

Comparative evaluation of a ‘frugal’ solar-powered otoscope with a traditional device amongst health care workers in Malawi

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Abstract

Abstract Objectives To comparatively evaluate a low cost ‘frugal’ otoscope in low resource settings with a traditional device amongst health care workers in Malawi. **Design** A prospective, comparative, qualitative observational survey of healthcare workers opinions using 5-point Likert rating scales and tick box categories. **Setting and Participants** 25 mixed cadre health care workers from the Ear, Nose and Throat department of the in Malawi were recruited. **Main outcome measures** A 10-item survey questionnaire was used to compare the low cost ‘frugal’ otoscope with a traditional device. **Outcomes** measures used were ease of speculum attachment, handling, insertion, stability, the quality of view, colour, build, brightness, overall ease of use and their suitability for local work. **Results** The low cost ‘frugal’ otoscope scored statistically higher in overall combined performance, as well as in the remaining 4 out of the 9 attributes. Notably, 54.2% of users rated the low-cost device more suitable than the traditional device for use in low-middle income countries, 25% were equivocal and 20.8% preferred the traditional device. **Conclusion** This study deemed the low-cost frugal Arclight otoscope appropriate as a practical substitute for more expensive traditional otoscopes for the delivery of ENT services in low resource settings.

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