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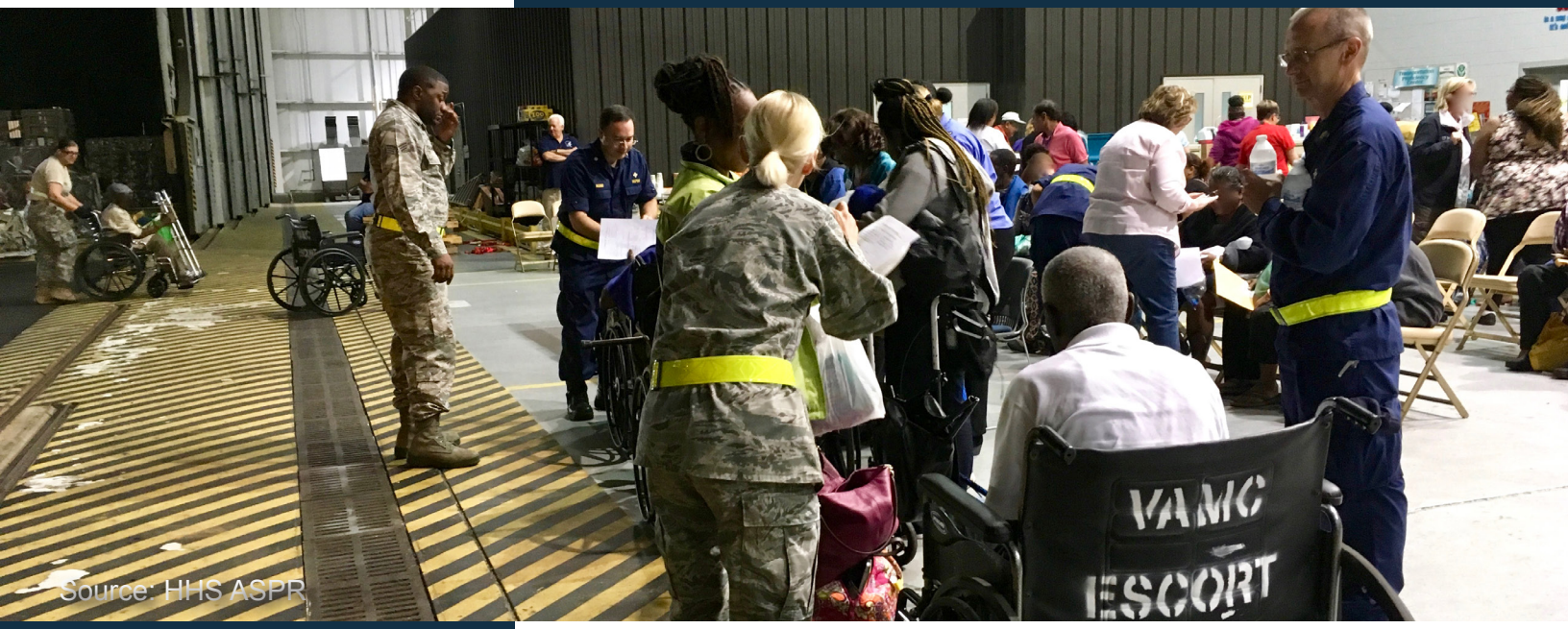
HEALTHCARE EMERGENCY PREPAREDNESS INFORMATION GATEWAY

Evacuating, Treating, and Tracking People on Dialysis:

Lessons Learned from the 2017 Hurricane Season



Source: HHS ASPR

The 2017 hurricane season devastated many areas of the nation, several repeatedly. After Hurricane Irma struck the U.S. Virgin Islands (USVI), many patients were evacuated to Puerto Rico (PR) to ensure continuity of care. Once Hurricane Maria ravaged PR, however, many USVI residents were evacuated a second time, including renal dialysis patients. ASPR TRACIE's Senior Editor John Hick (MD) interviewed Andy Stevermer, Incident Response Coordination Team (IRCT) Program Manager for ASPR's Office of Emergency Management (OEM) Division of Operations (who served as the Operations Section Chief during the response), Commander Selena Ready, a Risk Management Analyst at the U.S. Food and Drug Administration (USFDA) (who served as the IRCT Patient Movement Operations Branch Chief during the response), and Victor Harper (MS, Director of Logistics, ASPR OEM) to learn about this evacuation from a federal patient movement perspective.

John Hick (JH)

Tell us about your role at the time of the incident and how the services you provided integrated with the overall federal response.

Andy Stevermer (AS)

I served as the Operations Section Chief of the Emergency Management Group (EMG) at the operations desk for all three hurricanes. My daily job is to run the IRCT, so I was also busy staffing a variety of incident management needs across the various Areas of Responsibility as the situation developed.

Selena Ready (SR)

During this response, I served as the IRCT Patient Movement Branch Operations Chief. Typically, during deployments, I serve as the U.S. Public Health Service Services Access Team (SAT) 3 Commander. SATs have a variety of deployment capabilities, but were originally formed to provide resources and assistance to local health authorities with discharge planning for patients and their caregivers in mass sheltering—particularly in special needs shelters (e.g., Federal Medical Station [FMS]). When deployed in support of federal patient movement, SATs typically track the patients and caregivers from the area of impact to the National Disaster Medical System (NDMS) hospital and coordinate their return home (once the patient is medically cleared and the impacted area is safe and has appropriate resources). So, this was a new role for me. Part of my job as IRCT Patient Movement Operations Branch Chief was to oversee operations of the SATs.

JH

Do SATs typically serve dialysis patients?

SR

SATs are involved in the federal patient movement response so, yes, this could include dialysis patients. However, this was a very atypical response in terms of the volume and movement of dialysis patients. This was all new territory for us—we've never moved dialysis patients out of an area of impact before.

AS

After Hurricane Ike hit Texas in 2008, there was a plan to move dialysis patients from Galveston Island to an FMS in the Austin area, but it wasn't carried out because they were able to identify additional dialysis capabilities in the Houston area and closer to home. But that was the first time I can recall Emergency Support Function-8 (ESF-8) considering the movement of a specific subpopulation out of an impact area.

The Kidney Community Emergency Response (KCER) Program, under contract with the Centers for Medicare & Medicaid Services, provides technical assistance to End Stage Renal Disease (ESRD) Networks, kidney organizations, and other groups to ensure timely and efficient disaster preparedness, response, and recovery for the kidney community. The KCER Program's disaster preparedness resources help save lives, improve outcomes, empower patients and families, educate healthcare workers, build partnerships with stakeholders, promote readiness in the community, and support the ESRD Networks.

JH

How did you come to the decision to evacuate dialysis patients? What were your options and what was the calculus in deciding that the movement had to occur?

SR

Most of the dialysis centers in the USVI were rendered nonfunctional by the storms. Atlanta (located in Region IV) was determined to be the primary reception area for dialysis patients. Ninety-seven percent of the patient population came from the USVI, mainly from St. Croix, and the remaining 3% came from PR.

AS

We did not relocate dialysis patients from PR on a massive scale to the continental United States (CONUS). There are about 6,000 dialysis clients on PR, and their system was brought back up fast enough to provide the care needed. After Irma made landfall in the USVI, we did evacuate some dialysis patients from St. Thomas to PR (which made sense because of proximity). However, after Maria hit PR, we started bringing these clients into Region IV.

SR

As of December 11, 2017, we had moved a total of 174 dialysis patients into Atlanta.

JH

How were patients identified and transported?

AS

They used emPOWER data to help identify individuals on dialysis treatment in the impacted areas. The NDMS handled the patient movement side; most were moved in aircraft provided by the Department of Defense.

JH

How did you handle logistics in the Atlanta area?

SR

We used a Federal Coordinating Center (FCC), which is a designated entity in each region—often a Department of Veterans Affairs medical center or Department of Defense medical treatment facility—that coordinates NDMS patient reception. In a typical NDMS patient movement scenario, seriously injured or ill patients are loaded on a plane, the plane lands at the FCC, and a medical team on the ground assesses and triages patients, then puts them on ambulances which take them to various hospitals. For this group of dialysis patients, we had to modify the intake process. They came off the plane and were processed through a “med check” by a team of physicians and nurses, given snacks and beverages, and the SAT gathered patient tracking data and oriented them to their location. Then, they received a gift card from the American Red Cross, registered with the Federal Emergency Management Agency’s (FEMA) Office of Disability Integration and Coordination, and we transported them based on their triage results. If they were deemed “hotel appropriate,” we grouped and transported them to a hotel. If not, they were transferred to a hospital like a typical NDMS patient. Once they were placed in hotels or hospitals, the SAT coordinated their care and discharge plans.

JH

How did you facilitate the dialysis care? Were patients worked into existing openings at various local facilities?

SR

We have a contract in place with the End Stage Renal Disease Network (ESRD) who identified and connected patients with nearby dialysis centers. We coordinated housing, dialysisappropriate nutrition, transportation to/ from the dialysis centers, and other medical and primary care services for the patients.

JH

How are we helping patients get back home?

SR

We have to ensure that the infrastructure is in place back home to support their dialysis before they can be returned. We continue to monitor this through the Kidney Community Emergency Response Program (KCER) to determine what dialysis centers are available. The SAT also connects patients with FEMA and their Individual Assistance Program and patients need to confirm their homes are habitable.

JH

Are there any contracts or existing resources for rapidly deploying or setting up dialysis centers?

AS

No. We have looked into building soft- or hard-sided dialysis facilities and some private facilities are trying to free up chairs, but in terms of mobile centers, we don't currently have those capabilities. We have explored multiple avenues for this purpose, especially in the interest of getting centers back on line so that patients can return home. The federal government has even looked into placing mobile units on floating vessels, but while creative, these are also very expensive propositions. Selena and her team have been working on intermediate placements. For example, some patients have family in other parts of the country they could stay with as an interim step before going home. As soon as we can guarantee that there is a safe home and a dialysis center available, we will help patients get back home to the USVI.

JH

Were there any other patient subpopulations that were equally affected?

AS

Not specifically, but there were a lot of medical evacuations due to other health conditions. Those worked out better because they were true hospital-to-hospital referrals, and the FCCs and the NDMS patient movement system worked better because it was designed for this.

Here, we had people at home who ended up at the Aerial Point of Embarkation and then get to the FCC (because of the system) and Selena and her team had to figure out social services in addition to medical care. The NDMS was not designed to move individuals from their home to a

shelter location so that they can continue to receive outpatient services like renal dialysis.

JH

Were there any checklists or tools you used or would like to have at the airhead or on-site screening area that could be templated?

SR

For moving patient subpopulations, we definitely need a templated intake form, and we also need it to be comprehensive. The forms we originally had at the FCC were specific to patient tracking —they didn't list or track any human services needs. We also had some issues with patients not having identification and we did not have a JPATS team in place at the location where we were loading patients on the plane. We typically do, which prevents the need to collect the data when patients are getting off of the plane.

JH

Any particular lessons learned that could improve the response next time?

SR

Our greatest challenges were related to the Joint Patient Assessment & Tracking System (JPATS) (the electronic records system used by NDMS). We faced two specific challenges: 1) assessing and tracking an atypical (ambulatory, in this case) population and 2) aggregating the data. Due to the large number of patients, having a database where we could input patient-specific human services needs would have been helpful because we had to communicate the need numerically (e.g., the number of coats or meals per patient per day) and coordinate/provide the services.

Another challenge we faced is a common one: responder turnover. I would love to see responders be able to stay longer and not have to switch out every couple of weeks.

AS

I have two lessons learned. The challenge Selena touched on with longer duration responders is a symptom of the federal response in general. We cannot do business in Type 1 (major disaster requiring federal resources) responses with 14-day deployments. We need to look at longer-term deployment. In addition, we do not have a sufficient number of SAT teams to deal with consecutive Type 1 disasters like this with multiple displaced people. SAT has a unique skill set of case management and medical case management skills and we don't have deep bench strength. We just don't have enough of them.

The second issue is we don't have a soup-to-nuts system of providing wraparound services to displaced populations. During the Katrina response, FEMA set up an air bridge that moved thousands of people across the country. All of a sudden, we had a situation of a couple of hundred internally displaced individuals who weren't necessarily medical shelter type clients, but had specific needs (i.e., dialysis), and we didn't

have a plan for this specific displaced population. Usually this would be handled through ESF-6 and mass care, but throw in the fact that these patients have a dialysis medical need, and HHS has the responsibility for the wraparound services—the feeding, sheltering, clothing, and transportation. We just don't have a plan for that because we've never medically evacuated a group of individuals with a set of unique needs.

Initially, USVI dialysis patients were placed in an FMS-type asset at the Florida International University (FIU), but it was quickly realized that this was not sustainable. They switched to the "hotel model," then learned that some clients needed a higher level of care. Some clients' medical conditions deteriorated as time passed necessitating a higher level of medical care.

SR

Yes, a lot of decompensation took place with patients, especially the elderly. Many of them were stable in their own communities and moving them created unanticipated challenges. Also, we learned quickly that in a hotel Americans with Disabilities Act (ADA) rooms are not the same as wheelchair-accessible rooms. And in many cases the patient manifests from the flights weren't detailed enough to capture the actual need of wheelchairaccessible and ADA room needs prior to their arrival at the FCC. Trying to triage them into hotels all over the Atlanta area was definitely a challenge.

Another lesson we learned was specific to caregivers. While we had 174 dialysis patients to care for, many of them came to Atlanta with "non-medical attendants," many of whom had forgotten their own medications and were also fragile and/or elderly—this added to the challenge.

As for the SAT's unique skill sets, Disaster Case Management Teams are typically comprised of one social worker and under them, a team of people who are good at coordinating care and communicating. We try to build our SATs in this same model, with one social worker paired with four healthcare workers (who may not be social workers). Social workers are responsible for discharge planning (to include connecting patients with family members in the state if applicable). In this case, however, we ran out of social workers. We need to incorporate this lesson into future plans for sure.

AS

We need to look carefully at other isolated CONUS and outside the continental U.S. locations (e.g., in the Pacific Ocean or Alaska). Disasters similar in scope can definitely happen again and we need to be prepared to deal with this patient population when there is no electricity or water to run dialysis centers.

Related ASPR TRACIE Products:

- Dialysis Centers Topic Collection
- Healthcare Facility Evacuation/ Sheltering Topic Collection
- Utility Failures Topic Collection
- Major Hurricanes: Potential Public Health and Medical Implications
- Health and Social Services Recovery Lessons Learned from the 2016 Louisiana Flooding (webinar)
- Hurricane Resources at Your Fingertips
- After the Flood: Mold-Specific Resources
- Post-Disaster Lessons Learned: Dialysis Patient Management

Access these ASPR TRACIE resources for more information:

- Federal Patient Movement: NDMS Definitive Care Program Fact Sheet
- Federal Patient Movement: Overview Fact Sheet
- Federal Patient Movement Service Access Team Fact Sheet
- Joint Patient Assessment and Tracking System Overview Fact Sheet
- Patient Movement and Tracking Topic Collection

Federal Patient Movement

There are three levels of patient movement:

- **Local:** After a disaster, local Emergency Medical Services (EMS) (e.g., ambulance, police, and fire) handle the bulk of patient movement.
- **State:** Once local authorities become overwhelmed, they will request assistance from the state. If possible, state authorities will assist, but local authorities will continue to carry out the majority of the response efforts. The state may also reach out to neighboring states through the Emergency Management Assistance Compact (EMAC) for additional support.
- **Federal:** Once state resources, including all EMAC agreements, are (or could potentially be) overwhelmed or exhausted, the state requests federal-level resources.

When a state requests federal support to move patients, the U.S. Department of Health and Human Services (HHS), as the lead federal agency for Emergency Support Function-8, Public Health and Medical Services, will implement the patient movement system, which is comprised of five functions: patient evacuation (to include patient reception and management), medical regulating, en-route medical care, patient tracking, and re-entry.

Editor's Notes:

Providing dialysis services is an intricate process and can be particularly difficult after a major disaster. Power, reliable transportation, and highly pure water (hundreds of liters per patient) are just a few of the challenges that can interfere. Fortunately, KCER works closely with Fresenius, Davita, and other providers throughout the country to provide strong programs and relationships and can usually maintain continuity of treatment.

One of the main lessons learned from the 2017 hurricane season was the complexity of the social services issues that needed to be addressed, which were not able to be met through usual shelter channels. State and local emergency planners should work to ensure that they are coordinating with their local and regional representatives when considering the needs of the dialysis-dependent population. When infrastructure is damaged across a wide area, access to treatment may be difficult and require patient relocation in order to assure their safety. Identifying patients and assisting them with personal plans prior to an event, encouraging pre-disaster dialysis when possible, and communicating with patients as soon as possible after disaster are the first steps. Federal patient movement intake forms did not fully capture the data necessary, adding precious time to an already strained process. Updating intake forms and other data collection tools can help provide more personalized treatment as soon as practical.

Most dialysis patients have complex medical and social needs that cannot be addressed by providing dialysis services alone. Not addressed here is the strategy of "pre-dialysis" – dialyzing patients prior to landfall of a hurricane, for example, that can buy valuable time while decisions about evacuation versus bringing in services are made. Healthcare coalitions should be sure to partner with their local and regional dialysis providers when working on their plans and exercises.