

**Supplemental Material S1.** Selected publications of CF-specific evidence-based outcomes for ototoxicity.

Publication information	Who did the study target?	What was being assessed?	Result	Recommendation
<p><b>Maru et al. 2018</b>                      "Current practice of ototoxicity management across the United Kingdom (UK)" <i>International Journal of Audiology</i></p>	<p>Medical care team members (audiology, ENT, etc.)</p>	<p>Current methods of ototoxic management</p>	<p>Inconsistency and variation were noted in ototoxicity management protocols, with 72% reporting an absence of monitoring protocols.</p>	<p>Develop national guidelines to provide guidance for minimum standards of care.</p>
<p><b>Konrad-Martin et al. 2018</b> "Applying U.S. national guidelines for ototoxicity monitoring in adult patients: perspectives on patient populations, service gaps, barriers and solutions." <i>International Journal of Audiology</i></p>	<p>Review of US national audiology guidelines</p>	<p>Guidelines in relation to "real world" application</p>	<p>Perceived barriers were related to accessing and testing patients. Use of abbreviated screening methods facilitated monitoring.</p>	<p>The most effective programs integrated audiological management into care pathways of other clinical specialties.</p>
<p><b>Blankenship et al. 2020</b> "Functional Impacts of Aminoglycoside treatment on Speech Perception and Extended High Frequency Hearing Loss in a Pediatric Cystic Fibrosis Cohort." <i>Journal of the</i></p>	<p>Children with CF</p>	<p>Effects of aminoglycosides on hearing and speech-in-noise capabilities</p>	<p>Children with CF have a higher prevalence hearing loss; poorer speech-in-noise performance; and higher rates of multiple symptoms associated with otologic disorders (tinnitus, hearing difficulty, dizziness, imbalance, and otitis</p>	<p>Persons with CF should be asked about otologic symptoms and receive baseline hearing assessment(s) prior to treatment with potentially ototoxic medications to promote early intervention for audiological rehabilitation services.</p>

<i>American Academy of Audiology</i>			media) compared to controls.	
<b>Garinis et al. 2020</b> "Prospective cohort study of ototoxicity in persons with cystic fibrosis following a single course of intravenous tobramycin." <i>Journal of Cystic Fibrosis</i>	Patients with CF receiving IV antibiotics	Effects of IV-tobramycin on hearing	A single course of IV tobramycin can cause ototoxic hearing loss in some patients with CF.	Patients with CF need routine ototoxicity monitoring and are suitable for clinical trials of othotherapeutics in single IV-tobramycin course.
<b>Garinis et al. 2017</b> "The cumulative effects of intravenous antibiotic treatments on hearing in patients with cystic fibrosis." <i>Journal of Cystic Fibrosis</i>	Patients with CF receiving IV antibiotics	Effects of amikacin, tobramycin, and vancomycin on hearing thresholds	Patients exposed to two highest dosages of the ototoxic medications were five times more likely to experience permanent hearing loss. Older patients with CF experienced a higher chance of hearing loss.	Patients that are at a higher risk for developing hearing loss should follow an ototoxic monitoring protocol.
<b>Al-Malky et al. 2015</b> "High-frequency audiometry reveals high prevalence of aminoglycoside ototoxicity in children with cystic fibrosis." <i>Journal of Cystic Fibrosis</i>	Children with CF	Efficacy of high-frequency audiometry in ototoxic management	High frequency testing detected more children with ototoxicity than standard measures. With more courses of IV AG, potential for ototoxicity increases.	High frequency audiometry should be completed annually in pediatric patients with CF.

<p><b>Handelsman 2018</b>                  "Vestibulotoxicity: strategies for clinical diagnosis and rehabilitation."  <i>International Journal of Audiology</i></p>	<p>Patients with CF receiving IV antibiotics</p>	<p>Vestibulotoxic medications and their effects</p>	<p>Description of common vestibulotoxic medications and their impact on the vestibular system, clinical features of vestibular ototoxicity, and identify assessment tools for monitoring.</p>	<p>Assessment of vestibular function as part of an ototoxic monitoring program is important as cohort data suggests a high prevalence of vestibular involvement.</p>
<p><b>Dreisbach et al. 2018</b>                  "High-Frequency Distortion-Product Otoacoustic Emission Repeatability in a Patient Population."  <i>Ear and Hearing</i></p>	<p>Patients with CF NOT receiving IV antibiotics</p>	<p>Assessing reliability of HF DPOAE as a diagnostic measure</p>	<p>There was no significant difference in testing ranges throughout four trials for controls.</p>	<p>HF DPOAEs are a repeatable measure in control patients and indicate the test may be sensitive for monitoring purposes.</p>
<p><b>Rogers C. and Petersen L. 2011</b>                  "Aminoglycoside-induced balance deficits: a review of vestibulotoxicity."  <i>South African Family Practice</i></p>	<p>Medical care team members via literature review</p>	<p>Current information about aminoglycoside-induced vestibulotoxicity</p>	<p>Families and patients are not always informed about the potential side effects that accompany ototoxic drugs.</p>	<p>Increased education of clinicians is necessary regarding ototoxic drugs and notable side effects. Increased patient education is also needed so they understand side effects.</p>