



State of Maryland

**Maryland
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Emergency Medical
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MEMO

Date: January 28, 2014

To: Dispatch Center Managers
Highest EMS Officials (JAC)
EMS Medical Directors

From: Richard Alcorta, MD, FACEP
Maryland State EMS Medical Director

RE: Dispatch improvements to increase survival from out-of-hospital Sudden Cardiac Arrest (SCA)

Emergency Medical Dispatchers (EMD) are a critical link in the Chain of Survival and the aggressive provision of EMD-directed telephone CPR is the best way to get bystander CPR for the most victims of sudden cardiac arrest (SCA). Two interventions have been proven to maximize survival from SCA are the time to first compressions and the time to AED application; both of these actions are within the capability of the EMD. This memo serves to notify you of the importance of EMD efforts to maximize survival from SCA and to offer resources and support for EMD to fully implement those interventions to improve survival.

The Cardiac Arrest Steering Committee (CASC) has focused on three areas in an effort to improve out-of-hospital Sudden Cardiac Arrests: Emergency Medical Dispatch, EMS and public engagement. This memo is to highlight the dispatch specific areas where expediting interrogation and rapidly moving to dispatch directed CPR can significantly extend the resuscitation success window. There is national evidence that shortening the interrogation period, early dispatch directed CPR and minimally interrupted compression CPR can improve survival of out-of-hospital SCA victims. The Medical Priority Dispatch / National Academy of Emergency Dispatchers have made strides to streamline this process which is reflected in the changes made in the current 12.2 version that was released March 2013. Currently, 18 of Maryland's PSAP have version 12.2 installed and operational. 7 PSAPs are on version 12.1 or older. MIEMSS strongly encourages these 7 centers to upgrade their card set or software as soon as possible. In the MPD computer version 13 which is to be released in May 2014, the software is designed to reduce the initial entry fields for the EMD for the not awake and not breathing adult victim, fast tracking the EMD past card 9 (AED availability will still be triggered) directly to the Patient Assistance Instructions (PAI) and dispatch directed CPR directions thus saving EMD work and valuable seconds for the victim.

Up to forty percent of victims of out-of hospital SCA are unconscious but have weak, ineffective breathing (agonal respirations). This agonal breathing can confound identification of SCA by EMDs. The CASC and the State EMS Medical Director recognize the important role the EMD providers and will support EMD using the MPDS Protocol who start dispatch directed CPR for unconscious victims with agonal breathing and who

later turn out not to be in cardiac arrest. Evidence shows minimal harm from this approach with maximum impact on survival.

Bringing tighter focus to the actual interrogation, EMDs that have a caller with a not awake and uncertain breathing victim who can quickly identify agonal breathing (a single 10 second breathing interval or actually hear the slow snoring/pre-death breathing) should quickly transition to the PAI and initiate dispatch directed CPR. The Regional Medical Directors, State Protocol Review Committee and the State EMS Medical Director recommend that the PSAPs adopt, for the adult victim, the instruction on PAI "C Airway/Arrest/Choking", having the bystander perform 600 continuous uninterrupted compressions at a compression rate of 100 compressions per minute, and for a child less than 8 years of age including infants, perform 2 breaths/puffs to 30 compressions at a compression rate of 120.

Maryland already has several EMS operational programs that have implemented expedited interrogation, early dispatch directed CPR, continuous uninterrupted compressions, and prompt EMS provider response that initiates high performance "pit crew" CPR and defibrillation. The evidence from these EMS operational programs has shown a nearly tripling of the return of spontaneous circulation in witnessed out-of-hospital cardiac arrests: a success rate that every county would like to be able to claim.