

## **Telementoring may address need for surgical subspecialty expertise in remote locations**

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Telementoring may be an effective way for subspecialist surgeons to assist remotely located general surgeons in the care of patients in need of emergency subspecialty surgical procedures, according to new research findings published in the September issue of the *Journal of the American College of Surgeons*.

In the study, eight general surgery residents with no formal subspecialty training participated in three mock operations using animal cadavers intended to simulate live procedures. When telementored, the residents achieved higher overall mean performance scores ( $4.30 \pm 0.25$  versus  $2.43 \pm 0.20$ ; p

Wounds suffered in combat often require the expertise of several surgical subspecialists and the ability to provide that level of emergency care in military field hospitals is often not possible. In a civilian setting, telementoring could have wide-ranging applications for general surgeons in rural medical centers where they must treat a wide range of conditions, often without the breadth of subspecialty expertise needed for all cases.

"We wanted to determine if a robotic telementoring platform using realtime audio and video could impact the ability of onsite surgeons to deliver subspecialty surgical care," said lead author Alexander Q. Ereso, MD, resident physician at Wayne State University, Detroit, MI. "This study demonstrates how telementoring could be successfully applied in these surgical settings."



General surgery residents had 20 minutes to perform each operation, first with no assistance from subspecialty surgeons and then immediately afterwards with telerobotic mentoring. The three surgical procedures performed were a suture repair of a penetrating right ventricular injury in a cadaveric bovine heart, simulating a stab wound to the chest; an operative external fixation of a cadaveric porcine open tibial fracture, simulating an injury consistent with a fall; and a craniectomy on a cadaveric porcine skull, simulating an injury caused by a traumatic fall.

Mean performance scores for individual metrics, including tissue handling, instrument handling, speed of completion and knowledge of anatomy, were all superior when residents were telementored (p

"Not only did residents show improvement during telementoring, but when surveyed afterwards they also felt more competent in all three scenarios," said T. Sloane Guy, MD, FACS, the study's senior author and cardiovascular surgeon at Saint Joseph's Hospital, Atlanta, GA. "The study results demonstrate how we could feasibly use this technology to provide necessary advanced surgical care."

## Provided by Weber Shandwick Worldwide

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