Seeing is Believing: Telemedicine Improves Access to Genetics Consults in a Rural State
Terri J. Teague-Ross, MS; Shannon Lewis, BSN, RN; Whit Hall, MD; G. Bradley Schaefer, MD

Objectives
• Attendees will learn how telemedicine with a genetics application can be used to improve case management of fragile neonates.
• Attendees will learn how to decrease appointment waiting time for patients in need of a genetics consult.

Background
Only one Level IV nursery serves Arkansas, and the majority of the state’s rural hospitals are separated from the specialty resources fragile infants require. Using a statewide telemedicine network, healthcare leaders developed a Community-Based Research and Education Core Facility establishing telemedicine interactivity with several of the state’s outlying nurseries, the majority of which serve a rural Medicaid population. Funding was also provided by the National Center for Research Resources and the Centers for Medicare and Medicaid Services. T1 lines and codec-and-camera carts allow videoconferencing using a high-definition resolution camera. A novel concept in how to obtain specialty genetics consults for neonates matched outlying hospitals with the state’s only academic medical center.

Outcomes
Families at participating sites are now able to connect to one of only three pediatric geneticists in the state at Arkansas Children’s Hospital or the University of Arkansas for Medical Sciences to obtain information on their infant’s diagnosis, prognosis, and treatment. Parents are able to ask questions, and physicians are able to see physical features clearly through telemedicine video, rather than trying to decipher verbal descriptions of malformations. A similar but unassociated telemedicine clinic is offered in Wichita, Kansas. Use of the Arkansas and Kansas clinics indicate the effectiveness and increasing popularity of this groundbreaking strategy. In 2008 when the service was in its infancy in Arkansas, one consult was obtained. The following year, two consults were facilitated, and in 2010, five consults took place during the first eight months of the year (Figure 1). In the Wichita clinic, 48 patients have been seen to date (Figure 2).

Conclusions
The success of this program can also be attributed to the hiring of a geneticist with previous experience in telemedicine based patient care programs.

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