The Evolution of Pediatric Audiology in Kyrgyzstan

Achievements, Challenges, and Future Perspectives



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From late identification toward an organized hearing-care pathway

THE IDENTIFICATION GAP

A 2023 presentation reported that many children entered care after family referral, often at ages 3–7; 540 children with deafness were recorded through referrals in 2022.

SCREENING EXPANSION

Since May 2017, screening has been introduced in four maternity hospitals. The 2021 pilot aimed to establish a universal pathway through the National Center.

SERVICES AT NCMCHW

Available services listed in the source slides: OAE, ABR, tympanometry, play and pure-tone audiometry, and Cochlear/MED-EL speech-processor fitting.

THE KEY SYSTEM CHALLENGE

Screening must lead to completed diagnosis, timely hearing technology, and sustained rehabilitation—not simply a “refer” result or a screening count.

Source: uploaded Kyrgyz presentations by Munar Beishenova and Shirin Zhumabaeva (2022–2026). Figures reflect the reporting periods stated in those slides.

Development of Newborn Hearing Screening in Kyrgyzstan

From initial implementation to a national clinical protocol

2017

Screening introduced

Newborn hearing screening began in four maternity hospitals with support from TIKA.

2021

Pilot project

A pilot project supported expansion of newborn hearing screening with partner organizations.

2022

Equipment support

22 screening devices were purchased with UNICEF support; project support was also provided by GIZ.

2023

Cochlear implant selection criteria

Ministry of Health Order No. 117 (24 October 2023) set criteria for selecting candidates for cochlear implantation.

2024

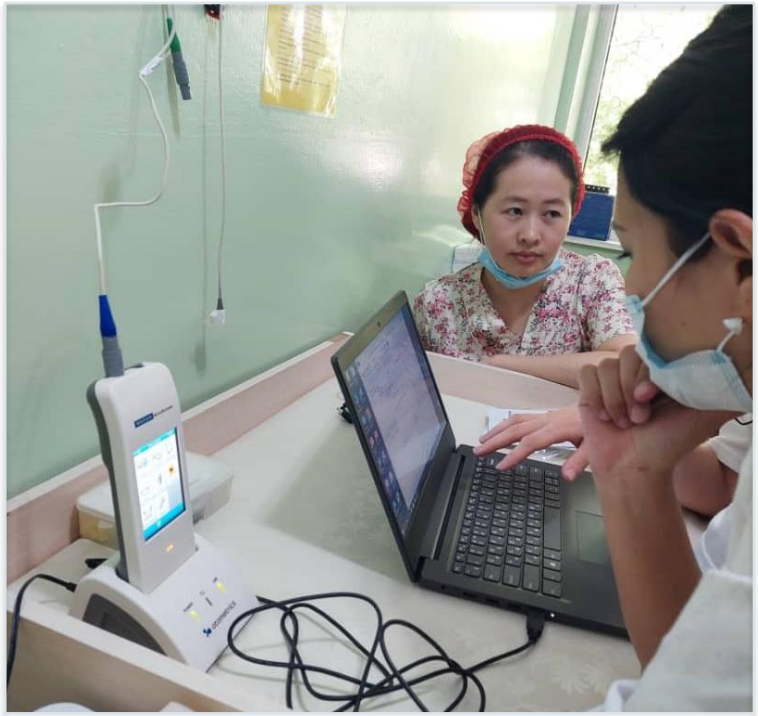
National screening protocol

Ministry of Health Order No. 468 (date as stated in the supplied presentation) approved the newborn hearing-screening clinical protocol.

Milestones based on the supplied presentations; verify official order dates and wording before delivery.

Newborn hearing screening and practical training

Photographs from the supplied presentations: screening practice, clinical training, and team-based implementation.



Newborn screening in practice



Practical training and masterclass



Clinical team and implementation

Kyrgyzstan’s newborn screening pathway (national protocol)

1

STAGE 1 • SCREENING

All newborns are screened at 3–4 days in maternity hospitals using OAE and ABR. Trained neonatologists, pediatricians, ENT physicians and nurses may perform screening.

2

STAGE 2 • DIAGNOSIS

Infants who do not pass Stage 1 and all infants with risk factors should receive diagnostic assessment by 3 months, including OAE/OABR, ABR and age-appropriate tests, by audiologists and ENT specialists.

3

INTERVENTION BY 6 MONTHS

The source presentation cites the recommended target of an individual rehabilitation plan by 6 months for children with confirmed hearing loss: hearing aids and/or CI, family guidance and follow-up.

A repeated REFER result is a call to action—not a diagnosis. The child must reach diagnostic testing and a documented next step.

Source: Munar Beishenova, IFOS 2026; Shirin Zhumabaeva, “Modern trends in cochlear implantation,” 2025. Timelines are reproduced as stated in the supplied slides.

Reported screening results in Kyrgyzstan, 2025–2026

40,124

newborns screened

Reported for 2025–2026

1,534

did not pass initial screening

Require follow-up and/or diagnostic assessment

>60

children with confirmed profound hearing loss/deafness

Reported in the source presentation

Interpretation for the care pathway

- 40,124 newborns were screened in the period reported.
- 1,534 did not pass the initial screen and need documented follow-up.
- The source reports more than 60 children subsequently confirmed with profound hearing loss/deafness.
- A “did not pass” result is not a confirmed diagnosis.

Source: Munar Beishenova, IFOS 2026 presentation. Confirm exact period, denominator, and diagnostic follow-up status before presenting these figures as national coverage.

What is available at the National Center (NCMCHW)

- Newborn hearing screening
- Otoacoustic emissions (OAE)
- Auditory brainstem response (ABR / OABR)
- Impedance audiometry / tympanometry
- Play audiometry and pure-tone threshold audiometry
- Cochlear and MED-EL speech-processor fitting

EQUIPMENT SUPPORT

The source slides report objective-test equipment support from the Lenhardt and PLACE Foundations since 2021 and the State of Qatar since 2022.

OFFICIAL SERVICE ACCESS

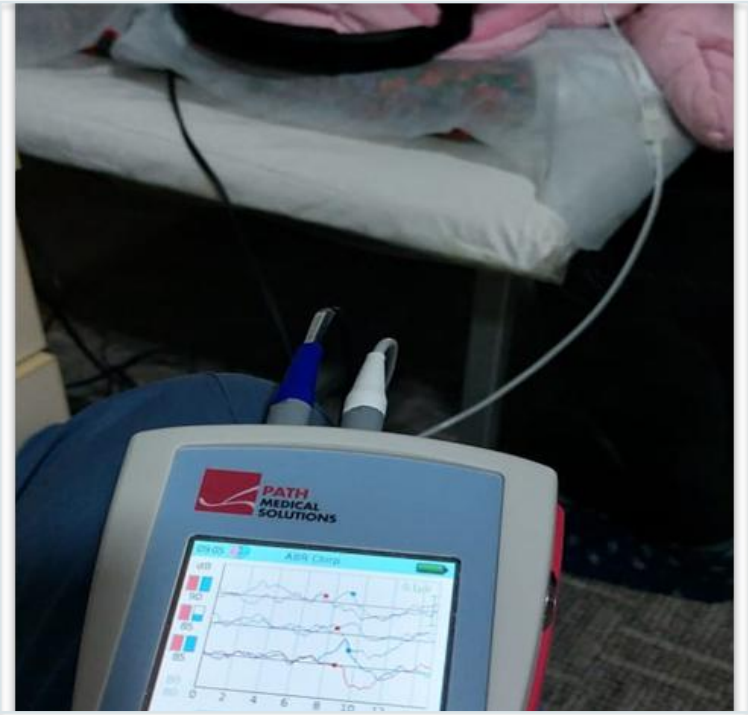
The 2025 source presentation states that official examination fees were set by the Antimonopoly Committee.

WHAT REMAINS ESSENTIAL

Close the referral loop: diagnostic assessment, hearing-aid/CI decisions, processor mapping, rehabilitation and long-term review.

Diagnostic audiology: from screening to assessment

Objective testing and age-appropriate assessment help clarify hearing status after a referral result.



Objective assessment in an infant



Audiological equipment



Child-focused assessment setting




MEIN
HAUSVERSTAND
SAGT
PAPIER
STATT PLASTIK!



Cochlear implantation in Kyrgyzstan: progress and dependencies

ASSESS

At NCMCHW, candidacy assessment includes audiology and medical work-up; source slides cite a multidisciplinary selection commission and Order No. 117 (2023).

→

IMPLANT

CI surgery has been performed in Kyrgyzstan since 2018. The source presentations describe donor-supported access; one reports four systems allocated by the state in 2024.

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PROGRAM

Initial activation and regular processor mapping are required. The source presentation notes that the external speech processor typically needs replacement about every five years.

→

REHABILITATE

Rehabilitation includes speech-processor adjustment, auditory and speech-language development, specialist sessions, home practice and family support.

IFOS 2026 materials state that, with financial support from Qatar, more than 100 children receive cochlear implants annually. This is a source-reported figure, not a cumulative total.

Source presentations identify the main gaps: a sustainable state CI programme, support for processor replacement/repair, trained surgeons and rehabilitation professionals, and continuity of post-operative care.

Historical totals differ by reporting period and scope; do not add them into one cumulative figure.

Kyrgyzstan: documented progress and unresolved gaps

PROGRESS REPORTED

- 2017: screening began in four maternity hospitals after TIKA-supported training and device procurement.
- 2021: pilot screening/diagnostic pathway launched with partner support.
- 2023: CI candidate-selection criteria cited under MoH Order No. 117.
- 2024: national newborn screening protocol approved (MoH Order No. 468).
- NCMCHW lists OAE, ABR, tympanometry, play/pure-tone audiometry and Cochlear/MED-EL processor fitting.
- Kyrgyz-language pediatric speech-test materials have been developed and initially tested.

PRIORITIES TO ADDRESS

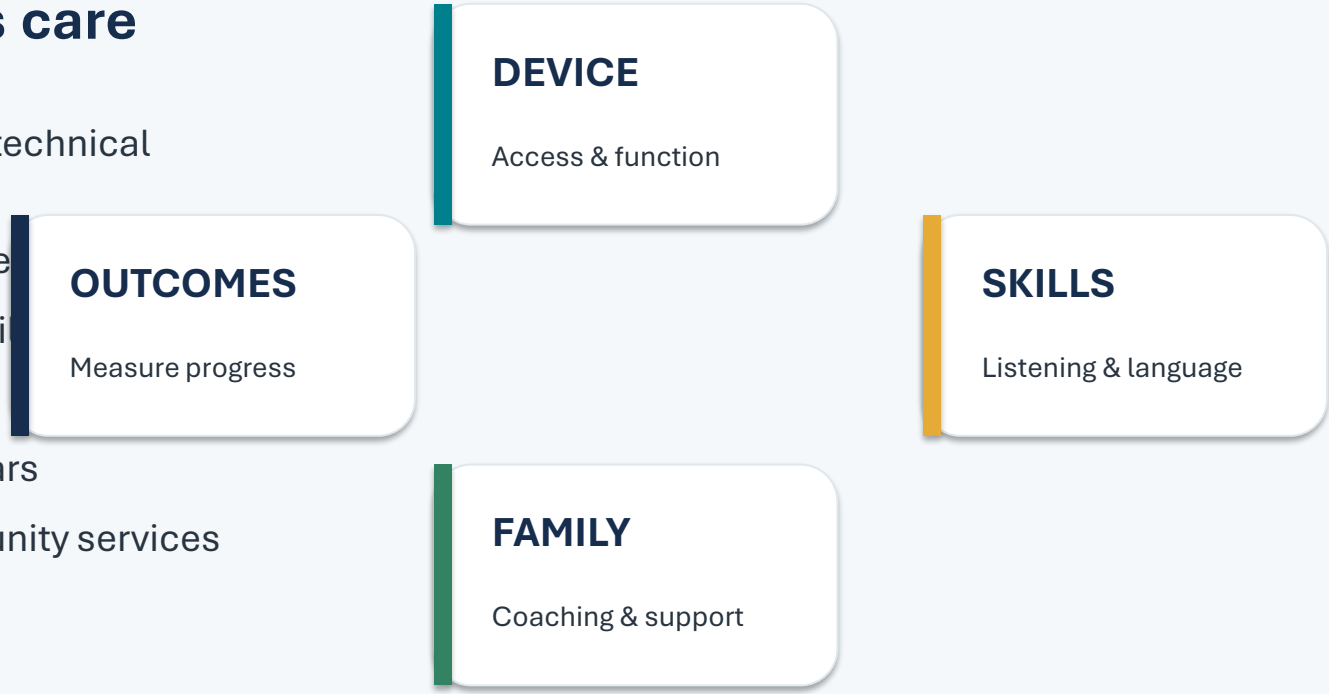
- Extend screening beyond the four original hospitals; source slides cite 50–60+ maternity hospitals nationwide.
- Ensure every infant who does not pass screening completes diagnostic assessment.
- Establish sustainable state financing for CI systems, processor replacement and repairs.
- Expand access to speech-language/auditory rehabilitation and family support.
- Train and retain audiologists, ENT surgeons and rehabilitation specialists.
- Track coverage, diagnostic completion, intervention and child outcomes.

Based on the supplied presentations. Screening totals do not, by themselves, establish universal national coverage or completed follow-up.

Rehabilitation determines long-term impact

Rehabilitation is continuous care

- Regular speech processor mapping and technical checks
- Auditory skills and speech-language deve
- Individual goals based on the child's profi
- Family coaching and home practice
- Monitoring progress over months and years
- Coordination with education and community services



Review, adapt, repeat

A local scientific contribution: Kyrgyz pediatric speech tests

Why it matters

Speech testing in an unfamiliar language can confound hearing performance with language familiarity. Culturally and linguistically appropriate material supports more meaningful assessment.

49

structured word and listening-test lists

112

children with normal hearing in initial testing

65

children in revised-material retest; no errors reported

WHAT HAS BEEN DONE

Six established test formats adapted; linguistic balancing and professional audio recordings completed.

WHAT COMES NEXT

Validate in children with hearing loss and hearing aids/CI; establish age norms, list equivalence, and test–retest reliability.

Source: IFOS 2026 presentation by Shirin Zhumabaeva and Anastasiia Naimanova. Evidence is preliminary, not full standardization.

Developing Kyrgyz-language speech assessment materials

The project photographs document child testing as part of the development and early evaluation of culturally appropriate speech tests.



Speech-test session



Testing environment and procedure

From promising tools to standardized clinical practice

- Complete validation in children with cochlear implants and hearing aids.
- Establish age-specific normative values.
- Evaluate equivalence between alternative word lists.
- Measure test–retest reliability and clinical validity.
- Document calibration, presentation level, response format, and acoustic conditions.
- Assess how the tests support clinical decisions and rehabilitation monitoring.

KEY PRINCIPLE

Adaptation is more than translation. It requires linguistic balance, child testing, revision, and formal validation.

The project creates a foundation for culturally appropriate speech audiometry in Kyrgyz-speaking children.

Long-term support: rehabilitation, families, and teams

The impact of hearing technology depends on continued support, family involvement, technical care, and monitoring.



Children, families, and clinical support



Professional collaboration and advocacy

Future perspectives: five priorities

01 **Universal coverage** — Expand newborn screening with measurable coverage targets.

02 **Reliable follow-up** — Track every referral through diagnostic resolution and intervention.

03 **Sustainable CI care** — Plan funding for implants, upgrades, repairs, and rehabilitation.

04 **Regional workforce** — Train and retain audiology and rehabilitation professionals.

05 **Local evidence** — Validate Kyrgyz tests and monitor child-centered outcomes.

The next stage is to connect progress in technology with equitable access, continuity of care, and measurable outcomes.

CONCLUSION

Pediatric audiology in Kyrgyzstan is moving from early implementation toward a more structured system of screening, diagnosis, implantation, and rehabilitation.

The next priorities are universal access, timely intervention, sustainable long-term care, and validated assessment tools in the child's language.

“Every child deserves the opportunity to hear, communicate, learn, and reach their full potential.”

Sources: five presentations supplied by the author (2017–2026 material, including IFOS 2026 screening and Kyrgyz speech-test presentations). Historical totals and some denominators require confirmation before external publication.