Creativity and Safety

Continued from page 17

dialysis unit, where COVID-19 patients are cohorted on the last shift.

COVID-19 and PUI patients in the intensive care unit receive either CRRT, continuous venovenous hemodiafiltration (CVVHD) or sustained low efficiency dialysis (SLED), or intermittent hemodialysis, depending on their acuity level, Mokrzycki said. Staff use extra-long tubing so they can sit outside the room. Again, machines are cleaned and disinfected but not dedicated to particular patients, and tubing and dialyzers are discarded. To optimize the use of CVVHD for two to three patients a day, she said, treatment times may be shortened to eight hours and high dialysate flow of 30-40 mL/kg/hour may be used.

To protect healthcare providers, patients remain masked during RRT procedures, and droplet precautions are maintained. Dialysis staff use full PPE and extra-long tubing, and direct exposure with patients is limited. Some use baby monitors to observe patients during hemodialysis treatments from the doorways. Limited nephrology staff who are rounding enter patient rooms for physical exams, use full PPE in patient rooms, and wear masks the entire time in the hospital.

Staff shortages a challenge

One of the biggest challenges, Mokrzycki said, is providing dialysis treatments with ongoing staff shortages owing to illness or quarantine. Pre-COVID, the team was doing about 8–12 sessions per day. "That has increased two- to threefold and has really put a strain on our nursing staff," she said.

The medical center has made several adaptations in response to the growing number of COVID patients requiring RRT, Mokrzycki said. These adaptations include reducing hemodialysis frequency to twice a week, shortening treatment times, initiating more AKI patients on urgent or acute peritoneal dialysis and creating a peritoneal dialysis rounding service, as well as using palliative care consultants where appropriate. Key to their success has been establishing several COVID task forces among the nephrology division, ICU teams, and hospital administration, with frequent communication, she said.

Mokrzycki spoke about her experiences during an ASN webinar about hospital care and treatment options for COVID-19–positive patients. ■

Dialysis Companies Join to Create Contingency Plans During COVID-19 Crisis

By Ruth Jessen Hickman

Dialysis patients pose a major challenge for limiting the spread of the SARS-CoV-2 virus, as they normally receive thrice weekly dialysis in often densely populated outpatient centers. They may have compromised immune systems, and many have additional health comorbidities that put them at risk of poor outcomes from COVID-19 (1).

Early in the pandemic, many symptomatic dialysis patients positive for COVID-19 were transferred to hospitals to reduce the risk of spread at outpatient dialysis units (1). It became clear, however, that triaging all such patients to hospitals might unnecessarily strain inpatient dialysis units, which might already be working past normal capacities treating people with kidney involvement from COVID-19 (2).

Outpatient dialysis units around the country instituted measures to try to protect their patients and workers, such as screening staff and patients entering clinics. Dialysis organizations such as Fresenius Medical Care North America also started developing isolation units and shifts that could be used to separate people positive for COVID-19 as well as those with high risk of exposure from the general dialysis population.

In March, several dialysis companies began communicating about how they might work together to protect dialysis patients and staff. As the virus spread around the country, the companies accelerated their efforts and worked with the Centers for Medicare & Medicaid Services to establish how a collaboration might best be implemented.

On March 31, official news of the collaboration was released. Participating dialysis organizations included Fresenius, DaVita Inc., U.S. Renal Care, American Renal Associates, and several others. The idea was to create a nationwide contingency plan that could be used to help maintain continuity of care for all dialysis patients during the COVID-19 pandemic.

Under the plan, patients would ideally be seen at isolation centers sponsored by the individual organizations, but if needed, patients could be transferred to isolation units at other dialysis companies. "Having this safety net assures us that we can continue to treat our patients, maintaining continuity of care at another provider should a particular clinic or geographic region need additional options," said Craig Smith, RN, vice president of clinical administration at American Renal Associates.

"The contingency plans are designed to ensure there is capacity among our centers to safely isolate and treat COVID-19–positive patients in the outpatient setting, particularly in communities hardest hit by the virus," said Jeff Giullian, MD, chief medical officer for DaVita. "We believe it's our duty as clinical leaders to push for more collaboration across the industry to help optimize patient care during this unique time."

Individual clinics made plans detailing the number of patients they can safely isolate while preventing cross-contamination. These plans include designating areas within specific clinics and designing dedicated shifts or days devoted to patients positive for COVID-19 and persons potentially infected. In some cases, entire clinics have been designated to treat such patients, and other clinics have been identified that might be converted to COVID-19 clinics if necessary.

Collaboration to help areas with worst outbreaks

The collaborative effort allows the organizations to collectively brainstorm about how to best meet the needs of patients and providers, and it helps the industry rapidly respond in areas of the country with the worst outbreaks.

"Our biggest goal of this collaboration is to keep dialysis patients out of the hospital whenever possible, freeing up limited hospital resources and limiting the spread of COVID-19," said Robert Kossman, MD, chief medical officer for Fresenius Medical Care North America.

Added Mary Dittrich, MD, chief medical officer for U.S. Renal Care, Inc.: "The dialysis providers involved are focused on ensuring there are enough nurses, social workers, dietitians, care technicians, and available space to provide uninterrupted care to all dialysis patients—including those who are or may be infected with COVID-19—in a manner that does not unnecessarily expose the hundreds of thousands of other patients who entrust them with their care."

Patients with mild or moderate symptoms of COVID-19 are dialyzed in these designated centers, while only patients with severe symptoms are sent for hospital evaluation and treatment. The outpatient organizations are planning to have capacity to meet the needs of all patients who can safely be dialyzed on an outpatient basis.

Members of the collaboration developed a centralized admissions process that permits any provider to call a single number to initiate a placement in an isolation clinic. They also developed a set of best practices covering such topics as admissions, transportation, telemedicine, and medication management. Under the agreement, the attending nephrologist continues to manage care of the patient, even if the patient is treated by another provider for purposes of cohorting.

All the organizations have been working with the US Department of Health and Human Services and the Centers for Disease Control and Prevention to ensure they are following updated guidelines regarding infection prevention and control. Measures to reduce potential spread of the virus include screening all people entering the facilities, requiring the use of masks for all patients and more elaborate personal protective equipment for staff, limiting visitors, instituting rigorous cleaning processes, and keeping patients at least six feet apart.

To date, dialysis companies participating in the collaboration for the most part have been able to treat their patients independently, without relying significantly on the developed contingency plans.

The members of the dialysis collaborative continue to communicate daily to review COVID-related needs, updates, potential issues, and patient transfers. "It is through effective, ongoing communication about the needs in different communities across the country that we can continue to enact plans that help all of our patients maintain safe, uninterrupted dialysis treatments," said Guillian. ■

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