

IMPROVING ACCESS TO CARE THROUGH TELEAUDIOLOGY: A TALE OF COLLABORATION

INTRODUCTION

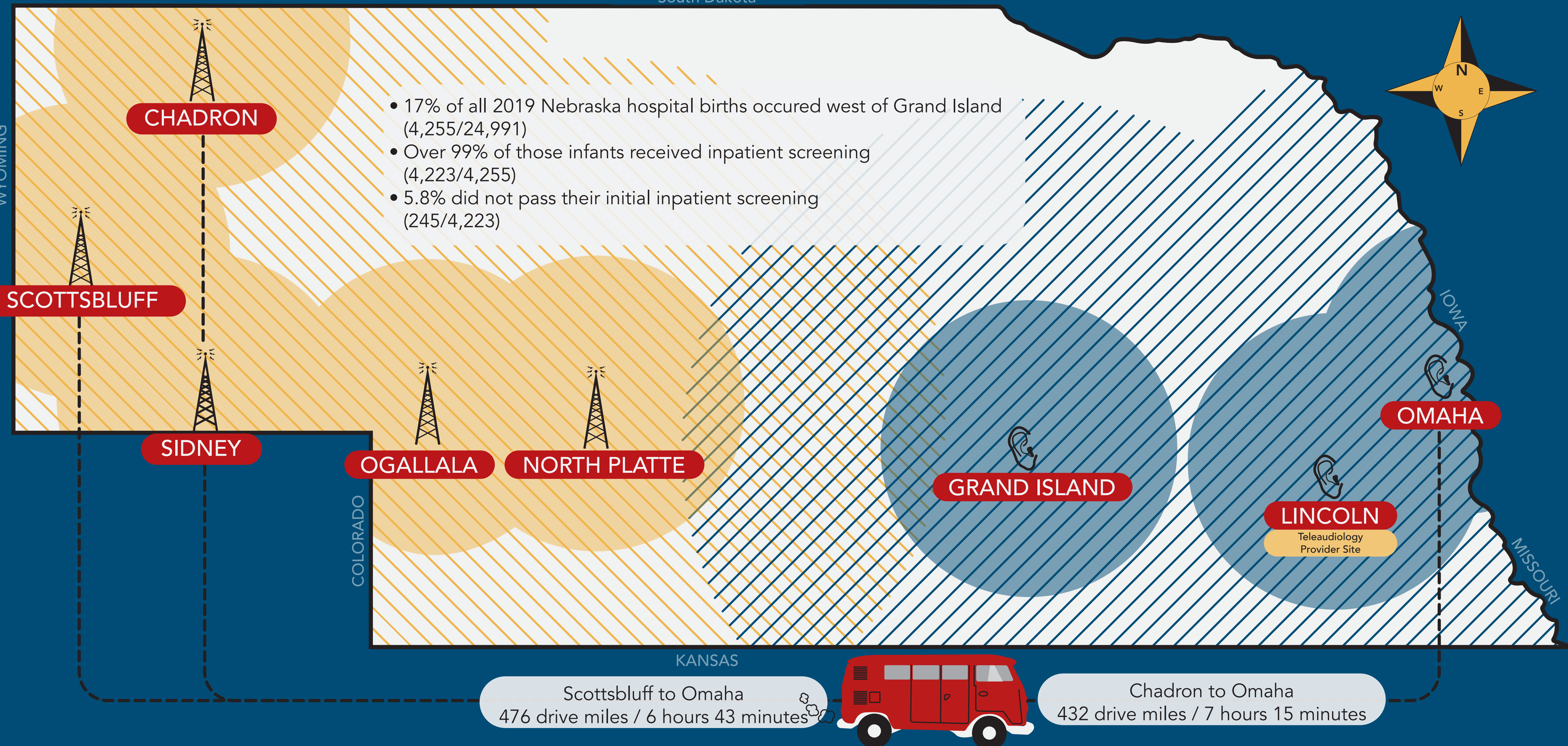
In 2016, a UNL Au.D. Candidate and NE-EHDI intern completed a capstone on how regional differences contribute to factors for loss to follow-up. Through data analysis, her research revealed the area of residence had a statistically significant effect on a child going through the audiological diagnostic protocol. If a child lived in regions outside of the two largest metro areas in the state (Lincoln or Omaha), there was a greater chance that they would become lost to follow-up when compared to those who lived within the Lincoln and Omaha area. Based on this data, the conclusion was that residents outside the metro areas would benefit from expanding services to their region. However, because there are small numbers of children needing audiological diagnostic services, satellite clinics were not an ideal solution. NE-EHDI also received feedback from parents in western NE and anecdotal evidence demonstrated a need for improved access to quality pediatric audiology services outside of metro areas of Nebraska. Based on these findings, teleaudiology became the solution.



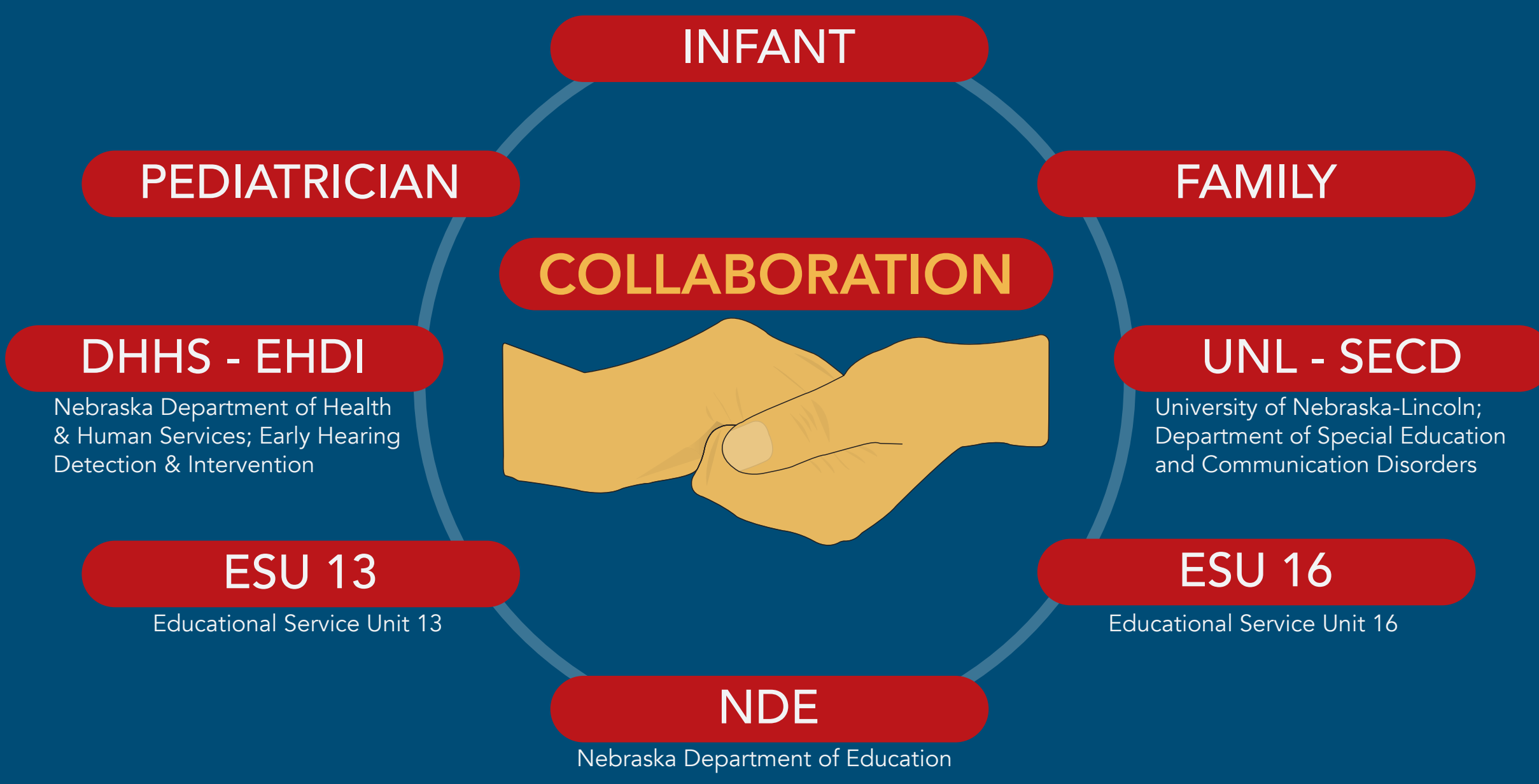
A UNL audiologist, with pediatric experience, uses HIPAA compliant Zoom to talk with the parent and conduct remote ABR testing.

PARENT EXPERIENCE OF CARE

"My husband and I were overjoyed to welcome twin girls in December 2009! Upon discharge, the nurses informed us that neither girl passed her hearing test at birth, but that it was just fluid and stated we needed to follow-up with our pediatrician as well as the audiologist in our town. On our first follow up with the audiologist, our babies did not pass, and we were again told it was probably just fluid, and to come back in a month to see the ENT. We followed up a month later as instructed, and the ENT stated that he couldn't see much wrong with either girl in terms of fluid, so he recommended we see the audiologist again in a month. For the next few months, we had a series of appointments where an ABR was attempted without success. When the girls were about three years old, a representative from the local Education Services came to their daycare to test all children for hearing loss. Neither one of my girls passed their hearing screening. We immediately returned to the local audiologist and showed him the test results. He said there was nothing he could do for them, and to come back in a month to see the ENT. I finally asked if there was a place we could go for a second opinion. He referred us to an Audiologist in Denver CO, which was about a three-hour drive from our home in western NE. The Audiologist in Denver was able to tell us immediately that both of them had bilateral sensorineural hearing loss. She also explained the different options for hearing aids, and both girls were fitted that day. We saw our audiologist every three months after our initial appointment with her. One of our girls has been through speech therapy and still struggles because she did not receive on time early intervention services. I cannot stress enough how important early intervention is for the long term benefit of kids with hearing loss."



- Approximately 100 mile radius from audiology office offering comprehensive pediatric services
- Approximately 50 mile radius from audiology office offering comprehensive pediatric services
- Teleaudiology remote site
- Approximately 100 mile radius from teleaudiology remote site
- Approximately 50 mile radius from teleaudiology remote site
- Comprehensive pediatric audiology services available



After the trained ESU 13 Teacher of the Deaf and Hard of Hearing preps the baby, he is ready for remote ABR testing.

BARRIERS & FUNDING

- Finding pediatricians with whom to partner
- Finding a host site in western Nebraska and training to operate equipment
- Acquiring equipment (biggest barrier)
 - ◊ Funded by grant from the Nebraska Department of Education
 - ◊ Diagnostic ABR, DPOAEs, Tympanometry
- Developing protocols and processes
- Promoting teleaudiology to providers after implementation

OUTCOMES

- 8 infants tested
 - ◊ From 6 different communities in two states
 - ◊ 3 of the 5 test sites were utilized
- 2 infants with permanent hearing loss identified and referrals for interventions made

CONCLUSIONS

- Improved access to quality early hearing detection
 - ◊ Current appointment wait time 1-2 weeks
 - ◊ Access to audiologist with pediatric experience
 - ◊ Decreased distance for families
 - » Max distance, so far, has been 25 miles
 - » Possible >7 hour drive time, so far, down to 30 minutes
- Next steps:
 - Parent satisfaction surveys
 - Handout to advertise teleaudiology option to families and primary care physicians
 - Improvements to referral process
 - Add testing location in north central Nebraska