

DIALYSIS DURING HURRICANE IKE. NEED FOR IMPROVED EMERGENCY PREPAREDNESS.

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As Hurricane Ike approached Houston in September 2008, residents within the storm surge were evacuated based on projected flood zones.

Unfortunately, many patients with chronic medical needs failed to consider the potential impact of the 150 mile zone of power outage.

More than four million people in the Houston metropolitan area were without electricity for an average of 7.5 days, leaving >9000 dialysis patients without adequate access to treatment. The majority of patients presented to the emergency department (ED) of one of the two hospitals in the area which had full power and a safe water supply, requesting routine dialysis. Within 36 hrs, 12% of evaluations in the ED were for dialysis-related issues, representing a 4.7-fold increase compared to usual volume. Of those presenting, 38% required emergent hemodialysis. In an attempt to preserve inpatient capacity within a federal disaster area, the hospital declared a state of emergency and patients who were stable after dialysis were discharged. The majority (50%) of ED patients were treated medically for mild hyperkalemia and discharged. On presentation, average values were as follows: SBP 173.6 mmHg, DBP 90.2 mmHg and serum potassium 5.1 mg/dL. 4 patients were admitted with vascular access failure, of which 3 required temporary catheter placement because of the unavailability of non-emergent vascular access services. Several patients on home hemodialysis and peritoneal dialysis (PD) were unable to perform their treatments due to lack of electricity or unsterile environments. In the three weeks following the storm, there were 6 cases of peritonitis in PD patients. Our experience shows that projected power outages need to be carefully considered when planning evacuation zones. Dialysis patients should be evacuated before predictable natural disasters for their physical safety as well as in anticipation of their medical needs.