

Preparing to move patients during resuscitation negatively impacts CPR quality



Clinical

Last Updated: 2014-01-24 16:05:59 -0500 (Reuters Health)

By Bridgett Novak

NEW YORK (Reuters Health) - A study presented January 17 at the National Association of EMS Physicians annual meeting in Tucson, Arizona sheds light on how preparing patients for transport after out-of-hospital cardiac arrest can affect the quality of CPR.

"Later in the rescue, when EMS personnel are 'packaging the patient' - i.e., getting him ready to move into the ambulance - they are distracted by other activities, which can have a very detrimental effect on the quality of the CPR," explained lead researcher Ben Bobrow, an emergency medicine physician at Maricopa Medical Center in Phoenix, Arizona. "Even very short interruptions, e.g., 10-20 second pauses, in forward blood are associated with worse survival."

The study reviewed the records of 211 cardiac arrest patients requiring CPR. The average age was 64.

All patients received cardiac compressions on scene and were transported to the hospital with ongoing compressions. Minute-by-minute cardiac compression process data were averaged for all minutes without return of spontaneous circulation during late scene treatment (i.e., three minutes prior to transport) and early scene treatment (i.e., all prior minutes at scene).

The chest compression fraction (i.e., the proportion of time during which compressions were performed) was 61% during the last three minutes before transport, compared to 74% for all the prior minutes at the scene.

The study did not look at patient outcomes, however.

Still, Bobrow told Reuters, "This challenges the old 'scoop and run' theory of rushing patients to transport. While that makes sense for some EMS conditions, it is actually counterproductive for CPR. If you want to save more people, you have to assure uninterrupted high-quality CPR as early as possible. So it is much better to 'stay and resuscitate' at the scene."

According to Dr. Charles Cady, an emergency medicine physician at the Medical College of Wisconsin, "This study demonstrates that anything that detracts from the EMS personnel's ability to focus on delivering high-quality CPR will degrade the effectiveness and decrease the chances of meaningful survival. With regards to cardiac arrest and proven treatments, there is nothing that can be done in the back of an ambulance or an emergency department that cannot be done in the patient's living room. This study proves the importance of treating patients as quickly as possible where they are found."

Bobrow expects more studies to expand upon these findings, but thinks that in the meantime, EMS teams with limited staff might consider taking along a mechanical CPR device to assure that high-quality chest compressions are delivered without interruption while they prepare patients for transport.

Copyright © 2014 Reuters Limited. All rights reserved. Republication or redistribution of Reuters content, including by framing or similar means, is expressly prohibited without the prior written consent of Reuters. Reuters shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. Reuters and the Reuters sphere logo are registered trademarks and trademarks of the Reuters group of companies around the world.

KEYWORDS: CARDIN;HEAFAL;RESPIR;CLIMED;MEDCON;CARDIO;HEARCA;EMER;HECA;HEA;GEN;DIS;MEDST
SLUGLINE: BC-CPR/CARDIAC-ARREST