

New York City Fire Department's Emergency Medical Service (FDNY-EMS)

FDNY-EMS, the largest EMS system in the nation with approximately 3,300 uniformed EMS personnel, is the first fire service-based EMS system in the country to implement a hypothermia treatment protocol for cardiac patients. In January, 2009, FDNY-EMS launched Phase I of Project Hypothermia which involved FDNY-EMS transporting cardiac arrest patients experiencing a return of spontaneous circulation (ROSC) only to hospitals where medical personnel could administer hypothermia treatment. In 2005, only 10 hospitals in New York City administered hypothermia treatment; now 46 of the city's 48 hospitals administer the treatment. The results of this change have been dramatic. Twenty percent more post-ROSC patients survive to hospital admission, while discharge rates for such patients have increased by 30%, and nearly 70% of surviving patients now leave hospitals neurologically intact.

In late summer of 2010, Phase II was initiated with all Advanced Life Support (ALS) paramedics receiving specialized training to administer hypothermia treatment immediately to all cardiac arrest patients on the scene or en route to the hospital. Since this procedure is now protocol, all patients receiving this treatment must be transferred to a participating hospital so that hypothermia treatment can be continued.

New York City hospitals participating in this effort are required to report data regarding the results of hypothermia treatment to FDNY-EMS. As a result, FDNY has developed a comprehensive data registry that will allow it to further refine the use of this treatment in New York and around the world. All ALS ambulances were outfitted with portable refrigerators to store six one-liter bags of normal saline that is cooled to just above freezing. Implementation of this procedure has proven to be safe, cost-effective and successful as a pre-hospital treatment. To record the results of hypothermia treatments as a basis for making enhancements, the FDNY-EMS developed a comprehensive data registry that participating hospitals are required to report data.