The importance of feedback for surgical teams during the COVID-19 pandemic

Editor

As new research has emerged about COVID-19 transmission, personal protective equipment (PPE) and patient management guidelines have evolved. This has led to rapid guideline changes within healthcare systems[1]. Conflicting guidelines can contribute to miscommunication, increased stress, and reduced cohesion among surgical teams. To successfully implement new guidelines during times of crisis, specific and timely feedback can be used to identify and resolve breaches in infection control, and promote feelings of support among healthcare workers[2].

Although inherently less complex than live surgery, feedback in stressful simulated scenarios can provide information about common pitfalls and provide a safe environment in which to practice new skills. Our group found that when under stress, mental practice coaching combined with feedback significantly enhanced performance compared to simulation alone by better preparing individuals to execute action[3]. Feedback and mental rehearsal can help improve individuals' knowledge of guidelines and confidence in their abilities to perform under stress. Critical skills to master in this new environment include PPE donning and doffing, performing procedures on COVID-positive patients while in PPE, and new workflow protocols.

Within normal workflow, new technical skills and adherence to new operative safety protocols may be improved by video-based feedback. In a randomized study, coached trainees using video-feedback made approximately half the number of technical errors when compared with those receiving conventional training[4]. This coaching has been extremely well received when implemented in multidisciplinary teams. Non-technical performance can also be improved through structured curricula combined with debriefing and feedback[5].

Under the best of circumstances, it can be challenging to provide the feedback necessary to maintain and improve individual and team performance. Our team developed the operating room (OR) Black Box® (Surgical Safety Technologies, Inc) - a technology that continuously captures and synchronizes multiple sources of intraoperative video and audio data. Postoperatively, analysts identify safety threats and resilience supports that may respectively contribute to, or help to avoid adverse events, so targeted interventions can be implemented to promote patient safety. Over the last ten years, our group has researched effective ways to reduce surgical error and optimize surgical safety using feedback[3–5].

To address the need for feedback during the COVID pandemic at our institution, we developed the COVID Black Box. Data from simulation scenarios on COVID-positive patients recorded via the COVID Black Box is assessed to detect breaches in infection control practices, and identify suboptimal performance for improvement. Specific and timely feedback is provided to equip OR personnel on how to correct misinformation, improve responses, and facilitate behavioural change on an operative team-level. Although formal analysis has yet to be conducted, qualitative downstream effects of feedback observed include an increased sense of control, reduced stress, improved team communication, feelings of managerial support, and more positive attitudes indicative of the organizational safety culture.

During this global pandemic, hospitals and surgical departments should not underestimate the importance of providing their teams with feedback. Hospitals without comprehensive recording capabilities should establish systematic methods of providing feedback to OR teams such as video recording operations or assigning dedicated observers to record breaches in safety practices. This feedback should be presented to surgical teams immediately and continuously, and collated for the larger institution on a regular basis to transparently communicate lessons learned from previous surgical cases. Specific and timely feedback may reduce preventable errors in surgery during the pressures of the pandemic. With ongoing effort to support our surgical teams and better performance, we can help our front-line OR staff and patients during both the first, and subsequent waves of this pandemic.

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