

EMBARGOED FOR RELEASE until February 7, 2019 – 5:00 PM (ET)

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CPR CAN SAVE LIVES IN DIALYSIS CLINICS, BUT IT'S UNDERUSED

CPR was not provided by dialysis staff in nearly 19% of in-clinic cardiac arrests.

Highlight

- When kidney failure patients experienced cardiac arrest at outpatient dialysis facilities, CPR initiated by dialysis staff was associated with a better chance of survival but was only performed in 81% of cardiac arrest events.
- Dialysis staff were more likely to initiate CPR within larger dialysis clinics, for male patients, and when cardiac arrests were witnessed.

Washington, DC (February 7, 2019) — New research indicates that when kidney failure patients experience cardiac arrest at outpatient dialysis facilities, cardiopulmonary resuscitation (CPR) can save lives, but it is not always performed by dialysis staff. The findings, which appear in an upcoming issue of the *Journal of the American Society of Nephrology (JASN)*, indicate that additional research is needed to understand the barriers to providing CPR in dialysis clinics.

Sudden cardiac arrest is the leading cause of death in patients on hemodialysis, accounting for more than 25% of all deaths and occurring at a rate 20 times more frequently compared with the general population. Cardiac arrests occur more frequently on the days that patients receive hemodialysis treatment, often while they are at outpatient dialysis facilities. In such cases, nearly half of patients do not survive long enough to be admitted to the hospital.

To study this issue, Patrick Pun, MD, MHS (Duke University) and his colleagues analyzed the treatment and outcomes of 398 patients who experienced cardiac arrests while at outpatient dialysis clinics between 2010 and 2016 in the southeastern United States (excluding patients with “do not resuscitate” orders).

Among the major findings:

- Before emergency medical services arrived, dialysis staff initiated CPR in 81.4% of cases and applied defibrillators in 52.3% of cases.

- Staff-initiated CPR was associated with a 3-fold increase in the odds of survival and a favorable neurologic status at the time of hospital discharge. There was no overall association between staff-initiated defibrillator use and outcomes.
- Dialysis staff were more likely to initiate CPR within larger dialysis clinics, for male patients, and when cardiac arrests were witnessed.

“It is reassuring that bystander CPR was associated with improved outcomes in dialysis clinics just as it is in other settings, but it is concerning that the rate of dialysis staff-initiated CPR isn’t closer to 100% considering that all staff should be CPR-trained,” said Dr. Pun. “Further research is needed to understand what barriers to providing CPR exist in the unique environment of the dialysis clinic in order to improve CPR delivery to patients.”

Study co-authors include Matthew E. Dupre, PhD, Monique A. Starks, MD, Clark Tyson, MS, NREMT-P, Kimberly Vellano, MPH, Laura P. Svetkey, MD, MHS, Steen Hansen, MD, Brian G. Frizzelle, MS, Bryan McNally, MD, MPH, James G. Jollis, MD, Sana M. Al-Khatib, MD, MHS, and Christopher B. Granger, MD.

Disclosures: The authors reported no financial disclosures.

The article, entitled “Outcomes for Hemodialysis Patients Given Cardiopulmonary Resuscitation for Cardiac Arrest at Outpatient Dialysis Clinics,” will appear online at <http://jasn.asnjournals.org/> on February 7, 2019, doi: 10.1681/ASN.2018090911.

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