IMPERIAL

OSCAR

Prevalence of surgical video recording in the United Kingdom and Ireland: results from the Observational Study of Camera-Assisted surgery Recording (OSCAR) study

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INTRODUCTION

This international, prospective study aims to assess the prevalence of surgical video recording in the United Kingdom and Ireland at individual case-level. A previous assessment of surgical video recording adoption at information governance-level estimated 15.7% NHS trusts in England/Wales routinely record surgical procedures, though this did not provide resolution about practice at individual case-level.

METHODS AND PROCEDURES

This multicentre, prospective study was undertaken at 18 institutions in the UK and Ireland, and included patients from 14 surgical specialties. The primary outcome measure was 30-day postoperative mortality. Secondary outcome measures were length of stay (LOS) and 30-day Clavien-Dindo grade of worst complication.

RESULTS

1064 patients underwent a surgical procedure between 11.18.24 and 2.23.25 with 30-day follow up; 464 (43.6%) emergency and 599 (56.3%) elective. Video recording took place in 65 (6.1%) patients; approaches were open (12/65; 18.5%), endoscopic (10/65; 15.4%), laparoscopic (17/65; 26.2%), and robotic (26/65; 40.0%).

Surgical subspecialties were colorectal (29/65; 44.6%), upper GI (17/65; 26.2%), urology (2/65; 3.1%), neurosurgery (17/65; 26.2%).

Differences in 30-day mortality were not statistically significant (p=1.000); 0.0% (0/65) in the video group and 2.8% (28/999) in the non-video group.

Differences in mean LOS were not statistically significant (p=1.000); 4 days (IQR 2-7) in the video group and 1 day (IQR 0-3) in the non-video group.

Differences in Clavien-Dindo grade III or above complication rate were not statistically significant (p=1.000); 6.15% (4/65) in the video group and 3.7% (37/999) in the non-video group.

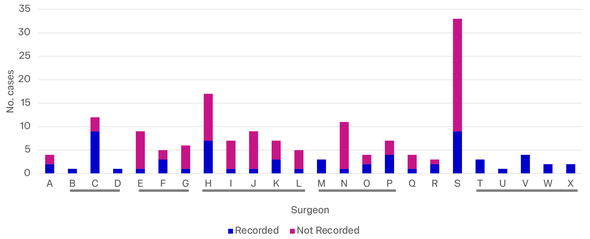

Figure 1. Individual surgeon recording practice. Lines denote surgeons working within the same institution.

Intuitive Hub was the commonest recording platform, used for all 26 recorded robotic procedures (26/65; 40.0%), followed by Karl Storz AIDA which recorded 18 procedures via other approaches (18/65; 27.7%).

In the video group, video was reviewed in 32.3% (21/65) cases; viewing purposes were stated as quality assurance (0), education (11), research (11), other (0).

Video review did not take place in cases where there was a Clavien-Dindo grade III or above complication.

DISCUSSION

The lack of easily demonstrable immediate patient or surgeon benefit may hinder behaviour change towards routine recording, in turn preventing later benefit from a “digital surgery dividend” of subsequently improved surgical performance through case review and other performance analytics.

Although previous studies have demonstrated value in surgical video data for documentation, quality assurance, education, training, and research, a 1.97% (21/1064) surgical video utilisation rate suggests that this value is not being translated into the vast majority of patient’s care within these health systems.

CONCLUSION

This is the first international study assessing surgeon-level surgical video recording practice in the UK and Ireland. Surgical video recording rates are low, quantifying the challenge in generating diverse surgical video datasets at scale for quality assurance and building foundational data sets for AI discovery. These data suggest video recording is not associated with inferior patient outcomes, but prospective trials are needed to establish patient benefit from routine surgical video recording.