

10 steps of GRA- Implementation

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10 Steps to Improve Cardiac Arrest Survival Rates

1. Establish a cardiac arrest registry
2. Begin Telephone- CPR with ongoing training and QI
3. Begin high-performance EMS CPR with ongoing training and QI
4. Begin rapid dispatch
5. Measure professional resuscitation using the defibrillator recording (and voice if possible)
6. Begin an AED program for first responders, including police officers, guards, and other security personnel.
7. Use smart technologies to extend CPR and public access defibrillation programs to notify volunteer bystanders who can respond to nearby arrest to provide early CPR and defibrillation
8. Make CPR and AED training mandatory in schools and the community
9. Work toward accountability – submit annual reports to the community
10. Work toward a culture of excellence



Step 1: Establish a cardiac arrest registry

Pan-Asian Resuscitation Outcomes Study (PAROS)

At

GVK Emergency Management and Research Institute (EMRI)

City: Secunderabad, State: Telangana, Country: India.



GVK EMRI-Login Updates

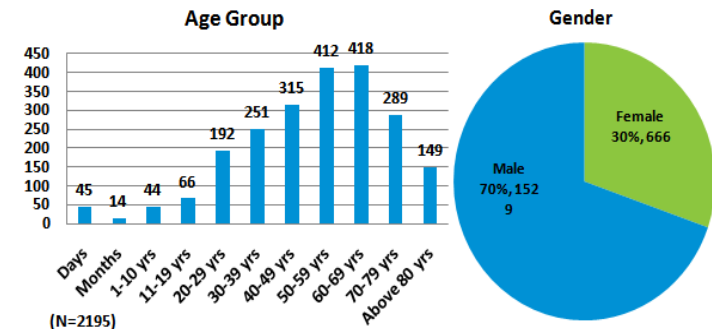
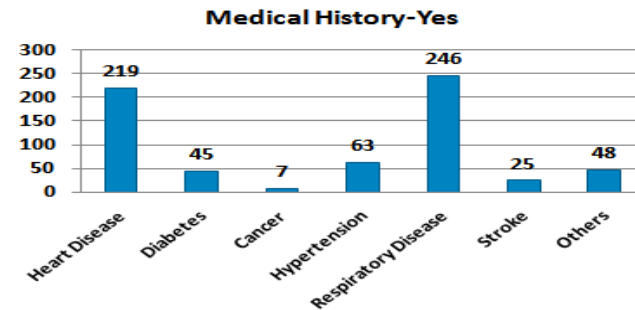
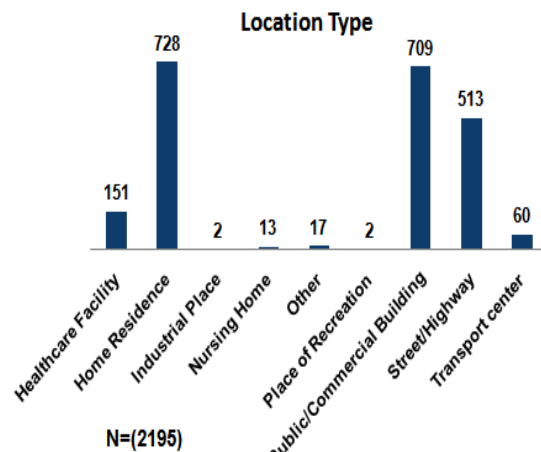


ePAROS Online Application of GVK EMRI Login: Updates

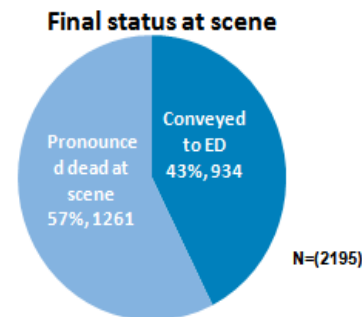
1. Login IDs created- 1. GVK EMRI.
2. City-Hyderabad (HYD) changed to State-Telangana (TLG).
3. Destination Hospital Type- Government ,Private and Trust Hospitals.
4. Hospital Outcomes: Patient status update from 48 Hrs Follow Up Process.
5. Site Number-001-Government. and 02 –Private Hospital Admissions.
6. Total records entered = 2200 (as on date)
7. Demo/Trail records = 5
8. Inclusion records = 2195
9. Months and Year of Inclusion data entry: Completed
December, 2015 , January to December 2016 and
January, February, March, April 2017 .
10. Data entry is in progress for remaining months from May 2017

GVK EMRI-EMS- Inclusion Sample

| Description of ePAROS Variables | GVK EMRI Data | Count |
|---------------------------------|------------------------|-------|
| Initial information | | |
| Case Number | Incident ID | 2195 |
| Country | India (IN) | 2195 |
| City/State | Hyderabad (HYD) | 270 |
| | Telangana (TLG) | 1925 |
| Site No. | | |
| | 01-Government Hospital | 599 |
| | 02-Private Hospital | 230 |
| | Site: Left blank | 1366 |
| Mode of Transportation | | |
| Patient brought in by | EMS | 2195 |



Disposition-Final status & Cause of Arrest at scene /en-route



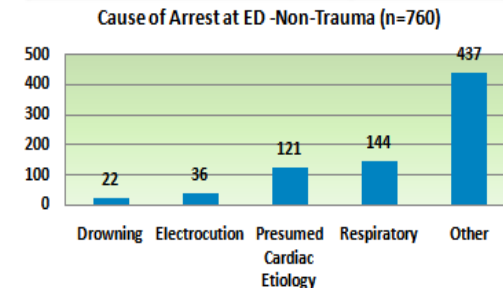
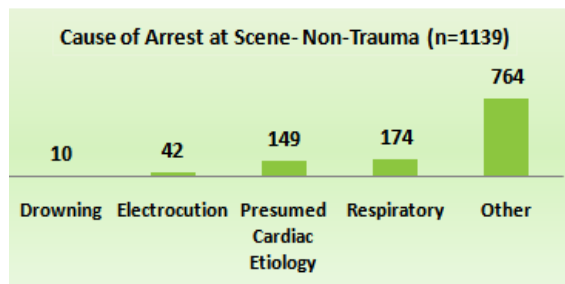
Disposition-At ED arrival and Cause of arrest at ED

| Patient's status at ED arrival | Total |
|--------------------------------|-------|
| N/A(Dead on scene) | 1261 |
| ROSC at scene | 11 |
| Ongoing resuscitation | 923 |
| Grand Total | 2195 |
| Cause of arrest-ED | Total |
| Non-Trauma | 760 |
| Trauma | 174 |
| Total | 934 |

Pre-hospital -Drug administration and CPR and ROSC at scene/en-route

| First CPR initiated by | Total |
|------------------------|-------|
| Ambulance Crew | 2195 |
| Grand Total | 2195 |
| ROSC at scene/en-route | Total |
| No | 2184 |
| Yes | 11 |
| Grand Total | 2195 |
| Medications given-Yes | Total |
| Epinephrine | 22 |
| Atropine | 33 |
| Dextrose | 20 |
| Total | 75 |

| Cause of Arrest at scene | Count |
|--------------------------|-------|
| Non-Trauma | 1139 |
| Trauma | 122 |
| Total | 1261 |



Step 2: Begin Telephone- CPR with ongoing training and QI

- Telephone CPR is in process



T-CPR application : NO, NO, then Go.

Incident Information
Emergency Group

Caller Information

Incident Id Call Date

Count Today Caller H

Latitude Longitude

Incident Information

District

City/Town

CallerName

Gender Male Female Tra

Emergency Information

Emergency Medical Police

Severity

Chief Complaints:

Vehicles Information

Vehicle details *

Hospital details

Assigned time Assigned To:

Chief Complaints

| Medical | Police | Fire |
|--|--------|------|
| Abdominal pain | | |
| Accident - Domestic/Non-vehicular | | |
| Accident - Vehicular | | |
| Allergic reaction - Drugs/Others | | |
| Amputations | | |
| Animal Bite/Insect Bite | | |
| Assault(Including Sexual Assault) / Violence | | |
| B.P.Problem Hypo & Hypertension (High B.P.) | | |
| Back pain(Non traumatic/ Non recent Trauma) | | |
| Bleeding in pregnancy | | |
| Bleeding injuries | | |
| Breathing problem | | |
| Burns | | |
| Cardiac | | |
| Chest pain | | |
| Choking | | |
| Diabetic problem (Sugar Problem) | | |
| Diarrohea/Dehydration | | |
| Drowning | | |
| Drunkenness | | |
| Electrocution lightning(Thunder Bolt) | | |

Is the patient conscious? YES NO

Is the patient breathing normally? YES NO

Medical

Police

Fire

Caller Information

Incident Id Call Date CallerName Caller Phone No

Incident Information

District Mandal Landmark

City/Town Village

Patient Information

Gender Age Years Chief Complaint

ERO Remarks

Vehicle Information

Assigned Vehicle Contact No Assigned Time

Nearby Hospital [Map point](#)

CPR Information

Rescuer CPR trained or not YES NO

Patient symptoms

Patient collapsed witnessed YES NO Time of collapse Time interval of collapse (Minutes)

Speaker mode on YES NO

Patient lying position - flat on hard surface YES NO

Lay rescuers position time YES NO

Proper Hand placement (Center of the chest between the nipples), straight arms and time YES NO

CPR Start time YES NO

Confirmation for chest recoil after each compression YES NO

Evaluate the chest compression rate (100-120 /min) YES NO

Chest compressions depth (Atleast 2 inches) YES NO

No of lay rescuers performed CPR (1/2/3/4/ more)

Availability and use of Public Access Defibrillator (PAD) YES NO

If used, was rhythm shockable YES NO

Chest compressions count loud YES NO

TCPR Remarks

Case Time : 174 Secs MAXIMUM CALL TIME EXCEEDED

[Close](#)

Summary



| Step No: | Description | Action |
|----------|--|------------------------|
| 1 | Establish a cardiac arrest registry | November 2015 |
| 2 | Begin Telephone- CPR with ongoing training and QI | Ongoing |
| 3 | Begin high-performance EMS CPR with ongoing training and QI | Jan - Mar 2018 |
| 4 | Begin rapid dispatch | Ongoing |
| 5 | Measure professional resuscitation using the defibrillator recording(and voice if possible) | January 18 onwards |
| 6 | Begin an AED program for first responders, including police officers, guards, and other security personnel. | January 18 onwards |
| 7 | Use smart technologies to extend CPR and public access defibrillation programs to notify volunteer bystanders who can respond to nearby arrest to provide early CPR and defibrillation | Independent Initiation |
| 8 | Make CPR and AED training mandatory in schools and the community | Yet to start |
| 9 | Work toward accountability – submit annual reports to the community | Yet to start |
| 10 | Work toward a culture of excellence | Yet to start |