Clinical utility of CARL, a patient simulator for clinician training, in a private practice setting.

Andreas Seelisch (1), Robert Koch (2)

(1) Hearing Solutions, (2) AHead Simulations

Objectives: This pilot study explores the benefits to using CARL, a patient simulator developed by AHead Simulations, for training on real ear measurement (REM) in a private practice setting.

Background: Clinical staff coming to work in private practice show tremendous variability in terms of training programs, practice experience and exposure to different protocols and equipment. One specific area of concern is REM with estimates of routine use for fittings being only 35-55%. This means a large portion of staff may arrive with limited exposure and proficiency; evidence has shown there can be significant implications with this including compromised measures associated with shallow probe tube placement. As such, there is significant rationale in objectively measuring proficiency and giving clinicians the opportunity to train on REM as a part of routine onboarding.

Methods: A multiple case study approach was used in which a cross section of three clinicians with varying levels of experience, training and tenure with the organization were asked to conduct a mock fitting on CARL. They were asked to conduct REM and approximately match target. Output was measured using an Audioscan Verifit. CARL was used to measure distance in mm to the tympanic membrane. Where placement was greater than 5mm it was improved to within 2mm and measurements repeated. Differences in output were recorded.

Results: Results illustrated how CARL was able to demonstrate objective improvements in REM for a majority of cases including one in which a dramatic impact to high frequency gain was resolved. All three cases showed at least some form of training benefit.

Conclusions: CARL represents a powerful tool that can be applied easily to private practice. It allows REM training without the need or risk associated with using live patients while providing objective feedback.