

Skill ratings predict which surgeons perform safer surgeries

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Video ratings data of surgeons' operating skills successfully predicted whether patients would suffer complications after they leave the operating room, according to a University of Michigan Health System study.

The study assessed the relationship between the technical skill of 20 bariatric [surgeons](#) and post-surgery complications in 10,343 patients undergoing common, but complex laparoscopic [gastric bypass surgery](#).

High skill surgeons, as rated by their peers, had significantly fewer post-surgery complications such as bleeding or infections, according to the study published in today's *New England Journal of Medicine*.

Their patients were also less likely to make a return visit to the hospital or emergency department.

"Peer assessment of a surgeon's operative skill may be a more practical, more direct, and ultimately more informative test for assessing the surgeon's proficiency than other measures," says lead study author John D. Birkmeyer, M.D., professor of surgery and director of the Center for Healthcare Outcomes & Policy at the University of Michigan.

Participation was voluntary and various skills such as a gentleness, time and motion, instrument handling, flow of operation, tissue exposure and overall technical skill were rated anonymously.

Based on viewing a single video that surgeons submitted themselves, surgeons were rated on a scale of 1 to 5, with 1 indicating the skill expected of a general surgery chief resident and 5 indicating the skill of a master surgeon.

"The technical skill of practicing surgeons varied widely," Birkmeyer says. "Summary ratings varied from 2.6 to 4.8 and greater skill was associated with fewer postoperative complications and shorter operations."

In the study, surgeons who received low skill scores had complication rates of 14.5 percent compared to 5.2 percent among high skill surgeons.

A high level of skill may also be associated with shorter operations, authors note, which are important in light of research linking prolonged operating times to increased risks of certain types of complications such as infection and venous thromboembolisms—dangerous blood clots that can travel to the lungs.

Low skill surgeons had operations lasting 137 minutes while high skill surgeons were done in 98 minutes.

"Variation in surgical skill and outcomes may never be eliminated," Birkmeyer says. "but coaching and constructive feedback from peers may be an important strategy for upping everyone's game."

These findings also suggest the formal evaluations of technical skill may be useful in identifying which medical students pursue careers as surgeons and in evaluating surgeons in training.

For surgeons already in practice, similar methods could be invaluable for the board re-certification process and hospital credentialing for specific procedures.

More information: "Surgical skill and complication rates after bariatric surgery," *New England Journal of Medicine*, Vol. 369, No. 15, Oct. 10, 2013.

Provided by University of Michigan Health System

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