For almost a year, Ellen McGowan knew the first Wednesday of every month she had to make the 115-mile trip from her house in Sheffield to her doctor at the University of Alabama at Birmingham Hospital for a checkup. She was willing to make that trip because before she met Dr. Eric Wallace at UAB, there was no answer to her failing health. She was in and out of the hospital for two months, and having muscle spasms so violent one broke her pelvis in four places, she said. “I was overmedicated and underdialysed,” McGowan said.

Wallace is a nephrologist at UAB specializing in peritoneal dialysis — home dialysis. McGowan has been on home dialysis for five years since chemotherapy treatment for a rare blood cancer zapped her kidney functions. She kept her treatment local as long as possible, but when she began to decline rapidly, her family looked to UAB for answers. When the decision was made to move her treatment to Birmingham, McGowan accepted the regular out-of-town trips, but those have basically stopped thanks to telemedicine research Wallace is conducting.

Staying home

Now on the first Wednesday of each month, McGowan makes a 20-minute car ride to the Colbert County Health Department in Sheffield. There, Wallace completes his regular clinical check on McGowan from his office in Birmingham, thanks to internet-connected diagnostic tools.

“I noticed that many of my patients — almost 25 to 30 percent of my patients — were driving more than an hour for their visits,” Wallace said. “I started to try to plan the program, and it only took me 31/2 years to get over the hurdles to get the program in place.” McGowan is one of 15 of Wallace’s patients participating in the study.

During a routine checkup, a nurse at the health department office uses a Bluetooth-connected stethoscope to transmit the heart and lung sounds to the stethoscope Wallace is using. A high-definition camera is used for a visual checkup. Wallace checks McGowan’s legs for swelling, her mouth for signs of dehydration, and her dialysis catheter for redness, drainage or other signs of infection. He provides shipping supplies to send any lab tests to the same lab in Florida he uses for non-telemedicine patients.

It has been such a relief for McGowan and the family members that had accompanied her on doctor’s appointments to Birmingham. Her dialysis treatment is a 10-hour cycle that runs while she sleeps, so on nights before she had an appointment in Birmingham, she was in bed at 7 p.m. to complete the treatment in time to get ready for the drive to UAB. Lunchtime typically hit while McGowan was out of town, so that meant a meal must be purchased, too.

“It saves me time, travel and money, but I’m still getting the care,” she said. “It just blows my mind. It opens up this world of care to people that don’t have the resources to get to Birmingham and get the good quality of care. “Kidney disease is rampant in northwest Alabama,
and we don’t have many options. This is a fabulous opportunity for our area, but it could go nationwide.”

**State impact**

Wallace’s patients are spread across the state. McGowan comes from the northwest corner, others from west Alabama and south of Montgomery. He found the county health departments, administered by the Alabama Department of Public Health, the perfect partner because they provide a central location in each county that has the nurses to provide the medical assistance needed to perform the checkup. “Where the need is greatest in Alabama is increasing access to care,” Wallace, an Anniston native, said. “We’ve proved we can do that with a complicated group of patients, and if we can do that, we can reach everyone. My hope is if we can reach everyone, we can improve health care for the entire state.”

There are 10 telemedicine-ready county health department sites in Alabama. That means the health department has the bandwidth capability necessary, and the standardized telemedicine cart on site, said Michael Smith, one of the people within the Alabama Department of Public Health working to build a statewide network for telemedicine.

A telemedicine cart is equipped with a computer with video and audio capability and the encryption necessary to satisfy the patient confidentiality of the Health Insurance Portability and Accountability Act. It also has a hand-held viewing camera that has three lenses — a general viewing lens, a dermatology lens and a lens for viewing inside ears and mouths. Smith said the state health department anticipates placing 15 more telemedicine carts in county health departments around the state this year.

“Telemedicine is not a service,” he said. “Telemedicine is a service delivery. The success of telemedicine around the country, and as it is growing in Alabama, is to connect clients with providers so they can have an improved quality of life and more efficient delivery of service.”

The Alabama Department of Public Health uses telemedicine to provide mental health counseling, AIDS and HIV patient care and outreach.

The state health department is working with different agencies, such as the Veterans Administration and Alabama Coalition Against Rape, to connect patients with services. Smith said telemedicine delivery of maternity care is one area being explored that could have a substantial impact in Alabama. Approximately 35 of Alabama’s 67 counties do not have hospitals that provide obstetrical services. Without a hospital to deliver babies, obstetricians are unlikely to set up practice in those counties.

Mothers-to-be there are left with the choice of driving one, two or even three counties away to find a doctor for routine care or forego consistent prenatal care.

Smith said the majority of medical specialists in Alabama are located in the state’s metropolitan areas; however, the majority of the state’s population lives outside of those areas with many living in small, isolated rural communities.

The commonality is the county health department. Each of Alabama’s 67 counties has its own staffed health department with nurses to assist with delivery of care, and social workers to provide support services. “As we work to establish a network of telemedicine carts at county health departments, we want to partner with providers to provide services for those in need,” Smith said. “Those include individuals traveling a great distance, or those that are left out because of transportation challenges or because they are not able to get away from work for a full day.” Smith said partnerships with UAB Hospital, University of South Alabama Health
System and other agencies would be vital in creating an effective and efficient network of telemedicine in Alabama.

Insurance help

A large stumbling block for Alabama’s telemedicine effort is insurance reimbursement. Approximately half the states have legislation that mandates insurance coverage to telemedicine service delivery, according to the American Telemedicine Association. Some states require coverage for private insurance and Medicaid programs, and others require the coverage in one or the other category. Alabama has no mandate requiring insurance companies or Medicaid to cover telemedicine.

Wallace said his experience has been insurance providers are more likely to reimburse telemedicine care for patients that live in areas classified as rural, but just because a patient lives in a so-called metropolitan area does not mean the patient can get to a doctor or the specialist that patient needs to see.

Smith said to make a statewide network a real possibility, insurance stability must be in place. ”There are a lot of opportunities,” he said. “It just depends on the state having the right environment for it, which includes making it financially sustainable. In addition to the clinic (at the health departments) we need to make sure that the physicians and specialists at the receiving end are going to get reimbursed for their service, and provide some level of financial support for the origination site.”

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