Maryland Dispatch Systems
Objectives

- Overview/History
- Time
- What can dispatchers do?
- Challenges
- Measure/Feedback
- Summary
Case

• You just experienced cardiac arrest
• A Bystander calls 911
• The clock is ticking ………

• Where would you put your money:
  – Dispatcher can coach the caller to do CPR
  – Hope a bystander knows and is willing to do CPR?
Chain of Survival

- How many links can the dispatcher accomplish?

- Early Access
- Early (telephone) CPR
- Early Defibrillation (Find and use and AED)
What Does Science Say?

AHA Scientific Statement

Emergency Medical Service Dispatch Cardiopulmonary Resuscitation Prearrival Instructions to Improve Survival From Out-of-Hospital Cardiac Arrest

A Scientific Statement From the American Heart Association

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Pre-Arrival Instructions
AHA Scientific Statement

Figure 1. Sample algorithm for identification of a patient with possible cardiac arrest. CPR indicates cardiopulmonary resuscitation.
Survival Benefit of PAI

- Dispatcher Assisted PAI CPR =/comparable to Survival Benefit of Unassisted Bystander CPR

Because of its ubiquitous position in the emergency medical response system, EMS dispatch has an enormous opportunity to provide lifesaving CPR instructions to the public. In contrast to most other forms of resuscitation training and knowledge translation, dispatchers are in direct communication with actual bystanders to cardiac arrest. Dispatchers have a unique opportunity to provide a real-time, high-yield intervention that can have a direct and immediate impact on the survival of the patient with OHCA. Furthermore, the general public expects dispatchers to direct their actions while they wait for help to arrive.\textsuperscript{16}
AHA Scientific Statement

PAI for CPR

• Need to overcome Bystander distress and uncertainty

• CPR PAI
  – Direct action
  – Convey teamwork and assurance
  – “We need to start CPR. I will help you.”

• Rather than
  – “Would you like to try CPR?”
What's the Number for 911?

America's Wackiest 911 Calls

Leland H. Gregory III

Coauthor of America's Dumbest Criminals™
“When is the Cinco de Mayo [Fifth of May] celebration?”
Dispatch Systems in Maryland

- APCO
- Power Phone
- National Academies of Emergency Dispatch
Maryland Dispatch

• Share best practices from Dispatch Centers currently using MPDS ver. 12.2
• Share curriculum, audio of agonal respirations and QI Dispatch TCPR Review
• Describe advances possible from MPDS ver. 13 and/or Paramount
• Standardize education, share and celebrate success!
GOING OFF HALF-COCKED

Twenty-one-year-old Darwin Coates was in a cocky mood when he took his .22-caliber pistol and shoved it into the waistband of his pants. He was feeling less cocky (literally) when the gun fired and shot him in the groin. He hobbled to his girlfriend’s apartment in Pasadena, Maryland, and called 911. Gregory Johson, a friend of Coates, was also at the apartment. While the two waited for the ambulance, Johson picked up Coates’s gun and stuck it in his back pocket. The gun went off again and shot Johson in the buttocks. The police arrived and were able to confiscate the gun without shooting themselves.
RUNAWAY CALLER

911 Dispatcher: “911.”

Man:

“Yeah, I'm having trouble breathing. I'm all out of breath. Damn . . . I think I'm going to pass out.”

911 Dispatcher: “Sir, where are you calling from?”

Man:

“I'm at a pay phone. North and Foster. Damn . . .”

911 Dispatcher: “Sir, an ambulance is on the way. Are you an asthmatic?”

Man:

“No . . .”

911 Dispatcher: “What were you doing before you started having trouble breathing?”

Man:

“Running from the police . . .”
Impact of Dispatch CPR

Influence of therapies on percent cardiac arrest survival
# Measurement and Feedback

Key to Success for PAI CPR Program

<table>
<thead>
<tr>
<th>Categorical Measure</th>
<th>Time Component</th>
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</thead>
<tbody>
<tr>
<td>Dispatch of appropriate EMS resources</td>
<td>Interval from receipt of call to EMS dispatch</td>
</tr>
<tr>
<td>Adherence to the identification algorithm</td>
<td>Interval from receipt of call to completion of algorithm</td>
</tr>
<tr>
<td>Recognition of arrest/provision of CPR prearrival instructions</td>
<td>Interval from receipt of call to provision of CPR instructions</td>
</tr>
<tr>
<td>Performance of bystander CPR</td>
<td>Interval from receipt of call to performance of CPR</td>
</tr>
<tr>
<td>Primary obstacle to CPR</td>
<td>...</td>
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</tbody>
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CPR indicates cardiopulmonary resuscitation; EMS, emergency medical services.
JUDGE NOT, LEST YE BE JUDGED

The court clerk’s eyes widened when she read the note handed to her from Judge Claudia Jordan of Denver. The note read: “Blind on the right side. May be falling. Please call someone.” Fearing for the health of the judge, the clerk called 911 and requested paramedics to come to the courthouse immediately.

When the clerk told the judge the paramedics were on their way and not to worry, the judge let out a little shriek. She then pointed to the drooping venetian blinds on the right side of the courtroom. “I didn’t want anyone to get hurt. I wanted someone from maintenance,” Jordan said.

Soon the paramedics arrived, stretcher in tow, and entered the courtroom looking for the ailing judge. Judge Jordan halted a drunk driving case she was hearing to let the emergency team know she was all right and to thank them for their prompt response. I just hope she makes her judgment calls a little more clear than her notes.
Emergency Medical Dispatchers

- Professionals
- First Link in the Chain of Survival
- Provide Dispatch Life Support
- Working hard to do the best job they can
- Deserve us to advocate for change that will improve care
A SHOOTING PAIN

Gail Murphy dialed 911 after firing a shotgun through the front door of her house. Was she shooting at a burglar? the dispatcher asked. No, you see, Gail, who was recovering from hemorrhoid surgery, was angered at her husband’s decision to go fishing with his buddies and not stay home and nurse her to health. Bad move. Even though Gail was forced to remain in bed on her stomach after the surgery, she was able to level the shotgun at the door when she heard her husband Edward returning home six hours later. Seems like Edward had been a pain in her rear longer than the hemorrhoids. He died of his wounds a few days later.
Key Goal

To **enhance** the response to, and care of, patients with sudden out-of-hospital cardiac arrest in a way that will **improve outcomes** from sudden out-of-hospital cardiac arrest in all communities and populations in Maryland.
Cardiac Arrest Steering Committee

- Subcommittees
  - Public
  - Provider
  - Dispatch
Key Points

- Average EMS Response times 5 – 6 minutes
- Dispatchers can start CPR within 1 minute
- Early CPR increases the chances of survival
- Can cause a doubling of bystander CPR
- Recognized as the standard of care
Dispatch Telephone CPR QI Program

Elements

• Planning
• Protocols
• Training
• Quality Improvement
• Continuing Education
1. Empower them - save a life
2. Educate – Agonal respirations
3. Support – Science, State
4. Abolish fear – can’t hurt; only help
Fears

• I don’t want to harm them
• It will increase our liability
• What if I don’t instruct perfectly?
• Not in arrest – could be injured
Empower Dispatchers

• You can’t hurt, You can only help
  – Give them a chance
• Your CPR instructions can extend the window in which the EMT’s defibrillator can be effective
• You are the best way to bystander CPR for all victims of cardiac arrest
• Time is the enemy
• Agonal respirations
  – Sign of a fresh arrest
  – Occur in 40% of cardiac arrests
  – More likely to respond to treatment with ROSC
  – Can confound Dispatcher CPR instructions
• Sources of delay-(added questions, agonals)
• False Positives – no need to fear
• Locate AED and instruct in use
Support

• Share successful saves
• Recognize EMD role in save
• Share system performance
  – QI and Science support their efforts
• CASC/State backing for rapid, aggressive Dispatch CPR
Feedback on Dispatch CPR

- Not Punitive or Disciplinary
- Praise what was well done
- Feedback on opportunities for improvement on the next call
- End on a positive note

- It’s all about teamwork and improvement
The Future

Dispatch Telephone CPR
• in ALL patients that are
• in cardiac arrest

If you are going to dream, dream big.
MPDS Strategies to Decrease TTFC

• For unresponsive patients
  – Case Entry Q. 6 “Is s/he breathing?”
    • If No or Uncertain -> “We need to start CPR. I’ll help you."

• Alternative for Uncertain response
  – Ask another question (allowed by MPDS)
    • “Is s/he breathing normally?”

• Request change to Entry Protocol
Summary

• Dispatch Assisted CPR
  – Capable of accomplishing Bystander CPR on ALL of your prehospital cardiac arrests

• Measure, Feedback/Educate, Remeasure

• Find one or more ways to decrease TTFC

• Is this low hanging fruit in your system?