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## **New CPR Technique Increases Survival Rate Oshkosh Fire Department is Part of Pilot Study**

(Oshkosh, WI.) The Oshkosh Fire Department was recently highlighted in an international study that looked at an alternative method of cardio-pulmonary resuscitation (CPR). The Oshkosh Fire Department was the only emergency medical agency in the state of Wisconsin chosen to participate in this study, which was conducted in seven geographic regions in the United States.

The study, which was published in the January 19th, 2011 online version of *Lancet*, determined that active compression-decompression CPR with augmentation of negative intrathoracic pressure gave patients a better chance of survival.

In the randomized study, emergency medical service (EMS) agencies in urban, suburban and rural areas of the United States, including EMS in Oshkosh, provided either standard CPR or the new technique to adults who had a non-traumatic arrest presumed cardiac in nature.

The new technique uses two devices simultaneously to increase circulation. One is a handheld device that attaches with a small suction cup to the patient's chest. After each compression, the suction cup allows the chest to be lifted up, stimulating blood flow. The second device, called an impedance threshold device, attaches to the patient's airway using a facial mask or breathing tube. When the chest lifts upward, the impedance threshold device prevents air from rushing into the lungs. That creates a vacuum inside the chest and helps refill the heart after each compression. Researchers found in each compression-decompression cycle, the heart and brain receive nearly three times more blood flow when compared with standard CPR.

A total of 813 standard CPR patients and 840 intervention patients were analyzed in the study. Researchers found 6% of the standard CPR patients survived to hospital discharge with favorable neurologic function. That compares with 9% in the intervention group (improvement of survival chance 53% in intervention group). The same proportions of patients in each group survived to one year.

About 800,000 people in the United States, Canada and Europe have an out-of-hospital cardiac arrest every year. The survival rate averages just 5%, in part because standard CPR is inefficient, providing just 25% of healthy blood flow to the heart and brain.

The study was led by Dr. Tom P. Aufderheide, professor of emergency medicine at The Medical College of Wisconsin. Dr. Aufderheide also provided the information for this press release.

The link to the online version of *Lancet* can be found by [clicking here](#). The study will also be profiled in an upcoming print publication of *Lancet*.

For more information on the study or to learn more about Oshkosh Fire Department services please contact Fire Chief Tim Franz or Battalion Chief Jim Austad at (920) 236-5240

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