

relationship is unlikely to be a “cause and effect,” but rather SCEs are a surrogate of important team dynamics indicating suboptimal performance and communication breakdown. As surgical complexity increases, the amplitude of the impact of suboptimal performance and intraoperative adverse events becomes exponential as shown by other studies.⁴⁻⁶ Identifying surrogates of suboptimal performance such as SCEs could facilitate error detection, which is the first step in error handling. The optimization of the delicate and complex interactions of many individuals in the performance of precise tasks in the operating room is required for best patient outcomes, similar to the organization and management of a nuclear power plant or an aircraft carrier.

Creating the sanctuary of the modern operating room is an important concept that has now transformed the surgical culture to constantly searching for information and surrogates in the analysis of team interactions, dynamics,

and performance associated with outcomes and the achievement of excellence.

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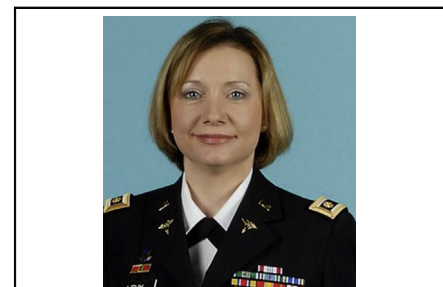
Commentary: Influence of staff turnover during cardiac surgical procedures: Less is more

LTC Julie Brian, AN, USAR

“The very first requirement in a hospital is that it should do the sick no harm.”

—Florence Nightingale

Bloom and colleagues¹ report their first-of-its-kind study on the relationship between staff turnover and sharp count errors (SCEs) during cardiac surgery. It was a significant finding that among 7264 cardiac surgeries, among the factors associated with increase in SCEs was staff turnover,



LTC Julie Brian, AN, USAR

CENTRAL MESSAGE

Staff turnover for breaks and shift change during cardiothoracic surgery can lead to an increase in sharp count errors. This first-of-its-kind study reveals that poor outcomes may be associated with sharp count errors.

including >2 scrub personnel (eg, 3 scrubs [odds ratio, 1.3; $P = .032$], 4 scrubs [odds ratio, 2; $P < .004$], and 5 scrubs [odds ratio, 2.4; $P = .004$]) and >1 circulating nurse (eg, 2 nurses [odds ratio, 1.9; $P < .001$], 3 nurses [odds ratio, 2; $P < .001$], 4 nurses [odds ratio, 2.4; $P < .001$], and 5 nurses [odds ratio, 3.1; $P < .001$]).¹

From the Department of Surgical Services, Lexington VA Medical Center, Lexington, Ky.

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Address for reprints: LTC Julie Brian, AN, USAR, Lexington VA Medical Center, 1101 Veterans Dr, Lexington, KY 40513 (E-mail: Julie.brian@va.gov).

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SCEs cause lengthy time delays, additional radiograph exposure for the patient, and have been associated with higher mortality rates for patients. The authors inspire the following question: How can staff turnover during cardiac surgery be minimized?

Bloom and colleagues¹ compel further discussion of ways to reduce staff transition during cardiac surgery. Operating rooms are among the most complex work settings in health care, with frequent unpredictable events that require a time-crucial interprofessional team response.² Staff turnover for breaks and shift changes can cause disruption of the tempo in the surgical suite. It is also a flashpoint for possible communication breakdowns that lead to SCEs.³ It is imperative that the number of staff transitions be minimized and the process for transition is strictly adhered to with zero tolerance for deviation.

Limitations of study include that the dataset lacks information on complexity of cases or acuity of patients. Complications during procedures and acuity of patients were not analyzed as part of this retrospective study. The large number of unknown cases means they were unable to

determine baseline patient demographic characteristics. It could not be ascertained that higher mortality rate was due to increased SCEs or acuity.

Minimizing staff turnover during cardiac surgery is challenging. It necessitates reviewing and revising hospital policies, and securing operating room staff buy-in. It may also require some creative scheduling practices to accomplish staff agreement. Education with an emphasis on a safety culture and improved patient outcomes could be beneficial with operating room staff.

Bloom and colleagues¹ prompt discussion for a ubiquitous issue in cardiac surgery. More research is warranted to improve patient outcomes and decrease SCEs.

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