Your Ideal Partner for Dialysis Water Emergencies

Hemodialysis (HD), which uses dialysate composed of 90% water, typically requires nearly 200 liters of water per session.[1,2] Water contamination or a water supply disruption in a hospital can constitute an emergency for dialysis patients.

Danbury Hospital's Water Emergency

On April 23, 2018, the municipal water supply in Danbury, Connecticut, was disrupted when a water main broke. The water main directly fed Danbury Hospital, which partnered with DaVita Hospital Services to provide inpatient services for dialysis patients. Without potable water, DaVita Hospital Services and Danbury Hospital's facilities team were challenged with implementing a safe HD alternative that was timely, effective and of minimal impact to hospital operations.

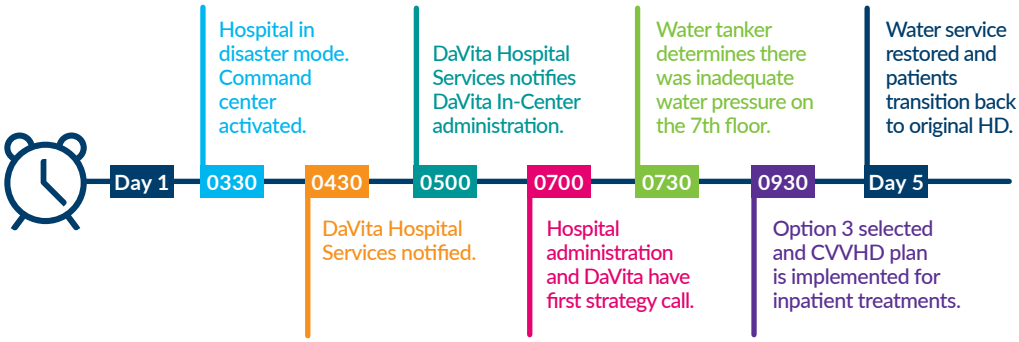
3 Dialysis Alternatives Considered

DaVita Hospital Services and the hospital facilities team considered the following three HD alternatives:

1. Transfer all hospitalized patients requiring HD to a chronic dialysis facility.
2. Transfer these patients to a sister hospital an hour away.
3. Provide a modified form of onsite continuous veno-venous hemodialysis (CVVHD) with the Prismaflex® system.

The teams decided to pursue the third option.

6 Hours from Emergency Start to First Treatment Implementation



About DaVita Kidney Care, Hospital Services

- First and only national Joint Commission-accredited provider of inpatient kidney care and apheresis therapies[3]
- 1.2M treatments performed annually[4]
- ~925 inpatient partners[5]

DaVita® Kidney Care

Hospital Services

Dialysis Alternative Quickly Organized and Delivered

Providing emergency modified CVVHD with Prismaflex required all hands on deck, as all equipment and supplies were located at a warehouse and two other locations within the region. Hospital and DaVita Hospital Services personnel rapidly responded to find, deliver, disinfect and certify all necessary components. All machines and supplies arrived on-site ready to use by 9:30 a.m. on Day 1.

Three registered nurses who were expert Prismaflex users were recruited from a sister hospital—Norwalk Hospital—to train personnel and help support patient care. On-site DaVita nurses were trained while other DaVita team members prepared equipment. Physicians and nurses worked together to create custom HD order sets on Prismaflex for same-day treatment and subsequent modified treatments. Patients received modified CVVHD with Prismaflex for 4 days until water service was restored and they transitioned back to their original HD therapies.

Results

By following this approach, clinical outcomes were not negatively impacted. Specifically, adequate dialysis was delivered with no associated adverse events and all patients—even those deemed most critical—remained stable without hemodynamic changes. Blood urea nitrogen clearances and chemistries improved for every patient at end of Day 2. This approach allowed patients to remain at their hospital of choice under the care of familiar physicians. In the face of a water emergency, DaVita Hospital Services and the Danbury Hospital team made a fast decision on a specific dialysis therapy and approach that was cost effective and resulted in success.

To learn how DaVita Hospital Services can help your hospital maintain care during water-related emergencies, please email hospitals@davita.com.

Factors that Contributed to Success

DaVita Hospital Services, in partnership with Danbury Hospital, quickly:

- Identified the most-viable treatment option
- Recruited expert CVVHD support to train on-site personnel on CVVHD and to help care for patients
- Created custom HD order sets
- Found on-site space for multiple pallets of supplies (in < 1 hour)
- Met all fluid removal goals with no complications

1. Layman-Amato RL, Curtis J, Payne GM. Water treatment for hemodialysis: An update. Nephrol Nurs J. 2013;40(5):383-404, 465.
2. Saha M, Allon M. Diagnosis, treatment, and prevention of hemodialysis emergencies. Clin J Am Soc Nephrol. 2017;12(2):357-369.
3. Ambulatory Health Care Accreditation was based on a survey of 177 DaVita acute programs, which included Joint Commission–accredited hospitals and other hospitals permitting Joint Commission access for purposes of the survey process (a limited number of hospitals declined to participate).
4. Internal DaVita data. August 2018.
5. Internal DaVita data. January 2019.

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