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.

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**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\(^5\)

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**6 Hours from Emergency Start to First Treatment Implementation**

- **Day 1**
  - **0330** Hospital in disaster mode. Command center activated.
  - **0430** DaVita Hospital Services notified DaVita In-Center administration.
- **Day 2**
  - **0500** Water tanker determines there was inadequate water pressure on the 7th floor.
  - **0700** Water service restored and patients transition back to original HD.
  - **0730** Water tanker determines there was inadequate water pressure on the 7th floor.
  - **0930** Option 3 selected and CVVHD plan is implemented for inpatient treatments.
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.