

Applying a Time-Out and Standardized Report Form in Anesthesia Handoffs

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A quality improvement project resulted in a protocol for patient handoffs from anesthesia providers to other departments that improved communication and fostered a greater sense of teamwork.

Improving health care safety is one of the top priorities of the U.S. health care system. A key element for health care safety is the elimination of sentinel events—unexpected occurrences involving death or serious physical or psychological injury, such as loss of limb or function—or even the risk.¹ Problems in communication, continuity of care, and planning have been identified as the root cause in more than 80% of documented sentinel events.² As a direct result, The Joint Commission (JC) added National Patient Safety Goal 2E, which instructs each organization to implement a standardized approach to patient handoff.¹ According to the JC, the objective of a handoff is to “pro-

vide accurate information about a patient’s care, treatment, and services, current condition, and any recent or anticipated changes and must include open communication and opportunities for questions.”^{1,3} The JC identified the patient handoff from anesthesia providers to the Surgical Intensive Care Unit (SICU) and Postanesthesia Care Unit (PACU) an opportunity for an improvement.^{1,3}

At the Memphis VAMC in Tennessee, there was no established protocol for patient handoff from anesthesia providers to the SICU and PACU. The Anesthesia and SICU staffs were frustrated by inconsistent and incomplete postsurgical handoffs. Issues identified by the anesthesia team included difficulty contacting SICU staff to give a report and inconsistent availability of staff on first arrival to SICU. The SICU staff felt communication was rushed and there were inconsistencies in length and quality of the reports, resulting in incomplete postsurgical handoffs.

A baseline survey showed only 75% of staff felt the handoff report was thorough, and 67% “felt like a team.” In response, a multidisciplinary safe patient handoff committee (SPHOC) was formed by representatives from the involved units to discuss issues and offer solutions. The SPHOC efforts were aided by the VA National Center for Patient Safety (NCPS).

This quality improvement project was implemented as part of the U.S. Army Graduate Program in Anesthesia Nursing (USAGPAN) and the Northeastern University doctorate of nursing practice curriculum. The goal was to develop a simple, reliable, easily trainable handoff protocol for implementation. This goal aligned with the priorities of the Memphis VAMC, USAGPAN, and VA to establish a culture based on patient safety and continuity of care.⁴

METHODS

Standardization of handoffs began with JC National Patient Safety Goal 2E. There has been a wealth

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of medical literature on the need for standardization of handoffs and the implementation of specific handoff protocols in the postoperative setting. The SPHOC completed a review of the literature supporting standardization of handoff protocols. After completion, a second literature search was completed to identify the concepts for the implementation phase of the project. A critical appraisal of the evidence was completed using the method described by Melnyk and Fineout-Overholt.⁵ Literature from January 2005 through March 2015 was obtained via the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Google Scholar. The search methods included the keywords handover, handoff, transfer, and safety combined with anesthesia, PACU, surgery, operating room, and intensive care. Articles about handoffs not originating in the operating room (OR) were excluded.

The 13 articles found in the literature review established an overall need for standardization of handoffs outside the OR. Four articles identified a correlation between adverse events and poor or incomplete handoffs.^{3,6-8} Multiple articles discussed the need to develop a standardized handoff protocol in order to increase team work and quality of care.^{3,6,7,9,10} Petrovic and colleagues reported a 10% decrease in missed information and a boost in staff satisfaction from 61% to 81% with a standardized handoff.⁹ Additionally, a decrease in handoff time by > 1 minute was noted.⁸ Two articles identified an increase in quality of care after the implementation of a standardized handoff protocol.^{8,10}

The second phase of the literature review examined relevant handoff information, best practices

for participation in the handoff, and established staff buy-in for the process. Segall and colleagues created a table with handoff strategies consistently identified in the literature.¹⁰ The most relevant of these were using a structured written checklist to guide communication, using protocols to standardize the process, and providing formal team training.¹⁰

Six articles identified a written checklist and standardized handoff process as successful strategies used to improve patient safety.¹¹⁻¹⁶ Zavaloff and colleagues discussed the use of a template sheet filled out by the anesthesia provider prior to the handoff for consistency and accuracy of report.¹⁶ Catchpole and colleagues drew correlations between a Formula 1 pit stop and anesthesia handoffs and discussed the teamwork portion of the handoff protocol relating to staff buy-in.¹⁴ After delegating roles and making a set protocol for the handoff process, the study group was able to meet their objectives of efficient and safe handoff.¹⁴

With the information provided from the literature review, the SPHOC established a standardized handoff for the postsurgical patient. The committee created a handoff sheet for the anesthesia provider to use for report. This also included standardizing the handoff process and delineating specific roles for each provider.

After completing a NCPS training workshop, goals were identified at a SPHOC meeting. The SPHOC discussed current barriers to safe patient transfer and suggestions to overcome the barriers. Initial interventions planned by SPHOC focused on the problems of unsafe handoffs and delays in transfer. First, SICU identified the best phone number to

call, which was distributed to the anesthesia and OR staffs. Additionally, the committee began tracking the number of attempted calls to reach SICU and availability of the nurse to take the report.

IMPLEMENTATION

A standardized handoff form was created by SPHOC, and anesthesia providers began to call time-out after the patient was deemed stable. After time-out was called, the SICU nurse provided his or her undivided attention and received the report. When SPHOC deemed the process successful, it was implemented in PACU as well. The entire OR, PACU, and anesthesia staffs were updated regarding the progress of the SPHOC on a monthly basis.

The implementation phase involved SPHOC tracking compliance of handoff sheets and time-outs. Compliance was tracked by counting the number of handoff sheets collected at the end of the day vs the total number of cases on the OR schedule. Tracking compliance with SICU transfers was monitored by the SICU members of the SPHOC through a tracking form. Initially a high level of SICU weekly compliance (93%) was noted.

Building on this success, SPHOC extended use of the handoff sheets and time-out to the PACU. Student registered nurse anesthetists (SRNAs) were tasked with education of the anesthesia and PACU staffs. Education continued via individual teaching, presentation at staff meetings, and e-mail reminders. To prevent confusion, no additional changes were made to the handoff sheet for an extended trial.

Despite these interventions, PACU compliance began to lag, averaging 33% over 3 weeks. Encouraging staff buy-in and a change in culture were

identified as strategies to improve compliance. The third month of the trial started with 71% compliance. Interventions regarding staff buy-in emphasized individual accountability. Names were attached to handoff sheets, and those found with < 80% of sheets completed were provided with additional education. Those participants with \geq 80% compliance were praised for their efforts.

Fostering a culture change proved to be more challenging. Interviews and discussions with anesthesia staff identified forgetting to fill out the sheet as the most common reason for noncompliance. Laminated copies of the handoff sheet were affixed to all anesthesia machines as a visual reminder. A sign denoting where to place the completed handoff sheets was placed in the PACU as a visual cue. The SPHOC stocked each anesthesia machine with handoff sheets on a daily basis.

To strengthen the culture of change, the PACU and SICU RNs were encouraged to ask for a time-out from the anesthesia provider. Handoff sheets were printed on yellow card stock to encourage anesthesia staff to “slow down for patient safety.” With these interventions, compliance increased to 98% by the end of the month.

Survey

An anonymous and voluntary survey was created and distributed to all staff involved in the handoff process. The 5-question survey was based on a 5-point Likert scale from 1 for strongly disagree to 5 for strongly agree. The survey included the following questions: The new surgery report is very thorough; I feel more comfortable when assuming care of the postoperative patient; staff is more attentive when listening to the surgery report when

a time-out is called; I feel the new surgery report is more effective and efficient; I feel I am more of a team with the OR with our changes in handoff of care process.

The survey was used as a baseline and to evaluate further changes in the process. Medical literature has shown that improper handoff communication was the leading cause of adverse events in the postsurgical patient.^{3,6}

RESULTS

Surgery to SICU transfers using the Handoff card increased from 33% in the first month to an average of 98% after interventions. In the 10-month intervention period, time-outs in SICU increased from 29% to 99%. The SICU staff present at patient arrival increased from 83% to 97%. Anesthesia handoff report for PACU patient transfers increased from 79% to 99%. The time-outs in PACU increased from 39% to 99% after interventions.

After compliance initially increased, SPHOC focused on the more complex aspects of the handoff process—staff satisfaction, which was chosen based on an area of weakness identified in the initial survey results. Overall, staff was satisfied with the handoff sheets; however, only 67% of SICU staff reported that they felt part of the team with the OR as a result of the handoff of care process.

To address this issue, the team delineated roles for providers when a new surgical patient arrived in the SICU. This was dubbed the ABCs of safe handoff with roles for the anesthesia provider or respiratory therapist, the circulating nurse and SICU nurse, and the anesthesia provider. A graphic representation explains the mnemonic, the roles created, and laminated copies were distributed throughout the OR and

SICU (Figure). Subsequent surveys showed 80% of staff felt more like a team with the new process.

CONCLUSION

The overall impact of the project has been to further promote a culture of patient safety at the Memphis VAMC and establish continuity of care as an institutional priority. The existing handoff sheet, time-out, and cross-check have been adapted to all hospital-wide transfers. With the SPHOC guidance and expertise, PACU began using a handoff sheet and time-out when transferring patients to the medical/surgical floors. The handoff sheet has also been adapted to fit the needs of transfers from the emergency department to the medical/surgical floors.

The framework of a standardized handoff is adaptable for other units to customize and has been adopted hospital-wide. The project is sustainable as it requires almost no money to create and sustain. The primary weakness of the process is the requirement of sustained staff participation and buy-in. Each unit and hospital invariably comes with a different culture and priorities; therefore, the process developed at Memphis VAMC may not meet the needs of other facilities. ●

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Disclaimer

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