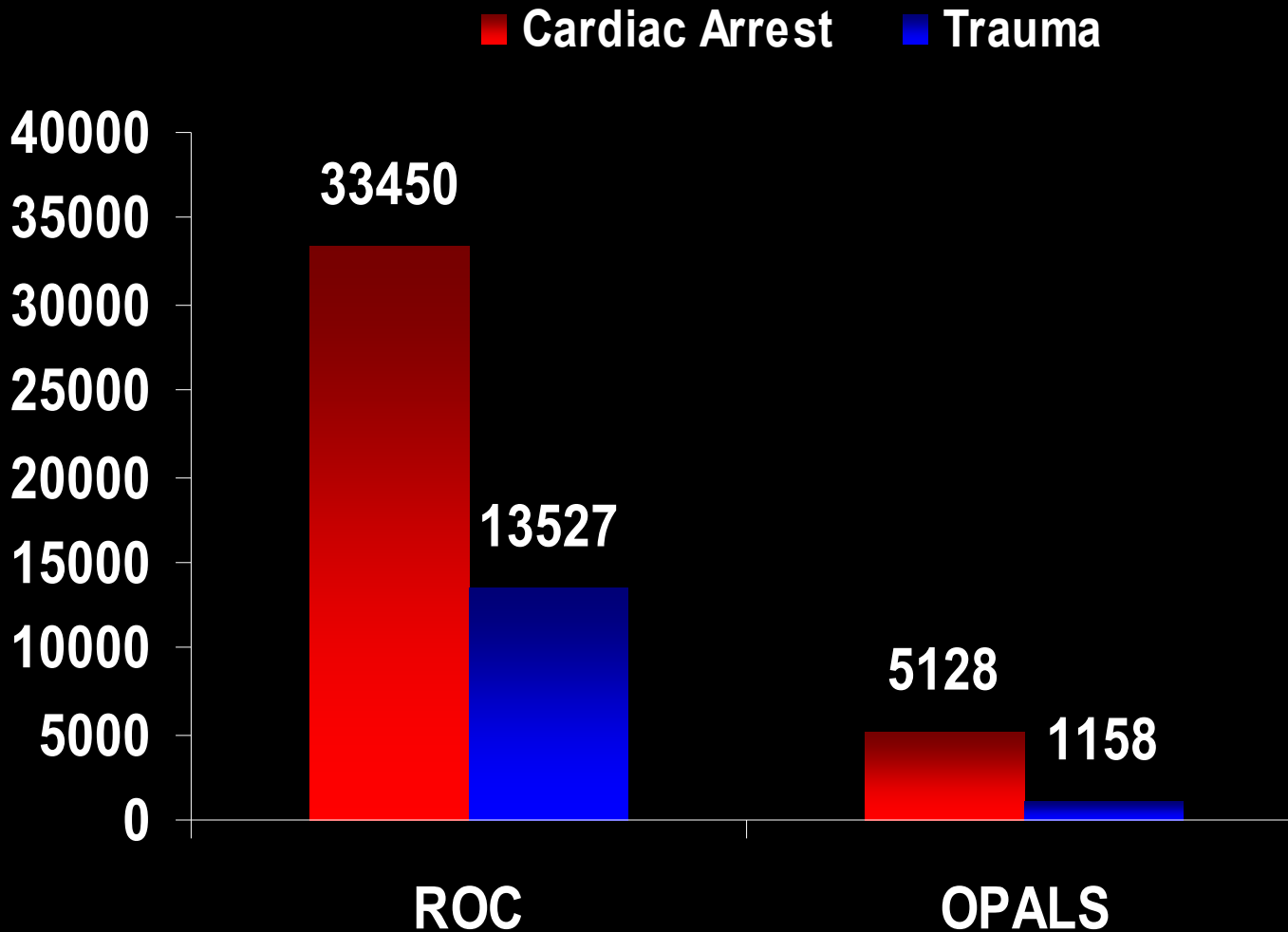
( end of form )

# ***OPALS PRG and the ROC Epistry***

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- Initial roll-out Dec. 1 2005
- ACRs and Dispatch Records within 2 weeks
- Survival info and ECG records later
- Expanded Cardiac
- Trauma now suspended

# Total Enrollment to Date



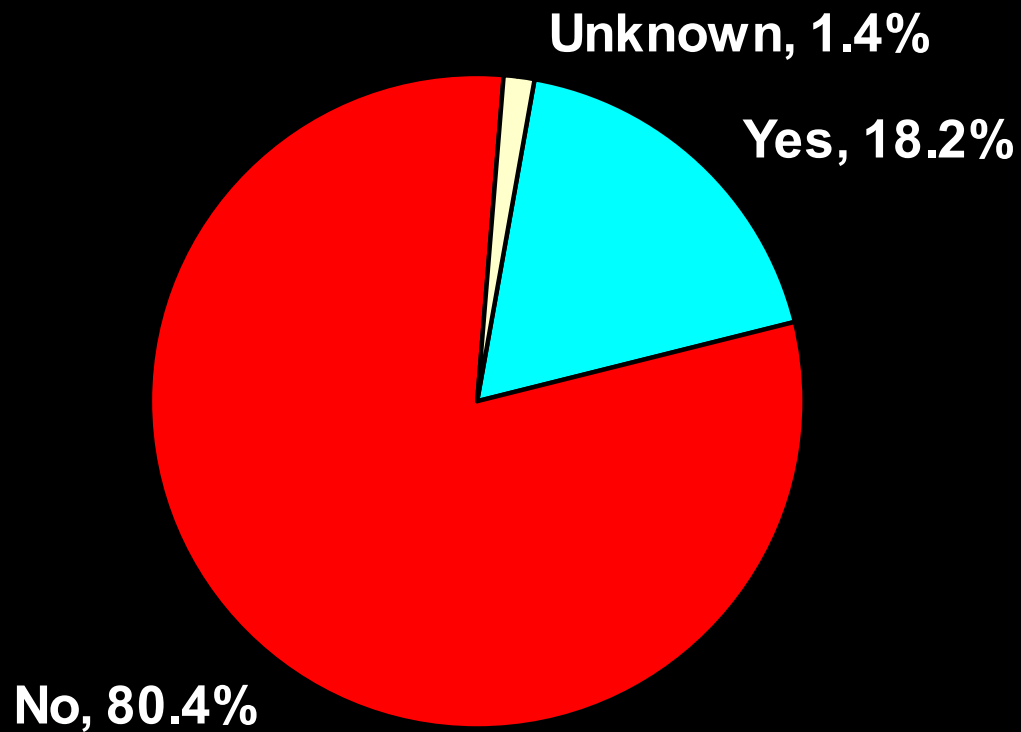
# **Cardiac Arrest Patient Characteristics**

## **(N=2,983)**

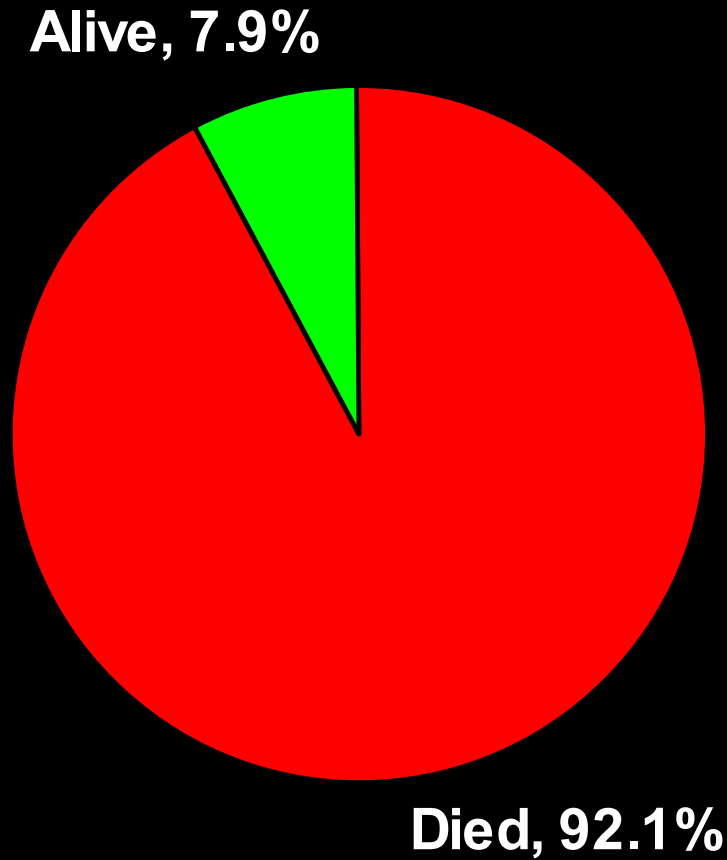
<b>Age in years (mean)</b>	<b>68</b>
<b>Male</b>	<b>64%</b>
<b>Bystander Witnessed</b>	<b>19%</b>
<b>Initial Rhythm (%)*</b>	
<b>VF or VT</b>	<b>11%</b>
<b>PEA</b>	<b>8%</b>
<b>Asystole</b>	<b>17%</b>
<b>AED no shock</b>	<b>6%</b>

\*56% unavailable, 1% not determined

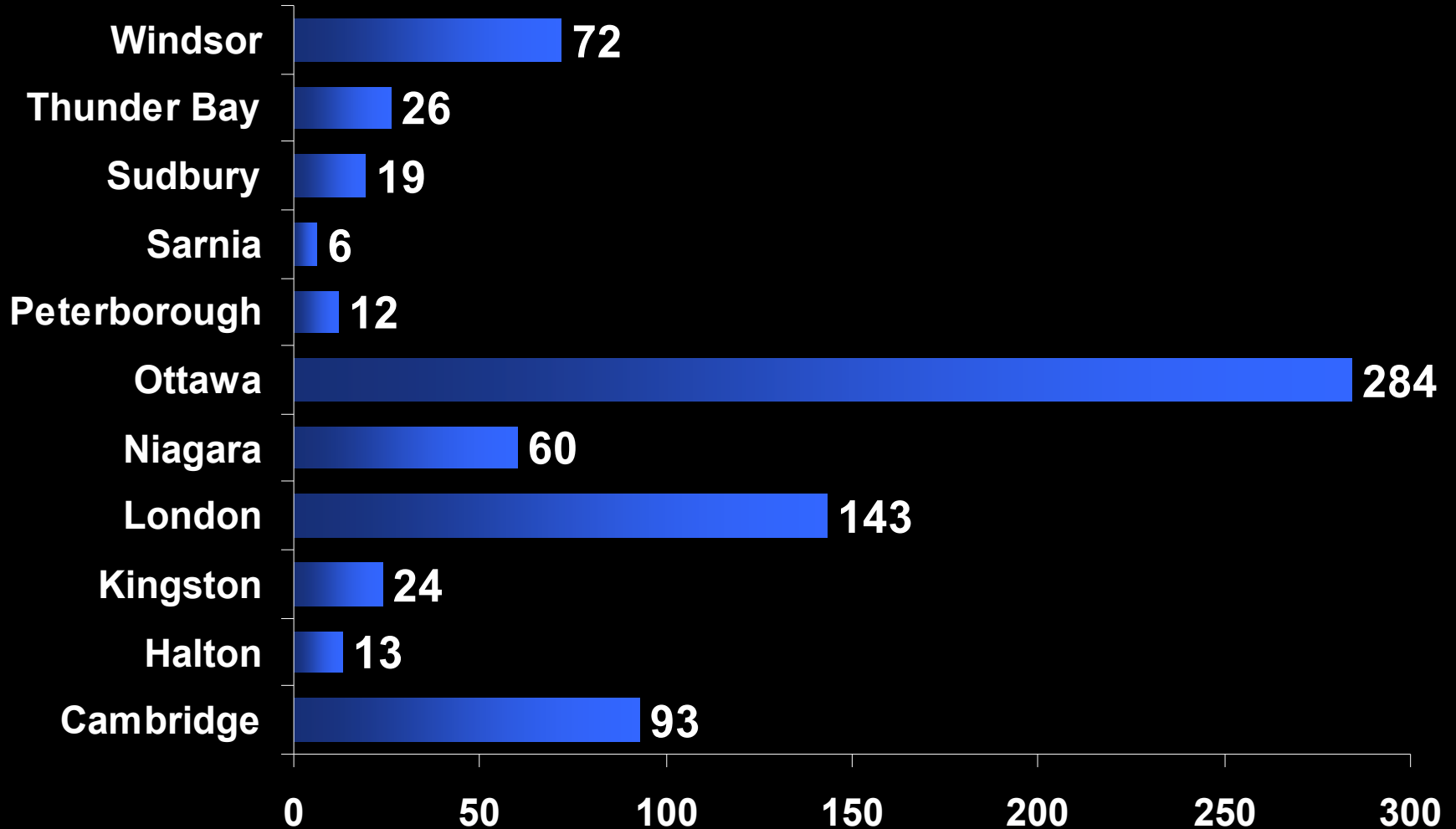
# ***Resuscitation by Bystanders*** **(N=2,983)**



# ***OPALS Cardiac Arrest Survival (N=1,164)***



# 2006 OPALS Trauma Enrollment by Site



# ***Trauma Patient Characteristics (N=763)***

<b>Age in years (mean)</b>	<b>39</b>
<b>Male</b>	<b>67%</b>
<b>Died at scene</b>	<b>16%</b>
<b>Transported to ED</b>	<b>78%</b>
<b>Alive not transported</b>	<b>0.1%</b>

# ***OPALS Trauma Survival (N=576)***

