Video Otoscopy in the Pediatric ED: Can it limit the need for repeat ear exams?

BACKGROUND

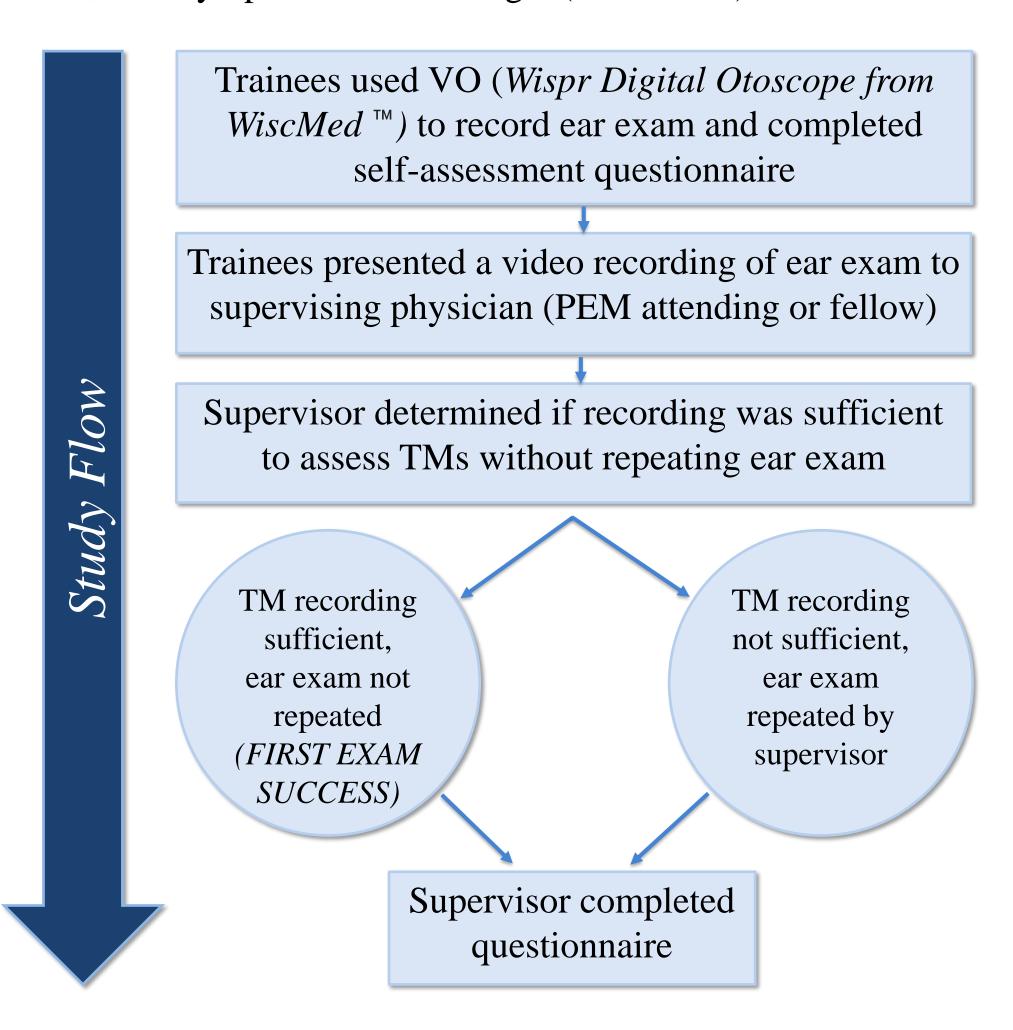
The video otoscope (VO) allows trainees to record magnified images and videos of the tympanic membrane (TM)

OBJECTIVES

To evaluate whether trainees' use of a VO can avoid repeat ear exams by supervising physicians, and to assess a VO's educational value compared to conventional otoscopes (CO)

METHODS

Prospective observational study of trainees in the pediatric ED examining patients ages 6 months – 5 years presenting with fever, URI symptoms and/or otalgia (11/21-7/22)



Trainees completed additional pre- and post-rotation questionnaires related to their experience using the VO



VIDEO OTOSCOPY

eliminated the need for a repeat ear exam in 75% of patients, and was **superior** to conventional otoscopy as a teaching and diagnostic tool

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RESULTS

| Table 1: Demographics | | | | |
|-----------------------|-----------------------|----|--|--|
| Trainees | Pediatric (PGY1-PGY3) | 40 | | |
| | EM (PGY2-PGY4) | 25 | | |
| | Pediatric NP | 2 | | |
| | | | | |

| Table 2: First Exam Success on Bilateral Ear Exams | | | |
|--|---------------------------|-----------|--|
| N = 368 | First exam successful | 276 (75%) | |
| | First exam not successful | 92 (25%) | |

Table 3: Factors Independently Associated with First Exam Success

| Adjusted Odd | ls Ratio, 95% CI |
|-------------------------------------|------------------|
| Patient age >2 years | 2.2, [1.3-3.9] |
| Training level (NP, PGY3, PGY4) | 1.8, [1.02-3.1] |
| >50% visualization of bilateral TMs | 9.6, [5.6-16.7] |

Figure 1: Trainee Assessments of Confidence & Satisfaction with Otoscopy

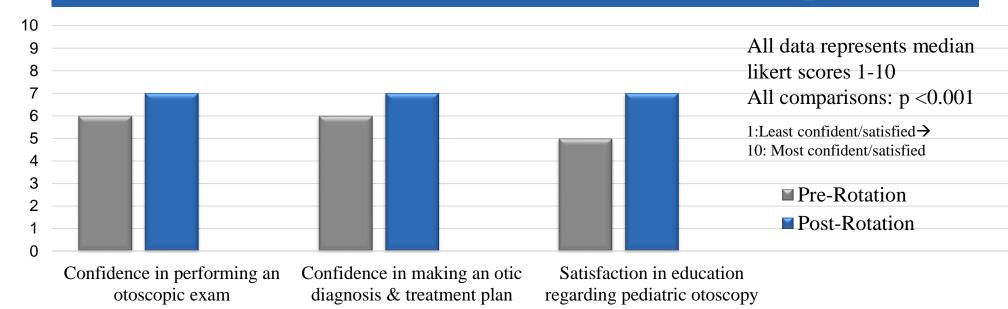


Figure 2: Trainee Assessments of VO Superiority compared to CO

