# IDENTIFYING AND REDUCING RISKS IN FUNCTIONAL ENDOSCOPIC SINUS SURGERY (FESS) THROUGH A HIERARCHICAL TASK ANALYSIS (HTA)

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**Introduction:** Functional endoscopic sinus surgery (FESS) is a common surgical procedure performed in all major ENT centres. Understanding the mechanisms behind human errors in FESS has potential to reduce the adverse events and improve the risks associated with undergoing FESS.

**Aim:** The aim of the study is to develop a hierarchical task listing of steps required to perform Functional endoscopic sinus surgery (FESS). To complete a technical and human factor analysis of tasks resulting in the identification of errors, frequency, severity, and reduction through remediation.

**Methods:** A triangulation of methods was used in order to derive the steps required to complete a FESS: (1) a literature review was conducted on published descriptions of FESS techniques; (2) observations of three FESS; (3) interviews with 5 surgeons on FESS techniques. Data sets were combined to develop a task analysis of a correct approach to conducting FESS. A review by 12 surgeons, and observation of 20 FESS resulted in refinement of the task analysis. With input from 5 consultant surgeons and 2 consultant anaesthetists, a Systematic Human Error Reduction and Prediction Approach (SHERPA) was used to identify the risks and mitigating steps in FESS.

**Conclusions:** Hierarchical Task Analysis and SHERPA are valuable tools to deconstruct performance and to highlight potential errors in FESS. The HTA and SHERPA approaches are useful learning and assessment tools for novice surgeons. The information offers the opportunity to improve surgical training and enhance patient safety.

### Biography

Mel Corbett obtained his primary degree in NUI Galway School of Medicine in Republic of Ireland in 2017. He is currently pursuing MSc in Health Informatics from the University of Limerick, while concurrently completing his intern year in University Hospital Limerick, Republic of Ireland. He will be commencing the Royal College of Surgeons Ireland Core Surgical Training scheme in July 2018. His research interests include: quality improvement in healthcare, sinus surgery and human factors in surgery. He has presented nationally at the Irish Otolaryngology Society Conference and the Royal Academy of Medicine in Ireland Section of Interns Study Day.

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