

Development and Delivery of a Workshop on Physical Examination of the Ear, Nose, Throat, and Neck

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Background

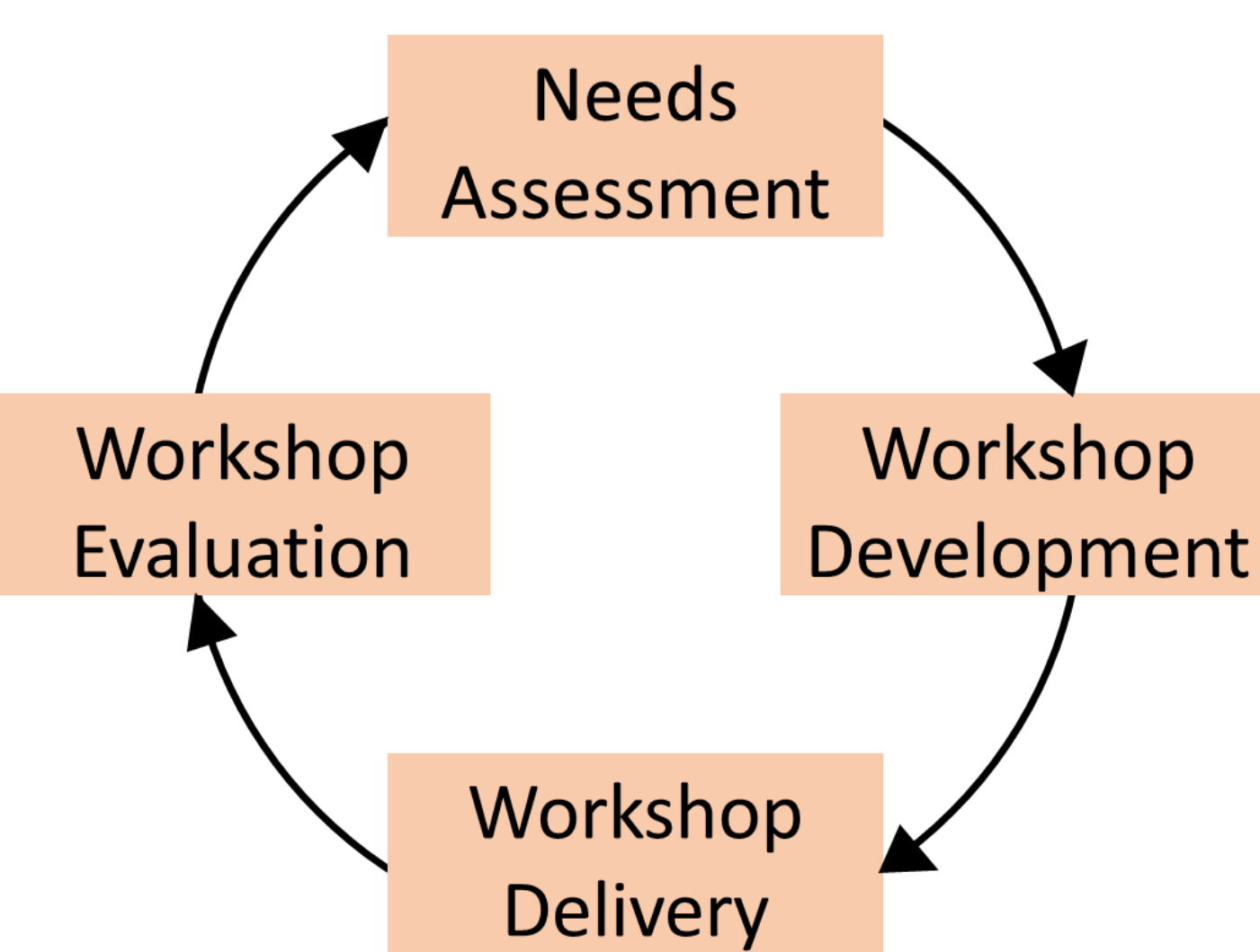
- Knowledge and examination skills on ear-nose-throat (ENT) conditions have been reported to be inadequate among trainees in undergraduate and postgraduate medical education.
- Moreover, with the shift to online education and virtual patient care during the COVID-19 pandemic, opportunities for hands-on practice of physical examination techniques decreased.
- To enhance these skills, we developed a workshop on physical examination of the ENT and neck.
- **Objective:** We will present the design of a workshop on PE of the ENT and neck.

Methods

Design:

Action research program consisting of cycles of:

- 1) needs assessment,
- 2) workshop development,
- 3) workshop delivery, and
- 4) workshop evaluation.



Participants:

Family Medicine residents and Year-2 medical students at the University of Alberta.

Outcome measures:

Variables in the needs assessment and evaluation.

The 30-minute Lecture and Demo

Establish Relevance of techniques & pathologies	Discuss techniques for the practice; Show some relevant pathologies.	Demo of techniques
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The 90-min Practice

Ear: Inspection, palpation, otoscopy, pneumatoscopy Equipment: one otoscope and one video-otoscope
Nose: Inspection, palpation, anterior rhinoscopy Equipment: one otoscope and one video-otoscope
Mouth and Oropharynx: Inspection, palpation Equipment: light (otoscope), gloves, tongue depressors
Neck/thyroid: Inspection, palpation Equipment: gloves, lighting

The Workshop Design

Teaching/Learning Strategies

1. Establishing Relevance
2. Needs Assessment
3. Establishing a safe environment for practice and
 - 3.1. Establishing a safe space for learning
 - 3.2. Managing the risk of infection
4. Acquisition of examination techniques
5. Provision of a handout and task list
6. Allowing hands-on practice
7. Provision of immediate feedback on technique and findings
8. Developing residents as teachers

Inspection and Palpation of the Pinna and Surrounding Areas

Inspect & Identify: Co, Concha; Lobule; Po, Postauricular area (relation: mastoid); Pr, Preauricular area (relation: parotid gland); Tr, Tragus; Ear drum using the naked eye

Palpate: pre-auricular and post-auricular areas; **Palpate** for tragal tenderness

Inspection and Palpation of the Nose and Sinuses

Inspect and Identify: the topographic areas overlying the facial bones and nasal bones.

Palpate: the frontal sinus and maxillary sinuses;

Palpate: the nasal tip

Inspection and Palpation of the Oral Cavity and Oropharynx

Inspect the oral cavity and oropharynx using **one tongue depressor** on one hand and a light source on the other hand.

Inspect the oral cavity and oropharynx using **two tongue depressors** (aided by another person holding a light source; or aided with a headlight or lamp).

Palpate using one hand: hard palate, tongue, retromolar trigone, floor of the mouth, lips

Palpate bimanually: submandibular gland, cheek

Inspection of the Neck and Palpation for Neck Nodes & Thyroid Gland

Inspect the neck and identify the thyroid cartilage, cricoid cartilage, thyroid gland

Palpate (firmly) for neck nodes Level I (submental and submandibular nodes), Level II (upper jugular nodes), Level III (middle jugular nodes), Level IV (lower jugular nodes), Level V (supraclavicular and posterior triangle nodes), [plus postauricular nodes and preauricular nodes], Level VI (anterior compartment nodes) and thyroid

Results

- We piloted the workshop to a group of family medicine residents (n=4). The residents found the workshop useful and recommended its learning potential for family medicine residents.
- We then offered the workshop twice to family medicine residents (n=11) and once to Year-2 medical students (n=20). The techniques practiced reflected the needs of the participants and consisted of otoscopy, pneumatic otoscopy, and anterior rhinoscopy.

Conclusion

- A workshop on physical examination of the ENT-neck is a learning opportunity for family medicine residents and medical students.
- The workshop can be customized for the learning goals of each group of participants, which are reflected in the pre-workshop needs assessment.