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## Efficacy of Handoff Education for ICU Nurses When Transferring Patients to the Operating Room

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EFFICACY OF HANDOFF EDUCATION FOR ICU NURSES WHEN  
TRANSFERRING PATIENTS TO THE OPERATING ROOM

A DNP Project Submitted to the  
Graduate Faculty  
of Jacksonville State University  
in Partial Fulfillment of the  
Requirements for the Degree of  
Doctor of Nursing Practice

By

SANDRA RUTH HORACE

Jacksonville, Alabama

June 28, 2021

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June 28, 2021

## ABSTRACT

*Background:* The transition of care from the Surgical Intensive Care Unit (SICU) to the Anesthesia team in the Operating Room (OR) is a vulnerable time for patients. There is currently no formal process for the patient transitioning from the Surgical ICU to the OR. The disarray of this transition can lead to serious omissions in communication and be harmful to the patient.

*Purpose:* Currently, there is no formalized or universal process for handoff communication between the SICU team and the Anesthesia team. This project aimed to provide handoff education for SICU nurses when sending a patient from the OR. This project utilized the IPASS method of handoff to formalize the ICU-to-OR handoff.

*Methods:* The project utilized a quasi-experimental design with pre- and post-education. A sample size of 30 RNs (n=30) was obtained. The RNs were given a pre-test for baseline knowledge assessment, followed by the education and a post-test.

*Results:* A paired t-test was used to compare pre-and post-intervention results. There was noted to be a 40% increase in mean test scores following education of SICU RNs.

*Conclusions:* The IPASS method of handoff can easily be taught to SICU RNs as a means of improving bedside handoff when patients are being sent from the SICU to the OR. The data collected indicates that in-service education is an effective means of disseminating information to SICU RNs.

**Keywords:** Anesthesia, ICU, Handoff, Preoperative, Critical Care, Tool, Checklist, IPASS

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# Efficacy of Handoff Education for ICU Nurses When Transferring Patients to the Operating Room

## **Introduction**

Transitions of care between providers - otherwise known as handoff - occurs multiple times per day for a patient in the Surgical Intensive Care Unit (SICU). The handoff process is the exchange of information between healthcare providers during a transfer of care and responsibility of a patient (McElroy et al., 2015). Handoff occurs when care providers change shifts, when a patient transfers to a different level of care, when a patient transfers to a procedural or surgical area, or other times when the responsibility of care is transferred. The frequency of handoffs produces multiple opportunities for the omission of information or incorrect information exchange.

For this project, the term handoff signified the transition of care from the SICU to the Anesthesia providers and the Operating Room (OR). The transition period from SICU to OR and the handoff process presents an opening for omissions of important information and patient harm. SICU nursing staff at the practice setting were noted to have incomplete knowledge regarding the use of preoperative handoff, resulting in incomplete information at the transfer of care. This project aimed to provide handoff education for the SICU nurses utilizing the IPASS method of handoff to improve the SICU-to-OR handoff.

## **Background**

The transfer of care is a vulnerable time for the hospitalized patient (The Joint Commission, 2017). The perioperative period can be an especially vulnerable time for patients due to the complexity of the surgical setting, the number of providers involved,

and the number of handoffs that occur (Hughes, 2008). Ensuring thorough communication is essential to the safety of patients, especially during these times. In a group of 258 surgical malpractice cases, 60 (23.2%) were found to be due to communication errors, 30 of these directly related to the handoff process (Agarwala, 2020).

The practice setting for this project has a process in place to ensure handoff occurs, but RNs do not widely use it. The SICU has noted that the lack of a formal handoff when transferring patients to the OR is common. The Joint Commission (TJC, 2017) issued a Sentinel Event report detailing the need for handoff with any transfer of patient care.

The complicated nature of the SICU patient presents an even more complex handoff situation. At times, SICU patients at the facility are sent to surgery in emergent situations. The volume of information which needs to be shared at such a rushed time can hinder an effective handoff (Lorinc & Henson, 2017). Providers and RNs at the practice facility have shared their frustration at situations such as this, citing the need for efficient and thorough handoff.

Lack of standardized reporting processes, the number of providers, the number of people circulating in and out of a room, unclear roles, unclear expectations, and unpreparedness to send the patient to surgery are barriers to effective handoff communication. It has been reported that in any given SICU-Anesthesia handoff, there can be up to 10 providers in the room simultaneously (Lorinc & Hinson, 2017). This number of providers in handoff presents multiple opportunities for both interruptions and unclear roles.

Current practice at the facility should include completing a "Stop Sign" packet containing pertinent documents for anesthesia and surgery, such as consents. The Stop Sign packet is to be completed by the SICU RN, Anesthesia staff, and surgery team, each filling out their respective section. In addition to education regarding the IPASS handoff, SICU RNs were reminded of the importance of this packet.

### **Problem Statement**

This project was developed to bring awareness of the importance of preoperative handoff to the SICU RNs. In addition, this project also aimed to educate the RNs about IPASS method of handoff. The question to be answered by this project, following the Problem, Intervention, Comparison, Outcome (PICO) format was as follows: in patients transferring from the Surgical ICU to the Operating Room, does the education of SICU RNs about the handoff process increase knowledge of structured handoff, compared to no education?

### **Organizational Description of Project Site**

This study was conducted at a 304-bed nonprofit teaching hospital in Jacksonville, Florida. It offers comprehensive care for more than 35 adult medical and surgical specialties. The facility has 22 ORs. The nursing department has earned the gold standard in nursing — Magnet Recognition status from the American Nursing Credentialing Center. The SICU where this project was completed has a total of 29 beds. The SICU frequently receives patients from cardiovascular and thoracic surgery, transplantation, and neurological surgery specialties.

## **Review of Literature**

The review of the literature was performed by utilizing several search engines for medical journals. PubMed, the Joanna Briggs Institute search engine, and the CINAHL library were primary resources for finding literature. Keyword searches were performed using the following keywords: preoperative handoff, ICU handoff, Critical Care, and IPASS handoff.

Handoffs are best described as transferring responsibility from one provider to another (Lorinc & Hinson, 2017) and present a vulnerable time for the patient. They occur numerous times throughout the hospitalization as well as during the perioperative period. There can be multiple handoffs between the preoperative period and the postoperative period alone, presenting the opportunity for information to be excluded (Argawala, 2020; Lorinc & Hinson, 2017).

The evidence suggests that adequate preoperative handoff occurs 25-50% of the time (Fleishman, 2012; Caruso, Marquez, Gip, Kelleher & Sharek, 2017). Regardless of recommendations from The Joint Commission (TJC) and other accrediting bodies, handoffs in the preoperative setting tend to be less formal and do not cover all pertinent data. Furthermore, the use of electronic or checklist handoffs alone is considered inadequate compared to formal handoffs in detailing all pertinent information (Agarwala, 2020). The utilization of a checklist to enhance a formal handoff is helpful to ensure all information is communicated (The Joint Commission (TJC), 2017)

A review of literature found that poor communication can result in errors and patient harm (Brown et al., 2015; Karamchandani et al., 2018; Parent et al., 2018; Shahain et al., 2017). Handoff errors have been attributed to communication and

technical errors, leading to adverse events (Argawala, 2020). It has been estimated that as many as 80% of medical errors occur due to a breakdown in communication.

At present, few reports detail the need for an effective preoperative handoff (Agarwala, 2020). There is, however, sufficient evidence to suggest the handoff process in general needs to be formalized across the continuum of care. Lack of an efficient handoff can lead to missed medications, unsigned consents, inconsistent care, and wrong patient/site/procedure events (Fleishman, 2012). The Joint Commission issued a Sentinel Event Alert in 2017 detailing suggestions for handoff communication.

The type of surgical procedure occurring had a bearing on the frequency of handoff; in cardiac and vascular surgery patients, pre-intervention handoff occurred 100% of the time while only occurring 60% of the time in neurosurgical patients (Karamchandani et al., 2018). Additionally, start times for SICU patients going to the OR are on time only 36% of the time without a formal handoff process (Brown et al., 2015).

The SICU patient requiring surgery can present a multitude of difficulties during the handoff process. The necessary equipment for many SICU patients, volume and intricacy of information, and the patient's physical condition create a more complex environment for the handoff process than an outpatient (Brown et al., 2015). Many SICU patients going to the OR cannot speak for themselves to confirm the information being exchanged which is another challenge and risk for miscommunication (Karamchandani et al., 2018). The SICU patient frequently has multiple issues occurring simultaneously, presenting another opportunity for the omission of important information (Argawala, 2020).

Distractions are another barrier to an effective handoff. According to Argawala (2020), distractions and interruptions can occur up to 2.3 times per minute during the handoff process. Many stakeholders can be present during handoff, including the OR and SICU Registered Nurse (RN), the Anesthesiologist, the Intensivist, Respiratory Therapy (RT), and transport personnel (Karamchandani et al., 2018; Lorinc & Hinson, 2017). It has been estimated that as many as 10 providers can be present at one time during a handoff (Argawala, 2020). The number of providers present for the handoff process can lead to a less organized process with more interruptions.

Role clarity is yet another barrier in the SICU-to-OR handoff process. The presence of multiple providers and the sometimes-emergent situation can cause a disorganized handoff in which those present are not clear about their roles (Argawala, 2020). This lack of role clarity can lead to the omission of crucial information (Karamchandani et al., 2018).

Several handoff methods have been studied and validated in peer-reviewed literature. The IPASS method of handoff communication was chosen for this project as the format for handoff. The IPASS mnemonic includes Illness Severity, Patient Summary, Action List, Situational Awareness/Contingency Planning, and Synthesis by the Receiver (see Appendix A) (Parent et al., 2018; Shahain et al., 2017).

Shahain et al. (2017) implemented a large-scale handover system utilizing the IPASS method of handoff. This study included the education of any staff responsible for patient care, including physicians, nurses, and respiratory therapists. Following six months of education and consistency in encouraging the use of IPASS with handoff, the group noted at least 80% compliance when handing off care to another provider. This

study is not considered strong evidence because it does not have a control group or a comparison group. However, this study does note that provider satisfaction with the IPASS handoff and perceived thoroughness of handoff was improved. It also demonstrates that large-scale implementation across a facility or organization can be achieved.

Parent et al. (2018) demonstrated successful implementation of the IPASS method of handoff in a stepped-wedge cluster randomized clinical trial. The study randomized eight ICUs to receive education and implementation of the IPASS handoff in four waves. This gradual method allowed for implementation and assessment of each wedge as implementation proceeded. Controls for this trial were considered to be pre-implementation data. The results of this trial demonstrated improved provider awareness for assuming care for ICU patients. In addition, a decrease of 3% in communication errors was noted.

### **Evidence-Based Practice: Verification of Chosen Option**

The evidence for this project has been collected from journals and national organizations, including the Agency for Healthcare Research and Quality (AHRQ) and The Joint Commission (TJC). Effective and reliable face-to-face provider handoffs have been a National Patient Safety Goal (NPSG) for over a decade (The Joint Commission, 2017), highlighting the need for continuous analysis and improvement of the process when needed.

### **Theoretical Framework/Evidence-Based Practice Model**

This project is based on Lewin's Change Theory of Nursing. This theory utilizes three steps to implement change within a system: unfreezing, change, and refreezing (Petiprin, 2016). The unfreezing process recognizes the need for change and finds modes to make change possible. The change process is also known as the "movement" process, in which the change is implemented, and a more productive means of accomplishing goals is realized. Finally, the refreezing process involves making the change a new normal.

In this project, the unfreezing step began with recognizing the need for change (Petiprin, 2016). It was recognized that there is a need for a more comprehensive handoff process preoperatively. Current research and national standards mandate a face-to-face handoff when there is a transfer of responsibility of care. This project's change step occurred with the implementation of the education for the SICU RNs. It continued with the distribution of educational materials and reminders during shift change huddles. Reminders continued until the end of the change period, which occurred with successful data collection. Once it was determined that the education intervention had been successfully implemented, the refreezing process took place. The team members at this facility are accustomed to continuous quality improvement and quickly adopt new processes. This adaptability aided the refreezing process of making the preoperative face-to-face handoff a standard of care at this facility.

### **Objectives, Goals, and Expected Outcomes**

This project aimed to increase the awareness and use of handoff among SICU RNs. The objective of teaching IPASS handoff to RNs and seeing a measurable



difference in knowledge following education was set. A goal of increasing reported handoff accompanied this. Several means of educating RNs to bring awareness of the process to the SICU nurses were utilized. The current process was not widely known or used. Therefore, a significant improvement in awareness and knowledge was expected.

### **Project Design**

This project was a Quality Improvement initiative to enhance patient safety when transferring a patient to the OR. Quantitative methods were utilized by surveying staff regarding the frequency of face-to-face handoff occurrences pre-intervention. The project followed a pre-post design, testing participants' knowledge before and after education via pre-and post-tests. In-service education of RNs regarding IPASS handoff was utilized.

In-service education of nurses has been effective because of its adaptability and ability to be used in clinical settings (Jackson et al., 2019). The handoff itself followed the IPASS method of handoff communication. This handoff method has proven to improve communication and provider preparedness to care for the patient (Parent et al., 2018)

### **Project Site and Population**

This project took place in the Surgical Intensive Care Unit (SICU) of a 304-bed metropolitan teaching hospital. The facility has a total of 22 ORs. The Surgical Intensive Care Unit (SICU) of this hospital is 28 beds and frequently sends patients to the operating room in various clinical situations. Common procedures patients are sent to the OR for include heart and lung transplantation, Extracorporeal Membrane Oxygenation (ECMO) cannulation and decannulation, evacuation of intracranial hemorrhages, brain tumor

resections, abdominal aneurysm repair, emergent situations in which bleeding or severe deterioration has occurred, as well as other planned cardiac and abdominal surgeries.

The diversity of this patient population and the needs of individual surgical cases made handoff communication a critical issue to investigate and improve upon. The primary stakeholders in this project were the patient, followed by bedside RNs and the Anesthesia providers (Certified Registered Nurse Anesthetist or Resident Anesthesiologist), and the surgical teams. The patient population was patients in the SICU going directly to the OR.

### **Setting Facilitators and Barriers**

This project had the advantage of taking place in a teaching facility where process improvement is an expectation. The project stakeholders include nursing administration, critical care providers and administration, anesthesia providers and administration, patients and family members, and the community. The project setting had a team of experts who assist in developing and implementing quality improvement projects. Difficulties were anticipated in patients who are emergently going to the OR, as the setting becomes chaotic in such situations. Participation recruitment of SICU RNs was challenging due to the hectic nature of their days and high staff turnover. However, they are familiar with process changes and adapted readily once a new procedure was in place. Availability of the researcher and educating the Team Leaders (TLs) on the unit assisted in overcoming barriers.

### **Implementation Plan/Procedures**

The project followed the Plan, Do, Study, Act (PDSA) method for implementation. The PDSA includes asking what the goal of change is, measuring

change, and what can be done to cause change (Agency for Healthcare Research and Quality, 2021).

The project's planning phase began with a needs assessment and was conducted by surveying SICU RNs about their awareness of the preoperative handoff process. The results were then translated into meaningful data to determine the knowledge gap. This was then presented for approval from the Jacksonville State University Institutional Review Board (see Appendix B). The facility this project was conducted at did not require IRB approval. Throughout this process, a continual review of the current literature was completed.

The Do phase of this project was the implementation of the education which consisted of a face-to-face in-service. This project's Principal Investigator (PI) provided in-person education about the preop packet, checklist, process, and IPASS handoff. The education included informed consent (see Appendix C) of participants and a pre-test and post-test. Following informed consent, participants were asked to complete the pre-test (see Appendix E). Education was then administered to the SICU RNs via a PowerPoint presentation (see Appendix F). Participants were given opportunities to give feedback and ask questions, after which the post-test, consisting of the same questions as the pre-test (see Appendix E), was administered. A PowerPoint detailing the preop checklist, process, and IPASS method was presented to the RNs. The IPASS method of handoff was discussed. Opportunities for questions and clarification were given to ensure RNs had a clear understanding of roles. A PowerPoint slide summarizing the information provided in the in-service was reviewed with each shift change huddle that occurred in the SICU. This infographic was also posted on the unit and in the OR (see Appendix D).

Following staff education, daily reminders to utilize the preoperative packet and checklist were announced during the shift change huddle. The PI was available to assist when patients were transferred to the OR.

The Study phase of this project included data analysis and outcomes. They will be detailed below. The Act phase of the project includes implications for nursing practice and sustainability. These will be discussed in the conclusion of this paper.

### **Measurement Instruments**

This QI project utilized a paired t-test to determine the effectiveness of handoff education of the SICU RNs. Graphpad Prism software was utilized to determine the results of the data collected. A p-value, Confidence Interval (CI), and the mean value of pre-and post-test data were analyzed. Graphpad Prism was then used to create a graphical representation of the results of the data analysis (see Appendix G).

The researcher created the pre-intervention surveys. The survey asked participants about their knowledge of the current pre-operative handoff process and “Stop Sign” packet the facility utilizes to ensure all tasks are completed. These numbers were collected and analyzed to determine the knowledge gap. The PI created a test to be used pre-and post-intervention. Pre-test and post-test scores from the educational intervention were analyzed to determine the effectiveness of education.

### **Data Collection Procedures**

The pre-implementation survey utilized in this project was conducted by CRNAs who had no professional interactions with the surveyed staff to avoid creating a bias when surveying SICU RNs. The results of this were analyzed to determine the knowledge gap.

Educational sessions included the use of Microsoft Forms. This online form is a means of allowing data collection without collecting any identifiable data. A QR code was created for participants to scan to access the form. Participants then completed the informed consent. The pre-and post-test questions followed this for participants to complete while taking part in the education intervention. These results were automatically uploaded into an Excel document by Microsoft Forms.

### **Data Analysis**

Pre-implementation data collection included a survey of SICU RNs (n=30) which found that 37% of ICU nurses were aware of the packet, while 63% were unaware of any process when sending a patient to the OR. Of those who were aware of the packet, 33% expressed knowledge of how to utilize the process. The survey revealed 16% of surveyed SICU RNs knowing how to use the process. Further questioning found that 3% of RNs had utilized the process in the preceding twelve months.

A paired t-test was used to compare scores pre-and post-test. The t-test is a statistical value that can determine a statistically significant difference between two groups (Moran, Burson & Conrad, 2020). It utilizes mean scores from each group to determine the statistical difference.

The mean pre-test score was 51.6%. It was noted that the most frequently missed questions were those regarding the definition of IPASS components. Question 3, "What does the 'S' representing 'Synthesis by receiver' indicate?" is also a question that asks about a component of IPASS. Question 3 was noted to be answered correctly more frequently with a mean score of 86%, respectively. The higher average for Question 3 could be because the answer is easily extracted from the phrase "Synthesis by the

Receiver". The questions more frequently incorrect represent a large knowledge gap regarding the meaning and use of IPASS handoff.

The mean post-test score was 88.7%, representing a 37% increase in the score from the pre-test average. The increase of correct answers is a significant improvement, even considering the excellent showing on half of the questions presented pre-education. Graphpad Prism was the software utilized for the statistical analysis of this data. The data analysis obtained using Graphpad had a p-value of  $<.001$ . The p-value indicates the likelihood of obtaining the same results of a set of data and determines the significance of the results (Moran, Burson & Conrad, 2020). The p-value of this data set,  $<.001$ , is statistically significant, indicating there is value to be found in the results of this data set.

### **Cost-Benefit Analysis/Budget**

The project was paid for by the practice facility. It was a hospital initiative in addition to a scholarly project. The costs for the project included RN pay for education, printing new surgical packets, and the creation of signs to be posted in alcoves.

Thirty RNs participated in this project, with an average time of thirty minutes to complete the education. This is fifteen hours of RN time, with the average RN at this facility being paid approximately \$30 per hour. This equals \$450 in RN pay, which was the highest cost for the project.

Surgical packets were already in use. Changing the components and order of the packets did not have a significant monetary impact because the packets were previously being printed and utilized. The packets contain seven sheets of paper, and forty new packets were created to be placed in the SICU. A ream of 500 sheets of printer paper is

\$7. The hot laminating sheets cost \$31. Therefore, the costs of printing and laminating flyers and updating the surgical packets could be estimated to be \$40 in total.

This project had no income. The monetary benefits of implementing handoff education include reduced risk of errors and malpractice cases, decreased length of hospital stay, and reduced costs incurred by the facility due to errors (Agarwala, 2020).

### **Timeline**

The pre-implementation data collection phase of this project began in September 2020. This included the needs assessment survey of SICU RNs. The needs assessment included the determination of a gap in knowledge that warranted intervention. Following pre-implementation data collection, an intervention and a plan of action was determined. Approval from the Jacksonville State University Proposal Evaluation Review Committee was obtained before implementation. Approval was received in December 2020. In mid-February 2021, the PI began the implementation of education for the SICU RNs. The process was anticipated to take four weeks. Data collection stopped when the appropriate number of participants (n=30) had completed the pre- and post-test. This was accomplished in early March 2021. Data Analysis procedures began in April 2021 and continued into May 2021.

### **Ethical Considerations/Protection of Human Subjects**

The Jacksonville State University Institutional Review Board (IRB) approval was obtained before initiating the DNP project. Approval from the facility's IRB is not necessary per the facility's IRB guidelines. This project has exempt status. It does not

involve interventions with human subjects. It is a process improvement that does not include direct patient interaction or access to medical records.

### **Conclusion**

Handoff is an essential part of the transfer of care of a patient. The patient population in the SICU is complex and diverse (Agarwala, 2020), making effective handoff even more critical to perform correctly. This project sought to determine the effectiveness of IPASS handoff education of SICU RNs. The project had a total of 30 participants and found that there was a significant improvement in pre-test and post-test scores ( $p < .001$ ). The IPASS method of handoff can easily be taught to SICU RNs to improve bedside handoff when patients are sent from the SICU to the OR. The data collected indicates that in-service education is an effective means of disseminating information to SICU RNs.

This project has been brought before the Nursing Leadership Team at the project site. It is currently being reviewed for implementation across the hospital when sending patients from any inpatient area to the Operating Room. Following implementation and evaluation of this step, the project intervention is planned to be presented across the enterprise which owns the facility.



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# APPENDIX A IPASS Pneumonic

I	Illness severity	Fair: no major interventions anticipated Watcher: monitoring hourly, with interventions possible Unstable: monitoring at 1/2 hour or less, with interventions likely Discharge/comfort care
P	Patient summary	Age, sex, primary diagnosis, and comorbidities 24-h events Assessment by problem or system: Key topics: Hemodynamic/volume status Ventilator management Tubes/lines/drains Antibiotics Transfusion plan Code status, family contact Key exam findings: neurological, vascular 24-h big-picture plan
A	Action list	Plan for this shift: to do list Who does it and when?
S	Situation awareness and contingency planning	What are anticipated problems in the next 24 h? Plan for anticipated problems: "if/then" statements
S	Synthesis by receiver	Receiver asks questions and restates key issues and action items

APPENDIX B  
Institutional Review Board Approval Letter  
From Jacksonville State University



**OFFICE OF THE VICE PROVOST**  
JACKSONVILLE STATE UNIVERSITY

January 25, 2021

Dear Sandra Horace:

Your proposal submitted for review by the Human Participants Review Protocol for the project titled: "Efficacy of Handoff Education for ICU Nurses when Transferring Patients to the Operating Room", has been reviewed and approved as exempt. If the project is still in process one year from now, you are asked to provide the IRB with a renewal application and a report on the progress of the research project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Joe Walsh', is written over a printed name.

Joe Walsh  
Executive Secretary, IRB

JW/dh

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APPENDIX C

## INFORMED CONSENT FOR PARTICIPATION

Informed Consent Form for: “Efficacy of Handoff Education for ICU Nurses When Transferring Patients to the Operating Room”

You are being invited to participate in a research project conducted by Sandra Horace who is a graduate student at Jacksonville State University.

You are invited to participate in a quality improvement project aiming to increase knowledge and awareness of preoperative handoff in the ICU.

You will be asked to take a short pre-education test, receive education about preoperative handoff and the IPASS method of handoff, followed by a short post-test to evaluate efficacy of the education.

No potential risk is foreseeable. We expect the project to benefit you in these ways; increase your knowledge of the IPASS method of handoff communication, become more prepared to present handoff when sending a patient to the Operating Room. You will not receive any compensation for your participation.

If you have decided to participate in this project, please understand that your participation is voluntary, and that you have the right to withdraw your consent or discontinue participation at any time with no penalty. To withdraw from the program, notify Sandra Horace by email at [shorace@stu.jsu.edu](mailto:shorace@stu.jsu.edu) or call/text her at (352) 228-7362 to inform her that you are withdrawing. You also have the right to refuse to answer any question(s) for any reason with no penalty.

In addition, your individual privacy will be maintained in all publications or presentations resulting from this study. No names or identifiers will be utilized in the final project. You will be given a number to maintain anonymity and individual responses will not be shared.

If you have any questions regarding this project, you may contact the researcher at [shorace@stu.jsu.edu](mailto:shorace@stu.jsu.edu). If you have questions regarding your rights as a research participant or any concerns regarding this project, you may contact my advisor/project chair, Dr. Douglas Stephens, at [djstephens@jsu.edu](mailto:djstephens@jsu.edu)

A copy of this consent form will be provided to you.

I understand the above information and voluntarily consent to participate in the research. I further attest that I am at least 19 years of age.

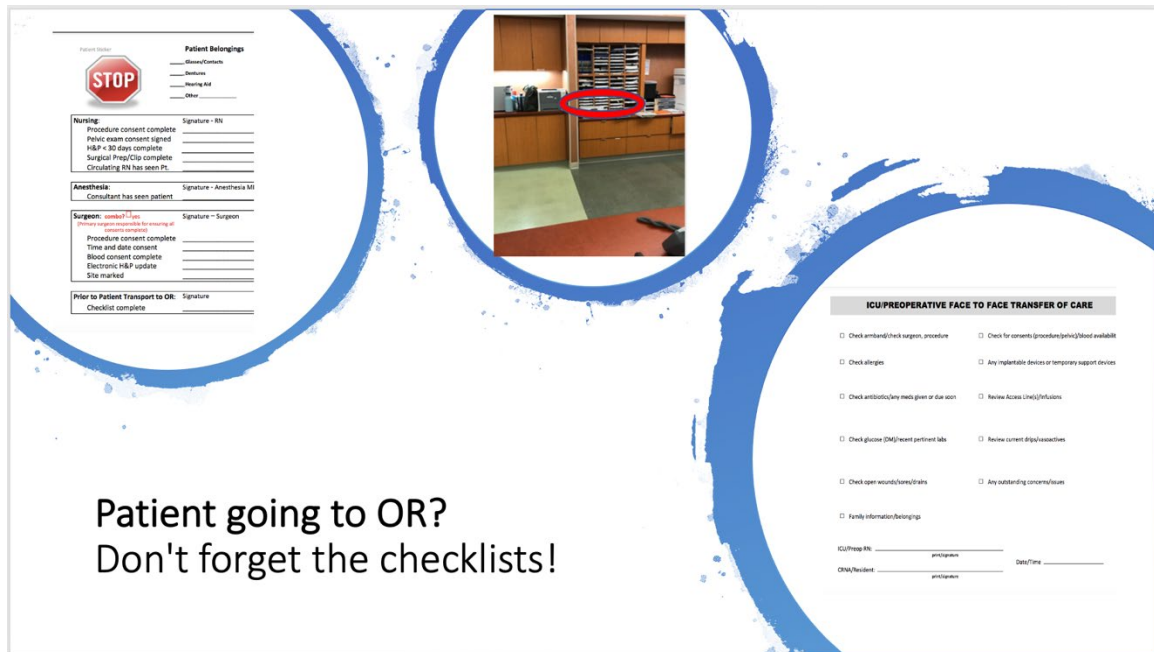
Participant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

IRB Approval Number: \_\_\_\_\_

IRB Expiration : \_\_\_\_\_

## APPENDIX D

Flyer placed in room alcoves and in other common areas  
 Figure 1.0- OR Reminder Flyer  
 Created by Sandra Horace



**Patient going to OR?**  
**Don't forget the checklists!**

**Patient Order**

**STOP**

**Patient Belongings**

\_\_\_\_ Room/Contact  
 \_\_\_\_ Bedside  
 \_\_\_\_ Hearing Aid  
 \_\_\_\_ Other

**Nursing:**

\_\_\_\_ Signature - RN  
 Procedure consent complete  
 Pre-Op exam consent signed  
 H&A - 30 days complete  
 Surgical Prep/Clo complete  
 Circulating RN has seen Pt.

**Anesthesia:**

\_\_\_\_ Signature - Anesthesia MD  
 Consultant has seen patient

**Surgeon:** **confirm 1 day before surgery** (Physician responsible for ensuring all items completed)

\_\_\_\_ Signature - Surgeon  
 Procedure consent complete  
 Time and date consent  
 Blood consent complete  
 Electronic H&A update  
 Site marked

**Prior to Patient Transport to OR:**

\_\_\_\_ Signature  
 Checklist complete

**ICU/PREOPERATIVE FACE TO FACE TRANSFER OF CARE**

☐ Check ambu/bag/Check surgeon, procedure ☐ Check for consents (procedure/bedside/blood available)

☐ Check all lines ☐ Any implantable devices or temporary support devices

☐ Check antibiotics/any meds given or due soon ☐ Review Access Lines/Infusions

☐ Check glucose (DMS) recent portered labs ☐ Review current drip/infusions

☐ Check open wounds/lines/drain ☐ Any outstanding concerns/notes

☐ Family information/Belongings

ICU/Preop RN: \_\_\_\_\_ Date/Time \_\_\_\_\_  
 OR/Preop RN: \_\_\_\_\_ Date/Time \_\_\_\_\_

## APPENDIX E

### Handoff Communication Pre and Post Education Exam

1. Why is handoff communication important with any transfer of care?
  - a. To prove the responsibility was handed off to someone else
  - b. It allows the incoming caregiver to know how to best approach a hostile patient
  - c. Handoff is done every day and doesn't need to follow any format
  - d. **It provides a structure and format for ensuring all pertinent patient data is communicated and allows the receiver to ask questions.**
2. What does the "I" in IPASS represent?
  - a. **Illness severity**
  - b. Identity
  - c. Infection
  - d. Immediate needs
3. What does the "S" representing "Synthesis by receiver" indicate?
  - a. The receiver must recite all data by memory
  - b. The receiver must sign a form that they have received handoff
  - c. **The receiver is able to ask questions and recap key points**
  - d. The receiver is able to take over care



4. What does the “A” in IPASS represent?

a. Antibiotics

**b. Action list**

c. Age

d. Assessment

APPENDIX F  
Figure 2.0  
OUTLINE OF POWERPOINT PRESENTATION USED FOR EDUCATION  
DEVELOPED BY SANDRA HORACE AND LORRAINE RODGERS

Bringing the Surgical Checklist Packet Back

For SICU patients going to the operating room

What are we talking about?

Where did it go?

Nowhere!

Then why are we not doing it?

Knowledge gap related to new staff

Lack of process ownership

Innocent oversight

Why is handoff important?

Current process: not formalized, pertinent information missed

Patient **vulnerable** during handoff

Especially true for ICU patients

Communication gaps lead to errors

The Joint Commission focuses on handoff as a National Patient Safety Goal

Survey Results              SAMPLE: 30 ICU RNs

IPASS Method of Communication

What do we need YOU to do?

Help us ensure the process is occurring!

What each service can do...

#### ICU Staff

The **most ideal** service to start the process to maximize efficiency

Education efforts:

In-service on packet

IPASS education

Reminder signs in ICU staff bathrooms and breakrooms

Huddle points

ICU TLs are proficient with process and will assist RNs

#### Surgical Staff

2nd Line of Defense: next best service to start process since they see the patient early

Surgeons, please grab packet for consent forms, rather than individual consent forms

ALL consent forms are contained in packet

#### Anesthesia Staff

3rd/Last Line of Defense: least ideal service to start process since they usually see the patient last; produces most inefficient process results

OR Circulator, please grab packet if it has not been initiated

Anesthesia Resident/CRNA, please grab packet if it has not been initiated

#### Face to Face Transfer of Care Checklist

IDEAL: prefilled out by ICU RN = discussion between ICU RN & Anesthesia provider is most efficient

But, we understand if there's no time to prefill!

At MINIMUM: meant to guide handoff discussion between ICU RN &

Anesthesia provider - structured, systematic, familiar to anesthesia

Please review each point on the sheet

At end of handoff, sign/date/time event

Will be collected & reviewed for auditing purposes

Where can I get a Surgical Checklist Packet?

Nurse Station – shelf located behind monitor techs

APPENDIX G  
GRAPHICAL REPRESENTATION OF DATA ANALYSIS RESULTS  
CREATED BY SANDRA HORACE USING GRAPHPAD PRISM

