CPR often done inadequately by doctors, paramedics, studies suggest

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CHICAGO (AP) - CPR is often performed inadequately by doctors, paramedics and nurses, according to two studies of resuscitation efforts during cardiac arrest.

Whether a stricken patient is in the hospital or on the way, the guidelines for administering cardiopulmonary resuscitation frequently are not followed. Among the problems commonly cited: Rescuers did not push hard enough or frequently enough on the victim's chest to restart the heart, and breathed air into the lungs too often - either mouth-to-mouth or through breathing tubes.

Both studies used an experimental monitor that assesses CPR quality, and both received funding from Laerdal Medical Corp., a Norwegian company that developed the device with Philips Medical Systems.

The studies appear in Wednesday's Journal of the American Medical Association.

The researchers explained that skills learned in the classroom can fall by the wayside in the stress-filled chaos of a real-life emergency. Also, they noted that chest compressions strong enough to break ribs are sometimes required, and rescuers can tire quickly.

In one of the studies, involving 67 adult patients at the University of Chicago, doctors and nurses failed to follow at least one CPR guideline 80 per cent of the time. Failure to follow several guidelines was common.

"Patients who had it perfectly done were in the distinct minority," said Dr. Benjamin Abella, one of the researchers.

The other study involved 176 adults with out-of-hospital cardiac arrest treated by paramedics and nurse anesthetists in Stockholm, Sweden; Akershus, Norway; and London. Chest compressions were done only half the time, and most were too shallow.

More than 600,000 people die from sudden cardiac arrest each year in North America and Europe. The heart suddenly stops beating, either because of a heart attack or other underlying heart disease.

The combination heart monitor and defibrillator used in the studies includes a small sensor that attaches to the patient's chest and evaluates depth of chest compressions and other aspects of CPR. The monitor includes an automated voice that provides on-the-spot coaching, telling rescuers when chest compressions are not strong enough or frequent enough. But that feature was not used during the studies.

Both studies were too small to determine whether using the device saved lives, but the Chicago researchers said it could improve patients' survival chances.

"Without a device that gives you feedback in the heat of the moment, you can't drive an airplane that way - and we can't take care of sick critical patients without the appropriate monitors," said the study's leader, Dr. Lance Becker, director of the university's emergency resuscitation research center.

The device is approved for experimental use in the United States, and the manufacturer is seeking Food and Drug Administration permission to sell it commercially.

While other studies have found CPR techniques lacking, the JAMA studies are the first using a monitor to evaluate "what's going on during real cardiac arrests and in real people," said American Heart Association spokesman Vinay Nadkarni said. "It's outstanding

information."

The studies will be taken up at a medical conference next week in Dallas that could lead to an update of the CPR guidelines, Nadkarni said.

The studies add to evidence that the guidelines need to be simplified so that they "can be readily used in the real world," Drs. Gordon Ewy and Arthur Sanders, emergency medicine specialists at the University of Arizona, said in an accompanying editorial.

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On the Net:

JAMA: http://jama.ama-assn.org

American Heart Association: americanheart.org