# Mission: Lifeline Cardiac Resuscitation Systems of Care
## BARRIERS AND SOLUTIONS

### COMMUNITY LEVEL

<table>
<thead>
<tr>
<th>BARRIER: Lack of Bystander CPR</th>
<th>EXAMPLES</th>
<th>SOLUTION</th>
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</thead>
</table>
| Lack of recognition of cardiac arrest | - Lack of recognition of cardiac arrest  
- Lack of knowledge of basic first aid emergency care/CPR  
- Apprehension about performing CPR correctly  
- Concern of contracting communicable disease with Mouth to Mouth ventilations | - Identify community champion to drive change  
- Promote public education materials such as Hands Only CPR website ([www.handsonlycpr.org](http://www.handsonlycpr.org)) and CPR Anytime educational kits  
- Health Care providers provide community CPR education  
- Promotion of Survivor Meetings  
- Increase Public Awareness campaigns  
- Promote CPR and PAD programs for the community, schools and workplaces |

<table>
<thead>
<tr>
<th>BARRIER: Lack of Public Access to Defibrillators</th>
<th>EXAMPLES</th>
<th>SOLUTION</th>
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</table>
| Lack of education on need | - Lack of education on need  
- Lack of knowledge on how to use AED  
- Lack of funding to purchase AEDs and train the public  
- No system for maintaining AEDs  
- Need for Local and State Government support and commitment for sustainability  
- Discrepancy of who "owns" AED’s for access, maintenance and repair | - Identify community champion to drive change  
- Community education and training on AED use  
- Identify potential grant structure for purchasing AED equipment  
- Strategically position AEDs and assign personnel responsible for upkeep and monitoring  
- Community standards for strategic AED placement in public settings  
- Dispatcher assisted identification of nearest AED location |

### EMERGENCY MEDICAL DISPATCH
## BARRIER: Delayed Identification of the Cardiac Arrest Victim

<table>
<thead>
<tr>
<th>EXAMPLES</th>
<th>SOLUTION</th>
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</thead>
<tbody>
<tr>
<td>• Lack of formal dispatch protocols</td>
<td>• Uniform training of all 911 dispatch operators consistent with AHA ECC guidelines</td>
</tr>
<tr>
<td>• Lack of training needed to recognize the need for cardiopulmonary</td>
<td>• Implement a quality improvement process that includes the use of audits and feedback</td>
</tr>
<tr>
<td>resuscitation</td>
<td>• Adopt the first recorded time that the 911 system identifies call as “time 0”</td>
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<tr>
<td>• Lack of quality improvement process</td>
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## BARRIER: Lack of Dispatch Assisted CPR

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<thead>
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<tr>
<td>• Lack of formal dispatch-assisted CPR protocols</td>
<td>• Dispatch instruct bystanders in Hands only CPR</td>
</tr>
<tr>
<td>• Lack of training to instruct bystander CPR</td>
<td>Initial training and annual competency of all dispatch operators to instruct the lay person on CPR</td>
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## PARAMEDIC/FIRST RESPONDER

## BARRIER: Lack of Resources to Implement Cardiac Resuscitation Systems of Care

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<tr>
<td>• Lack of understanding why change is needed</td>
<td>• Identify EMS champion to drive change</td>
</tr>
<tr>
<td>• Lack of reallocation of resources – High effort → Low yield activities</td>
<td>• Redistribute resources to Low effort → High yield activities</td>
</tr>
<tr>
<td>• Insufficient integration of first responder training</td>
<td>• Paramedics provide training to first responders</td>
</tr>
<tr>
<td>• Insufficient quality review or quality improvement programs for cardiac resuscitation</td>
<td>• Review outcomes and provide feedback to team on all cardiac resuscitation calls</td>
</tr>
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</table>

## BARRIER: Providing Uninterrupted CPR
### EXAMPLES
- Compressions are interruption for performing various interventions such as intubation and IV insertion
- Compression interruption to move the patient

### SOLUTION
- Update CPR protocols to include new AHA CAB Guidelines (Compression, Airway, Breathing)
- Provide continuing education for first responder providers on excellent chest compression technique
- Dispatch sufficient number of providers with appropriate equipment (manual defibrillators) to the scene
- Provide effective ALS training

### BARRIER: Lack of Destination Protocols

#### EXAMPLES
- Lack of cardiac resuscitation designation for hospitals
- No national certification process to identify destination hospitals
- Need early alert to hospitals of arrival of cardiac arrest patient

#### SOLUTION
- Identify hospital champion to drive change
- Develop and maintain relationship between EMS and hospitals
- Establish a multidisciplinary approach to post cardiac arrest care
- Identify destination centers for cardiac resuscitation develop destination plan

### REFERRAL CENTER

#### BARRIER: Lack of Comprehensive Post-Cardiac Arrest Care

#### EXAMPLES
- Lack of active engagement from multidisciplinary team
- Lack of multi professional engagement
- Lack of organization of in-hospital resources to care for cardiac resuscitation patients
- Lack of established treatment protocols for cardiac resuscitation

#### SOLUTION
- Identify hospital champion to drive change
- Identification and certification of specialized cardiac resuscitation centers
- Develop an accreditation process to designation cardiac resuscitation centers
- Develop multidisciplinary, post-cardiac arrest teams
- Early transfer for PCI eligible to STEMI Receiving Centers
- Begin or continue hypothermia when indicated
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</table>
| • Limited resources  
• Rural geography | • Identify hospital champion to drive change  
• Build referral center relationship with an identified comprehensive Cardiac Resuscitation receiving center  
• Train Referral Center staff on early recognition, rapid defibrillation, quality chest compressions, therapeutic hypothermia induction, and rapid transfer |

**BARRIER: Post-Cardiac Arrest Limited staff**

**SYSTEM LEVEL**

**RECEIVING CENTER**

**BARRIER: Lack of Comprehensive Post-Cardiac Arrest Care**

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| • Lack of active engagement from multidisciplinary team  
• Lack of multi professional engagement  
• Lack of organization of in-hospital resources to care for survivors  
• Lack of established treatment protocols for post-cardiac arrest survivors  
• Effect of increases post-cardiac arrest survivors requiring PCI on nationally reported hospital data and outcomes | Identify hospital champion to drive change  
• Identification and certification of specialized cardiac resuscitation centers  
• Develop an accreditation process to designation cardiac resuscitation centers  
• Develop multidisciplinary, post-cardiac arrest teams  
• Provide early cardiology evaluation and if needed pPCI for those eligible  
• continued hypothermia  
• Delay prognostication of functional outcome for at least 72 hours  
• Referral for AICD placement  
Address CMS and other National data reports to review methods of reporting OHCA survivor morbidity |
### BARRIER: LACK OF RESOURCES

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| • Data measurement  
• Staffed infrastructure | • Solutions are individual to the community or system  
• Identify the foundation to build the system infrastructure early on  
• Identify variables and measurement period  
• Assign staff at each level to collect data |

### BARRIER: Lack of System Wide Implementation

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| • Need for qualified medical leadership  
• Conflicting interests  
• Lack of reporting system  
• Reporting bias | • Identify a key system champion to drive change  
• Integrate community involvement with EMS, Referral and Receiving Centers |