

Care Center Spotlight: How Arkansas Children's Hospital Takes Neuromuscular Care to Rural Communities

As the only children's hospital in its state, Arkansas Children's Hospital cares for patients from far beyond Little Rock, where the main campus is located. Many patients live hours away in rural communities.

For children living with neuromuscular diseases (NMDs), distance can create barriers to timely diagnosis, disease-modifying therapies, clinical trial participation, and the coordinated multidisciplinary care these complex conditions often require. Aravindhan Veerapandiyan, MD, Director of the Comprehensive Neuromuscular Program and Co-Director of the MDA Pediatric Care Center at Arkansas Children's Hospital, says these gaps can ultimately affect both quality of life and long-term outcomes.

"The quality of care someone receives, or the outcome someone achieves, should not be determined by where they live," Dr. Veerapandiyan says. "Many rural families are already facing significant challenges, such as poverty or access to other services, so managing a complex medical disease may not be their main priority."

To help ensure that geography does not prevent access to important care, Dr. Veerapandiyan and his team have expanded NMD services beyond the hospital's main campus through satellite clinics, telemedicine, multidisciplinary care coordination, and partnerships with local providers.

“Improving access can help ensure that these patients and their families receive the care they deserve at the right time, regardless of where they live,” he says.

Building a statewide care network

Bringing care closer to all the state’s residents has become a central goal of the Arkansas Children’s Neuromuscular Program. To reduce travel burdens while accessing this specialized care, the program employs several strategies:

- **Multidisciplinary clinics** at the main campus in Little Rock, including specialized clinics for Duchenne muscular dystrophy (DMD), spinal muscular atrophy (SMA), and other NMDs. “Families can travel once and see all of our specialists in a coordinated setting,” Dr. Veerapandiyan says. These specialists may include neurologists, pulmonologists, cardiologists, and rehabilitation providers.
- **Satellite clinics** in northwest and northeast Arkansas that allow families to receive specialty neuromuscular care closer to home while remaining connected to the expertise of the main campus.
- **Telemedicine** to support certain follow-up visits.
- **Partnerships with local physicians, therapists, and laboratories** that help extend the time between visits to Arkansas Children’s campuses. Many aspects of ongoing care can be coordinated locally. For example, laboratory monitoring for commercially approved therapies can often be completed at a local lab, with results reviewed by the Arkansas Children’s neuromuscular team. “Strong partnerships with local providers, primary care physicians, community physicians, and therapists create the network of care that supports these patients,” Dr. Veerapandiyan says.

When families must travel to Little Rock for comprehensive multidisciplinary visits, Arkansas Children’s provides support through its social work team to help reduce the financial and logistical burden. “Our social workers can help with different resources, including travel and lodging,” Dr. Veerapandiyan says.

The Neuromuscular Program also conducts clinical trials, giving Arkansas families opportunities to participate in research without leaving the state.

Lessons learned while expanding NMD care

While satellite clinics have improved access to care, building them has come with challenges.

“The challenge is replicating the multidisciplinary model,” Dr. Veerapandiyan says. “It’s challenging to get all the specialists in those satellite clinics and provide that coordinated model.”

Combining in-person visits with telemedicine, allowing specialists at the main campus to participate remotely when needed, has helped address this challenge.

Another key to the success of expanding care to rural areas is the partnerships they've built with local providers. Working with local physicians and laboratories can reduce travel while ensuring patients continue to receive appropriate follow-up care.

Dr. Veerapandiyan says one of the biggest lessons has been recognizing just how much logistical challenges can affect care. He recalls a family whose son with DMD was an ideal candidate for a gene therapy clinical trial. After initially agreeing to participate, the family called back to decline because they did not have childcare for their other child.

Other factors, such as transportation and missed work, can also affect a family's ability to access care and research opportunities.

Best practices for extending care in rural communities

For other neuromuscular providers hoping to expand care in rural communities, Dr. Veerapandiyan recommends starting with patients' needs rather than organizational logistics.

"First, try to understand the needs and challenges of the patients and families," he says. "Understanding those unique challenges should drive the design of any outreach program."

He also encourages providers to build strong partnerships with local healthcare professionals and leverage telehealth when appropriate.

Just as important, he says, is securing organizational support. "If you're working in a bigger institution, it is important to be a champion and try to educate the leadership and key stakeholders about how important this is," Dr. Veerapandiyan says. "We should be champions and do the education that will help us all."

Ultimately, he believes expanding rural care requires a shift in perspective.

"Our goal should not be to make rural patients travel farther to find expertise," Dr. Veerapandiyan says. "Rather, it should be to make expertise travel farther to reach patients."



MDA Pediatric Care Team
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Resources

- Explore [MDA Medical Education](#) programs and case studies.
- MDA Webinar: [Best Practices in Establishing a Telemedicine Practice in Neuromuscular Disease](#)
- A patient perspective: [MDA Ambassador Guest Blog: Rurally Complicated](#)
- American Academy of Neurology: [Telehealth Resources](#)