

SOUTHWESTERN NEWS

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CPR instructions should focus on continuous chest compressions, UT Southwestern physicians recommend

DALLAS – May 6, 2005 – Cardiopulmonary resuscitation (CPR) instructions given over the phone by emergency dispatchers to lay rescuers should focus primarily on continuous chest compressions instead of the traditional ABC's – “airway, breathing, circulation,” according to Dr. Paul Pepe, chairman of emergency medicine at UT Southwestern Medical Center.

Dr. Pepe, along with international colleagues from the Council of Standards for the National Academies of Emergency Dispatch (NAED), makes the recommendation in the May issue of the journal *Resuscitation*.

The council had been asked to update and modify protocols for emergency dispatchers who may need to give rapid telephone instructions on how to perform CPR. The council's recommendations were based largely on experimental data and a supportive clinical trial that found improved survival with a “compressions-only” approach. The council's recommendations were also based on the notion that simplifying the guidelines would increase the chances that CPR will be performed since some people may be reluctant to perform mouth-to-mouth resuscitation.

“Not only is this new protocol easier to use, it gets more people willing to perform life-saving actions,” said Lt. Janet Raysby Cowan of the Dallas Fire-Rescue Department Dispatch Office. “We are really pleased with this official recommendation and believe it will save more lives.”

Dr. Lynn Roppolo, assistant professor of emergency medicine at UT Southwestern and the article's lead author, said the NAED council offered four major recommendations. First, if bystanders are already performing traditional CPR, they should be encouraged to continue. Second, the traditional form of CPR (“airway, breathing, circulation”) should be recommended in situations including trauma, choking, strangulation, drowning, smoke inhalation or carbon monoxide poisoning, in which oxygenation problems probably led to the heart attack.

The third recommendation, however, was that bystanders who are not sure how to perform CPR or are uncomfortable with mouth-to-mouth procedures should just do chest compressions until

(MORE)

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emergency medical services crews arrive. The fourth recommendation is that dispatchers' CPR protocols should take into consideration local EMS system features, like geography, which can account for longer response times. Also, dispatchers should always receive quality oversight and expert medical direction.

Dr. Roppolo said people needing CPR still have oxygen in their bodies for several minutes without mouth-to-mouth resuscitation. Moreover, they passively inhale air as the chest wall recoils after each compression. Patients also take gasping breaths during the initial phases of heart attack. To some degree, these breaths are more effective than normal breaths because they can generate a larger and more powerful respiratory effort than a normal breath. Gasping opens more airways and enhances blood flow back into the chest, thus priming the pump more. However, if four minutes pass and help has still not arrived, the person performing chest compressions should then give two mouth-to-mouth breaths, followed by 100 chest compressions, then two more breaths, and so on.

“People are more likely and more able to perform CPR if they only have to do chest compressions,” said Dr. Roppolo, “Also, when assisted breathing is provided, dispatchers spend a significant amount of time trying to instruct inexperienced people on the right way to position the head and pinch the nose before breathing into the victim's mouth, thus delaying the all-important chest compressions.”

Dr. Pepe emphasized that stopping chest compressions frequently to perform mouth-to-mouth ventilation can restrict the blood flow to the heart itself, which diminishes the chances of restoring an adequate heart beat. Therefore, the new recommendations of continuous compressions for four minutes followed by a rate of 100 compressions to two ventilations should improve the chances of restoring spontaneous heartbeat and blood flow, he said.

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