

Implementation of a Written Anesthesia-PACU Report Tool:

To Increase Data Transfer and Improve Staff Satisfaction

By

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Table of Contents

Abstract..... 4

Background and Significance 5

Purpose..... 6

Review of Current Evidence 6

Accuracy of Handoff Report..... 6

Omissions of Data 7

Utilization of a Standardized Process 8

Staff Satisfaction 8

Conceptual Framework/Theoretical Model..... 9

Methods 10

Design..... 10

Translational Framework..... 10

Population 11

Setting..... 12

Implementation 12

Project Implementation..... 12

Formation of A Team 12

Tool Development 13

Staff Education..... 13

Instruments..... 14

Data Collection..... 15

Data Analysis..... 16

Results..... 17

Results – Omissions..... 18

Results – Accuracy..... 18

Results - PACU Nurse Satisfaction 18

Discussion..... 19

Limitations And Barriers..... 19

Relevance and Recommendations for Clinical Practice..... 20

References 22

Appendix - Instruments 25

Appendix A 25

Appendix B – Chart review Audit Form 26

Appendix B – Chart Review Audit Form 27

Appendix C – Survey 28

Abstract

Background: The purpose of handoff report is to transfer critical patient information effectively between healthcare providers to provide continuity of care and enhance patient safety. Failure to provide all necessary information in a timely fashion can result in delays in care and lead to patient harm. Upon transfer to the post anesthesia care unit (PACU), the PACU nurse relies on a clear and accurate report from the anesthesia provider to safely assume care of the patient. The lack of a standardized handoff tool results in inaccuracies, omissions, and staff frustration with the handoff process. **Purpose:** The purpose of this quality improvement project was to appraise whether the use of a written anesthesia handoff tool during anesthesia provider to PACU nurse handoff increases report accuracy, decreases omissions, and increases PACU nurse satisfaction. **Methods:** Direct observations of handoff procedures, chart reviews and surveys were conducted to evaluate baseline anesthesia provider to PACU nurse handoff accuracy and staff satisfaction. A site-specific written handoff tool and educational intervention were developed and introduced in collaboration with key stakeholders at the clinical facility. Direct observations of handoff procedures, chart reviews and surveys were repeated to assess interval improvement in handoff accuracy and staff satisfaction. **Results:** There was a 13.1% increase in report accuracy, a 51% decrease in omissions, and an 81% increase in PACU nurse satisfaction from pre-implementation to post-implementation of a written handoff tool for anesthesia to PACU nurse handoff. **Key search words:** “PACU handoff tool”, “anesthesia handoff tool”, “PACU report tool”, “PACU handoff”, “anesthesia handoff”, and “PACU anesthesia report”.

Background and Significance

The purpose of the handoff report is to transfer critical patient information accurately between healthcare providers to provide continuity of care and enhance patient safety. This process takes place routinely when surgical patients are transferred from the operating room to the PACU. PACU nurses need to be aware of patient history, anesthesia type, medications administered by the anesthesia provider, and critical intraoperative events to safely assume care of the patient. Patient safety is at risk when important patient data is omitted during handoff report (Lambert & Adams 2018; Joint Commission 2012; Jones et. al. 2018). Greenberg et al. (2007) report that miscommunication occurred in 57% of 444 surgical malpractice claims. The Joint Commission (2016) found that communication failures accounted for 30% of malpractice claims resulting in 1,744 deaths. A failure to provide all critical patient information in a timely and efficient manner results in delays in care and potential patient harm (Jones et. al., 2018). In 2012, the Joint Commission released data that communication breakdown during handoff accounts for 80% of medical errors (The Joint Commission, 2012).

Standardization of handoff report is key to improving accuracy and completeness of handoff communication (The Joint Commission, 2006). Without a standardized process, specific information included is often inconsistent among providers, and it is left up to the individual giving report to decide what information is deemed necessary to relay to the nurse or provider taking over care of the patient. Since communication between providers leaves a wide range of approaches to the handoff of patient care, standardizing this process can improve accuracy of communication. Standardizing the anesthesia to PACU handoff can improve staff satisfaction (Burns et al, 2018). By implementing a standardized handoff tool in PACU, omissions in

communication can be reduced, the amount of accurate information can be increased, and overall staff satisfaction can be improved.

Purpose

The purpose of this quality improvement (QI) project was to critically appraise whether the use of a written anesthesia to PACU handoff tool improved handoff report accuracy, decreased handoff report omissions, and improved PACU nurse satisfaction with the handoff process.

Review of Current Evidence

An extensive review of the literature was performed using the following search of terms: “PACU handoff tool”, “anesthesia handoff tool”, “PACU report tool”, “PACU handoff checklist”, “anesthesia handoff checklist” and “PACU anesthesia report”. The following databases were used to search these key terms: Ebscohost, ProQuest, NIH, PubMed, and Ovid. Search criteria included: articles published in English in peer-reviewed journals between the years 2017 and 2023. Older studies were included if they were directly related to the standardization of anesthesia to PACU nurse handoff report. Criteria for exclusion included: PACU handoff between PACU nurse and inpatient surgical floor nurses or handoff between the operating room staff that did not include anesthesia. In total, 19 articles met these criteria and were included in this review.

Accuracy of Handoff Report

Accuracy is defined as “precision of correctness” and is vital to safe patient care (Cambridge Dictionary, 2024). In the clinical setting, accuracy during handoff is defined as a comparison of the verbal handoff report to the patient’s medical record (Halladay 2018, Parks,

2019). In anesthesia to PACU nurse handoffs, accuracy has been measured with the use of a handoff score or a handoff percentage. Handoff score has been defined as the mean number of items included in a handoff report (Parks, 2019; Halladay, 2018). Handoff percentage is defined as the percentage of items accurately included in the handoff report when compared to the patient's medical record (Burns, 2018; Halladay et. al.; Jelacic, 2019; Parikh & Schuller, 2018; Lambert & Adams, 2018). Alternatively, omissions in handoff report can also be quantified.

Omissions of Data

Omission of patient data affects the accuracy of handoff report and jeopardizes patient safety (Lambert & Adams 2018; Joint Commission 2012; Jones et. al. 2018) Increased handoff omissions during the perioperative period are associated with increased risk of adverse events, increased morbidity, and increased mortality (Jones et. al., 2018). Omitting vital patient details can lead to tragic outcomes, loss of function, organ impairment, delayed discharge and even death (Lambert, 2018). Omissions during handoff occur frequently and can be the source of surgical malpractice claims (Greenberg et. al., 2007).

Omissions during handoff can be categorized by pre-operative neurologic status, baseline vital signs, patient name, procedure type, antiemetic use, allergies, lines and drains and intake and output (Park 2019, Lambert 2018, Halladay et. al., 2019, Halterman, 2019). Halterman (2019) reports that the most frequently occurring omissions are antiemetic use, invasive lines, and patient allergies. Additionally, The Joint Commission deemed patient identification with two patient identifiers as the number one safety goal for the year (Joint Commission, 2017).

Omission of patient identity and medical record number occurs frequently (Jelaic, 2019; Lambert, 2018). Omission of patient identity was noted in 99.5% of observed anesthesia provider to PACU nurse handoff reports (Jelaic, 2019).

Utilization of a Standardized Process

The use of a standardized handoff tool can improve the accuracy of handoff report (Burns, 2018; Halladay et. al.; Parikh & Schuller, 2018; Lambert & Adams, 2018). The use of a standardized handoff tool decreases handoff report omissions (Lambert, 2018; Park, 2019; Burns, 2018; Halladay et. all.; and Halterman, 2019). Implementation of a handoff tool also resulted in improved handoff scores (Park, 2019) and handoff percentages (Burns, 2018; Halladay et. Al.,2018; Jelacic, 2019; Parikh & Schuller, 2018; Lambert & Adams, 2018). The use of a standardized handoff tool improved handoff percentages between 22.7% and 38.2% (Burns, 2018; Halladay et. al.; Jelacic, 2019; Parikh & Schuller, 2018; Lambert & Adams, 2018).

The implementation of a standardized anesthesia to PACU nurse handoff tool appears to be effective in decreasing omissions in multiple categories (Burns, 2018; Halladay et. al., 2018; Jelacic, 2019; Parikh & Schuller, 2018; Lambert & Adams, 2018). Handoff omissions of patient allergies were reduced by 19% following implementation of a standardized handoff tool (Halterman, 2019). Handoff omissions of preoperative vital signs were reduced by 15% (Lambert, 2019). Handoff omissions of preoperative antibiotics were reduced by 45% (Jelacic, 2019). The existing evidence clearly supports using a standardized handoff tool to decrease omissions and improve handoff accuracy.

Staff Satisfaction

A standardized handoff tool also improves staff satisfaction with the overall handoff process (Burns et al, 2018; Halladay et. al.; Jelacic, 2019; Lambert & Adams, 2018). When staff members are satisfied with the handoff they are given, they are better equipped with information needed to take safe care of patients. This improvement in PACU nurse satisfaction can be partially explained by a decrease in callbacks for information (Robins et al., 2015). Halladay et.

al. (2018) reported a 14% increase in PACU nurse satisfaction with the use of an electronic anesthesia to PACU nurse handoff tool. Burns et. al 2018 reported an improvement in PACU nurse satisfaction by 36% following implementation of a standardized handoff tool. Lambert & Adams (2018) report that the implementation of a handoff tool increases satisfaction of both the PACU nurse and the anesthesia provider. Staff satisfaction is an important factor in creating long-lasting evidence-based practice change.

Conceptual Framework/Theoretical Model

The framework used for this DNP project was Lewin's Change Theory, a 3-stage model that consists of "unfreezing, change and refreezing" (Petiprin, 2020). The first step is the unfreezing stage which involves recognizing driving forces which are defined as forces pushing for a change to occur (Petiprin 2020). An example of driving forces as it pertains to this DNP project were adverse patient outcomes and decreased staff satisfaction resulting from ineffective handoff report between the CRNA and PACU RN. The recognition of a clinical problem serves as the impetus for change and motivates key stakeholders to seek solutions to the problem. Involving key stakeholders and staff is necessary to overcome restraining forces. Restraining forces are those forces that are counter driving forces (Petiprin 2020). A restraining force for this quality improvement project was a reluctance of change by some hospital staff and a lack of administrative support.

The second step in Lewin's Change Theory is the change phase, which involves a change in thoughts, feelings, or behavior (Petiprin 2020). Key stakeholders worked collaboratively to develop an evidence-based solution to improve handoff report accuracy and staff satisfaction with the handoff process. An evidence-based educational intervention and the implementation of

a standardized handoff report tool were developed to address the clinical problem. The change phase of this quality improvement (QI) project involved the implementation of a site-specific handoff tool.

The final step in Lewin's Change Theory is refreezing (Petiprin 2020). Refreezing occurs when a new procedure becomes habit (Petiprin 2020). The sustained use of a standardized handoff at the clinical facility to improve the communication between anesthesia and PACU creates a standardized and improved handoff process.

Methods

The purpose of this quality improvement (QI) project was to critically appraise whether the implementation of a site-specific anesthesia to PACU handoff tool improved handoff report accuracy, decreased handoff report omissions, and improved PACU nurse satisfaction with the handoff process.

Design

This quality improvement project utilized a preintervention and postintervention design to evaluate the utilization and effectiveness of a standardized anesthesia handoff tool to improve handoff accuracy, decrease report omissions, and improve PACU nurse satisfaction with the handoff received.

Translational Framework

The Iowa model was used as the translational framework for this quality improvement project. The Iowa model is a guide for introducing evidence-based practice change in the clinical setting and consists of a series of steps to implement evidence-based solutions to clinical problems (University of Iowa Hospitals & Clinics, 2017). These steps are the identification of a

trigger, the determination of whether the problem is a priority, the formation of a team, a review of the existing evidence, the introduction of an evidence-based practice change, and an evaluation of the impact of the practice change (University of Iowa Hospitals & Clinics, 2017).

The first step is the identification of a clinical issue that is either “knowledge-focused” or “problem focused” (University of Iowa Hospitals & Clinics, 2017). The clinical issue identified was the lack of an existing standardized handoff report process and subsequent decreased PACU nurse satisfaction at the clinical facility. This is an example of a “problem-focused” clinical issue.

The subsequent steps in the Iowa Model consist of a determination of whether the clinical problem represents an organizational priority and the formation of a team comprised of key stakeholders. Step two was deciding if the communication issue during handoff was a priority (University of Iowa Hospitals & Clinics, 2017). PACU RN stakeholders at the target facility stated that the verbal handoff was inconsistent, and technique varied from anesthesia provider to anesthesia provider, causing information to be omitted during data transfer. Anesthesia to PACU handoff was the first time a PACU RN encountered a patient, and lost information during handoff could negatively impact their care.

The next step involved the formation of a team with key stakeholders. Members of the team created to address this problem included the principal investigator (PI), nurse manager from the PACU, Chief CRNA, and CRNA Clinical coordinator.

Population

This QI project utilized a convenience sample of PACU nurses available to attend the educational intervention and willing to participate in the project. Exclusion criteria included staff that were not available for the educational intervention or were not willing to participate.

A Written PACU Report Tool: Increasing Data Transfer and Staff Satisfaction

Specific demographic data of PACU staff was not collected or recorded to maintain confidentiality.

The QI project also included a convenience sample of anesthesia to PACU handoffs that occurred on mutually agreed upon dates with the clinical facility. A combination of adult general, regional anesthesia and monitored anesthesia care (MAC) cases were observed. Sedation cases not involving anesthesia, out of OR cases that did not recover in the PACU, pediatric cases, endoscopy procedures, and cesarean cases were excluded.

Setting

The anesthesia to PACU handoff tool was implemented at a tertiary care hospital with approximately 1,000 beds and 11 operating rooms and several other procedural areas such as endoscopy suites, labor and delivery suites, two procedural suites and a cystoscopy suite.

Implementation

Project Implementation

This quality improvement project consisted of an educational intervention and the introduction of a site-specific anesthesia to PACU handoff tool at the target facility. The PACU handoff tool was deemed a quality improvement project, therefore did not need approved by the IRB. The clinical facility, as well as nurse managers from both the PACU and anesthesia departments approved the implementation of this quality improvement project. Direct observations, chart reviews and surveys were used to assess for improvement of handoff accuracy, decreased omissions and increased PACU nurse satisfaction.

Formation of a Team

A multidisciplinary team was formed that consisted of the principle investigator (PI) and key stakeholders at the clinical facility. Members of the team included the nurse manager from

the PACU, the Chief CRNA, and the CRNA clinical coordinator. The PI reviewed and analyzed the current evidence on standardized anesthesia to PACU handoff to determine evidence-based best practices. The PI, along with stakeholders, determined and agreed that there was enough evidence to support practice change at the clinical facility to standardize anesthesia to PACU handoff. Based on the existing evidence, the team developed a standardized site-specific written anesthesia to PACU handoff tool.

Tool Development

The PI worked with key stakeholders to develop a site-specific anesthesia to PACU handoff tool. Although there are multiple handoff tools in the existing evidence, upon review, no single tool addressed all primary concerns with the handoff process at the clinical facility. The PI collaborated with key stakeholders to combine elements of existing handoff tools to develop a site-specific handoff tool (Appendix A).

Staff Education

Participation in the QI project from anesthesia and PACU staff was on a voluntary basis. An educational breakfast was held by the PI to inform the anesthesia and PACU staff about the current evidence regarding anesthesia to PACU handoff report, introduce the site-specific handoff tool and facilitate buy-in. The session was held during one of the monthly staff meetings. A PowerPoint presentation of current evidence-based strategies to improve handoff report accuracy was used to aid in the educational session. A sample of the site-specific anesthesia to PACU handoff tool was presented during the presentation. At the conclusion of the presentation, staff members were invited to ask questions and complete the written pre-implementation PACU nurse satisfaction surveys.

Instruments

The PACU nurse satisfaction surveys were developed by the PI for the purpose of this QI project (Appendix C). The surveys were created using the Likert Scale. These surveys were provided in paper format to the PACU nurses at the conclusion of the educational intervention and following implementation of the site-specific handoff tool. The survey consisted of seven questions to evaluate the PACU nurses' level of satisfaction with the existing handoff report process, handoff quality, and the amount of information transferred. An initial question was included to verify that the PACU nurses completing the surveys were currently active in anesthesia-PACU handoff. Additional questions listed on the satisfaction surveys pertained to a separate QI project. Surveys were anonymous, and no identifiable data was collected. Additional surveys were left with the charge RN for staff to fill out when the PI was not present. The surveys were collected by the PI and data was entered into an excel spreadsheet.

The anesthesia handoff tool (Appendix A) was created by the PI in collaboration with key stakeholders at the clinical facility. The site-specific handoff tool included surgical procedure performed, patient allergies, past medical history, pre-operative vital signs, pre-operative medications administered, laboratory results, type of anesthesia, degree of airway difficulty, intravenous access, relevant medications, and fluids administered, urine output (UOP) and estimated blood loss (EBL). These categories were selected based on examples from the existing evidence and specific feedback from key-stakeholders. Additional space was provided at the bottom of the handoff tool for notes.

The written handoff tool was formatted into a 4.25" by 5.5" paper pad (Appendix A). Each pad contained 50 copies of the tool to be used by the anesthesia staff. Each pad was placed on top of the anesthesia Pyxis in each operating room and procedural area. Additional pads were

available in the anesthesia lounge. No patient names or gender were used to maintain patient confidentiality and shield patient protected health information (PHI). The tool was used to facilitate verbal report during handoff between the CRNA and the PACU nurse during handoff. The handoff tool was instructed to be left with the PACU RN after completion of handoff for reference by the PACU nurse. When the patient is discharged to home or to an inpatient room, the PACU RN was instructed to place the handoff tool in a secure facility approved PHI disposal container at the nurse's station.

Data Collection

This QI project included a convenience sample of anesthesia to PACU handoffs that occurred on mutually agreed upon dates with the clinical facility. Handoff procedures observed included a combination of adult general, regional anesthesia and monitored anesthesia care (MAC) cases. Sedation cases not involving anesthesia, out of OR cases that did not recover in the PACU, pediatric cases, endoscopy procedures, and cesarean cases were excluded. The target sample size was 30 preintervention and 30 postintervention direct observations for a total of 60 direct observations of handoff procedures conducted over two separate four-week periods. These direct observations were followed by chart audits to compare direct observation handoff report data to the documentation in the electronic medical record (EMR).

Chart audits were conducted using a chart-review audit form (Appendix B) developed by the PI for the purpose of this project. This form was used to compare the data included in the observed handoff report and the data documented in the electronic medical record (EMR) for accuracy. This chart-review audit form was used by the PI to calculate the number of omissions and a handoff score per handoff report.

A Written PACU Report Tool: Increasing Data Transfer and Staff Satisfaction

A total of 23 total items were evaluated to calculate omissions. The PI obtained a patient label at the start of the observed handoff report to match the observed handoff report for each patient to the correct case in the electronic medical record (EMR). The chart-review audit form was then used to compare the-observed handoff of these 23 items to what was charted by the anesthesia provider in the EMR for the 23 items. Consistent with existing evidence, an item was considered an omission if it was charted in the patient's electronic record but not included in the observed handoff report. The total number of omissions was recorded for each handoff and for each individual item. The total number of omissions for each item pre-implementation was compared to the total number of omissions post-intervention. To measure accuracy, a handoff score was calculated for each individual case. The handoff score was calculated by creating a proportion of the total number of items included in the observed handoff report compared to the total number of items charted in the EMR. This allowed for the variance in number of items used or relevant to each specific case.

After data was entered into the excel spreadsheet, the chart audit form (Appendix B) for the case, including the patient label, was properly disposed of in a locked hospital approved PHI disposal container. No patient identifiable data was removed from the facility. This process was repeated for each case during the pre-implementation and post-implementation phases of the QI project.

Data Analysis

During the QI project, 60 handoff reports between the CRNA and PACU nurse were observed and compared to the patient's EMR. There were 30 direct observations and chart reviews performed pre-implementation of the handoff tool and 30 performed post-

implementation. The three main aims evaluated for this QI project included, accuracy of report, omissions of data, and PACU nurse satisfaction.

Omissions and accuracy of report were calculated by comparing the items included in the observed anesthesia to PACU handoff report to the items documented in the patient’s EMR for each case. An item was considered an omission if it was not included in the observed handoff report but was charted in the patient’s EMR.

Nurse satisfaction was analyzed by comparing the results of the PACU nurse satisfaction surveys (Appendix C) pre-and-post intervention. A total of 10 surveys were collected pre-implementation, and 11 surveys were collected post-implementation. The same five questions were asked pre-and-post implementation. Satisfaction was measured by calculating the mode very satisfied or satisfied for each question.

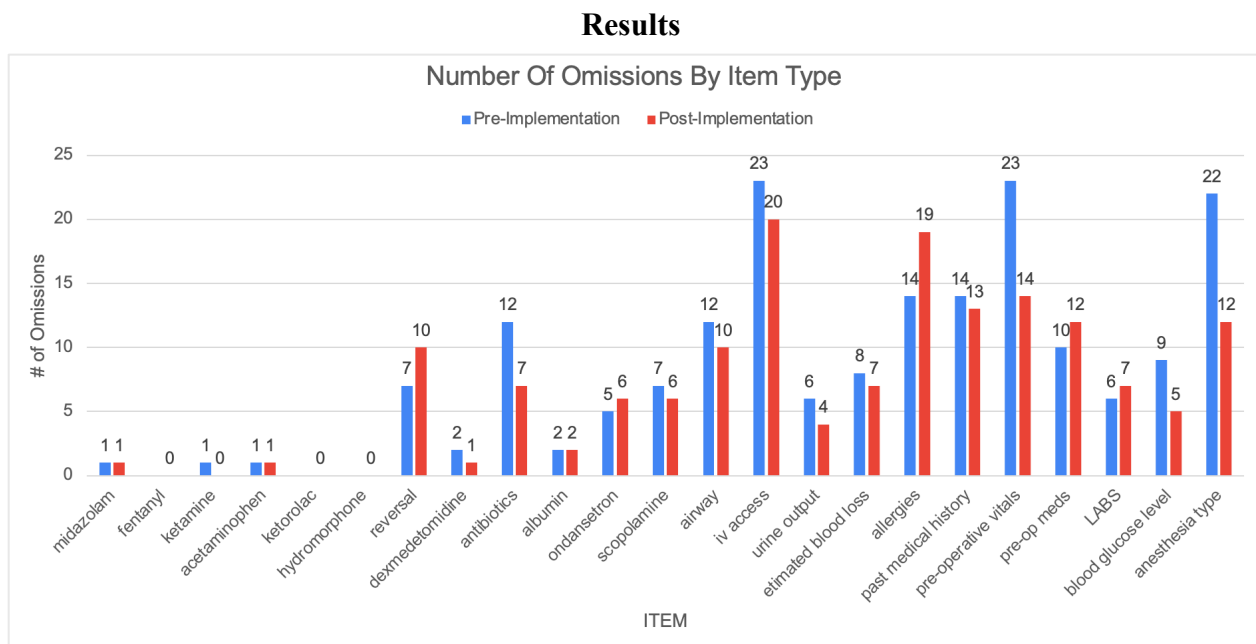


Figure 1

Results – Omissions

The maximum number of omissions possible for each individual handoff is 23 since there were 23 items evaluated. The maximum number of omissions possible per item, however, is 30 preintervention and 30 following implementation of the handoff tool. Medications most frequently omitted were medications administered for the reversal of paralytic medications, antibiotics administered, and pre-operative medications administered (Figure 1). The top non-medication related data omitted were IV access, patient allergies, pre-operative vital signs, and type of anesthesia.

The greatest decreases in omissions from pre-implementation to post-implementation include anesthesia type (decrease of 10 omissions), pre-operative vital signs (decrease of nine omissions), and antibiotics (decrease of five omissions). Overall, there was a 51% decrease in omissions with the use of the handoff tool.

Results – Accuracy

Accuracy of report was calculated by comparing the items-included in the observed handoff report to the items charted in the patient's EMR for each case. There was an average 13.1% increase in accuracy of handoff report from pre-implementation to post-implementation.

Results - PACU Nurse Satisfaction

A total of 10 surveys were collected pre-implementation, and 11 surveys were collected post-implementation. The same five questions were asked pre-and-post implementation. All respondents reported that they were currently involved in the anesthesia to PACU handoff process. Pre-intervention, one respondent reported that they currently use a written handoff tool. Satisfaction with the amount of information received during handoff improved by 24%. Overall

PACU nurse satisfaction with quality of report increased 82% with the use of the anesthesia-PACU handoff tool.

Discussion

Overall, there was a decrease in handoff report omissions, an increase in handoff report accuracy, and an increase in PACU nurse satisfaction with the handoff process. The handoff tool gave the anesthesia staff something to reference instead of relying on memory to give report. Although the results of the study were not statistically significant due to the small sample size, there was still an overall decrease in omissions and an increase in report accuracy. The implementation of the site-specific handoff tool was associated with an increase in accuracy of 13.1%, however, this was much lower than the accuracy stated in the existing evidence following implementation of a standardized handoff report tool. It is not known whether a longer implementation period might have resulted in more positive results. The existing evidence consistently demonstrated that the use of a standardized handoff tool improves anesthesia to PACU handoff report, and this quality improvement project demonstrated consistent results. To increase retention of the use of the handoff tool, the tool needs to be accessible, easy to use, and relevant to everyday practice.

Limitations And Barriers

Some barriers to this QI project include the use of convenience samples for handoff observations and staff satisfaction surveys, the use of one facility for data collection, the possible influence of staff being directly observed during handoff processes, and anesthesia staff turnover during project implementation. The initial proposed timeline was two weeks of pre-implementation data collection, four weeks of implementing the anesthesia to PACU handoff tool, and two weeks of post-implementation data collection. Unfortunately, there was an almost

complete anesthesia provider staffing turnover after the pre-implementation phase. The clinical facility allowed the PI to extend the data collection timeline to successfully obtain the targeted number of total observations. The actual timeline for the QI project was four weeks of pre-implementation data collection, four weeks of implementing the anesthesia to PACU handoff tool, and four weeks of post-implementation data collection. Most of the buy-in for the QI project was done with the staff that participated in the pre-implementation phase. The PACU staff stayed relatively consistent throughout this QI project.

Existing evidence shows that implementation of a standardized anesthesia to PACU handoff tool improved accuracy between 22.7% and 38.2% (Burns, 2018; Halladay et. al.; Jelacic, 2019; Parikh & Schuller, 2018; Lambert & Adams, 2018). This QI project had an increase in accuracy of 13.1%. The accuracy of report might have been more significant if the anesthesia staff remained the same during the entirety of the QI. In addition, the option to collect each handoff tool after it was used to compare what they wrote versus what they said verbally could potentially lead to a more accurate data collection of the tool's use.

Another limitation to the evaluation of PACU nurse satisfaction would be the subjectivity of the individuals filling out the surveys. Since satisfaction is not objective, it is prone to subject bias and influence. Since the PACU nurse staff remained consistent pre-and-post intervention, the impact of anesthesia turnover was not expected to impact PACU nurse satisfaction. In contrast to Halladay's (2019) conclusion about PACU staff satisfaction, this QI project's handoff tool did indeed improve PACU nurse satisfaction overall.

Relevance and Recommendations for Clinical Practice

This QI project showed that the implementation of a standardized anesthesia to PACU nurse handoff tool decreased omissions and improved accuracy of report. Lambert and Adams

A Written PACU Report Tool: Increasing Data Transfer and Staff Satisfaction

(2019) used a single peri-operative handoff tool to facilitate pre-operative to anesthesia handoff, intra-operative anesthesia to anesthesia handoff and anesthesia to PACU handoff report to improve accuracy, improve staff satisfaction, and decrease omissions. Post-implementation survey results from this QI project included multiple suggestions to initiate the handoff tool in the pre-operative area, continue its use by anesthesia in the intra-operative phase, and utilization of the handoff tool to facilitate report in PACU. The benefit of this approach would be to reduce the amount of writing for staff members in each phase. This is an excellent modification to the use of the handoff tool. In hindsight, it would have been preferable to give each anesthesia provider their own handoff tool pad to keep and use during the duration of the QI project. This might have created some personal responsibility and increased accessibility to use the written handoff tools on a more frequent basis. A future study could include this strategy to increase overall utilization to the practice change. Increasing the sample size and duration of the QI project might also create statistically significant results.

This QI project concluded that the use of a written anesthesia to PACU handoff tool improved handoff report accuracy, decreased handoff report omissions, and improved PACU nurse satisfaction with the handoff process. Policy changes are needed to help enforce the continued use of standardized handoffs. Both facility-wise and across healthcare, the Joint Commission could put out more specific recommendations for standardizing handoff that are consistent with current evidence. Decreasing omissions, increasing accuracy, and increasing staff satisfaction improved the handoff process. Ultimately, the overall objective is to improve patient safety in the peri-operative setting. Patient safety is improved through the use of a standardized handoff report process.

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A Written PACU Report Tool: Increasing Data Transfer and Staff Satisfaction

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Appendices

CRNA:	MDA:	#:
Pt: _____ WT: _____ Age: _____		
Surgery:		
Allergies:		
PMH: <u>HTN CAD</u> CHF DM OSA PONV Anemia		
PRE-OP VITALS: BP: _____ HR: _____		
PRE-OP MEDS: <u>Tylenol Gabapentin</u> Celebrex Scop		
LABS: _____ BGL: _____		
Anesthesia: General ETT / LMA MAC Block		
Airway: Easy Difficult		
IV Access: loc/gauge: _____ loc/gauge: _____		
VERSED: _____ FENTANYL: _____		
KETAMINE: _____ PRECEDEX: _____		
Tylenol: _____ Toradol: _____		
<u>Dilaudid:</u> _____ Reversal: _____		
PONV: <u>Zof</u> Dec <u>Scop</u>		
Abx: {Ancef <u>Clinda</u> <u>Gent</u> Cefoxitin} REDOSED:		
I&O: IVF:	Albumin:	UOP: EBL:
Notes: 		

Appendix A (anesthesia to PACU handoff tool)

A Written PACU Report Tool: Increasing Data Transfer and Staff Satisfaction

Chart Review Audit

PART 1. Will access intra-operative documentation for the following items.

For medications or items will document Y for yes or N for no if they were administered or present in chart. If Item was not documented as administered in chart, then it will not count towards total count of items needed to be mentioned in report.

For example, if no UOP was documented and a foley was not listed as being present during the case, then the item does not count towards total number of items needed to be mentioned in report. However, if a foley was listed as being present during the case, then the item does count towards total count of items needed to be mentioned in report and will be listed as an omission.

*Of note: No PHI or MRN's will be stored on the chart review form or removed from WakeMed Cary. All MRN's used to link the handoff to the chart review will be used immediately following direct observation and will be disposed of at WakeMed Cary in a facility approved container immediately following chart review.

Item	Mentioned In Report	Documented as administered in chart
Midazolam		
Fentanyl		
Ketamine		
Acetaminophen		
Ketorolac		
Hydromorphone		
Reversal		
Dexmedetomidine		
Antibiotics		
Albumin		
Ondansetron		
Scopolamine Patch		
Airway		
IV Access		
UOP		
EBL		

Appendix B – (Chart review Audit Form)

A Written PACU Report Tool: Increasing Data Transfer and Staff Satisfaction

PART 2. Will access pre-procedure documentation for the following items. Will document Y for yes or N for no if they were present in chart. For PMH (past medical history), will use the anesthesia evaluation form to compare to items mentioned in report. Labs will only need to be mentioned in report if they were addressed or intervened upon during intra-operative care.

Item	Mentioned In Report	Documented as administered in chart
Allergies		
PMH (Past Medical History)		
Pre-operative Vitals		
Pre-operative Medications		
LABS		
BGL (blood glucose level)		
Anesthesia type		

Appendix B – (Chart Review Audit Form)

