Hearing Follow-Up After Paediatric Meningitis

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Background

Bacterial meningitis is a leading cause of acquired sensorineural hearing loss in children. Progressive cochlear ossification following meningitic labyrinthitis can render cochlear implantation difficult or impossible if intervention is delayed. NICE NG240 and Quality Standard QS19 mandate audiological assessment within four to six weeks of discharge, paediatric review within six weeks, and MRI in cases of profound hearing loss. This audit measured institutional adherence to these standards.

Methods

A retrospective review of electronic patient records was conducted at Calderdale and Huddersfield NHS Foundation Trust for admissions between October 2017 and November 2025. Of 76 patients initially identified, 52 met inclusion criteria (32 male; median age three years, IQR 0–9). Outcomes assessed included timing of audiological follow-up, paediatric outpatient review, MRI utilisation, and discharge documentation, measured against NICE-stipulated standards at 100% compliance.

Results

Compliance was critically low across all standards. Audiological follow-up within 45 days was achieved in only 7 of 52 patients (13.5%). Paediatric review within 42 days occurred in 3 of 52 (5.8%), rising to 7 of 52 (13.5%) by 65 days. Of the single patient with identified profound hearing loss, MRI was appropriately performed (100%). Hearing risk was documented in only 11 of 52 discharge summaries (21%). A key barrier was EPR miscoding: antibiotics administered before lumbar puncture led to cases being classified as “suspected” rather than “confirmed” meningitis, causing patients to be lost to the follow-up pathway.

Conclusions

Adherence to NICE NG240 and QS19 hearing follow-up standards following paediatric meningitis is critically low at this institution. Timely audiological review is essential to prevent irreversible cochlear ossification and missed opportunities for cochlear implantation. Recommended interventions include revision of discharge summary templates to mandate audiology referral, targeted education of paediatric staff on the four-to-six-week review window, and improved EPR coding to ensure accurate case identification. A formal re-audit is planned at 12 months following implementation.

Keywords: paediatric meningitis, sensorineural hearing loss, audiological follow-up, NICE NG240, cochlear ossification