

CentraState uses new body cooling device on first emergency patient; Technology helps recovery of cardiac arrest patients

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A new rapid cooling device used in CentraState's Emergency Department for cardiac arrest patients is demonstrated by Robert B. Schock, PhD, vice president, R&D, Life Recovery Systems HD, LLC, and Annette Keller, nurse educator, CentraState.

FREEHOLD TOWNSHIP—CentraState's Emergency Department (ED) now offers a new rapid, body-cooling device for cardiac arrest patients to help them recover with minimal or no damage to the brain. Clinicians in the ED successfully used the device for the first time earlier this month on a 55-year-old male patient.

The ED is the first in New Jersey using the new *ThermoSuit* by Life Recovery Systems. Clinicians use the system to rapidly decrease a patient's core temperature to around 92 degrees which slows blood flow to the heart and brain. "When the body is cooled down, the heart and brain require less oxygen to continue functioning," says M. Michael Jones, MD, chair, Emergency Services, CentraState Medical Center. "This helps prevent further damage to the brain and creates better

opportunity for healing with favorable outcomes."

At CentraState, the *ThermoSuit* is used for patients after they've experienced cardiac arrest and have been revived, but are not responsive. Cardiac arrest is a condition in which the heart stops pumping blood as a result of irregular heart rhythms. According to the American Heart Association, 95 percent of people who suffer from cardiac arrest outside of a medical facility die before they reach the hospital.

The device is an inflatable pool that wraps around a patient's body and then constantly pumps ice water across the body to remove surface heat, decreasing the body's temperature quickly. Any time throughout the process, CPR and/or a defibrillator can be used if needed without disruption of the cooling. The "suit" is computer controlled and shuts down once the target temperature is reached. To maintain hypothermia, a simple iced saline infusion is used, and a patient can stay cold for around 24 hours.

The *ThermoSuit* can obtain the desired temperature between 93 and 90 degrees Fahrenheit in only 27 minutes. Past cooling methods took up to two hours and 43 minutes. The faster a

hypothermic state is reached, the greater chance there is of preventing permanent damage to the heart and brain.

The non-invasive procedure has no reported complications and is the top in its category for reducing core body temperature.

Patient satisfaction at CentraState's Emergency Department has ranked at the 96th percentile or higher for seven of the last eight quarters, according to a national patient satisfaction measurement firm. CentraState has one of the busiest emergency departments in Central New Jersey, caring for more than 60,000 patients per year.

CentraState Healthcare System is a non-profit community health organization consisting of an acute-care hospital, an ambulatory care campus, three senior living communities, a Family Medicine Residency Program, and a charitable foundation. CentraState is a member of the Robert Wood Johnson Health Network and a clinical research affiliate of The Cancer Institute of New Jersey, a National Cancer Institute-designated Comprehensive Cancer Center.

Photo caption: A new rapid cooling device used in CentraState's Emergency Department for cardiac arrest patients is demonstrated by Robert B. Schock, PhD, vice president, R&D, Life Recovery Systems HD, LLC, and Annette Keller, nurse educator, CentraState.

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