

PERFORMANCE IMPROVEMENT**Nursing & Health Sciences Research Journal**Journal Access: <https://scholarlycommons.baptisthealth.net/nhsrj/>**A Performance Improvement Project to Improve Hand-off Communication Documentation within the Surgical Services Department**

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ABSTRACT

Over 80% of adverse events in healthcare are due to miscommunication. To improve patient safety, The Joint Commission recommended the use of standardized hand-off communication tools in 2012. One acute care hospital located in the Southeastern United States implemented standardized hand-off reports as required and made few revisions since then. The COVID-19 pandemic brought to light additional critical information that was needed to keep patients and staff safe, such as laboratory results indicating the need for isolation precautions. The nurses within the surgical services department noticed this critical information was not consistently included in the hand-off reports. Omission of this critical information could potentially lead to unnecessary staff exposures and delays in treatments. The quality improvement nurse noticed a significant drop in the documentation of the hand-off report leading to concerns for patient and staff safety. The purpose of this performance improvement project was to improve the documentation of hand-off report which was the measurement used by the department to monitor the quality of hand-off reports within the department. The project followed the Plan-Do-Check-Act model for performance improvement to monitor, assess, and report the results to the staff and leaders. The documentation improved as a result of this project indicating improved hand-off reports.

BACKGROUND

Hand-off communication is defined as the transfer of information and responsibility for a patient's care from one healthcare provider (e.g., nurse, physician, respiratory therapist) to another (Galatzan & Carrington, 2018). Accurate hand-off communication, also known as handover report, hand-off report, and change-of-shift report, is important for the safety of patients who change healthcare providers during their stay. Miscommunication can have devastating consequences, including missed medications, missed diagnosis, missed treatments, or even death. The Joint Commission (TJC, 2017a) reported that about 80% of adverse events in healthcare are the result of miscommunication. The Joint Commission considered an accurate and detailed hand-off report so essential that they mandated the use of standardized hand-off templates in an effort to reduce the number of adverse events. Hand-off report is especially important in the surgical

services department where patients are transferred between healthcare providers numerous times while preparing for, undergoing, and recovering from surgical procedures.

Accurate hand-off communication is important every time a patient's care is transferred from one healthcare provider to another (Robinson, 2016). Numerous hand-off reports are required within the surgical services department which provides abundant opportunities for nurses to omit information. Transfer of care in the Post Anesthesia Care Unit (PACU) is particularly prone to errors due to the high acuity of patients and their inability to participate in their care due to sedation and disorientation (Njambi et al., 2020). Pre-operative (pre-op) areas are commonly designated for preparing patients for surgery and are considered high-risk areas as well. Pre-operative preparation often includes confirmation of oral intake status, review of lab results, and review of other diagnostic test results to assure

patient safety and to assure that the physician has the necessary information to perform the surgery. After the information is confirmed, the patient is transferred to a location just outside the operating room (OR), the OR Holding area. Here, the initial nurse transfers the care of the patient to another healthcare professional, the pre-op nurse. This nurse checks the patient's information again and assumes care of the patient until the OR team is ready. When preparations are complete, the pre-op nurse transfers the care of the patient to the OR nurse who takes the patient into the surgery room for the procedure. When the procedure is complete, the patient is taken to the PACU where the care of the patient is transferred to the PACU nurse. Once the patient recovers from the anesthetic drugs, the patient is transferred yet again. The patient is transferred to either a nurse who provides care until the patient is discharged from the facility (outpatient) or a nurse who works on the inpatient unit and assumes care of the patient. The prior example is a simple scenario.

The Joint Commission (2017b) estimated a typical teaching hospital might have as many as 4,000 hand-off exchanges each day. Each hand-off provides an opportunity for important details to be omitted or misunderstood. While TJC mandated the use of standardized forms for hand-off report and even released several tools to assist healthcare organizations with the implementation of a standardized hand-off communication, TJC did not mandate the content of the report. Galatzan and Carrington (2018) revealed most research on hand-off standardization has focused on how to structure the hand-off tools, not the specific content to be communicated when using the tools. Nevertheless, it is imperative that nurses convey all critical information needed for safe and optimal patient care (TJC, 2017a).

Standardization of hand-off has proven effective in improving the quality of hand-off communication in many cases. A study demonstrated that implementation of a standardized hand-off tool was associated with improved quality of and increased inclusion of essential information during hand-off communication (Starmer et al., 2017). However, healthcare organizations have discovered that just having a standardized form does not ensure accurate and efficient hand-off reports or compliance with hand-off tools. Miller (2021) found only 48% of nurses reported using I-PASS at every hand-off even though 94% reported knowing how to access it and 98% agreed with

the effectiveness of the tool. The authors noted barriers to successful hand-offs including interruptions, distractions, lack of time, information omissions, lack of experience with hand-off, and nurse dissatisfaction with standardized tools (Galatzan & Carrington, 2018; Miller, 2021; Njambi et al., 2020).

Some of these barriers may have simple solutions. Fewer interruptions and designated zones of silence during report time have been suggested to minimize distractions during shift report (Patient Safety Network, 2019; TJC, 2017b). Galatzan and Carrington (2018) concluded the hand-off tool should be adaptable by different nursing areas. It is important to involve staff in the development and implementation of a new hand-off tool in order to promote compliance with the tool.



PROBLEM

A standardized hand-off report form using the situation-background-action-recommendation (SBAR) format was used in the Surgical Services Department of an acute care hospital in the Southeastern United States (see Figure 1). The SBAR format is a communication model used in healthcare organizations and is designed to provide an efficient format for exchanging patient information accurately (Park, 2019).

Prior to the COVID-19 pandemic in 2020, the compliance level of providing an accurate hand-off report (as measured by the completeness of the documentation of the hand-off report) averaged 89% for the OR and 96% for the PACU (see Figure 2). The pandemic provided a serious challenge for the staff in many ways. Staffing issues, a quickly changing environment, and frequently changing procedures challenged the staff to provide the same standard of care needed for the patients. Unfortunately, during times of high surges of COVID-19 patients, documentation of the hand-off report decreased because of the workload and frequent process changes. Another challenge was documenting the hand-off report for patients requiring isolation. Patients who were positive for SARS-CoV-2 were placed in isolation and paper forms were not taken into the patient rooms to decrease the risk of spreading the infection. Therefore, the hand-off report had to be completed at a later time and compliance dropped to 7% in the OR for September 2020. In addition, the form in use at the time did not have a designated place to document the isolation

Figure 1

SBAR Hand-off Form 2018

  <input type="checkbox"/> CALL LATER	
SURGICAL SERVICES SBAR PRE-OP → OR	
TIME: _____ DATE: _____ SURGEON _____ RM# _____ PRE-OP RN _____ DAY PRIOR RN/EXT: _____ AM RN/EXT: _____ CONTACT PERSON: _____ PHONE #: _____	
DAY OF SURGERY CALL BOX CHANGES: _____ PENDING: _____	
SITUATION	PROCEDURE: _____ _____ _____ DX: _____ CONSENT COMPLETED: PATIENT/ PROXY _____ MENTAL STATUS: _____ CAPACITY FORM: Y/N DNR: Y/N STRATIFICATION: Y/N
ASSESSMENT	IV ACCESS: _____ O2: Y/N _____ TUBES/DRAINS: Y/N NPO: Y/N DIABETIC: Y/N BS: _____ MG/DL @ _____ INSULIN COVERAGE: Y/N _____ CARDIAC/HTN: Y/N TELE BOX: Y/N DIALYSIS: Y/N LAST TX: _____ COLON PREP: Y/N RISK FOR FALL: Y/N MEDS ADMIN: _____
BACKGROUND	HISTORY: _____ _____ _____ Allergies: _____ LATEX: Y/N PACER / AICD: Y/N MANUFACTURER NAME: _____ ISOLATION: CONTACT RESPIRATORY N/A ANTIBACTERIAL SOAP BATH: PM: Y/N AM: Y/N ADD-ON _____ CBC PT PTT BMP <input type="checkbox"/> LABS: _____ <input type="checkbox"/> EKG: _____ <input type="checkbox"/> CXR: _____ <input type="checkbox"/> H&P: PAST FAMILY SOCIAL ALLERGIES <input type="checkbox"/> DX TESTING: _____ <input type="checkbox"/> ORDER FOR PROCEDURE: Y N <input type="checkbox"/> UCG _____ <input type="checkbox"/> CLEARANCE: MED CARDIAC OTHER N/A <input type="checkbox"/> BB: _____ <input type="checkbox"/> ANTI COAG: _____ <input type="checkbox"/> ABX: _____ DUE: _____
RECOMMENDATIONS	_____ _____ _____ _____ _____ STOP BANG: Y/N SCORE: _____ If score is 5 or greater place orders for: (Nursing Referral) 1. Sedation Precautions 2. OSA Precautions 3. Capnography (ENDO) (Respiratory Notified)
(NOT FOR PERMANENT RECORD)	

status of patients. This information had to be written on the form without any reminder cues. This led to nurses writing the information at different places or failure to document it on the form. If the off-going nurse did not include the isolation status in the verbal report, the information could be easily missed, and isolation not initiated. Failure to communicate this critical information put the nurses at risk for unnecessary exposure to COVID-19. After reviewing the situation, the Unit Practice Council (UPC) took action to

- revise the form, if necessary, with input from the staff to increase the usability of the tool to

improve efficiency,

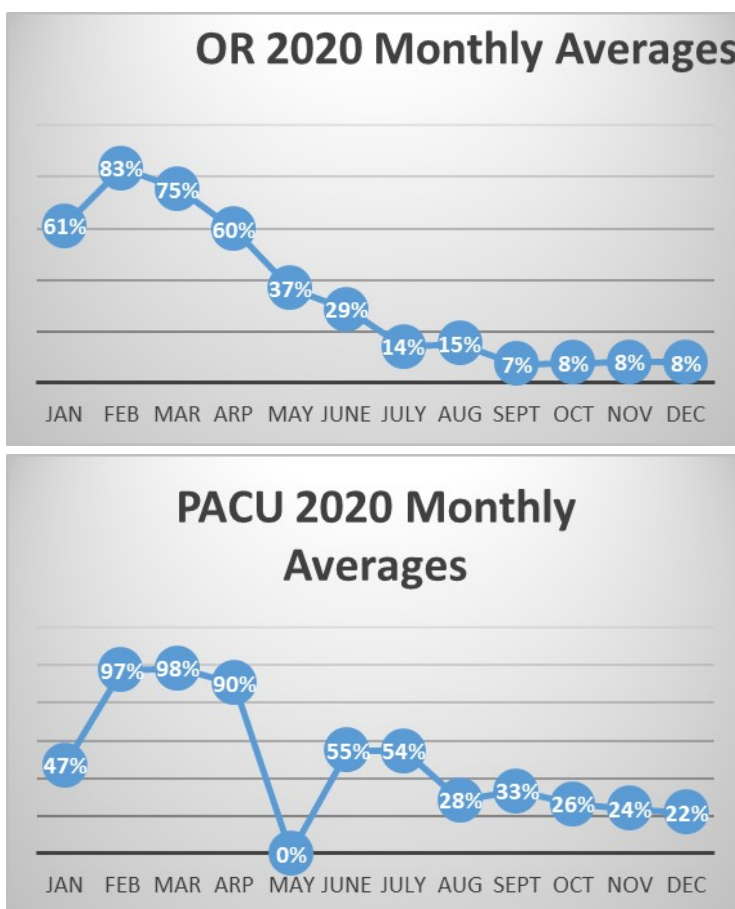
- monitor the documentation compliance of the hand-off report, and
- improve patient and staff safety as evidenced by the number of complaints from the staff.

METHODS

Following the Plan-Do-Check-Act (PDCA) model for performance improvement (PI), the council began the PI project to improve documentation of the hand-off report. In December 2019, the documentation of the hand-off report

Figure 2

OR and PACU 2020 Monthly Completed Hand-off Reports Averages

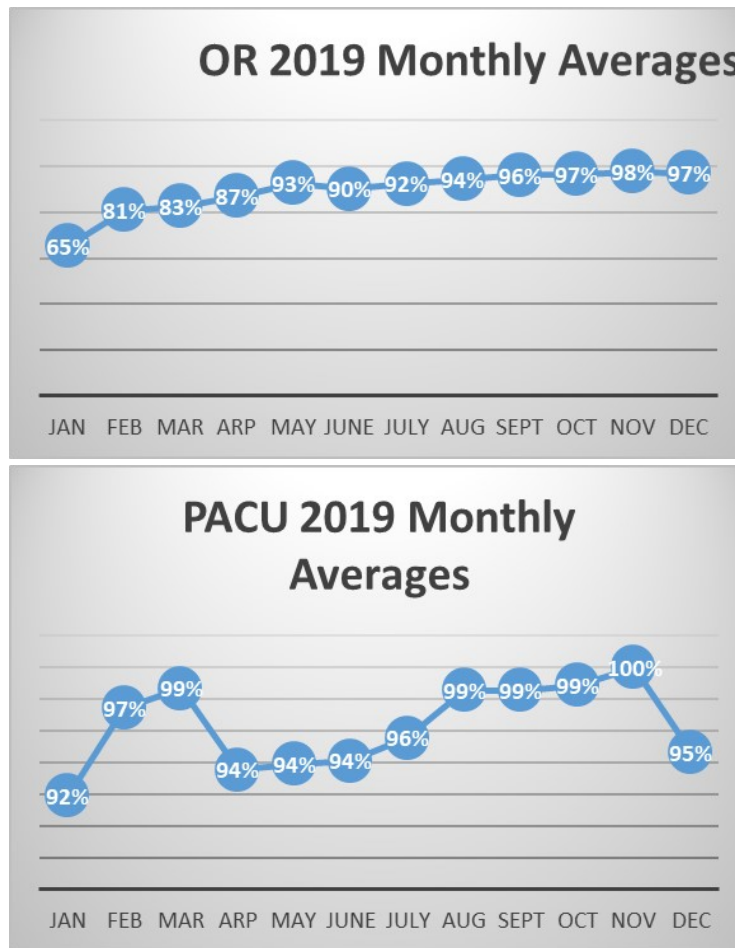


was 97% in the OR and 95% in the PACU, well above the benchmark of 90% (see Figure 3). Then, the number of COVID-19 positive cases rose in the community and within the facility, changing the patient census and acuity dramatically. Monitoring of the documentation of the hand-off report became sporadic due to increased patient activity and level of care needed. Furthermore, many surgical services nurses were cross-trained into other areas of the hospital because elective surgeries decreased.

In September 2020, well into the pandemic and after caring for large numbers of SARS-CoV-2 positive patients, the nurses became concerned because important information was not always included in the hand-off reports. Specifically, information was missing if a patient was positive for COVID-19. The omission of the status delayed implementing isolation procedures, increasing the probability of exposing staff to the

contagion. With the approval of the UPC members, the council chair took the lead to explore why the hand-off report was inconsistent and recommend changes to improve documentation.

The project was discussed at the staff meeting in which all areas of surgical services (pre-op unit, holding, OR, PACU, and Endoscopy) were included. The UPC chairperson reviewed the hand-off report form and reported the compliance levels; the staff discussed possible changes. The compliance level for completing the hand-off report form for November 2020 was 8% for the OR and 22% for the PACU. The nurses noted the standardized form did have a designated place to document isolation, however this information was easily missed because the space was small and located in the middle of the page. Between December 2020 and January 2021, the chairperson sought feedback from all nurses within

Figure 3*OR and PACU 2019 Monthly Completed Hand-off Reports Averages*

surgical services, seeking recommendations for the hand-off report form. The final revisions were:

- Improve location and readability of the isolation status by enlarging the font, moving the block to the right side of the form, and making the font bold.
- Types of isolation were added so nurses only had to circle the appropriate type.
- Consults and clearances were added.
- “STOP BANG” (the area used to document obstructive sleep apnea screening) was made smaller and moved to the left.
- Height and weight were added.
- Process for completion was revised.
 - ◊ The hand-off report form remained a

paper form and was part of the medical record. As a paper form, the tool could not be taken into the room of a patient who was positive for COVID-19. This created problems completing the tool. After much discussion, the consensus was to complete the document at the end of the case then place the form in a designated area in the PACU.

The nurses were educated on the final revisions during staff meetings between January and February 2021, with one-to-one educational sessions conducted by the UPC chairperson as needed. The education included

- the rationale for the standardized form,
- how to complete the form accurately, and
- where to place the completed documentation.

In March 2021, the revised hand-off report form (Figure 4) was implemented within surgical services departments.

RESULTS

Prior to initiating the revised hand-off report, the percentage of completeness for the hand-off report tool was well below the benchmark for OR and PACU (Figure 5). Accurate hand-off report was measured by the completeness of the hand-off report form. The hand-off report form was initiated when the patient entered any of the surgical services departments. The hand-off tool

traveled with the patient and each nurse caring for the patient added needed information. Prior to initiating the revised hand-off report, the percentage of completeness of the hand-off report tool by the OR nurses averaged 0% in January 2021 and 28% in February. A noticeable improvement was obtained in March (76%) after the staff were educated on the new tool and 90% in May. June showed a slight decrease due to lower completeness by new staff but rose again in July at 98%. The same trend was noted for the PACU area with 21% completed in January, 21% in February, and increases in May (78%) and June (78%). The decrease was also noted with new staff and attributed to the new nurses' need to learn the tool

Figure 4

SBAR Hand-off Form 2021



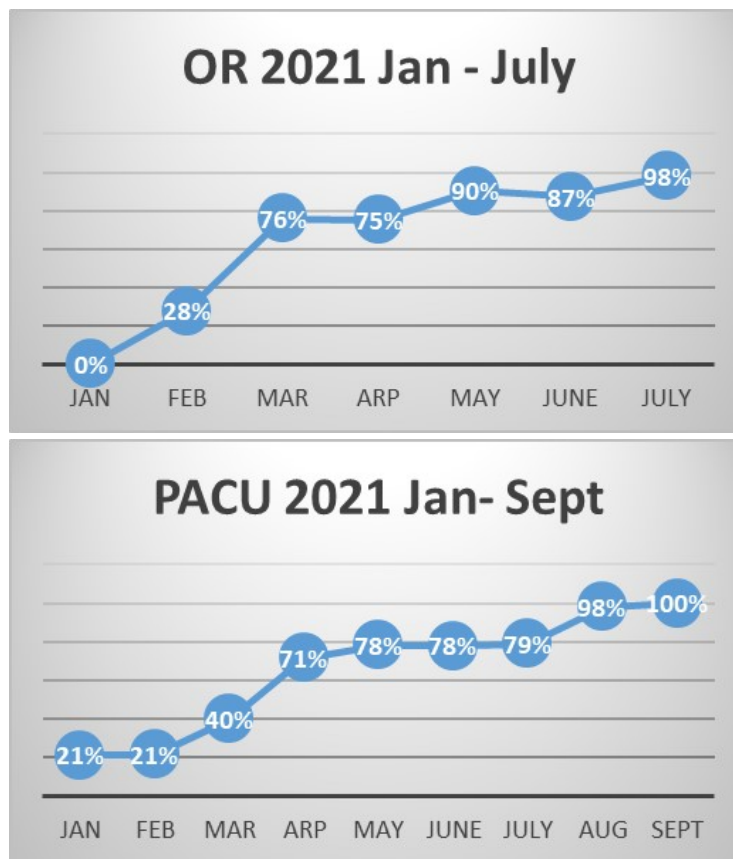
SURGICAL SERVICES SBAR PRE-OP → OR	
  <input type="checkbox"/> CALL LATER	
TIME: _____ DATE: _____ SURGEON: _____ RM# _____ PRE-OP RN _____ DAY PRIOR RN/EXT: _____ AM RN/EXT: _____ CONTACT PERSON: _____ PHONE #: _____	
DAY OF SURGERY CALL BOX CHANGES: _____ PENDING: _____	
SITUATION	PROCEDURE: _____ _____ _____ DX: _____ CONSENT COMPLETED: PATIENT/PROXY MENTAL STATUS: _____ CAPACITY FORM: Y/N DNR: Y/N STRATIFICATION: Y/N
ASSESSMENT	IV ACCESS: _____ O2: Y/N _____ TUBES/DRAINS: Y/N NPO: Y/N DIABETIC: Y/N BS: _____ MG/DL @ _____ INSULIN COVERAGE: Y/N CARDIAC/HTN: Y/N TELE BOX: Y/N DIALYSIS: Y/N LAST TX: _____ COLON PREP: Y/N RISK FOR FALL: Y/N MEDS ADMIN: _____
BACKGROUND	HISTORY: _____ CBC PT PTT BMP <input type="checkbox"/> LABS: _____ <input type="checkbox"/> EKG: _____ <input type="checkbox"/> CXR: _____ <input type="checkbox"/> H&P: PAST FAMILY SOCIAL ALLERGIES <input type="checkbox"/> DX TESTING: _____ <input type="checkbox"/> ORDER FOR PROCEDURE: Y N <input type="checkbox"/> UCG _____ Allergies: _____ <input type="checkbox"/> BB: _____ <input type="checkbox"/> ANTI COAG: _____ <input type="checkbox"/> ABX: _____ DUE: _____ LATEX: Y/N PACER / AICD: Y/N MANUFACTURER NAME: _____ ANTIBACTERIAL SOAP BATH: Y / N STOP BANG : Y/N SCORE: _____ <small>If score is 5 or greater place orders</small>
RECOMMENDATIONS	ISOLATION : CONTACT RESPIRATORY AIRBORNE MRSA C-DIFF Droplet N/A HT: _____ WT: _____ CONSULTS ORDERED: _____ _____ CLEARANCES: MED CARDIAC PULMONARY NEURO VASCULAR NEPHRO
(NOT FOR PERMANENT RECORD)	

Figure 5*OR and PACU 2021 Monthly Averages*

and the process. The PACU improved to 98% in August and 100% in September.

DISCUSSION

The accuracy of the hand-off report became a concern during the pandemic because the completeness of the form reflected a lack of communication between healthcare workers regarding patient care. If nurses were not completing the hand-off report form, or if the hand-off form did not include vital information, the probability of omitting crucial facts during the transfer of care increased dramatically. Employees new to surgical services were another concern because this group had difficulty completing the form along with their other duties. The new nurses complained there was inadequate time to complete the form. To relieve the workload of the preceptors for the new nurses, the education on the hand-off report was added to the orientation schedule. This project illustrated the importance

of standardized hand-off report and how its advantages provided for successful hand-off communication. The department improved the hand-off report documentation from 0% to 90% through staff collaboration and education. The department will continue to audit the documentation of the hand-off report in order to identify any issues and make corrections.

CONCLUSION

Accurate communication between healthcare providers is essential for safe patient care within an acute care hospital. Hand-off report is the communication process for transferring pertinent patient information and responsibility for the patient's care from one healthcare provider to another. Forgotten, omitted, or deleted information during transfer of patient care can have serious consequences for patients. Research has demonstrated standardizing the hand-off report reduces miscommunications and prevents adverse

events (Robinson, 2016). Standardized tools are easily available (TJC, 2012) but do not fit every facility and do not work for every nursing unit. Nurses' input in developing the form increased its usability thereby improving the documentation compliance.

This project was limited to one facility in the Southeastern United States with a diverse patient and staff population. It was conducted throughout a time of high stress during the COVID-19 pandemic. The UPC chairperson and the nurses worked together to improve documentation of the hand-off report process. The nurses continue to monitor the completeness of the hand-off report and recognize the need to remain vigilant for future situations requiring further changes.

DECLARATION OF INTEREST

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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