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Human Factors Analysis of CORESS cases using the NOTSS Framework

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Talking Poster WTP7.4

Introduction

CORESS is a charitable organization that operates independently to improve safety standards in surgical practice. It plays an important role in promoting openness and continuous improvement within the field. CORESS gathers confidential reports of incidents from surgeons and theatre staff. These reports are carefully reviewed by an Advisory Board to identify key lessons. With a focus on education rather than assigning blame, CORESS supports the reporting of adverse events and near misses and, by publishing these key lessons, helps to spread important safety insights throughout the profession.

NOTSS (Non-Technical Skills for Surgeons) is a training and assessment framework created between 2003 and 2007 by surgeons using Human Factors principles. It is designed to evaluate and develop non-technical skills in four main areas and has been adopted internationally.

Although CORESS has shared case reports since 2005, our previous interim analysis was the first large-scale comparative study using these cases. Our current analysis of all archived CORESS cases completes our review of common Human Factor themes within the data. By linking CORESS case details with the NOTSS framework, we aimed to identify areas that could inform targeted training and guide future improvements in surgical practice.

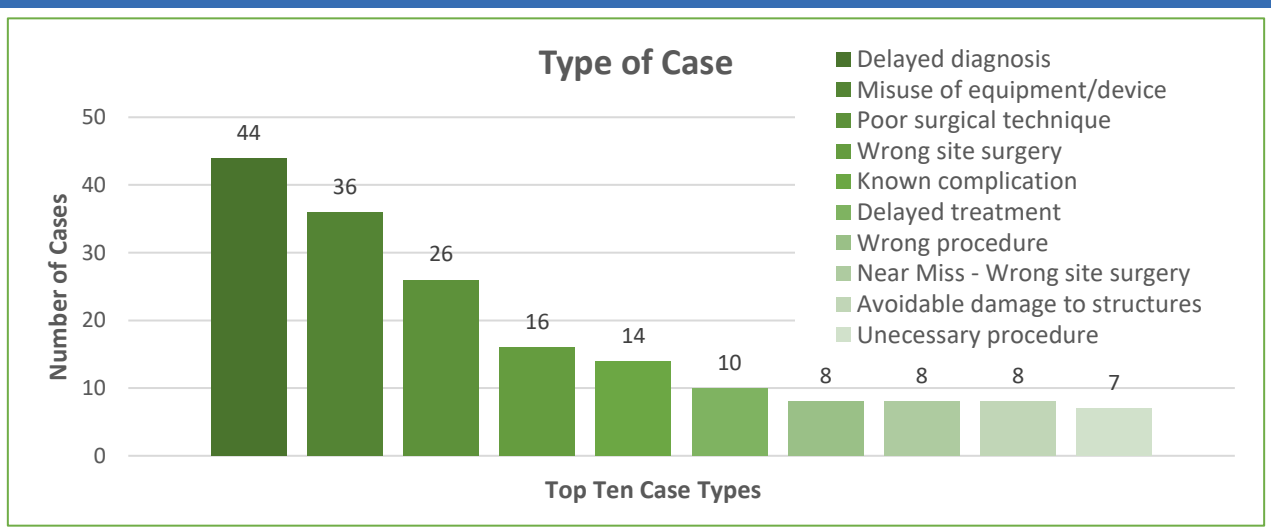
Objectives

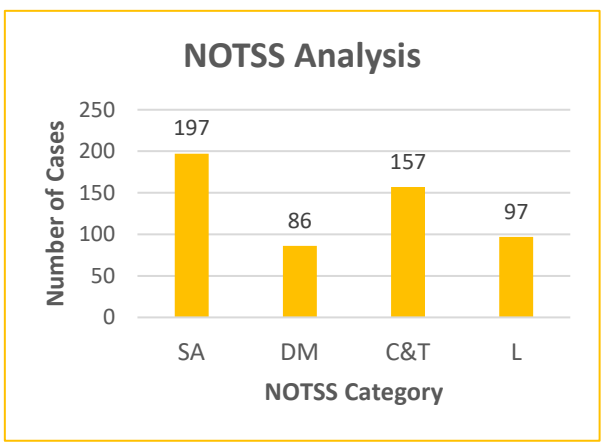
Determine the human factors implicated in cases submitted to the Confidential Reporting System in Surgery (CORESS), using the non-technical skills for surgeons (NOTSS) framework.

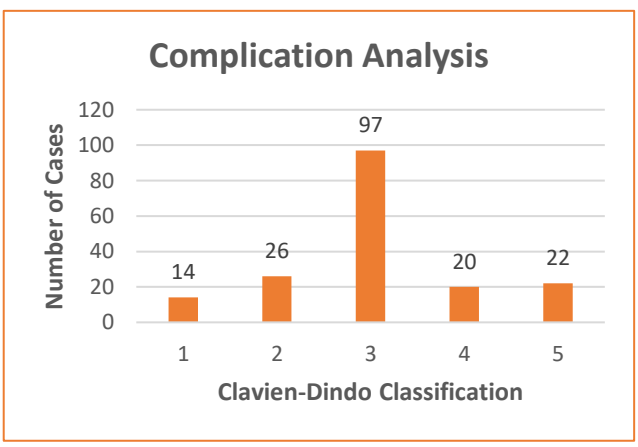
Methods

A consecutive series of cases submitted to CORESS between 2005 and 2024 were systematically evaluated, building upon preliminary findings from an interim analysis conducted the previous year. Data extracted included the nature of the incident, presence of patient harm, Clavien-Dindo (CD) classification, and the clinical setting in which the event occurred. Although demographic information was recorded, it was excluded from analysis due to routine anonymisation practices aimed at protecting patient confidentiality. Each case was assessed using the Non-Technical Skills for Surgeons (NOTSS) framework, which categorises behaviours into four key domains: Situational Awareness, Decision Making, Communication and Teamwork, and Leadership.

Results







Conclusions

Human factors are widely implicated in surgical patient safety incidents. Lack of situational awareness, and failure of communication and teamwork were most likely to be responsible for error within these case examples, although all NOTSS categories were implicated. Therefore, efforts to prevent medical errors should focus on clinician human factors training. Further analysis of cases should involve identifying protective factors in near miss situations.