

Infant Hearing Program

ANNUAL REPORT

2022

Calendar Year 2021 Activities

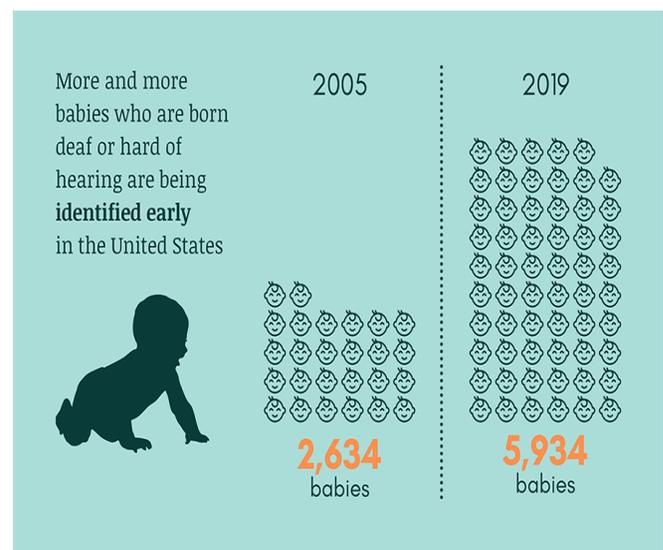


Arkansas Act 1559 of 1999 mandates hearing screening for all infants born at Arkansas birthing hospitals. The Infant Hearing Program (IHP) located in the Arkansas Department of Health (ADH) Center for Health Advancement (CHA), oversees the regulatory component of the mandate. Act 1559 also established a Universal Newborn/Infant Hearing Screening (UNHS) Advisory Board whose members are appointed by the Governor. The board consists of seven members: audiologist at large, audiologist from ADH, audiologist from Arkansas Children's Hospital (ACH), speech-language pathologist, pediatrician/neonatologist or otolaryngologist, adult who is Deaf or Hard-of-Hearing (DHH) to represent consumer organizations for DHH persons and consumer of services who is a parent of a child with a hearing condition. The 2022 Annual Report describes program activities occurring during the 2021 calendar year and recent data trends highlighting program performance as reported to the Center for Disease Control and Prevention's (CDC) Hearing Screening & Follow-Up Survey (HSFS).

The IHP serves as the state's lead agency for the Early Hearing Detection and Intervention (EHDI) system. The IHP works to ensure all newborns receive:

- 1 Hearing screening *before* one month of age,
- 3 Diagnostic audiological evaluation *before* three months of age,
- 6 Enrollment in early intervention services *before* 6 months of age.

EHDI programs were developed because hearing conditions are the most common congenital anomalies, with approximately 3 of every 1,000 infants diagnosed annually. For most of these infants, there are no known signs or risk factors for the condition. As a result, identification of these hearing conditions are often delayed until the child is as old as three years. Infants with undiagnosed hearing conditions are at an increased risk of developing significant speech delays and experiencing barriers in language attainment.



IHP continued its efforts to promote EHDI to strengthen the state system. The IHP focused on completing workplan activities despite challenges imposed by the COVID-19 pandemic by identifying innovative activities to increase awareness of EHDI recommended practices and increase access to services. These efforts enabled the program to address goals and objectives through increased partnerships with stakeholders, virtual activities and the completion of workplan activities.

Goals and Objectives

Goal 1: To ensure infants receive a newborn hearing screen no later than 1 month of age, preferably prior to hospital discharge.

Arkansas continues to report 96% of infants receiving a newborn hearing screen no later than 1 month of age. The IHP completed workplan activities supporting effective relationships with the 39 birthing facilities statewide. Through the annual survey, the IHP identified increased access to outpatient rescreening at birthing hospitals; 22/39 facilities offer outpatient rescreening with 20/22 of these facilities willing to rescreen infants not born at their facility. The IHP is currently revising follow-up protocols to increase efforts to promote outpatient rescreening prior to 1 month of age to reduce families' barriers in obtaining diagnostic evaluation due to the limited number of pediatric audiologists available statewide. The survey also indicated inconsistencies in reporting the results of the newborn hearing screening to primary care physicians. As a result, the IHP revised follow-up protocols to include contacting primary care physicians immediately when a child does not pass the newborn hearing screening. Adding this initial contact with primary care physicians allows IHP staff to confirm the child's doctor is aware of the test results in efforts to decrease the amount of time between initial screening and outpatient screenings due to the lack of a referral. By notifying the primary care physician of the initial screening results prior to the infant reaching 1 month of age, many families can be referred to the birthing facility for rescreen, and thus eliminating the need for diagnostic evaluation in some instances.

IHP staff continued weekly communication (phone and/or email) and quarterly email blast with birthing facilities to promote the Joint Committee on Infant Hearing's 1-3-6 recommended practice guidelines. Additionally, the program reviewed and revised system generated follow-up

letters to promote increases in timeliness of follow-up screening and diagnostic evaluation. New follow-up letters are available in English and Spanish to accommodate populations statewide. Revisions included clarification of required next steps after an infant does not pass the newborn hearing screen and the timeline indicating when follow-up care should occur. The new follow-up letters include QR codes enabling increased access to IHP educational materials. These QR codes allow parents to download a copy of educational materials for review later when internet services may not be available due to the rural conditions of various areas of the state.



Infants less than 1 month of age



Infants older than 1 month of age

The IHP determined additional educational materials are needed to target families at risk for becoming lost to follow-up/documentation. These materials will promote follow-up evaluation as soon as possible even if the child's age exceeds the recommended 1-3-6 timeline. Specifically, the program will continue working to create new materials targeting families with children over the age of 6 months that still need a hearing evaluation to identify normal hearing or a hearing condition. Lastly, the IHP worked with Arkansas Hands and Voices (AR H&V) to interview a parent of a DHH child to develop videos for a media campaign. The videos ran as paid ads on TikTok, Facebook and Instagram during the remainder of the project period. These paid ads targeted expectant and new parents in priority counties in hopes to improve performance.

Goal 2: To increase the number of infants who do not pass the initial hearing screening and receive a diagnostic audiological evaluation no later than 3 months of age.

Arkansas' 2019 data identified 48% of infants diagnosed with a hearing condition received a diagnostic evaluation before 3 months of age. The IHP continues pursuing new opportunities for quality improvement in increasing the number of infants receiving timely diagnostic evaluation through improved educational materials indicating why and when evaluation should occur, increased communication with audiologists statewide and an expanded partnership between the IHP and AR H&V.

The state's Early Hearing Detection and Intervention-Information System, ERAVE, identified 10 audiology clinics reporting diagnostic evaluations in 2020. During this time period, the ERAVE Diagnostic Report Aggregate identifies the results of 201 diagnostic evaluations, 84% of these results were reported by Arkansas Children's Hospital's clinics. As a result, the IHP met with audiologists from Arkansas Children's Hospital (ACH) to review protocols and identify opportunities for improvement. The IHP identified data quality (i.e. reporting test results in a timely manner) as a focus area for improvement to decrease loss to documentation and facilitating timely referrals for diagnostic evaluation as an opportunity to reduce loss to follow-up. IHP staff trained audiologists at clinics statewide on key aspects of EHDI during the project period. The program will continue engaging additional pediatric audiologists statewide to promote early identification.

The IHP revised protocols to reduce the number of records labeled "parent unresponsive" by adding a new referral to AR H&V. AR H&V's Parent Guides received referrals from the IHP indicating families who have missed two or more appointments for follow-up care.

Parent Guides contact the families to provide support and share real life experience to encourage parents to obtain recommended follow-up care. IHP staff received feedback from families referred to AR H&V stating they chose to complete follow-up care after speaking with a Parent Guide. The program will research a quality improvement project to monitor the effectiveness of these referrals during the next project period.

Goal 3: To increase the number of infants identified to be DHH that are enrolled in Early Intervention no later than 6 months of age.

Preliminary 2021 data findings indicate improvements in timely enrollment in EI and family-to-family support services (FSS). The program notes increased collaboration with state partners, such as First Connections, Arkansas School for the Deaf Statewide Services and Title V Children with Chronic Health Conditions, as a key factor in performance improvement. These partnerships enabled the program to connect families with additional options for receiving care coordination and assistance obtaining audiological services as a Non-Part C service and access to educators of the deaf.



Additionally, the IHP's involvement as an appointed member of the state's Interagency Coordinating Council (ICC) increased awareness of the EHDI system amongst EI providers. This enabled the program to provide feedback to First Connections to support improvements in EI enrollment for DHH children. Participating as a member of the ICC also allowed the IHP to distribute educational materials promoting timely EI enrollment (i.e., IHP Resource Guide) to service providers. IHP staff participated in quarterly ICC and Child Find meetings to provide feedback regarding EHDI recommended practice guidelines as a support for children with special health care needs. As a result of the ICC's recommendations, First Connections created an intake unit that includes coordination with Arkansas School for the Deaf Statewide Services' staff for service coordination for DHH children. These changes ensure all families with DHH children that are referred for EI receive access to a qualified professional specifically trained to provide services to families with DHH children.

Lastly, the program revised protocols for conducting follow-up with families after diagnosis to promote timely enrollment in EI. Previous findings identified a large quantity of families not enrolled in EI and family-to-family support services being identified as "unable to contact." As a result, the IHP added a new contact attempt with families prior to facilitating the referral to Part C, Non-Part C, and family support partners in efforts to increase enrollment in EI services. IHP staff used this contact as an opportunity to share information included on the "What to Do Next" flyer to outline next steps for parents with a DHH child and identify organizations available to assist their families and the services the organizations provide.

Goal 4: To increase the number of families enrolled in family-to-family support services by no later than 6 months of age.

The IHP continued a partnership with AR H&V to provide opportunities for families to connect and enroll in FSS during the current reporting period by completing a referral for each child identified with a hearing condition. AR H&V connected with families through the Guide By Your Side (GBYS) and Advocacy, Support and Training (ASTra) programs. Unfortunately, AR H&V continued experiencing barriers to enrolling families in FSS as a result of the COVID-19 pandemic, due to their inability to interact with families during in-person events. However, AR H&V worked to strengthen their partnership with ACH and hosted the following virtual events for families with DHH children in efforts to increase enrollment in FSS:

- Tuesdays Together – an opportunity for families and professionals to connect. Sessions included Springing into Success, Tips for Maintaining Hearing Equipment, Activities Families can do to Facilitate Language Development at Home, and Assistive Technology: What Do You Need to Know.
- Lunch & Learn Virtual Events – a way for parents to join short discussions on topics of interest. These sessions were held during the typical workday and included topics such as: Beginning your Individualized Education Plan and 504 Process and Learn about ICAN (Increasing Capabilities Access Network). During these events, ASTra advocates shared information regarding transition and the ICAN program coordinator shared information about the statewide technology program available to Arkansans.

- Champ Chats – sessions for DHH children to connect with other DHH children, parents are requested to attend with their child. Magic in the Air, a magic show for children birth to 6th grade was held during the current reporting period.
- AR H&V Academy – a series of Zoom calls to introduce basic education concepts and activities. This was a new event for children birth to 3 years of age and their parents.

AR H&V experienced a reduction in attendees at virtual events during the current project period. AR H&V attributes the reduced attendance to Zoom fatigue and the number of obligations parents were faced with during the pandemic. As a result, several virtual events were cancelled during the second quarter of this reporting period. AR H&V was able to host their first in-person event since the start of the pandemic during this project period. The organization hosted pumpkin patch events in four locations across the state with a total of 100 participants attending the events. Lastly AR H&V staff are working with a media company to identify ways to increase awareness of EHDI amongst families and providers. AR H&V hopes the combination of chapter events and media will assist in improving timely enrollment in FSS.



Reid Moore attending an AR H&V Pumpkin Patch event, courtesy of Shaylece Moore.

Goal 5: Provide opportunities for families to connect to a DHH adult to mentor, support, and guide families of DHH children no later than 9 months of age.

AR H&V provides opportunities for families to connect with DHH adults as part of the GBYS program. DHH Guides are available to each family referred to the GBYS program during initial communications between Guides and parents at AR H&V events. Initially, opportunities to connect with a DHH Guide were offered to families with limited enrollments. During current reporting period, DHH Guides reached out to each family referred to GBYS to promote connection to a DHH adult. AR H&V is working to increase the number of families connected with DHH adults.

Goal 6: Increase the IHP's capacity to lead efforts to engage and coordinate all stakeholders in the state EHDI system.

The IHP worked to engage stakeholders in the state EHDI system during the current project period by providing trainings and presentations to health professionals and service providers. During the semiannual UNHS advisory board meetings, stakeholders representing the entire EHDI system received information regarding EHDI challenges and data. Stakeholders provided feedback indicating opportunities to increase the EHDI system's reach by sharing information with state associations including the Arkansas Chapters of the American Academy of Pediatrics, Academy of Family Physicians and Society of Otolaryngology-Head and Neck Surgery. The IHP experienced challenges in actively engaging and delivering presentations to pediatric specialists participating in these associations during the current project period due to COVID-19 restrictions. The program will continue efforts to engage these providers.

Accomplishments and Barriers

IHP staff worked to increase the program's social media presence by publishing weekly posts on various EHDI topics. The program saw an increase in the number of visitors viewing parent information on the ADH website. Current records indicate 80 total views, 63 first time views, and an average of 3 minutes viewing the site.

Wristbands were distributed to eight Arkansas birthing hospitals as a pilot to promote effective communication of newborn hearing screening results and encourage the families of infants requiring rescreening to pursue follow-up testing before reaching one month of age. Preliminary findings indicated participants agreed that:

- The distribution of the wristbands did not interfere with their work responsibilities.
- They would continue to distribute the wristbands if provided with supplies.
- The wristbands "provide patients with a visual aid to let them know their infant needs a repeat screen."

However, the program received mixed feedback regarding the wristband's perceived effectiveness in increasing the family's understanding of their child's test results and steps for follow-up care. Moving forward, the program will provide additional education outlining best practices for distributing wristbands to participating facilities.

IHP staff delivered education on key aspects of the EHDI program to 110 health professionals and/or service providers. Presentations outlining recommended screening practices, health professionals' roles in the EHDI system, opportunities for collaboration with the EHDI

program and EHDI data occurred during advisory board meetings, state association meetings and continuing education series. These meetings also provided a forum for stakeholders to provide feedback regarding opportunities for improvement in the EHDI system.

The IHP initiated a preliminary performance assessment to determine whether EHDI system activities were inclusive and addressed the needs of the state's population. The Outreach Coordinator engaged stakeholders to solicit feedback regarding current activities. Through this feedback, race and geography were identified as the focus of the program's diversity and inclusion plan. The IHP increased access to EHDI educational materials amongst the Latino population by translating program materials (i.e. fact sheets and follow-up letters) and increasing awareness in each community through collaborations with local organizations. Additionally, the program will continue monitoring EHDI performance data to identify data trends facilitating targeted interventions to promote improved timeliness in follow-up care amongst all populations.

Lastly, the IHP continued efforts to facilitate improved coordination of care and services for DHH children and their families by maintaining partnerships, assessing diversity and inclusion within the EHDI system and monitoring program performance. Active intra-agency partnerships with the Women, Infant and Children (WIC) program, Home Visiting program and the Center for Local Public Health continued in efforts to increase awareness of 1-3-6 amongst families receiving services statewide in the local health units or through the Nurse Family Partnership program.





I need another hearing test.

Please follow up with your baby's doctor to schedule a hearing rescreen.

You may reach the Arkansas Department of Health, Infant Hearing Program @ (501) 280-4740 for questions.



The IHP experienced challenges in facilitating timely follow-up with families due to the lack of valid contact information (i.e., phone number, address and/or primary care physician) in addition to struggles identifying Non-Part C EI information for DHH children. Families continued to report challenges in obtaining follow-up care as a result of lack of transportation, access to a pediatric audiologist near their home and timely enrollment in newborn Medicaid. Additionally, the continuance of COVID-19 adversely affected planned in-person activities to increase stakeholder engagement and access to family support activities, as well as reduced access to EHDI follow-up services statewide. Due to the pandemic:

- The IHP continued hosting virtual presentations, trainings, and stakeholder meetings. All planned in-person provider education activities were cancelled, which restricted access to stakeholders such as pediatric/family practitioners and licensed lay midwives.
- The quantity of family support activities were reduced.
- Audiologists experienced longer delays in scheduling initial and follow-up outpatient EHDI services for families.
- Parents expressed reluctance to schedule follow-up outpatient care as a result of fear of contracting COVID-19.

To combat these challenges, the IHP identified new opportunities for collaboration with state agencies such as the Department of Human Services' Divisions of County Operations and Developmental Disability Services to obtain additional contact information and check the status of newborn Medicaid applications to reduce the number of infants identified as lost to follow-up due to "unable to contact" or "parent unresponsive."

The program has seen immediate improvements in obtaining pertinent information regarding newborn

Medicaid application status, and thus enabling immediate referrals for rescreen or diagnostic evaluation for infants previously identified in a "pending insurance status". Moderate success was seen in obtaining additional contact information for infants identified as "unable to contact".

Performance Monitoring

The IHP is working to strengthen performance monitoring efforts using continuous quality improvement to address areas where children are not receiving timely services per the Joint Committee on Infant Hearing recommended practice guidelines. During the current reporting period, program staff worked with staff from the epidemiology department to identify performance indicators, aligned with grant objectives, to create a performance monitoring plan. Additionally, the program worked with the Information Technology department to create a de-identified patient level report that will be submitted to CDC annually.

Plans for Upcoming Year:

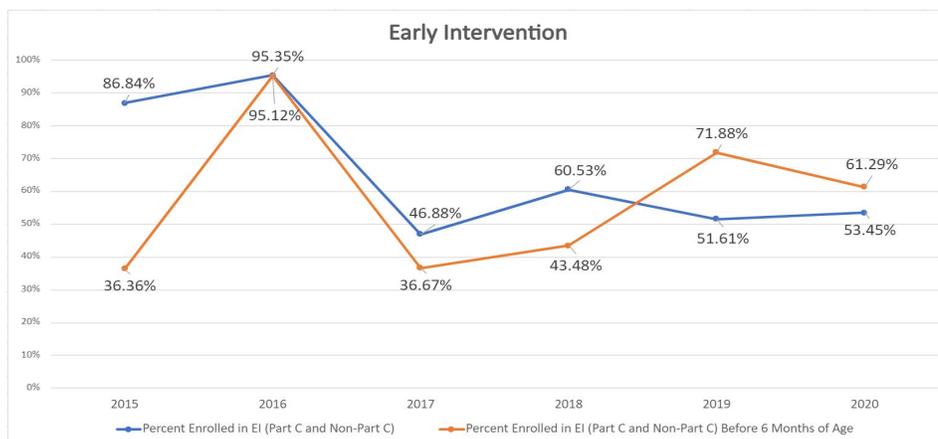
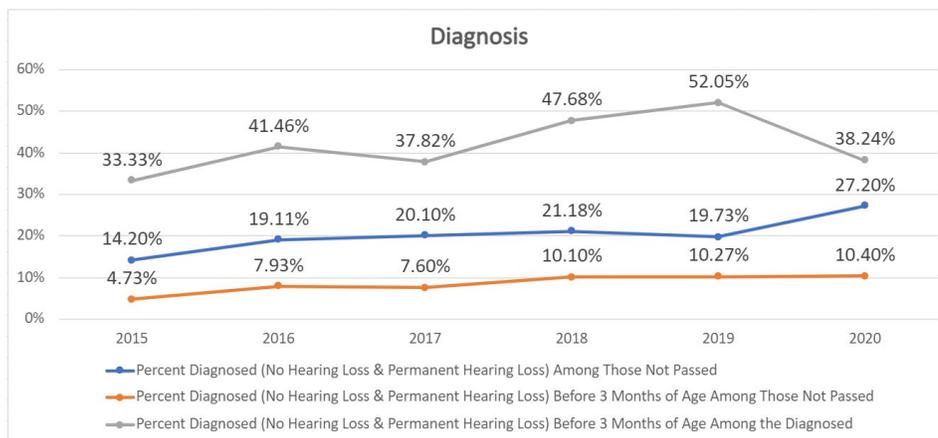
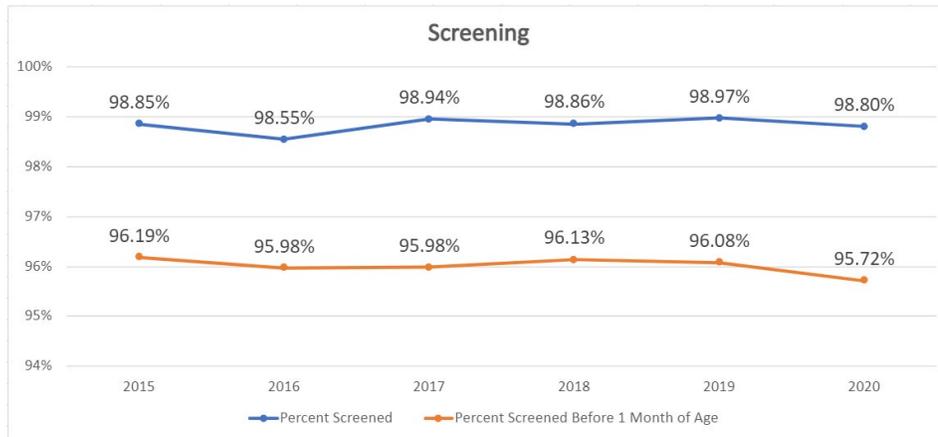
The IHP will work collaboratively with stakeholders to complete the following activities in the upcoming year:

- Increase outreach activities to provide additional resources to the Latino and Marshallese populations.
- Partner to provide trainings and presentations to professionals serving DHH children and their families.
- Work with AR H&V and Arkansas School for the Deaf Statewide Services to increase awareness of EHDI recommended practices, specifically FSS and connection to DHH adults.
- Increase engagement with primary care physicians to remove barriers delaying follow-up care following a failed screen.
- Develop a state plan to expand infrastructure, including data collection, for EHDI services for children up to age 3.

APPENDIX A

EHDI Performance Data:

The following graphs identify Arkansas EHDI data, 2015-2020:



Source: <https://www.cdc.gov/ncbddd/hearingloss/ehdi-data.html>

APPENDIX B

Family-to-Family Support Performance:

The following table identifies the IHP's progress during Year 1 (April 1, 2020 – March 31, 2021) and Year 2 (April 1, 2021 – October 31, 2021):

Objective	Total Details	Year 1 Totals	Year 2 Totals
Increase by 20% from baseline the number of families enrolled in FSS services by no later than 6 months of age.	Total # diagnosed	54	30
	Total # referred	50	30
	Total # enrolled	11	9
	Total # enrolled by 6 months	1	9
Increase by 10% from baseline the number of families enrolled in DHH adult-to-family FSS services by no later than 9 months of age.	Total # diagnosed	54	30
	Total # referred	50	30
	Total # enrolled	2	2
	Total # enrolled by 9 months	0	2
Increase by 10% the number of health professionals and service providers trained on key aspects of the EHDI program.	Total # trained	130	110

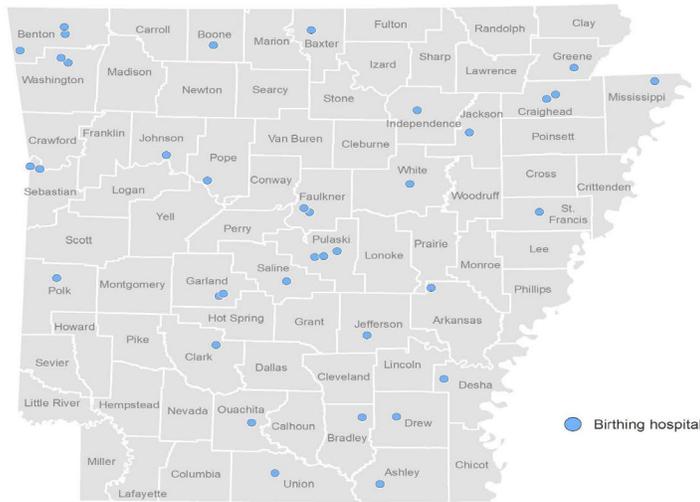
Source: IHP HRSA Year 2 Program Report

APPENDIX C

Service Providers:

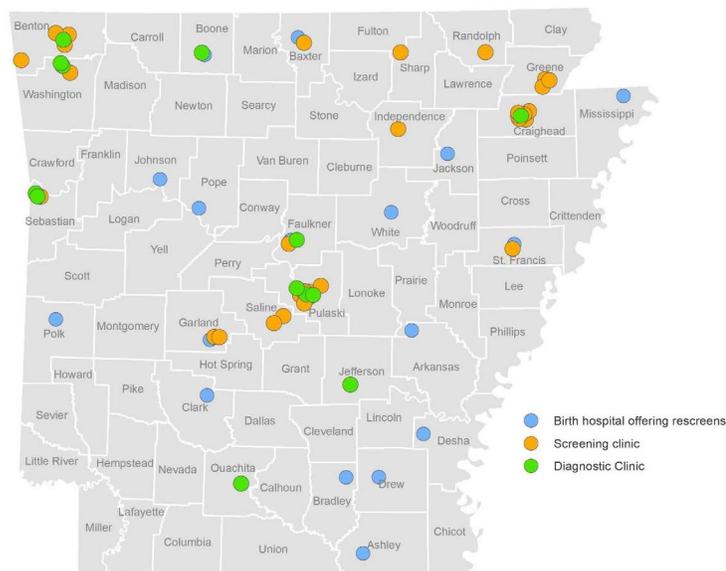
The following maps identify the availability of birthing hospitals and follow-up service providers statewide:

Arkansas Birthing Hospitals



Source: Infant Hearing Program, Arkansas Department of Health, April 2022

Arkansas Infant Hearing Screening & Diagnostic Providers



Source: Infant Hearing Program, Arkansas Department of Health, April 2022
 Note: Identified hospitals and screening clinics provide bilateral physiologic hearing screening for children between the ages of 0-3. Identified diagnostic clinics provide full diagnostic evaluations to diagnose a hearing condition completed by an audiologist licensed by the State of Arkansas.

Resources

Resources:

- [Expectant Mother Fact Sheet](#)
- [Healthy Hearing Brochure](#)
- [Arkansas Parent Story](#)
- [Organizations that Support Children with a Hearing Condition](#)
- [Resource Guide for Parents of Deaf/Hard-of-Hearing Children](#)
- [Primary Care Physicians' Guide For Infant Hearing Screenings](#)
- [Audiologists' Guide for Infant Diagnostic Evaluation](#)
- [ENT Guide for Infant Diagnostic Evaluation](#)

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<https://www.arhealthyhearing.com>

<https://www.facebook.com/groups/ehdi.arkansas>

