

## RN Protocol: Earache

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### I. POLICY

- A. Function: To facilitate and guide the Registered Nurse (RN) in the assessment and treatment of patients presenting with a complaint of earache.
- B. Circumstances under which the RN may perform the function:
  - 1. Setting: Outpatient clinic.
  - 2. Supervision: No direct supervision required.

### II. PROTOCOL

- A. Definition: This protocol covers the assessment and treatment of patients presenting with complaint of earache. Earache in adults may be caused by (1) infection in the middle ear (otitis media); (2) infection in the external auditory canal (otitis externa); or (3) cerumen (ear wax) impaction. Pain associated with earache may be described as sharp, dull, throbbing, intermittent, or constant. Other causes of ear pain may include bruxism and TMJ arthritis.

Acute otitis media or middle ear infection may begin as a cold, sinus infection, or throat infection. The upper respiratory infection causes edema of the eustachian tube, resulting in the accumulation of fluid and mucus in the middle ear. As fluid accumulates the patient may experience severe throbbing pain and hearing loss. Other symptoms associated with middle ear infection include nasal discharge, fever, dizziness, nausea, and vomiting. Objective physical findings may include a red, dull, bulging or retracted tympanic membrane with absent landmarks and a decreased light reflex.

Serous otitis media can develop from acute otitis media that has not completely cleared or from a blocked Eustachian tube. The fluid that accumulated behind the eardrum during the acute infection remains after the infection resolves. Patients with serous otitis media may complain of decreased hearing, ear pressure, or a popping or crackling sound when swallowing. On examination the tympanic membrane may appear retracted with clear, yellow, or blue-gray fluid; however, the eardrum will not be erythematous.

Otitis externa is an inflammation of the external ear canal caused by bacterial infection. Common bacterial agents include *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *Streptococcus pyogenes*. Diabetic patients are prone to fungal infections. Otitis externa also may occur as a result of trauma from scratching or inserting foreign objects into the ear. Symptoms may include pain, itching in the ear canal and discharge. The pain is aggravated by movement of the auricle or by applying pressure to the tragus. The patient may also complain of decreased hearing or sensation of obstruction in the ear. The external ear canal is usually tender upon examination with an otoscope, and may appear red and edematous. Purulent drainage may also be present.

Cerumen impaction develops when earwax accumulates in the ear canal, blocking the eardrum. Cerumen is most likely to become impacted when it is pushed against the eardrum by cotton-tipped applicators, hairpins, and other foreign objects. Symptoms of cerumen impaction include sensation of fullness in the ear, partial hearing loss, and pain.

**B. Subjective:**

1. Chief complaint (document in the patient's own words).
2. Date and time of onset.
3. Which ear is involved?
4. Rate pain on a scale of 0-10, 0 = no pain and 10 = worst pain.
5. Describe the quality of the pain (e.g., aching, throbbing, sharp pain).
6. What makes the pain better?
7. What makes the pain worse?
8. Assess for accompanying symptoms (e.g., itching, decreased hearing, drainage from ears,) in one or both ears?
9. History of recent upper respiratory infection, chills, fever, or chronic ear problems (otitis media, otitis externa).
10. Chronic illness (e.g., cancer, diabetes, HIV infection).
11. Allergies.
12. Current medications.

**C. Objective**

1. Vital signs.
2. Observe and document:
  - a. Which ear is involved (right, left, or both). Condition of external ear canal of affected ear(s) (i.e., normal, red, swollen, and presence of cerumen or foreign body).
  - b. Tenderness of external ear canal on examination.
  - c. Drainage from ear(s) (e.g., none, bloody, purulent, serous).
  - d. Condition of tympanic membrane(s) (e.g., pearly gray, dull, red, bulging, retracted, unable to visualize due to cerumen; describe presence and quality of fluid behind tympanic membrane).
  - e. Adenopathy
  - f. Mastoid pain
3. Assess hearing acuity (normal, reduced, absent).

**D. Assessment:**

- Pain evidenced by/related to:
- Alteration in sensory/perception, auditory, evidenced by/related to:

**E. Plan:**

1. If inspection of the ear canal reveals retracted tympanic membrane and/or fluid behind the tympanic membrane refer patient to physician **STAT**.

2. If the patient presents with a temperature  $\geq 101.5$  F and/or bulging tympanic membrane, refer to a physician **STAT**.
3. If inspection of the ear canal reveals a bulging or newly perforated tympanic membrane, or purulent drainage refer patient to physician **STAT**.
4. If the patient complains of severe ear pain and hearing loss, refer the patient to a physician **STAT**.
5. If the patient is diabetic with purulent ear drainage, refer the patient to a physician **STAT**.
6. For ear pain without fever or with fever less than 101.5:
  - a. Apply warm compresses to ear PRN.
  - b. Acetaminophen 325mg 2 tabs PO Q4-6 hours PRN pain while symptoms persist; not to exceed 12 tabs in 24 hours. **or**
  - c. Ibuprofen 200mg 1-2 tabs PO Q4-6hrs PRN pain while symptoms persist; not to exceed 6 tabs in 24 hrs
  - d. Chlorpheniramine 4mg 1 tab PO Q4-6 hours PRN nasal congestion while symptoms persist; not to exceed 24mg/day x 3 days;
  - e. Instruct patient to follow-up in RN clinic in 48 hours if symptoms persist.
7. For cerumen impaction:
  - a. Administer Carbamide Peroxide 6.5% Otic Solution: instill 5 to 10 drops into external ear canal, then insert a cotton plug x 30 minutes. Using an otic syringe, gently flush the ear with lukewarm water and hydrogen peroxide mixture.
  - b. Follow-up with RN in 48 hours. If impaction is not fully removed and symptoms persist, repeat the procedure.

F. Patient Education:

1. Assess patient's potential for understanding the health information to be provided.
2. Provide patient education consistent with the assessment of the condition.
3. Evaluate the patient's level of understanding and document all patient education on the encounter form or a progress note.
4. Refer patient to other resources as needed.
5. Document referrals in the patient's unit health record.
6. Advise the patient to resubmit a Health Care Request Form (CD 7362) if symptoms persist.

G. Documentation:

All information related to the patient's complaint shall be documented on the appropriate nursing protocol encounter form. The encounter form(s) shall be filed in the patient's unit health record.

**III. REQUIREMENTS FOR RN**

- A. Education/Training: The Registered Nurse shall attend an in-service on the assessment and treatment of patients presenting with earache and achieve a minimum score of 80% on the written posttest examination.
- B. Experience: None.
- C. Certification: None
- D. Initial Evaluation: Initial competence will be validated onsite through simulated exercises, mock scenarios, and return demonstration. The Registered Nurse must satisfactorily demonstrate all critical behaviors identified on the Competence Validation Tool to be considered competent to perform standardized procedure functions.

A written performance appraisal shall be performed by the Supervising Registered Nurse or designee six months after initial competence has been validated. Methods to evaluate performance shall include, but not be limited to direct observation, feedback from colleagues and physicians, and chart review.

- E. Ongoing Evaluation: Ongoing competence will be validated annually using case study analysis, written examination, and return demonstrations where appropriate.

**IV. REGISTERED NURSES AUTHORIZED TO PERFORM THIS PROCEDURE**

A current list of all Registered Nurses authorized to perform this procedure shall be maintained in the Office of the Director of Nursing.

**V. DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE**

This standardized procedure was developed and approved by authorized representatives of administration, medicine, and nursing. The procedure will be reviewed annually.

REVIEW DATE \_\_\_\_\_ REVISION DATE \_\_\_\_\_  
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THE STANDARDIZED PROCEDURE WAS APPROVED BY:

\_\_\_\_\_  
Chief Nurse Executive/Director of Nursing

DATE: \_\_\_\_\_

\_\_\_\_\_  
Chief Medical Executive

DATE: \_\_\_\_\_