Measuring Competency Development in Objective Evaluation of Videofluoroscopic Swallowing Studies

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Abstract

Clinical interpretation of videofluoroscopic swallow study (VFSS) has often been criticized for its poor objectivity and inter-rater agreement. In order to address this, objective VFSS measures have been developed, reported and demonstrated to be valid and reliable. However, widespread clinical implementation is lacking. Reasons cited include lack of training and excessive time taken to perform measures. This study investigated competency development in selected standardized objective VFSS measures among speech-language pathologists (SLPs) naive to quantitative measurement. Six novice (no VFSS experience) and four experienced (2–10 years of VFSS experience) SLPs participated in 4 h of training in how to perform selected objective VFSS measures including pharyngeal constriction ratio, maximum pharyngoesophageal opening, pharyngoesophageal

opening duration, airway closure duration and total pharyngeal transit time. Each week for eight weeks, participants were asked to independently measure and report three VFSS of patients affected by stroke. By week 8, all SLPs, irrespective of prior experience level, were able to achieve 80% accuracy in measures in comparison to the consensus of three expert clinicians. SLPs' mean time for completion reduced from 50 min in week 1–25 min in week 8. Inter-rater agreement for measures improved across the eight-week period (range ICC = –31.05 to.60 in week 1 to ICC = .71 to.98 in week 8). There was high agreement in location of impairment and consequent management recommendations by week 8. In conclusion, SLPs can reliably learn and incorporate objective VFSS measures within a reasonable time frame. Level of experience has limited influence on the learning curve. © 2017, Springer Science+Business Media New York.

Author keywords

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Indexed keywords

MeSH

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EMTREE medical terms

adult; Article; cerebrovascular accident; clinical competence; dysphagia; esophagus; female; fluoroscopy; human; learning curve; measurement accuracy; middle aged; paramedical education; pharynx; priority journal; respiration control; speech language pathologist; swallowing; videofluoroscopic swallowing study; young adult; diagnostic imaging; dysphagia; fluoroscopy; swallowing; videorecording

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