



Cerumen Impaction Clinical Pathway Synopsis

Cerumen Impaction Algorithm

Exclusion criteria:

- Visualized foreign body, refer to [Ear Foreign Body Clinical Pathway](#)



QR code for mobile
view

Cerumen Impaction Symptoms

- Ear pain or discomfort
- Ringing in the ears
- Feeling of fullness or pressure
- Hearing loss
- Dizziness
- Cough
- Itching or irritation of the ear

Contraindications to Irrigation

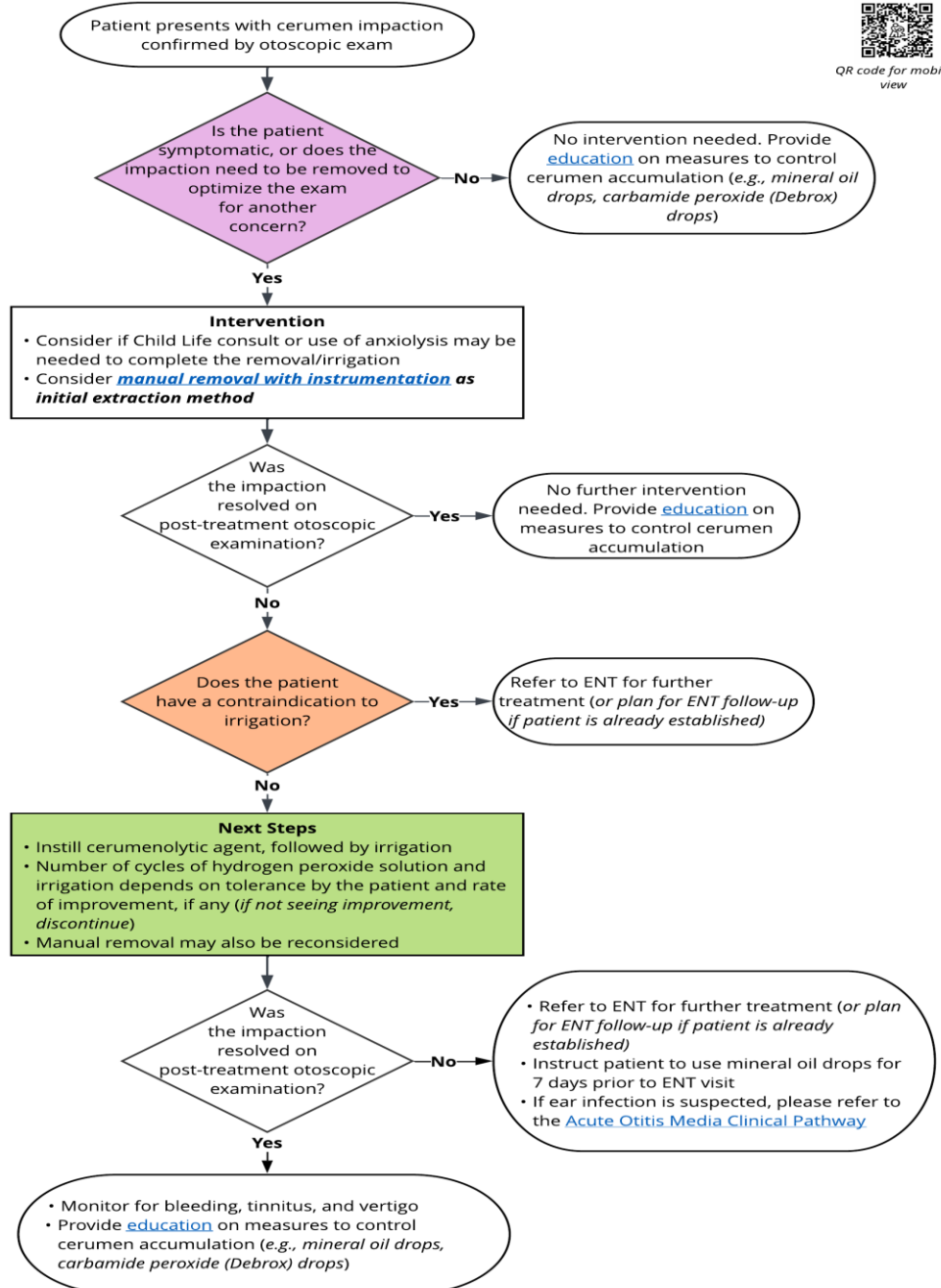
- Tympanostomy tube
- Tympanic membrane perforation (*acute or chronic*)
- History of tympanoplasty
- Recent, major otologic surgery (*within 3 months*)
- Trauma (e.g., *known penetrating injury*)

Cerumenolytic Agent and Irrigation
([link to cerumen removal guidance](#))
First Step: Cerumenolytic

- Use medicine cup to mix 3% hydrogen peroxide with tap water in equal parts to make half strength hydrogen peroxide and place in ear canal to soften the cerumen prior to irrigation (soak 5 minutes)
Note: Hydrogen peroxide can stain clothing, use towel as barrier or remove shirt

Second Step: Irrigation

- Use lukewarm, soapy (*minimal or very small amount of hand soap*) tap water
 - Avoid cold water to minimize risk of dizziness, nystagmus, and nausea
- **Device options:**
 - Large syringe with single-use otic tip
 - Commercially available ear lavage system with single-use otic tip and low pressure flow (*do not use high-pressure irrigation*)
- Discontinue procedure if child experiences pain or dizziness



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Table of Contents

Cerumen Impaction Algorithm	1
Objective of Clinical Pathway	3
Background	3
Target Users.....	3
Target Population	3
AGREE II.....	3
Practice Recommendations.....	4
Additional Questions Posed by the Clinical Pathway Committee	4
Recommendation Specific to Children's Mercy	4
Updates from Previous Versions of the Clinical Pathway	4
Measures	4
Value Implications.....	4
Organizational Barriers and Facilitators	4
Bias Awareness.....	5
Clinical Pathway Preparation.....	5
Cerumen Impaction Clinical Pathway Committee Members and Representation	5
Clinical Pathway Development Funding	6
Approval Process.....	6
Review Requested	6
Version History	6
Date for Next Review.....	6
Implementation & Follow-Up	6
Disclaimer	6
References	8

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Objective of Clinical Pathway

The Cerumen Impaction Clinical Pathway provides care standards for the patient who presents with a cerumen impaction confirmed by otoscopic examination. It provides guidance when intervention is warranted and outlines the processes to follow in the event of complications or an unresolved impaction.

Background

Cerumen, commonly known as earwax, serves as a natural barrier against water and foreign bodies, protects against infection, and lubricates the external auditory canal (Michaudet & Malaty, 2018; Schwartz et al., 2017; Sevy et al., 2023). Although cerumen is typically expelled through jaw movement as part of the ear's self-cleaning mechanism, this process can fail, leading to an accumulation and subsequent impaction (Michaudet & Malaty, 2018; Schwartz et al., 2017; Sevy et al., 2023). The impaction may block the ear canal or press against the tympanic membrane, causing symptoms such as the sensation of fullness, hearing loss, itching, and pain (Michaudet & Malaty, 2018; Schwartz et al., 2017; Sevy et al., 2023).

Cerumen impaction affects up to 10% of children and is the most common ear-related complaint during routine clinic visits (Michaudet & Malaty, 2018; Sevy et al., 2023). It may also be the reason a child presents to the emergency department or an urgent care clinic. Management options include cerumenolytics, manual removal with instrumentation, irrigation, or, in some cases, a watchful waiting approach (Michaudet & Malaty, 2018; Schwartz et al., 2017; Sevy et al., 2023). Given the variability in treatment approaches, the Cerumen Impaction Clinical Pathway Committee aims to provide clinicians with guidance on managing cerumen impaction once it has been confirmed by otoscopic examination.

Target Users

- Physicians (Emergency Medicine, Urgent Care, Ambulatory Clinics, Fellows, Resident Physicians)
- Advanced Practice Nurses
- Nurses

Target Population

Inclusion Criteria

- Patients presenting with cerumen impaction confirmed by otoscopic examination

Exclusion Criteria

- Patients who have a visualized foreign body, refer to the [Ear Foreign Body Clinical Pathway](#)

AGREE II

The American Academy of Otolaryngology - Head and Neck Surgery national guideline provided guidance to the Cerumen Impaction Clinical Pathway Committee (Schwartz et al., 2017). See Table 1 for AGREE II.

Table 1

AGREE II Summary for the American Academy of Otolaryngology - Head and Neck Surgery Guideline (Schwartz et al., 2017)

Domain	Percent Agreement	Percent Justification [^]
Scope and purpose	96%	The aim of the guideline, the clinical questions posed, and the target populations were identified.
Stakeholder involvement	94%	The guideline was developed by the appropriate stakeholders and represents the views of its intended users.
Rigor of development	95%	The process used to gather and synthesize the evidence, as well as the methods to formulate the recommendations and update the guidelines, were explicitly stated.
Clarity and presentation	100%	The guideline recommendations are clear, unambiguous, and easily identifiable; additionally, different management options are presented.
Applicability	92%	Barriers and facilitators to implementation, strategies to improve utilization, and resource implications were addressed in the guideline.
Editorial independence	94%	The recommendations were not biased by competing interests.

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Overall guideline
assessment 95%

See Practice Recommendations

Note: Four EBP department members completed the AGREE II on this guideline.

^ Percentage justification is an interpretation based on the Children's Mercy EBP Department standards.

Practice Recommendations

Please refer to the American Academy of Otolaryngology – Head and Neck Surgery (Schwartz et al., 2017) Clinical Practice Guideline for practice recommendations, evaluation, and treatment recommendations.

Additional Questions Posed by the Clinical Pathway Committee

No additional clinical questions were posed for this review.

Recommendation Specific to Children's Mercy

No deviations were made from the American Academy of Otolaryngology – Head and Neck Clinical Practice Guideline (Schwartz et al., 2017). However, logistical processes specific to Children's Mercy have been incorporated, including:

- Guidance on involving Child Life services and considerations for the use of anxiolysis to support successful removal or irrigation procedures
- Sequencing recommendations for removal methods, use of cerumenolytic agents, and device options when irrigation is indicated
- Referral guidance to Otolaryngology (ENT), including instructions to provide when impaction remains unresolved following post-treatment otoscopic examination

Updates from Previous Versions of the Clinical Pathway

- The Cerumen Impaction Clinical Pathway is a newly developed evidence-based pathway with no previous version for comparison

Measures

- Utilization of the Cerumen Impaction Clinical Pathway
- Referrals to the ENT Clinic
- Orders for ear irrigation in either the Urgent Care, Primary Care Clinic, or emergency department

Value Implications

The following improvements may increase value by reducing healthcare costs and non-monetary costs (e.g., missed school/work, loss of wages, stress) for patients and families and reducing costs and resource utilization for healthcare facilities.

- Decreased risk of overtreatment (i.e., attempting cerumen removal when intervention is not warranted)
- Decreased unwarranted variation in care
- Improved efficiency in receiving timely care within the current care setting
- Decreased need for referral if care is successful in the ambulatory or acute care setting

Organizational Barriers and Facilitators

Potential Barriers

- Variability of the acceptable level of risk among providers
- Variability in experience among clinicians
- Need for effective communication and coordination among clinicians and specialties
- Challenges with access to healthcare and health literacy faced by some families

Potential Facilitators

- Collaborative engagement across the continuum of clinical care settings and healthcare disciplines during clinical pathway development

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- Anticipated high rate of use of the clinical pathway

Bias Awareness

Our goal is to recognize social determinants of health and minimize healthcare disparities, acknowledging that our unconscious biases can contribute to these inequities

Order Sets

- There are no order sets associated with this clinical pathway

Associated Policies

- Cerumen Removal Clinical Skills – Patient Care Policy (under revision)
- Cerumen Removal (Pediatric) Clinical Skills – Patient Care Policy (under revision)
- Ear Irrigations Clinical Skills – Patient Care Policy (under revision)

Educational Materials

- Dealing with Earwax (Cerumen)
 - Intended as a resource to inform families about cerumen
 - Found through Children's Mercy KidsHealth® (The Nemours Foundation, 2020)
 - Available in [English](#) and [Spanish](#)

Clinical Pathway Preparation

This pathway was prepared by the EBP Department in collaboration with the Cerumen Impaction Clinical Pathway Committee, composed of content experts at Children's Mercy. If a conflict of interest is identified, the conflict will be disclosed next to the committee member's name.

Cerumen Impaction Clinical Pathway Committee Members and Representation

- Amanda Nedved, MD | Urgent Care | Committee Co-Chair
- Sheri Pratt, BSN, RN, CPN | Urgent Care | Committee Co-Chair
- Gretchen Range, RN, BSN, CPN | Urgent Care | Committee Co-Chair
- Laura Neff, MD, MPH | Otolaryngology (Ear, Nose, and Throat) | Committee Member
- Sonali Ramesh, MD | Pediatric Emergency Medicine Fellow | Committee Member
- Vivek Dubey, MD | Emergency Medicine | Committee Member
- Jennifer Bitner, APRN, FNP-C | Emergency Department | Committee Member
- Holly Reid, BSN, RN | Emergency Department | Committee Member
- Cameron (Cami) Gonzalez, BSN, RN | Emergency Department | Committee Member
- Eileen Calabria, RN, MSN, CPNP, CBC | General Academic Pediatrics | Committee Member
- Scotti Brackett, MSN, APRN, FNP-C, CPN | Urgent Care | Committee Member
- Amy Boren, RN, MSN, CPN | Urgent Care | Committee Member
- JoAnna Van Noy, RN, MSN, CPN | Urgent Care | Committee Member
- Laura Gillard, RN, MSN, CPN | Urgent Care | Committee Member
- Traci Burns, RN, BSN, CPN | Urgent Care | Committee Member
- Tracy Geier, RN, CPN | Urgent Care | Committee Member
- Malindar Ali, MHA, BSN, RN, CPN | Urgent Care | Committee Member
- Sarah Simons, CNA | Urgent Care | Committee Member
- Staci Hayes, RN, BSN, CPN | Ambulatory Administration/Education Coordinators | Committee Member
- Alisha Dillingham, MSN, RN, CPN | Ambulatory Administration/Education Coordinators | Committee Member
- Erin Todd, BSN, RN, CPN | Ambulatory Administration/Education Coordinators | Committee Member
- Sarah Dierking, MSN, RN, CPHQ | Clinical Practice and Quality | Committee Member
- Shannan Johnson, BSN, RN, CPN | Clinical Practice and Quality | Committee Member
- Jena Servatius, B.S., RDMS, LSSGB, CPST | Ambulatory Administration/Quality Improvement Program Coordinator | Committee Member
- Darrin Dillingham, PharmD | Pharmacy | Contributor

EBP Committee Members

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- Kathleen Berg, MD, FAAP | Evidence Based Practice
- Kelli Ott, OTD, OTR/L | Evidence Based Practice

Clinical Pathway Development Funding

The development of this clinical pathway was underwritten by the following departments/divisions: Urgent Care, Otolaryngology (ENT), Emergency Medicine, General Academic Pediatrics, Nursing, Pharmacy, Ambulatory Administration/Education Coordinators, Clinical Practice and Quality, and Evidence Based Practice.

Conflict of Interest

The contributors to the Cerumen Impaction Clinical Pathway have no conflicts of interest to disclose related to the subject matter or materials discussed.

Approval Process

- This pathway was reviewed and approved by the EBP Department and the Cerumen Impaction Clinical Pathway Committee after committee members garnered feedback from their respective divisions/departments. It was then approved by the Medical Executive Committee.

Review Requested

Department/Unit	Date Obtained
Urgent Care	November 2025
Otolaryngology (ENT)	November 2025
Emergency Medicine	November 2025
General Academic Pediatrics	November 2025
Nursing	Emergency Department: November 2025 Urgent Care: November 2025
Ambulatory Administration/Education Coordinators	November 2025
Clinical Practice and Quality	November 2025
Evidence Based Practice	October 2025

Version History

Date	Comments
November 2025	Version one – (algorithm and synopsis developed)

Date for Next Review

- November 2028

Implementation & Follow-Up

- Once approved, the pathway was implemented and presented to the appropriate care teams:
 - Announcements made to relevant departments
 - Additional institution-wide announcements were made via the hospital website and relevant huddles
 - Community providers affiliated with Children's Mercy received announcements via "Progress Notes"
- The patient care clinical skill policies were reviewed with updates requested. The policies detail a process for nursing staff to guide cerumen removal and the process used when conducting ear irrigations. These update requests are in process and will be submitted to the Nursing Practice Council Patient Care Policy Committee for approval.
- Care measurements may be assessed and shared with appropriate care teams to determine if changes need to occur.
- Pathways are reviewed every 3 years (or sooner) and updated as necessary within the EBP Department at Children's Mercy. Pathway committees are involved with every review and update.

Disclaimer

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When evidence is lacking or inconclusive, options in care are provided in the supporting documents and the power plan(s) that accompany the clinical pathway.

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References

- Cerumen Removal Clinical Skills (June 2025), *Patient Care Policies – Elsevier Performance Manager*. Children's Mercy Hospital, Kansas City, Missouri
- Cerumen Removal (Pediatric) Clinical Skills (June 2025), *Patient Care Policies – Elsevier Performance Manager*. Children's Mercy Hospital, Kansas City, Missouri
- Dinces, E. A. (2025). How to remove cerumen manually and with irrigation. In the Merck Manual Professional Version. Merck & Co., Inc. Retrieved September 24, 2025, from <https://www.merckmanuals.com/professional/ear-nose-and-throat-disorders/how-to-do-ear-procedures/how-to-remove-cerumen-manually-and-with-irrigation>
- Ear Irrigations Clinical Skills (November 2024), *Patient Care Policies – Elsevier Performance Manager*. Children's Mercy Hospital, Kansas City, Missouri
- Michaudet, C., & Malaty, J. (2018). Cerumen impaction: Diagnosis and management. *American Family Physician*, 98(8), 525-529.
- Schwartz, S. R., Magit, A. E., Rosenfeld, R. M., Ballachanda, B. B., Hackell, J. M., Krouse, H. J., Lawlor, C. M., Lin, K., Parham, K., Stutz, D. R., Walsh, S., Woodson, E. A., Yanagisawa, K., & Cunningham, E. R. (2017). Clinical practice guideline (update); Earwax (cerumen impaction). *Otolaryngology – Head and Neck Surgery*, 156(S1), S1-S29. <https://doi.org/10.1177/0194599816671491>
- Schwartz, S. R., Magit, A. E., Rosenfeld, R. M., Ballachanda, B. B., Hackell, J. M., Krouse, H. J., Lawlor, C. M., Lin, K., Parham, K., Stutz, D. R., Walsh, S., Woodson, E. A., Yanagisawa, K., & Cunningham, E. R. (2017). Clinical practice guideline (update): Earwax (Cerumen Impaction) Executive Summary. *Otolaryngology – Head and Neck Surgery*, 156(1), 14-29. <https://doi.org/10.1177/0194599816678832>
- Sevy, J. O., Hohman, M. H., & Singh, A. (2023, March 1). *Cerumen impaction removal*. In StatPearls [Internet]. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK448155/>
- The Nemours Foundation. (2020). *Dealing with earwax (cerumen)*. <https://kidshealth.org/ChildrensMercy/en/parents/earwax.html>

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