

Gardner-Webb University

Digital Commons @ Gardner-Webb University

Doctor of Nursing Practice Projects

Hunt School of Nursing

Spring 2020

Implementing SAFEPLAN: A Communication Template for Emergency Nurses Caring for Psychiatric Patients

Michele Leigh Rudisill

Follow this and additional works at: <https://digitalcommons.gardner-webb.edu/nursing-dnp>



Part of the [Psychiatric and Mental Health Nursing Commons](#)

Implementing SAFEPLAN: A Communication Template for Emergency Nurses

Caring for Psychiatric Patients

by

Michele L. Rudisill

A DNP Project submitted to the faculty of
Gardner-Webb University Hunt School of Nursing in partial fulfillment of the
requirements for the degree of Doctor of Nursing Practice

Boiling Springs, NC

2020

Submitted by:

Michele L. Rudisill

Date

Approved by:

Nicole Waters, DNP, RN

Date

Approval Page

This capstone project has been approved by the following committee members:

Jeffrey Phillips, MSN, RN, CEN
Committee Member

Date

Debbie Travers, PhD, RN, FAEN
Committee Member

Date

Nicole Waters, DNP, RN
Project Chair

Date

Abstract

This DNP Project explored the impact of introducing a communication template for emergency department (ED) nurses to use during handoff when caring for psychiatric patients. This need was identified as ED nurses are now caring for psychiatric patients for longer periods of time in the ED setting, sometimes weeks to months, due to limited inpatient mental health resources and resources in the community. ED nurses' perceptions were surveyed and the need for a standardized, yet flexible communication template was identified. The literature was reviewed, and no such template was identified specific to ED nurses caring for the psychiatric patient population. Using the Situation-Background-Assessment-Recommendation (SBAR) nursing communication template found in the literature, the project administrator developed a template, SAFEPLAN, specific for ED nurses to use when caring for psychiatric patients to provide a structured handoff report. The nursing staff at the study site were educated and the template was introduced to determine its impact in the ED. Nurses' perceptions related to consistency of report, clarity of report, and patient and department safety were measured. Additionally, the perceived usefulness (PU) and perceived ease of use (PEU) of the SAFEPLAN template were measured.

Keywords: emergency nurse, emergency department, psychiatric patient, handoff, report, template, standardization, communication, SAFEPLAN

Acknowledgements

Completing this project was not only an academic lesson; it was a lesson in perseverance. I am certain I could not have been successful without having particular people placed in my life by the unseen hands of God. I have many to thank for contributing to my success.

First and foremost, my family, starting with my mother, Camillia Henley Rudisill Holland. Momma was the first of her family to get a college education, and as an educator herself, she stressed the importance of education to her daughters. She always supported me and my sister academically, even allowing me to leave home for higher learning opportunities at the age of 15. Her support throughout many endeavors in life has been irreplaceable. Second, my father, Donald Ray Rudisill, taught me the value of hard work. Even though I only had him for a short 15 years, he taught me that things may not be easy, but you make a goal, work hard, and you get to the top of the mountain.

Next, I would like to thank my DNP cohort, who has never given up on me and has supported me through years of project changes, reboots, and revisions. The support of my cohort sisters and brother, Neil, has been overwhelming. Having each of you is a blessing. We are connected throughout this life.

Heartfelt thanks go out to my project committee who assisted me to craft this project after many attempts to find the right fit for me and my practice. To my project chair, Dr. Nicole Waters, thank you for your never giving up on me and for encouraging me onward. To Mr. Jeffery Phillips and Dr. Debbie Travers, thank you for your support, mentorship, and input into this project. Without the three of you, this project would not have come to fruition.

Next, I would like to thank countless other, nameless, folks who have assisted in this project in any way. This includes my nursing colleagues and friends. Many of you have touched on this project unbeknownst to you.

Finally, I would like to thank my best friend, partner, soul-mate, ride or die—Don. Donald Pfister, Jr., I am the luckiest woman in the world to have you in my life and to have you love me. You are always so supportive of me. You push me when I need to be pushed. You let me rest when I need to rest. There is no way this project would be as successful, or painted as purple, without you as my helper in this life. I love you, and thank you, with the whole of my being.

© Michele L. Rudisill, 2020

All Rights Reserved

Table of Contents

SECTION I: PROBLEM RECOGNITION

Problem Background and Significance.....	1
Problem Recognition	2
Setting	2
Problem Statement	3
Gaps in Practice	4

SECTION II: NEEDS ASSESSMENT

Needs Assessment.....	5
Literature Review.....	7
Ardoin and Broussard	8
Cornell, Townsend-Gervis, Vardaman, and Yates	9
Cornell, Gervis, Yates, and Vardaman	10
Eberhardt.....	11
Farhan, Brown, Woloshynowych, and Vincent	13
Gopwani, Brown, Quinn, Dorosz, and Chamberlain	13
Hunt, Marsden, and O'Connor.....	15
Kerr, Klim, Kelly, and McCann.....	15
Klim, Kelly, Kerr, Wood, and McCann.....	16
Mathias.....	16
Shalini, Castelino, and T.....	16
Staggers and Blaz.....	17
Stevens, Bader, Luna, and Johnson	18

Younan and Fralic.....	19
Strengths and Weaknesses of the Literature	20
Gaps in the Literature.....	21
Population	21
PICOT	21
Sponsor and Stakeholders	22
Organizational Assessment and SWOT Analysis.....	22
Available Resources.....	25
Desired and Expected Outcomes	25
Project Team Selection	26
Cost/Benefit Analysis	26
Scope of Problem.....	27
 SECTION III: GOALS, OBJECTIVES, AND MISSION	
Mission Statement.....	33
Goals	33
Process and Outcome Objectives.....	34
 SECTION IV: THEORETICAL UNDERPINNINGS	
Theoretical Underpinnings.....	35
Adult Learning Theory	35
TAM2.....	35
 SECTION V: WORK PLANNING	
Work Planning	37
Timeline	37

Budget	38
SECTION VI: EVALUATION PLANNING	
Evaluation Process	40
Ethical Considerations	42
SECTION VII: IMPLEMENTATION	
Project Process	44
Outcome/Evaluative Measures and Interpretation.....	45
SECTION VIII: INTERPRETATION OF DATA	
Limitations	69
Project Evaluation.....	71
Discussion of PICOT	72
Discussion of Outcome Goals.....	73
Recommendations for Improvement.....	75
Achievements.....	75
Plan for Sustainability.....	76
Implications for Practice and Quality Improvement.....	76
Conclusion	76
REFERENCES	78
APPENDICES	
A. SAFEPLAN Template and Report Form	82
B. Permission to Use and Adapt Tools	84
C. Education Link and Survey Question Screenshots	85
D. Recruitment Script	91

List of Figures

Figure 1: Patient Volume Trend	4
Figure 2: Strengths of the Literature	20
Figure 3: Psych Analysis by Fiscal Year	24
Figure 4: SWOT Analysis.....	24
Figure 5: Psychiatric Census in ED, May 2017	28
Figure 6: Length of Stay (Hours).....	29
Figure 7: The SAFEPLAN Report Template.....	32
Figure 8: TAM 2 Concepts	36
Figure 9: Project Implementation	37
Figure 10: Proposed Budget.....	38
Figure 11: Actual Budget.....	39
Figure 12: Project Administrator Generated Survey Items.....	41
Figure 13: PU Scale Survey Items	41
Figure 14: PEU Scale Survey Items.....	42
Figure 15: Q1 Results Graph	46
Figure 16: Q1 Answer Choices	46
Figure 17: Q2 Results Graph	47
Figure 18: Q2 Answer Choices.....	47
Figure 19: Q3 Results Graph	48
Figure 20: Q3 Answer Choices.....	48
Figure 21: Q4 Results Graph	49
Figure 22: Q4 Answer Choices.....	49

Figure 23: Q5 Results Graph	50
Figure 24: Q5 Answer Choices	50
Figure 25: Q6 Results Graph	51
Figure 26: Q6 Answer Choices	51
Figure 27: Q7 Results Graph	52
Figure 28: Q7 Answer Choices	52
Figure 29: Q8 Results Graph	53
Figure 30: Q8 Answer Choices	53
Figure 31: Q9 Results Graph	54
Figure 32: Q9 Answer Choices	54
Figure 33: Q10 Results Graph	55
Figure 34: Q10 Answer Choices	55
Figure 35: Q11 Results Graph	56
Figure 36: Q11 Answer Choices	56
Figure 37: Q12 Results Graph	57
Figure 38: Q12 Answer Choices	57
Figure 39: Q13 Results Graph	58
Figure 40: Q13 Answer Choices	58
Figure 41: Q14 Results Graph	59
Figure 42: Q14 Answer Choices	59
Figure 43: Q15 Results Graph	60
Figure 44: Q15 Answer Choices	60
Figure 45: Q16 Results Graph	61

Figure 46: Q16 Answer Choices	61
Figure 47: Q17 Results Graph	62
Figure 48: Q17 Answer Choices	62
Figure 49: Q18 Results Graph	63
Figure 50: Q18 Answer Choices	63
Figure 51: Q19 Results Graph	64
Figure 52: Q19 Answer Choices	64
Figure 53: Q20 Results Graph	65
Figure 54: Q20 Answer Choices	65
Figure 55: Comparison to Needs Assessment	70

List of Tables

Table 1: Average LOS by Age.....	30
Table 2: Average of Responses for PU and PEU	66

SECTION I

Problem Recognition

Problem Background and Significance

Emergency department (ED) nurses are expected to care for all types of patients: medical, surgical, psychiatric, young, and elderly. They are skillful at responding to life-threatening situations and stabilizing patients. In addition, they have a plethora of experience with multi-tasking, prioritizing, and advanced nursing skills.

However, over the last two decades, the ED has become less the fast-paced environment loved by these nurses and frequently has become a holding area for the hospital. Crowding is a condition that is routinely reported at 90% of EDs in the United States (US) (American College of Emergency Physicians [ACEP], 2016). Patients in the ED awaiting admission or transfer contribute to this crowding, known as boarding. Boarding contributes to longer lengths of stays (LOS) for all patients (ACEP, 2016).

A population that is experiencing increased boarding in the ED is the patient presenting with a mental health complaint. In the US, one of every eight visits to an ED is psychiatric in nature (Emergency Nurses Association [ENA], 2013). In North Carolina (NC), millions of dollars have been cut from mental health services over the past few years, making EDs the service provider of last resort for many patients with psychiatric needs (Copeland, 2017). The state is ranked 27th in the United States for access to care (Thomas et al., 2018). Thomas et al. (2018) report that in NC EDs, the average wait time is less than 40 minutes for most patients, but for patients with mental health complaints awaiting long-term inpatient care, the wait is approximately 4 days. Nurses have expressed discomfort in providing care to this population, citing inadequate education,

lack of confidence in skills and expertise, lack of guidelines, and safety concerns as contributing factors to these attitudes (ENA, 2013).

Problem Recognition

Communication failure is a problem that has been recognized by The Joint Commission (TJC) as contributing to sentinel events and medical errors (Ardoin & Broussard, 2011). National Patient Safety Goals have been developed to improve safety in healthcare. One such goal instructed healthcare systems to develop processes to improve communication among healthcare workers. Standardizing a ‘handoff’ when caregivers change shift has been an approach used to meet this goal of providing a consistent, clear, and accurate report of the patient condition (Ardoin & Broussard, 2011).

Setting

The project setting is an academic, tertiary care facility located in central NC. The medical center campus includes a trauma center, a burn center, and a neuropsychiatric hospital. The emergency department, which has approximately 90 beds, is the entry point for approximately 50% of the medical center’s admissions. Additionally, this department has dedicated treatment areas for pediatric and psychiatric patients. Currently, this setting has 34 beds in four areas of the ED with video monitoring capability to care for psychiatric patients. Nurses in this department are expected to have the knowledge, skills, and abilities to be able to care for patients across the age continuum as well as patients presenting with medical, surgical, and psychiatric complaints (personal communication, J Phillips, June 22, 2017).

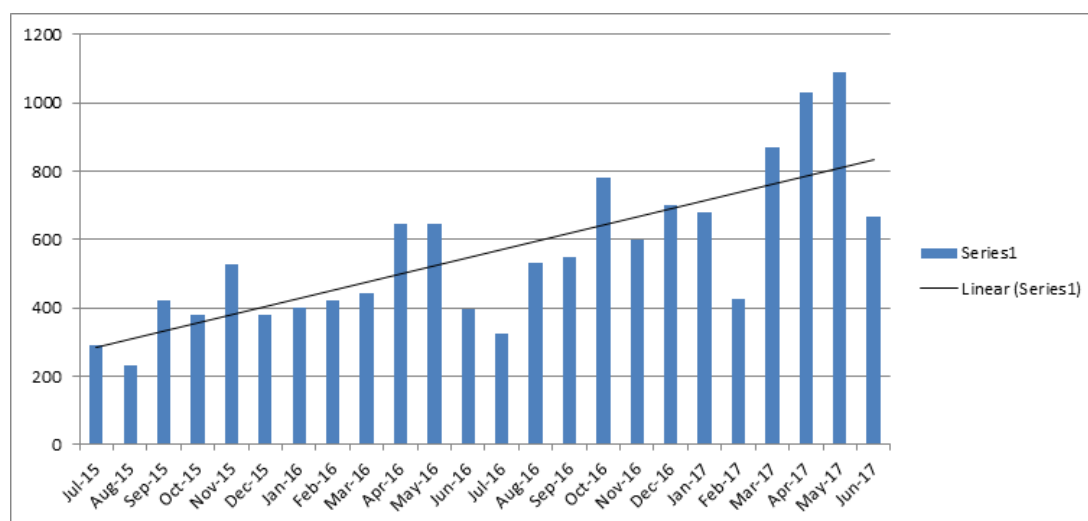
The ENA has reported that ED nurses do not feel comfortable providing care to patients presenting with mental health complaints (ENA, 2013). In framing this project,

the project administrator surveyed nurses in the ED study setting and found that 68% felt that their education and training were inadequate in mental and behavioral health.

Problem Statement

One patient population that is using EDs in increasing numbers is the psychiatric population (ACEP, 2014). Inpatient bed numbers for this population have been decreasing for the past 40 years, and currently there are less than 50,000 to serve this population nationwide (ACEP, 2014). Expert recommendation suggests that states have 50 inpatient psychiatric beds per 100,000 population; NC has just eight state psychiatric beds per that number of people (Copeland, 2017). Simulations have concluded that NC would need an increase of over 350 long-term state mental health beds to decrease patients' boarding times in EDs to less than 24 hours (Thomas et al., 2018).

The ED at the project site has experienced an alarming trend in growth of its psychiatric population. Figure 1 shows the linear trend of number of patients seen in the ED from 2015 to 2017 with steady positive growth in numbers (Series 1= Patient Volume).

Figure 1*Patient Volume Trend*

To reduce the number of psychiatric patients waiting in EDs for inpatient care, it is estimated that the central area of NC must increase inpatient state treatment beds by 165% (Copeland, 2017). However, NC continues to decrease funds for mental health by hundreds of millions of dollars over the past few years (Copeland, 2017) so this increase seems unlikely.

Gaps in Practice

ED nurses are not conditioned to caring for the same patients long-term. Furthermore, ED nurses do not have a comfort level in caring for the psychiatric patient population (ENA, 2013). Due to many factors discussed above, ED nurses now have to learn how to care for this population sometimes over shifts to weeks, while waiting on a plan of care and disposition. Developing communication skills, such as using a structured handoff tool, would be useful to ED nurses and potentially close this practice gap.

SECTION II

Needs Assessment

As stated earlier, nurses across the country do not feel comfortable caring for patients who present with mental health complaints (ENA, 2013). In the project planning stage, the project administrator surveyed 128 nurses who staff the UNC ED caring for psychiatric patients three separate times. The first survey was simply to determine if the nurses felt their education and training was adequate in mental and behavioral health. There were 63 respondents to this question (49% response rate) and 68% of these nurses felt their education and training with this patient population was inadequate.

The second survey honed in more on the direction that the project administrator wanted to lead the project. In personal experiences, the project administrator had experienced frustration with lack of consistency and clarity in handoff reports with psychiatric patients in the ED due to patient complexity and long lengths of stay. Anecdotally, with each handoff it seemed that information was lost and different nurses provided different information. A second survey was sent out to staff to measure their perceptions on consistency and clarity to either validate the project administrator's viewpoints or not. Additionally, safety is an issue with this patient population and the administrator wanted to gauge staff perceptions on safety and patient handoffs. The second survey consisted of the five statements with yes/no answer choices:

- Sometimes I feel information I receive in report (shift handoff) on psychiatric patients is unclear.
- Sometimes I feel information I receive in report (shift handoff) on psychiatric patients is inconsistent.

- Information provided/received in the report of psychiatric patients contributes to patient safety.
- Information provided/received in the report of psychiatric patients contributes to departmental safety.
- When I give report (shift handoff) on psychiatric patients, I use a consistent report format.

Of the 128 nurses surveyed, 73 responded to the second survey (57% response rate). In terms of clarity and consistency of information in report, 63% felt that report was sometimes unclear and 70% felt that report was sometimes inconsistent. The vast majority, 95%, responded that information provided and received in report contributes to both patient and departmental safety. Despite the perceived inconsistency in information in shift handoffs, the majority (66%) of nurses surveyed reported that they used a consistent report handoff with psychiatric patient reports.

The third survey was developed to provide the project administrator with more quantitative data related to clarity and consistency of report information and to gather information from nurses who gave consistent reports as to what they thought were important components of their reports. Of the 128 nurses surveyed, 55 nurses responded (43%). This survey consisted of three queries. The first two queries had temporal estimates: less than 25% of the time, 25-50% of the time, 51-75% of the time, and more than 75% of the time.

- I receive information in report on psychiatric patients that is unclear.
- I receive information in report on psychiatric patients that is inconsistent.

In terms of clarity, 36% of nurses reported 25-50% of the time the information received was unclear and 22% reported greater than 51% of the time this information was unclear. With consistency, 42% of nurses reported 25-50% of the time the information received was inconsistent and 18% reported greater than 51% of the time this information was inconsistent.

The third query allowed for a free text answer which the project administrator reviewed to assist in the report tool development.

- If you answered yes to the question in the Needs Assessment II survey "When I give report (shift handoff) on psychiatric patients, I use a consistent report format.", please briefly describe the format that you use. (If you answered no, please state "I do not use a consistent format".)

There were 39 responses to this question as 16 respondents skipped this question. Of these responses, 19 reported they did not use a consistent format and only four reported using a structured, evidenced-based format, such as the Situation, Background, Assessment, and Recommendation (SBAR) format.

This needs assessment data supported the need to develop a structured handoff template specific to the ED psychiatric patient population and potentially have a positive impact on shift handoffs and ED nursing practice.

Literature Review

Before proposing any improvement project, the relevant literature was reviewed, providing the project administrator with background information related to the topic. In addition, the literature supported and provided justification for the proposed project. The project administrator used the following keywords and combinations of keywords during

the literature review: education, emergency, handoff, handoff tool, intervention, mental health, nurs*, psych*, and SBAR. Databases used in the search were PubMed and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). The initial literature search was completed in 2017. The literature was searched from 2006 to 2016, excluding articles that were not peer reviewed, did not offer full text, and were not written in English. A subsequent literature search was completed at the request of the Nursing Research Council of the project site in 2019, which used the similar search parameters but searched through 2019. The 14 articles presented were located using this method. Once the literature is presented, the strengths, weaknesses, and gaps will follow.

Ardoin and Broussard

This descriptive article reports on a community hospital implementing a program standardizing handoff communication. This article focused on nurse to physician communication using the SBAR tool. Staff development nurses spearheaded this project and began with a needs assessment, then completed a literature review. SBAR was chosen as the structure for communication as it could be used across multiple clinical settings. Of note, during the literature review, they described the literature support as “weak, as there were no controlled trials” (Ardoin & Broussard, 2011, p. 129).

Guidelines were developed and then formalized into policy related to using the tool related to communication and handoff. Change theory principles were used and several strategies were outlined to include: piloting the project on one unit first, developing an educational module on SBAR, having nursing and medical leadership project champions, having visible posters and reminders such as pocket cards and telephone stickers available. After the pilot project, nurses and physicians were surveyed

as to the success of the pilot implementation, and then the education was disseminated hospital-wide. The project was evaluated with several measures. Physician satisfaction with perception of nurse communication improved. Additional measures for evaluation included chart audits for medication reconciliation on admission which increased from 67% to 82% and audits of risk management reports showing a decrease in error related to communication (Ardoin & Broussard, 2011).

Cornell, Townsend-Gervis, Vardaman, and Yates

This study evaluated the impact of interdisciplinary rounds (IDR) and use of a SBAR communication protocol across three medical-surgical units in an acute care hospital. The study reviewed 960 patient reports during IDR by nurses over a 9 month timeframe to test the following hypotheses:

- IDR and SBAR impact situation awareness, which will be shown by decreasing patient review times during report by nurses
- The script provided by SBAR will increase consistency of report among nurses
- The patient experience will be positively influenced by use of IDR and SBAR as measured by patient satisfaction scores related to nurse communication and knowledge
- IDR and SBAR will positively impact patient LOS (Cornell et al., 2014).

The nurses were observed giving report in four conditions over time. The first two conditions were a report from memory and notes about patients under their care. First, the baseline report was a case conference format and was held in the unit conference room where the nurses provided report and input on patients' plans of care. Nurses were only present for their patient's presentation. Second, the IDR was moved to

a 'mobile' area located in areas where nurses provided patient care. Everyone involved in care stood and moved from nurse station to nurse station depending on the nurse's location. After these first two observations were made, an educational session was held with nurses regarding SBAR. This consisted of classroom as well as simulation training. A SBAR tool was introduced during this training for nurses to print at the beginning of each shift. The third observation of IDR reports began approximately 6 weeks after SBAR training and consisted of using the paper SBAR tool. The last observation consisted of the nurses using an electronic version of the SBAR tool when reporting during the IDR (Cornell et al., 2014).

The authors note that two of the four hypotheses were supported, with one being partially supported. Review times were reduced by introducing IDR and SBAR. Of note, using electronic SBAR templates resulted in longer report times in comparison to using paper templates ($t=1.97$, $P<.005$). Observation of nurses showed an increase in consistency in report after implementation of SBAR reporting, regardless of age, tenure, or experience. This supported the second hypothesis. Lastly, patient satisfaction indices regarding nurse communication were trending positive but were not statistically significant, lending only partial support to the third hypothesis. There was no improvement in LOS during the study period on the study units (Cornell et al., 2014).

Cornell, Gervis, Yates, and Vardaman

This study introduced SBAR onto four medical-surgical units in a tertiary care hospital to evaluate the impact on shift handoff reports. This was a quantitative observational study meeting level three criteria on the evidence scale. Seventy-five nurses participated in the study which had three observational periods: baseline, paper

SBAR, and paper and electronic SBAR report. These observations occurred over an 8 month period (Cornell et al., 2013).

The authors found that using SBAR did not increase time for report and increased conversation. Additionally, the authors stated that there were no advantages of the electronic SBAR over paper SBAR in terms of information currency or linkages found in this study. Using SBAR for shift handoffs has several implications for practice, the authors noted. First, it provides structure, consistency, and comprehensiveness of report. This template of relevant topics to discuss allows all nurses to be able to provide an accurate, concise report no matter the level of experience of the nurse. Additionally, it allows nurses to anticipate needs and prioritize the plan of care (Cornell et al, 2013).

Eberhardt

This descriptive article discusses one hospital's experience initiating SBAR handoffs between medical-surgical and operating room (OR) nurses using the Iowa Model as a framework. The problem was identified by new nurses working on the medical-surgical floors as handoffs being a frustrating, disorganized process. A team was developed and the hospital charged them with improving the consistency of the handoff process. This team reviewed the current evidence and determined that structured handoffs, such as SBAR, were recommended by regulatory and safety agencies (Eberhardt, 2014).

The team collected baseline data and determined that there was no consistency in transfer notes on transfer from the medical-surgical unit to the OR, and documentation was present only 32% as a note and 42% in the vital signs flow sheet. The nurses were surveyed as to current handoff practices and 93% indicated that report was given prior to

transferring a patient to the OR less than 25% of the time. A new electronic documentation form, the SBAR Transfer Note, was created and implemented, in order to address the desired outcome of improved documentation of patient handoffs. The team had two measurable goals: short-term to improve documentation to greater than 75% within 1 month of implementation for transfer from medical-surgical to OR and long-term to improve documentation using the SBAR format to 100% for all inpatient transfers (Eberhardt, 2014).

During the implementation phase, the team presented the note to the OR and a pilot medical-surgical unit's leadership. Nursing champions were selected to assist with educating bedside staff and to obtain feedback on the note. Feedback was gathered, the process was clarified, and adjustments were made. After the pilot, implementation occurred on all of the medical-surgical units within the hospital with patients' transfers to the OR. In terms of meeting goals, review of documentation showed that at 1 month, 50% of transfers to the OR used the SBAR Transfer Note and that at 4 months, 100% used the note. Additionally, at 4 months, 90% of post-operative transfers back to the medical-surgical units had handoffs using the standardized documentation tool. The medical-surgical and OR staff were also surveyed at 1 and 4 months post-implementation and reported positive experience with the new process (Eberhardt, 2014).

The author goes on to say that the success of the initial implementation has led to further implementation of the SBAR Transfer Note throughout all inpatient units within the hospital. She states that its applicability can be seen across various clinical settings with customization of the tool (Eberhardt, 2014). For example, Eberhardt (2014) states

“assessment criteria specific to the neonatal ICU, labor and delivery unit, and pediatric unit were included” (p. 19).

Farhan, Brown, Woloshnowych, and Vincent

This was a mixed-methods study which described template development for handover physician care in the ED. A ‘best practice’ written template was developed after interviewing physicians. This handover was for operational and organizational issues, not patient specific handoff issues. The authors state “there are only a relatively small number of high quality evidence-based interventions that are applicable to the ED” (Farhan et al., 2012, p. 942).

Gopwani, Brown, Quinn, Dorosz, and Chamberlain

This article described implementation of the SOUND tool used in interdisciplinary handoffs led by physicians in a pediatric emergency department. The authors note the vulnerability of the ED setting to communication errors due to incomplete information about patients and constant multi-tasking that the environment demands. Additionally, handoffs occur frequently with staff changing multiple times per day. In the study institution, an urban, academic, tertiary-care pediatric emergency department that has more than 90,000 visits each year, team huddles where handoffs occur each day occur at 7 am, 3 pm, 7 pm, and 11 pm. At these times, some or all of the patient’s caregivers will be changing. The team huddle handoff consists of provider staff (attending physicians, midlevel providers, and resident physicians), students, and nursing staff (Gopwani et al., 2015).

In the planning phase, the authors studied the literature to determine components of an ideal handoff as well as examining the culture of teamwork within their department

to develop their handoff tool structure. The resulting structure and sequence of the handoff reporting tool was: synthesis (patient overview), objective data, upcoming tasks, nursing input, and double-check (clarification on information by the receiver and any questions asked and answered). This format for the handoff was shortened to the mnemonic SOUND. During this planning phase, the following outcome was identified: a handoff would be considered successful if four of the five components of the SOUND template were used (Gopwani et al., 2015).

Prior to implementation, baseline data were gathered by observing 286 handoffs in 48 team huddles. Physicians and midlevel providers were then provided education with a short web-based module that included the importance of concise, accurate communication and introduction to SOUND with examples of each of the components. Signs were also placed in the department as memory aids. After two weeks of having education availability, the observational study began. Soon thereafter, the nursing staff began questioning what their expectations and input should be, as they had not received any training as to the new process. In response to this, nursing leadership created an educational session to provide nurses guidance (Gopwani et al., 2015).

The findings of this study show that successful implementation of a structured, provider-driven, interdisciplinary handoff tool can occur in a pediatric emergency department. Before implementation 26.2% of handoffs met the authors' metrics for success; after implementation 63.6% met the metrics for success. The authors note that this statistically significant result ($P < .01$) shows that a short educational intervention (six minute video) can impact handoffs. One limitation noted by the authors in this study was that the tool, SOUND, has not been nationally validated. It was created specifically by

them for their setting and culture; however, they stated that use of a structured handoff tool has improved the completeness of reports. They stated that further study at other institutions is needed to validate the use of the SOUND tool (Gopwani et al., 2015).

Hunt, Marsden, and O'Connor

This article discussed handoffs in mental health settings with varied providers. It was a two-part descriptive study, with a questionnaire to staff regarding current practice and then observations of actual handoffs. Handover was linked to safety and the authors noted that structuring content was important. In the majority of the handoffs, Hunt et al. (2012) observed the following information was relayed: “patient’s mental state, critical incidents and risk assessments, drug and alcohol issues, leave or discharge planning and medical information such as side effects and test results” (p. 316).

Kerr, Klim, Kelly, and McCann

The authors noted that there has been very limited research with structured nursing report handoffs in the ED setting. This was a pre- and post-implementation study to evaluate the impact of a systematic handoff tool used during handoff report by ED nurses. This tool is based on ISBAR- where I indicates Identify and the remaining SBAR mnemonic is unchanged. There was one psychiatric specific question on the tool- voluntary or involuntary status of the patient. The authors used audit and survey methods to determine impacts of a structured handover guide developed by the study authors based on their work. The implementation of this handover guide suggested two findings: 1- use of the guide improved completion of nursing care, and 2- transfer of important information was improved. Handover was also linked to safety (Kerr et al., 2016).

Klim, Kelly, Kerr, Wood, and McCann

These authors assert that most tools for handoffs are designed for inpatient settings and are not easily translated to ED use. Klim et al. (2013) state “there have been few examinations of nursing handover in the ED setting (p. 2235). This mixed-methods study explored ED nurses’ current handover perceptions as well as perceptions of essential parts of shift reports. While the authors stated that evidence suggests that ED nursing reports are highly variable, they were able to identify essential, optimal components of an ED nursing report: contextualized to patient population, structured with key elements, and conducted at the bedside. The authors concluded that “provision of a handover framework incorporating key features and essential information... may enhance the transfer of accurate and essential information to enable safe and high standards of nursing care in the ED” (Klim et al., 2013, p. 2233).

Mathias

This article describes a communication tool developed based on SBAR principles and used by a community hospital’s surgical nursing service line. This tool, termed SHARED, is a worksheet to help with report organization and work planning. The mnemonic, SHARED, signifies the following: situation, history, assessment, request, evaluate, and document. The author states that this tool, while not part of the medical record, follows the patient through the surgical stay, to communicate information and to provide clear and consistent report (Mathias, 2006).

Shalini, Castelino, and T

This experimental study occurred in a tertiary care hospital in India. The specific nursing setting was not discussed in the paper. The authors describe having a population

of 36 controls and 36 nurses who comprised an experimental group. In both groups of nurses baseline knowledge of SBAR communication techniques was assessed with testing as well as observing shift handoffs. After this, the experimental group was educated on SBAR techniques and provided a practice checklist on SBAR for use during handoffs. Approximately 2 weeks later, each group was surveyed and observed again as to knowledge and use of SBAR. The experimental group had increased knowledge and practice scores. Their findings support the use of education in improving knowledge as well as practice of SBAR communication techniques (Shalini et al., 2015).

Staggers and Blaz

This paper was an integrative review of literature from 1980-2011 on nursing handoffs in medical and surgical settings. The initial search strategy returned 247 citations, of which the authors then trimmed to a total of 30 included articles that met their criteria of non-duplicates, relevance, full-text availability, and quality standards. Of this total, 20 were qualitative, four were experimental, and six were descriptive. The following conclusions were drawn by the authors:

- The topic of handoff functions and rituals is saturated,
- Verbal handoffs have other functions besides information exchange,
- Further examination is needed on analyzing handoffs related to patient-centered care,
- Handoffs should be contextual and specific to nursing needs,
- Bedside handoffs are not yet supported by evidence,
- Research is needed on what is important information to build context specific handoff templates, and

- Nursing researchers need to use more experimental designs when developing research on this topic (Staggers & Blaz, 2012).

Of note, in reviewing the articles included in this integrative review, the project administrator found one highly relevant to this project. Porthier et al. (2005, as cited in Staggers & Blaz, 2012) was mentioned as a quasi-experimental study which compared three handoff styles on data loss. With verbal only handoffs, data was lost after three cycles of information. With the use of verbal report and a template, there was minimal loss of information. This study recommended using a verbal report in conjunction with a formal handoff template (Porthier et al., 2005, as cited in Staggers & Blaz, 2012).

Stevens, Bader, Luna, and Johnson

This article describes a hospital-wide effort to implement a standardized process for nurse handoffs and use of safety checklists. All nursing units, including the ED, were included in this study at a 522-bed hospital in California. The researchers framed this study using Lewin's change theory and Knowles' adult learning theory. They describe the process developing an educational module on a nurse-to-nurse handoff tool, SBAP (situation, background, assessment, plan), based on prior training on the nurse-to-physician tool, SBAR and a safety checklist and subsequent implementation of these. Nurses were tested on knowledge related to SBAR, SBAP, and safety checklists prior to and after the educational rollout. The scores obtained showed that the video module was an effective educational tool. Additionally, at 4 months, an evaluation showed that nurses were continuing to use the two tools (SBAP and checklist) during handoffs. Furthermore, the authors discussed the impact that the implementation has had on safety at their hospital. A new initiative, the 'catch of the day' was begun. From July 2009 to

January 2010, using these tools, nurses across all units found 750 near misses or errors (Stevens et al., 2011).

Younan and Fralic

This article describes improving the nursing handoff process at a 130-bed hospital in Lebanon targeting internal barriers such as absence of standardization of report, training on handoff communication, and interruptions. The authors described the process of developing a handoff template based on SBAR and SHARQ (situation, history, assessment, recommendation, questions) for a medical, a surgical, and a cardiac unit within the hospital. This addressed the first barrier identified. To address the second barrier, the nurses on each unit were provided a two hour in-service which discussed key aspects of handoff communication techniques and its contribution to safety. Finally, interruptions were addressed by negotiating with other stakeholders in the hospital to change processes to minimize actions such as physician rounding and operating room transfers during intershift times (Younan & Fralic, 2013).

To evaluate the effectiveness of the intervention, data was collected prior and post-intervention. Information omissions were assessed by audiotaping handoffs for a 1 month period and then randomly auditing the handoffs for omissions. Six months after the intervention began, another month of audiotaping and auditing occurred. Similarly, prior to education and 5 months after the in-service, nurses were tested on their knowledge about handoff communication. Finally, nurses were asked to log interruptions for 1 week prior to and post the intervention to determine effectiveness (Younan & Fralic, 2013).

Strengths and Weaknesses of the Literature

Four major themes emerged from the literature as strengths: standardized tools provide consistency of handoffs, these tools should be contextualized, education is a vehicle to increase knowledge and use of a handoff tool, and safety may be impacted by use of a handoff tool. Figure 2 is a visual representation of these strengths in the literature.

Figure 2

Strengths of the Literature

Strengths of the Literature

	Consistency Impacts	Context Specific	Education Impacts	Safety Impacts
Ardoin & Broussard, 2011	X		X	X
Cornell et al., 2013	X			
Cornell et al., 2014	X		X	
Eberhardt, 2014	X	X		
Farhan et al., 2012	X	X		X
Gopwani et al., 2015	X	X	X	
Hunt et al., 2012		X		X
Kerr et al., 2016	X	X		X
Klim et al., 2013	X	X		X
Mathias, 2006	X	X		
Shalini et al., 2015	X		X	
Staggers & Blaz, 2012		X		
Stevens et al., 2011		X	X	X
Younan & Fralic, 2013	X		X	

Weaknesses in the literature were identified by Ardoin and Broussard (2011) in their literature review. Similarly, there were no controlled trials identified in the literature review conducted by this project administrator. Much of the literature is descriptive in nature, describing implementation processes. There was only one experimental design noted (Shalini et al., 2015). Finally, there were only a few articles

with implementation of handoff processes described specific to an ED setting (Farhan et al., 2012; Gopwani et al., 2015; Kerr et al., 2016; Klim et al., 2013).

Gaps in the Literature

Two specific gaps in the literature were noted that are germane to this specific project. First, there was a lack of articles related to ED nursing handoffs specific to the ED psychiatric population. Second, there were minimal articles located specific to improving nursing handoffs related the psychiatric population in general.

Population

The population in this project will be nurses working in the study setting who care for psychiatric patients. These nurses may be full-time or part-time registered nurses who are hired to work in the ED or they may be medical center flex team registered nurses. These nurses typically have prior work experiences that provide them with the capability to work in the ED setting.

PICOT

There are two PICOT questions that are addressed by this project. First, for nurses working in an emergency department with psychiatric patients, will implementation and use of a standardized shift handoff report template, SAFEPLAN, result in an increase in nurses reporting an improvement in clarity and consistency of handoff, patient safety, and departmental safety as measured by ‘agree’ or ‘strongly agree’ responses on a Likert scale survey tool six weeks after implementation? Second, for nurses working in an emergency department with psychiatric patients, will implementation of a standardized shift handoff report template, SAFEPLAN, result in an

increase in nurses reporting using a consistent handoff format, as measured by using the template greater than 50% of the time six weeks after implementation?

Sponsor and Stakeholders

The project administrator has the full support of the ED nurse manager as the sponsor of this project. Immediate and easily identifiable stakeholders for the project include nurses and the psychiatric patients in the ED. Because this project aims to standardize report communication which in turn may increase safety many additional stakeholders may be impacted. These additional stakeholders include other patients and visitors, the psychiatry emergency service, other staff members, and hospital security and police officers. The organization may also be considered a stakeholder in terms of decreasing risk and liability.

Organizational Assessment and SWOT Analysis

The setting is not unlike many other healthcare systems and hospitals in terms of having to care for a burgeoning psychiatric population in their ED. Since spring 2016, the ED has been using overflow areas within the department as well as the hospital to treat this population of patients. In May 2017, it had seven overflow beds in the department where psychiatric patients were being treated re-designated to psychiatric-specific treatment beds, increasing the number of psychiatric-specific treatment beds to 20. Unlike regular ED treatment beds, these beds have specific requirements that are mandated by regulatory agencies to provide a safe environment for patients. The department continues to use other overflow areas as needed on a fairly consistent basis including a swing area (six beds), a portion of the less acute area of the ED (up to 20

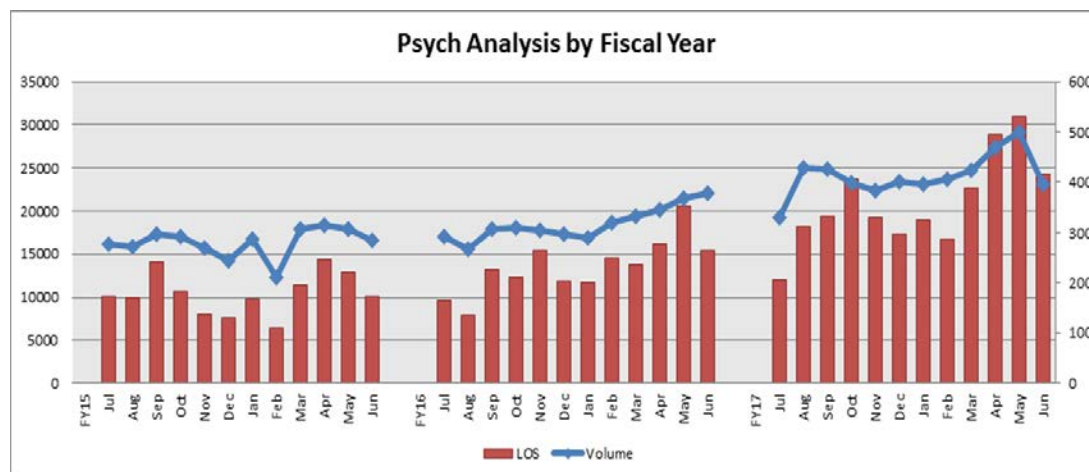
beds) and the Children's Hospital Short-Stay Unit (six beds) (personal communication, J. Phillips, June 22, 2017).

In fall 2015, Huron Consulting noted during their organizational-wide assessment that productivity for the ED had dropped and attributed this to issues with the volume of psychiatric population. Due to recommendations from this group an assistant nurse manager (ANM) position with a psychiatric focus was approved as well as additional nursing full time employee positions. This ANM position has since been transformed into a nurse manager position due to the continued growth and needs of the psychiatric patient population. Additionally, renovations for a business suite were approved in May 2016 to increase the number of treatment beds there to 14 and to re-designate this space as psychiatric-specific. Design and planning for this project began in June 2017, and it was completed in fall 2018. Another change made to attempt to impact throughput to disposition was developing the Division of Psychiatric Emergency Services under the leadership of the Chair of the Department of Emergency Medicine. Beginning in July, 2017, patients presenting to the ED are screened and managed by this service instead of the inpatient consulting psychiatry service. Finally, the hospital executives are aware of the issues the psychiatric volume is causing the ED. The chief executive officer of the organization has charged an organizational vice president with an organizational goal of planning and building a psychiatric emergency department physically separate from the current ED (personal communication, J. Phillips, June 22, 2017). This 40-bed space remains under construction currently as of spring 2020. However, one of the factors that is clearly a stressor is the time it takes to plan and build these additional facilities when the current trend of the increasing psychiatric volume and increasing length of stay (LOS)

which is already significantly affecting departmental functions as noted by data in Figure 3 below.

Figure 3

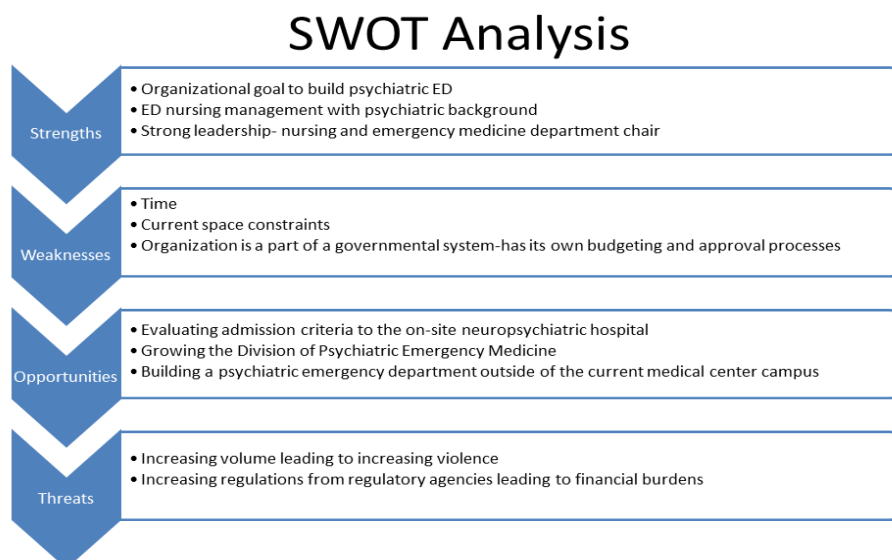
Psych Analysis by Fiscal Year



The strengths, weaknesses, opportunities, and threats (SWOT) to the organization and department addressing the need for caring for this population are identified in Figure 4.

Figure 4

SWOT Analysis



Available Resources

Because the study site is an academic medical center there are many resources available that are not typical at most EDs for psychiatric patients. The nurse to patient ratio is 1:6 for this population with one ancillary staff member to assist each nurse. Additionally, if a patient needs a 1:1 sitter for safety, this need is prioritized by administration. Other resources that are available are hospital school services and recreational therapy. For safety issues, hospital security and police round frequency and there are panic alarms in all of the ED treatment areas. Staff are encouraged to wear personal safety alarms.

This hospital also has a neuropsychiatric hospital on the same campus as the ED setting. It has 76 total beds and has capability to provide specialized care for geropsychiatric, adolescent, child, postpartum, and eating disordered patients as well as crisis and psychotic patients. Due to the high specialization of these units, these beds are at a premium for patients from across the entire state. Additionally, the general units have very strict admission guidelines that prohibit admissions of medically complex patients or patients with violent or aggressive histories (A. Little, personal communication, July 7, 2017). This further adds to the backlog of psychiatric patients waiting placement in the ED.

Desired and Expected Outcomes

The desired and expected outcomes of this project are as follows:

- By educating nurses in the setting about structured handoffs and providing them a template, SAFEPLAN, to use, their perception of consistency and clarity will improve related to handoffs with the psychiatric population,

- these nurses will perceive SAFEPLAN easy to use and usable, and
- these nurses will perceive SAFEPLAN contributes to patient and departmental safety.

Project Team Selection

The project administrator will be assisted in this project by two nursing leaders within the ED study setting. Both of these nurses have backgrounds in psychiatric nursing. The business manager of the department will be utilized to provide departmental statistics. The nursing supervisor for the medical center Flex Team, will assist with dissemination with information about the project to Flex Team staff that work in the ED. The project administrator will also hire a statistician to assist with data analysis. Additionally, input from the project administrator's project chair was considered in developing this project.

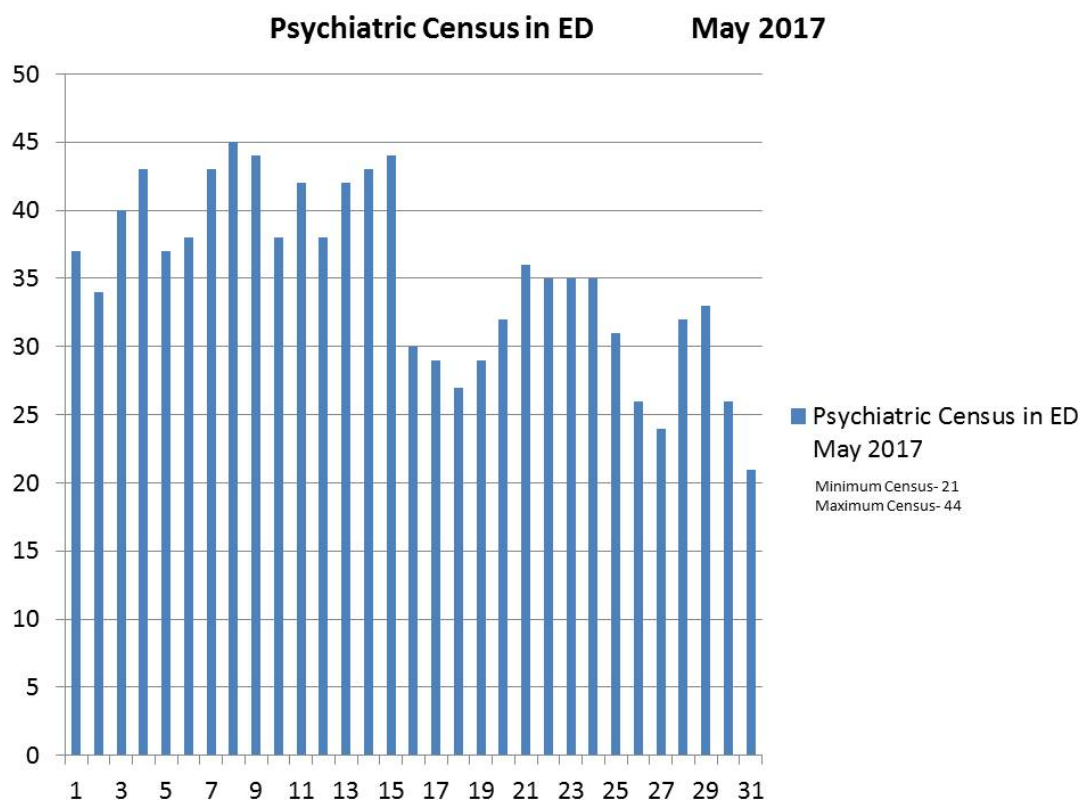
Cost/Benefit Analysis

The cost/benefit analysis of this project is skewed greatly toward benefit. For minimal input, as this project is budgeted for \$1,600 of the project administrator's own funds, great benefit can be seen. Improving communication among nurses caring for psychiatric patients may prevent injuries to staff, to patients, among patients, and to visitors. Additionally, improving communication may lead to decreased burnout among nurses caring for these patients. Burnout and injuries may contribute to nurses leaving the ED work setting. Having to replace a nurse is costly. Duffield et al. (2014) performed a comparative review of nurse turnover data. They found that in the United States average turnover costs for one nurse is \$20,561 (Duffield et al., 2014).

Scope of Problem

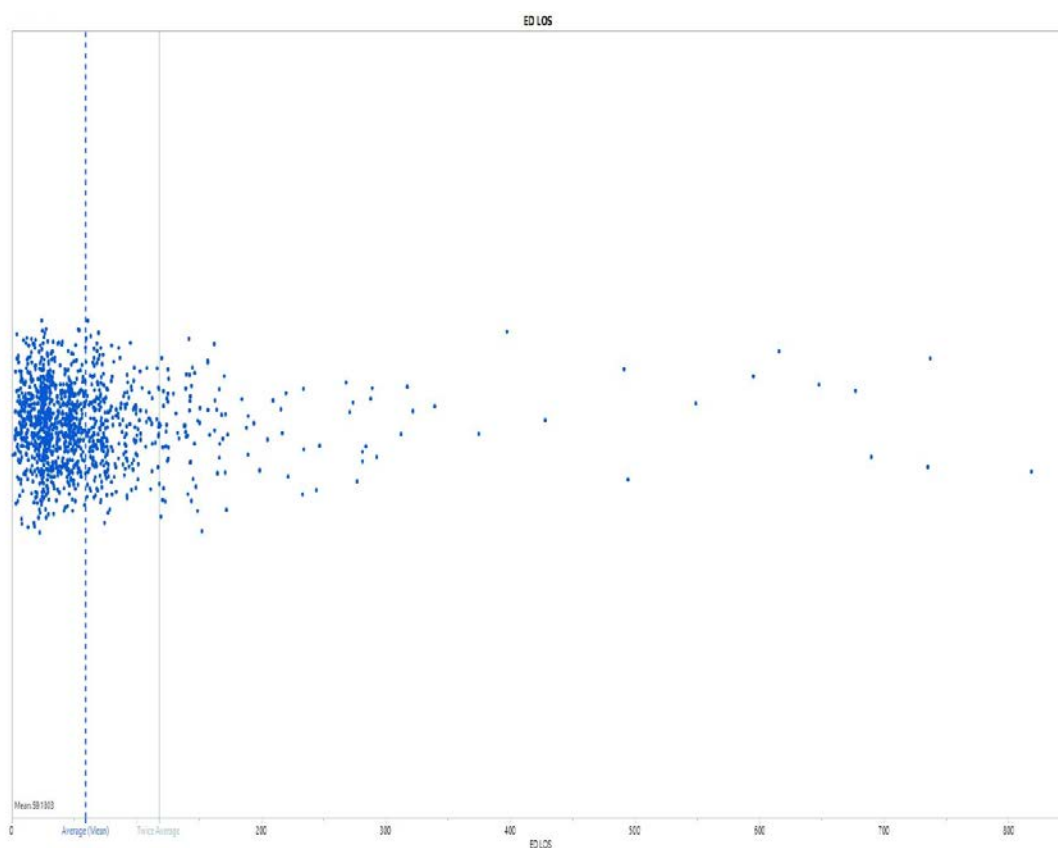
ENA reports that in the US there are approximately 12 million visits to EDs by patients with psychiatric complaints annually; this translates to one in eight ED patients (ENA, 2013). ACEP has noted that sociopolitical forces over the past 40 years have led to a decline in available inpatient resources for psychiatric patients with currently less than 50,000 beds available in the US. Additionally, they state that outpatient and community resources have been limited in budgetary terms, thus making the ED the last resort for care for these patients (ACEP, 2014).

Patient volume and LOS are an issue at the project site. As discussed earlier, the department originally was designed with a two bed locked unit over 20 years ago. Approximately 10 years ago, two areas were renovated and an additional 11 beds in two secure units were added for a total of 13 beds to serve psychiatric patients. In July 2017, an additional seven beds were re-designated to serve psychiatric patients and in fall 2018 an additional 14 bed unit was designated, so that the ED currently has 34 treatment beds to specifically serve this population. Despite this, it is an inadequate number of beds for the population served, as the department consistently staffs two overflow areas to treat emergency psychiatric patients. While placing tremendous stress on the emergency department, this ED has the capability to surge to treat 40+ emergency psychiatric patients and has in the recent past. Figure 5 below shows an example of the psychiatric daily census during May 2017 during the time of the needs assessment completion. In this mode, there are many negative effects on the department such as not accepting medical and surgical transfers from other hospitals and increased waiting room times for patients with non-psychiatric emergency complaints.

Figure 5*Psychiatric Census in ED, May 2017*

Data from January to April 2017 showed that 1,277 patients presented for whom the examining ED provider ordered a psychiatric consult. Of these 1,277 patients, in terms of pediatric and geriatric patients, 85 were between 0-11 years of age, 242 were between 12-17 years of age, 69 were between 60-69 years of age, and 63 were over age 70. The remaining 818 were between the ages of 18 and 59 (personal communication, Rosy Fernandez, May 10, 2017).

The average LOS during this timeframe for this population was 59 hours (blue dashed line on Figure 6 below). However, there were a large number of patients who were outliers with much longer LOSs as evidenced by Figure 6 below (light gray solid line in Figure 6 is 2 times average LOS).

Figure 6*Length of Stay (hours)*

Patients with extremes of age had average LOSs longer than the overall average LOS, as shown in Table 1 (personal communication, Rosy Fernandez, May 10, 2017).

Table 1*Average LOS by Age*

Age	Average LOS (hours)
0-11	69
12-17	60
18-29	57
30-39	49
40-49	57
50-59	61
60-69	62
70+	82
Overall	59

In addition to long LOS from January to April 2017, these patients were of high acuity with 587 admitted to the neuropsychiatric hospital on the same campus as the ED. Of the 1,277, 72 were transferred to another psychiatric facility within the state for inpatient care. One of the main reasons for transfer to another facility is a patient history of aggression or violence. Again, evidence that nurses in this ED are caring for a population with high acuity for extended periods of time.

Safety is an issue for ED nurses dealing with this population. TJC addresses safety in this population in the 2017 National Patient Safety Goals for hospital accreditation. Goal 15 states that hospitals must have procedures in place to assess and address safety needs related to psychiatric needs of patients (TJC, 2017).

The volume, increased LOS, and high acuity of these patients could contribute communication issues that ED nurses have when providing handoffs (shift reports) regarding these patients. Lack of consistency or clarity in information can lead to safety

issues in the department or for the patient. Handoffs have been linked to adverse events in all clinical settings (Agency for Healthcare Research & Quality [AHRQ], 2016).

Failures related to communication in the emergency setting have been found to be a significant cause of preventable error in closed malpractice claims. The recommendation for improving the safety related to handoffs is standardizing the process (AHRQ, 2016).

For more than 10 years TJC has focused on improving communication between caregivers to improve patient safety (Ardoin & Broussard, 2011). In nursing, the SBAR tool has been extensively used and although there is no *best practice* for improving communication in handoffs, the World Health Organization (WHO) suggests it may be a useful standardized communication framework (WHO, as cited in Ardoin & Broussard, 2011). The psychiatric patient population is complex with many needs that may need to be addressed during the plan of care during the emergency department stay. As discussed earlier, long LOS in the ED can contribute to degradation of consistent and clear information related to these patients that can impact quality and safety. To attempt to mitigate this, this project was designed to provide an educational module and implement in this department an innovative nursing handoff template in order to impact care. This tool, the SAFEPLAN Report Template (see Figure 7), was developed by the project administrator to be used for the emergency psychiatric patient population and is based on SBAR principles of providing specific information related to situation, background, assessment, and recommendations. This tool was reviewed and input on development given by the project administrator's chair and committee as well as two ED nursing colleagues with prior psychiatric experience considered experts in the field.

Figure 7*The SAFEPLAN Report Template*

	The SAFEPLAN Report Template
S	Status- IVC or Voluntary Situation- what brought the patient to the ED? Service- what service is following the patient?
A	Assessments- General and Psychiatric Specific - Activity/Agitation - Alcohol/Substance withdrawal
F	Forbidden -Items or people, specific to the patient -Known triggers to avoid
E	Events of the Last Shift - ADL's - Group activity participation - PRNs needed - Restraint use
P	Pertinent PMH Pain Prior attempts/hospitalizations Password Privileges Plan to admit/transfer/DC
L	Labs- Abnormalities Legal Guardian/POA Legal Issues
A N	Anticipated Needs (including but not limited to): - VS frequency/Abnormalities - Accuchecks/Labs to be drawn - Wound care/Medical complaints - Special diets - Increased supervision (fall risk, cognitive impairment, developmental delay, incontinence)

SECTION III

Goals, Objectives, and Mission

Mission Statement

In line with the mission statement of the project site, which is to provide patient care, educate health care professionals, and to conduct medical research in conjunction with the affiliated medical school (UNC Health Care, 2017), the project administrator has composed the following mission statement for this project: The mission of the *Implementing SAFEPLAN: A Communication Tool for Emergency Nurses Caring for Psychiatric Patients* project is to educate nurses caring for the emergency psychiatric patient population to use an innovative new handoff template to improve communication and safety during patient care.

Goals

The project administrator has identified six goals for this quality improvement project.

1. Nurses caring for emergency psychiatric patients will be provided an educational module related to the SAFEPLAN Report Template (SAFEPLAN).
2. Nurses caring for emergency psychiatric patients will begin to use SAFEPLAN when communicating handoff reports.
3. SAFEPLAN will be a template that is simple to use.
4. SAFEPLAN will be a usable template.
5. SAFEPLAN use will impact nurses' perception of patient safety.
6. SAFEPLAN use will impact nurses' perception of departmental safety.

Process and Outcome Objectives

The process for this quality improvement project began with identifying a need and then performing a literature review to determine the evidence base as well as the gaps present to target quality improvement. From that, the above goals were developed. To meet these goals, an educational module was developed and provided to the staff electronically. Staff were provided 3 weeks to complete the education and the SAFEPLAN report initiative was then implemented. Staff were encouraged to use the SAFEPLAN template when providing handoff report on psychiatric patients in the ED. Templates were posted around the department at the nursing stations and paper report forms were provided for staff use (see Appendix A). After approximately 6 weeks, the staff was surveyed to determine the impact of the education and implementation of SAFEPLAN. The following outcome objectives have been identified.

1. Nurses report an increase in clarity of report.
2. Nurses report an increase in consistency of report.
3. Nurses perceive SAFEPLAN easy to use.
4. Nurses perceive SAFEPLAN usable.
5. Nurses perceive SAFEPLAN contributes to patient safety.
6. Nurses perceive SAFEPLAN contributes to departmental safety.

SECTION IV

Theoretical Underpinnings

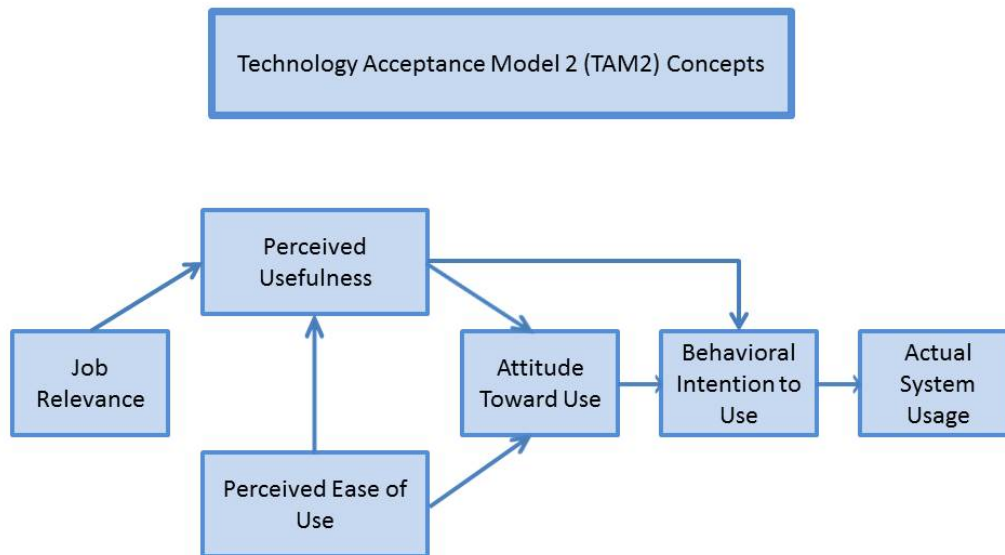
This project will be based on two frameworks related to education and process acceptance: adult learning theory and the technology acceptance model 2 (TAM2).

Adult Learning Theory

The literature provides information on how adults learn, which in some ways is very different from pedagogy, or how children learn. In adult learning theory, learning is a conscious, intentional act, focusing on the practical applications of the learning (ENA, 2014). Adult learning is much more interactive than pedagogy, with the instructor facilitating learning rather than providing rote information and facts to be memorized. Additionally, adult learners may be more motivated to learn when they can link the education to work application. Adults prefer learning practical applications of information that can assist them in their job roles (ENA, 2014). In this project, ED nurses will be introduced to an innovative template that can assist them with communication during handoff of emergency psychiatric patients.

TAM2

When most individuals think of technology, they think of computers or the *internet-of-things* that currently is expanding in society today. However, technology can be defined simply as a “process” (Dictionary.com, n.d.). TAM2 is a model that seeks to explain adoption of technology using two variables: perceived usefulness and perceived ease of use (see Figure 8).

Figure 8*TAM2 Concepts*

The initial TAM and the current TAM2 were initially used in the information technology field but since the focus has widened and research has been used in varying work settings to include health care to include nurses' perceptions on adoption of technology (National Institutes of Health [NIH], n.d.).

SECTION V

Work Planning

Work planning for this project includes a timeline for project activities and a budget for project implementation and completion.

Timeline

Figure 9 outlines the Timeline for project implementation using a Plan-Do-Study-Act (PDSA) framework.

Figure 9

Project Implementation

Project Phase	Activities	Timeline
Preparation (Plan)	Needs Assessment Tool Development Project Proposal Educational Module Development Project Approvals	May 2017- August 2019
Education (Do)	Provide Educational Module	September 2019
Implement (Do)	Implement Use of SAFEPLAN	September- October 2019
Data Collection (Study)	Recruit and Survey Staff	November 2019
Data Analysis (Study, Act)	Analyze Data to Determine Impact of Project Results and Conclusions Revise template and re-educate staff as necessary	December-March 2020
Project Presentation (Act)	DNP Project Defense Proquest Submission Presentation to ED staff	April 2020

Budget

The project administrator estimated a budget of \$1,600 for implementation of this project and it was able to be completed under budget. Copyrighting of intellectual property was deferred at this time due to potential future revisions. Figure 10 breaks down the cost projections and Figure 11 lists actual costs of the project.

Figure 10

Proposed Budget

Proposed Budget

Item	Amount
Statistician Services	\$750
Electronic Survey Service	\$300
Formatting/Copying of Manuscript	\$300
Copyright/Intellectual Property	\$150
Office Supplies/Copying/Misc.	\$100
TOTAL	\$1600

Figure 11*Actual Budget*

Actual Budget

Item	Amount
Statistician Services	\$173
Electronic Survey Service	\$408
Formatting/Copying of Manuscript	\$300
Copyright/Intellectual Property	\$0
Office Supplies/Copying/Misc.	\$273
TOTAL	\$1154

SECTION VI

Evaluation Planning

Evaluation Process

During the needs assessment, nurses were surveyed about their perceptions on their education adequacy related to this patient population, current reporting formats and perceived shortcomings, and contributions to reports of this population to departmental and patient safety. The evaluation process will occur after education has been completed and SAFEPLAN handoffs have been occurring for 6 weeks. The evaluation process will include survey items generated by the project administrator (see Figure 12) as well as two adapted survey tools based on TAM2: the Perceived Usefulness Scale (PU) (Figure 13) and the Perceived Ease of Use Scale (PEU) (Figure 14). These scales have been used extensively in research and have high reliabilities (PU=0.98 and PEU=0.94) along with high validity. Each scale has six questions that use a 7-point Likert scale from extremely unlikely to extremely likely (NIH, n.d.). Permission has been received from Dr. Davis for the project administrator to adapt and use these tools (see Appendix B). The full survey can be reviewed in Appendix C). These surveys will be administered electronically.

Figure 12*Project Administrator Generated Survey Items*

Project Administrator Generated Survey Items

7-point Likert
Strongly Disagree to Strongly Agree

- Using SAFEPLAN in handoffs increases clarity of report.
- Using SAFEPLAN in handoffs increases consistency of report.
- In my opinion, using SAFEPLAN in handoffs contributes to departmental safety.
- In my opinion, using SAFEPLAN in handoffs contributes to patient safety.

Percentage Rank:

- Less than 25% of the time
- 25-50% of the time
- 51-75% of the time
- More than 75% of the time

- I use SAFEPLAN with psychiatric patient handoffs
- I receive information in report on psychiatric patients that is unclear
- I receive information in report on psychiatric patients that is inconsistent

Open-ended Qualitative:

- What parts of the SAFEPLAN template were most helpful to you?
- Was there anything missing from the SAFEPLAN template?
- Is there anything that should be changed in the SAFEPLAN template?

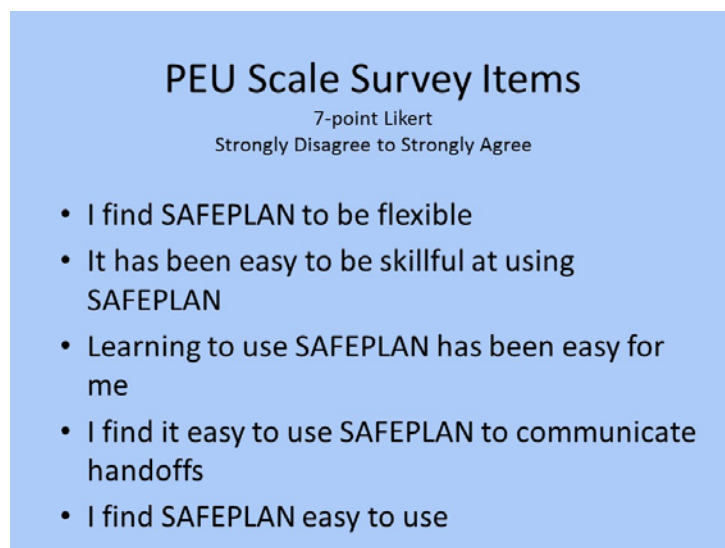
Plus 3 demographic questions

Figure 13*PU Scale Survey Items*

PU Scale Survey Items

7-point Likert
Strongly Disagree to Strongly Agree

- Using SAFEPLAN in my job enables me to accomplish tasks more quickly
- Using SAFEPLAN in my job increases my productivity
- Using SAFEPLAN in my job makes it easier to do my job
- I find SAFEPLAN useful in my job
- Using SAFEPLAN is clear and understandable

Figure 14*PEU Scale Survey Items*

Additionally, demographic data will be collected on the nursing sample to include ED or flex team nurse, number of years' experience as a nurse, and prior experience as a psychiatric nurse as these variables may affect the survey data.

Ethical Considerations

Nursing members in the emergency department and on the hospital nursing flex team were encouraged by their respective managers to participate in this project; however, the project remained a voluntary process change. There were no adverse actions taken by management for non-participation. The informed consent document was developed by the project administrator prior to project implementation (see Appendix D). This document was approved by the project chair, the project setting's Nursing Research Council (NRC), and the University's Institutional Review Board (IRB) Committee. Participants received the informed consent electronically and consent was implied by participation in the project survey. The survey was developed to be administered in an

anonymous manner via the SurveyMonkey® platform. University IRB and the project setting's NRC approval was granted prior to project implementation. Consent was provided by the ED nursing management for the project to occur. Project implementation was presented by the project administrator. The project administrator was available for any questions from participants. No participants reported any harm or negative experiences from participation in the project.

SECTION VII

Implementation

Project Process

As stated earlier, the project consisted of presenting education related to SAFEPLAN, implementing the SAFEPLAN handoff report, and then surveying participants to evaluate the project. The education was presented at two staff meetings in October 2019 as well as in electronic form via the YouTube platform for staff who were unable to attend the staff meetings. A total of 85 nurses were educated over a 3 week period prior to implementation of the project on the unit. The content of the education included:

- Learning objectives
- Background information related to ED visits of patients with psychiatric complaints
- Impact of communication and standardizing handoffs in healthcare
- Literature review discussing best-practice and gaps related to handoffs
- Four themes identified as strengths of the literature supporting this project
 - Standardized templates provide consistency of handoffs
 - The templates should be contextualized
 - Education can increase knowledge, and
 - Safety can be impacted by use of a handoff template
- Review of needs assessment findings
- Discussion of factors contributing to and impacts of communication issues in the ED

- Review of the SAFEPLAN template and report form
- Review of project implementation timeline, and finally
- Direction for questions related to the project

After the education period, nurses were asked to begin using the SAFEPLAN template during report whenever caregivers changed. This behavior was encouraged by nursing managers via email to staff and by the project administrator via email and by placing informational placards about the project around the unit. Each treatment area had SAFEPLAN template report forms placed in the nursing station for use. Nurses were allowed 6 weeks of template use prior to the survey opening for project evaluation. The electronic survey was sent out via email and was open for 3 weeks. The setting nurse managers encouraged staff to complete the survey and the project administrator placed encouraging placards about the survey around the unit. The project administrator also sent follow-up emails weekly in an attempt to boost survey completion. After a 3 week timeframe, the survey was closed.

Outcome/Evaluative Measures and Interpretation

At the end of 6 weeks of use of the SAFEPLAN template during handoffs, a survey instrument was provided electronically for nursing staff to complete anonymously. Staff was encouraged by the project administrator and the project setting managers to participate, but participation was voluntary. The survey was completed, on average, in less than 4 minutes by participants. There were 29 responses out of a total of 180 potential participants, yielding a 16.1% response rate. The raw data responses are provided below (Figures 15-54) for each quantitative survey question.

Figure 15

Q1 Results Graph

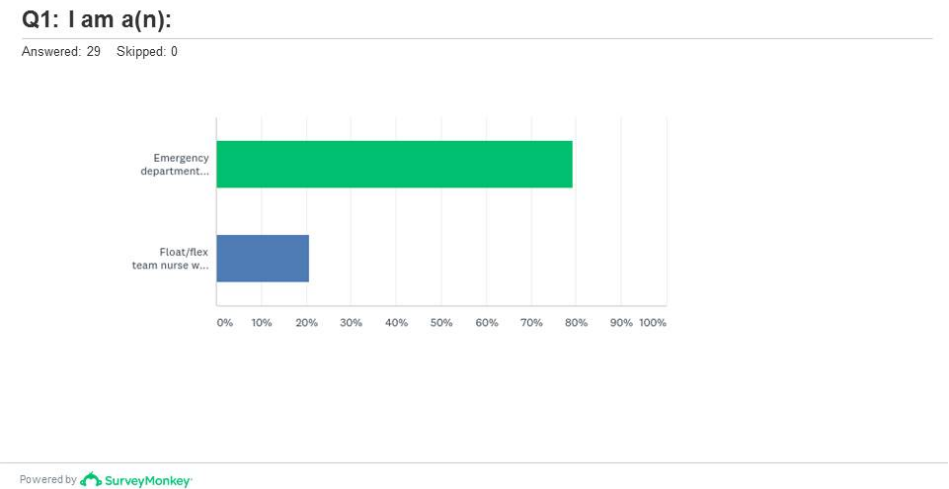


Figure 16

Q1 Answer Choices

Q1: I am a(n):

Answered: 29 Skipped: 0

ANSWER CHOICES	PERCENTAGE	COUNT
Emergency department nurse (assigned to 27031 or 27041)	79.31%	23
Float/flex team nurse who has been assigned to work in the emergency department in the past 6 weeks	20.69%	6
TOTAL		29

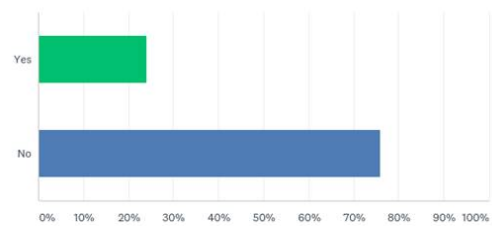
Powered by SurveyMonkey

Figure 17

Q2 Results Graph

Q2: I have had prior experience as a psychiatric nurse.

Answered: 29 Skipped: 0



Powered by  SurveyMonkey

Figure 18

Q2 Answer Choices

Q2: I have had prior experience as a psychiatric nurse.

Answered: 29 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	24.14%	7
No	75.86%	22
TOTAL		29

Powered by  SurveyMonkey

Figure 19

Q3 Results Graph

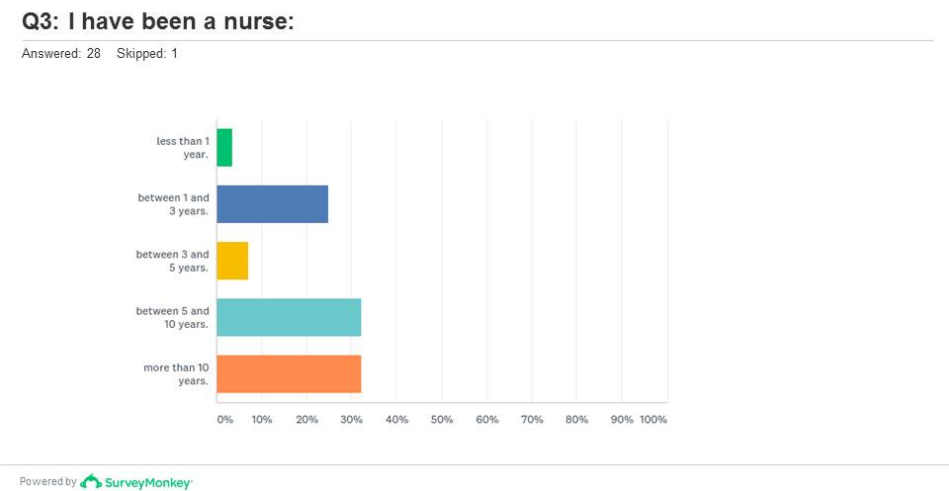


Figure 20

Q3 Answer Choices

Q3: I have been a nurse:

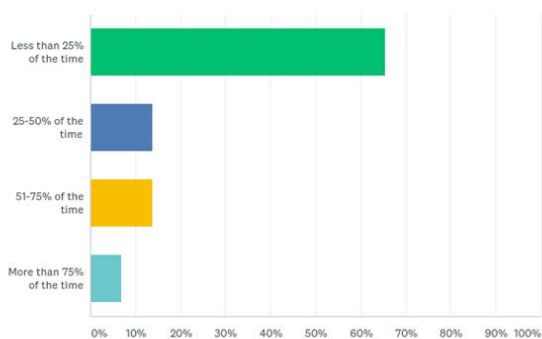
Answered: 28 Skipped: 1

ANSWER CHOICES	PERCENTAGE	COUNT
less than 1 year.	3.57%	1
between 1 and 3 years.	25.00%	7
between 3 and 5 years.	7.14%	2
between 5 and 10 years.	32.14%	9
more than 10 years.	32.14%	9
TOTAL		28

Powered by SurveyMonkey

Figure 21*Q4 Results Graph***Q4: I use SAFEPLAN with psychiatric patient handoffs:**

Answered: 29 Skipped: 0



Powered by SurveyMonkey

Figure 22*Q4 Answer Choices***Q4: I use SAFEPLAN with psychiatric patient handoffs:**

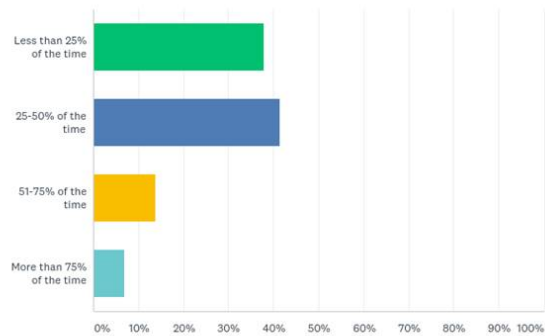
Answered: 29 Skipped: 0

ANSWER CHOICES	RESPONSES
Less than 25% of the time	65.52% 19
25-50% of the time	13.79% 4
51-75% of the time	13.79% 4
More than 75% of the time	6.90% 2
TOTAL	29

Powered by SurveyMonkey

Figure 23*Q5 Results Graph***Q5: I receive information in report on psychiatric patient that is unclear:**

Answered: 29 Skipped: 0



Powered by SurveyMonkey

Figure 24*Q5 Answer Choices***Q5: I receive information in report on psychiatric patient that is unclear:**

Answered: 29 Skipped: 0

ANSWER CHOICES	RESPONSES	
Less than 25% of the time	37.93%	11
25-50% of the time	41.38%	12
51-75% of the time	13.79%	4
More than 75% of the time	6.90%	2
TOTAL		29

Powered by SurveyMonkey

Figure 25

Q6 Results Graph

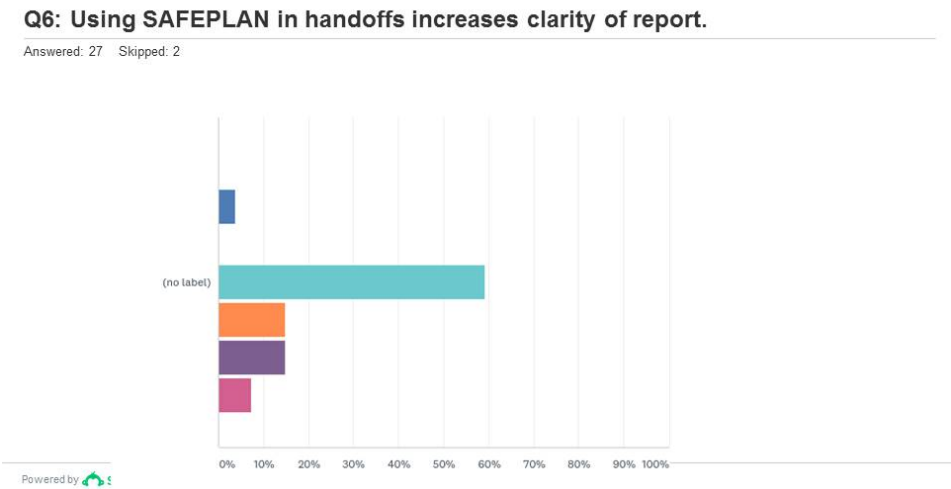


Figure 26

Q6 Answer Choices

Q6: Using SAFEPLAN in handoffs increases clarity of report.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	3.70% 1	0.00% 0	59.26% 16	14.81% 4	14.81% 4	7.41% 2	27	4.59

Powered by SurveyMonkey

Figure 27

Q7 Results Graph

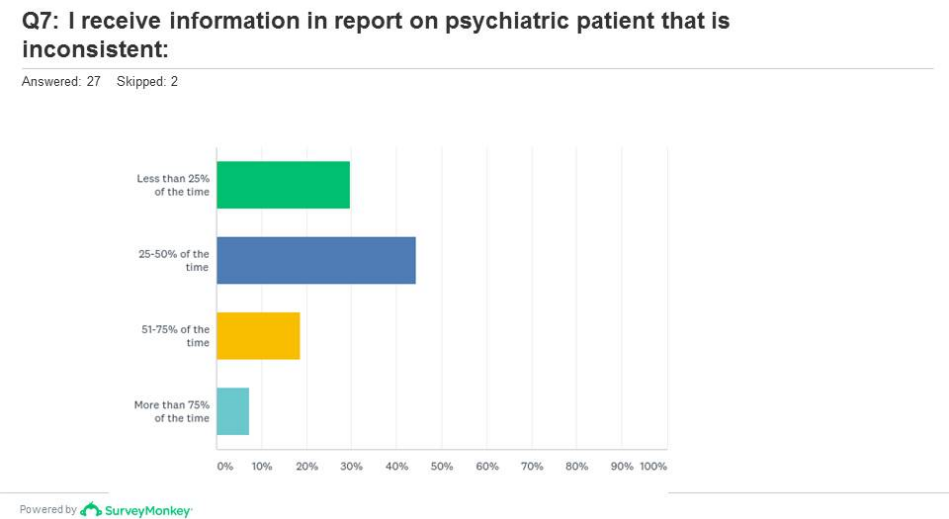


Figure 28

Q7 Answer Choices

Q7: I receive information in report on psychiatric patient that is inconsistent:

Answered: 27 Skipped: 2

ANSWER CHOICES	RESPONSES
Less than 25% of the time	29.63% 8
25-50% of the time	44.44% 12
51-75% of the time	18.52% 5
More than 75% of the time	7.41% 2
TOTAL	27

Powered by SurveyMonkey

Figure 29

Q8 Results Graph

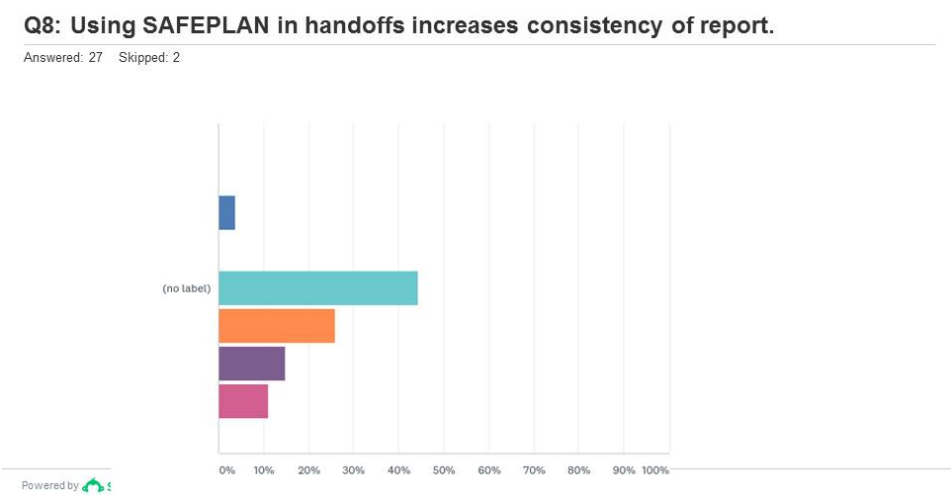


Figure 30

Q8 Answer Choices

Q8: Using SAFEPLAN in handoffs increases consistency of report.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	3.70% 1	0.00% 0	44.44% 12	25.93% 7	14.81% 4	11.11% 3	27	4.81

Powered by SurveyMonkey

Figure 31

Q9 Results Graph

Q9: In my opinion, using SAFEPLAN in handoffs contributes to departmental safety.

Answered: 26 Skipped: 3

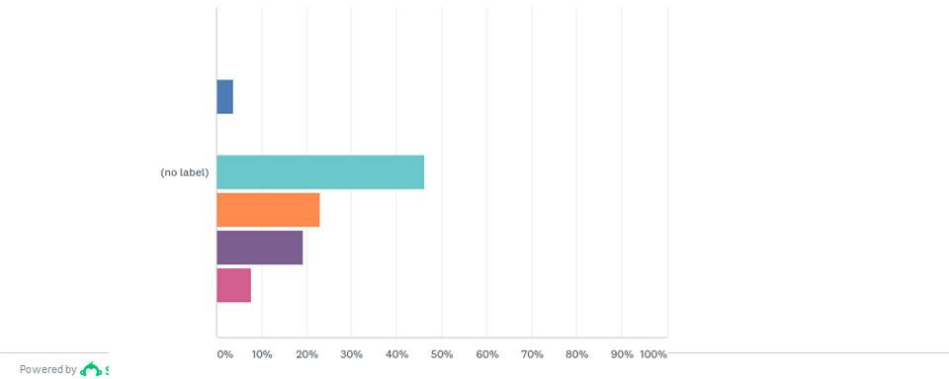


Figure 32

Q9 Answer Choices

Q9: In my opinion, using SAFEPLAN in handoffs contributes to departmental safety.

Answered: 26 Skipped: 3

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	3.85% 1	0.00% 0	46.15% 12	23.08% 6	19.23% 5	7.69% 2	26	4.77

Figure 33

Q10 Results Graph

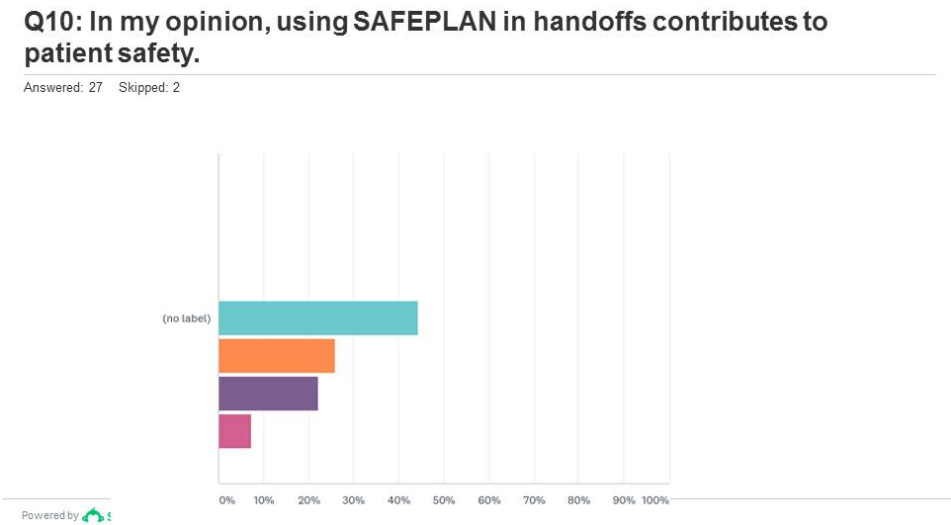


Figure 34

Q10 Answer Choices

Q10: In my opinion, using SAFEPLAN in handoffs contributes to patient safety.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	0.00% 0	44.44% 12	25.93% 7	22.22% 6	7.41% 2	27	4.93

Powered by SurveyMonkey

Figure 35

Q11 Results Graph

Q11: Using SAFEPLAN in my job enables me to accomplish tasks more quickly.

Answered: 27 Skipped: 2

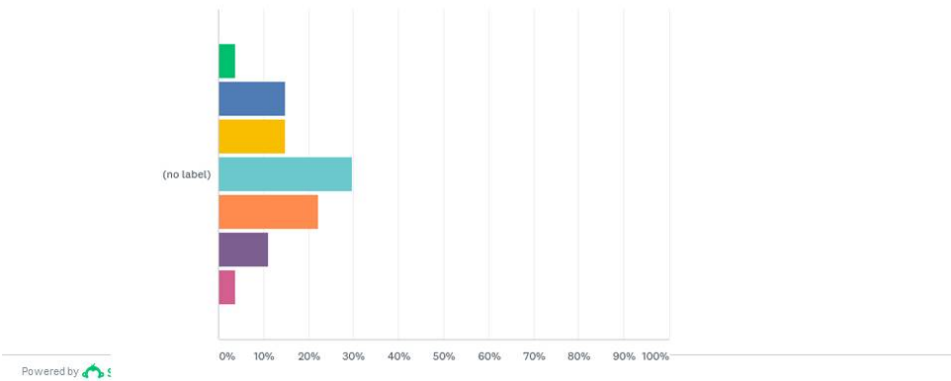


Figure 36

Q11 Answer Choices

Q11: Using SAFEPLAN in my job enables me to accomplish tasks more quickly.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	3.70% 1	14.81% 4	14.81% 4	29.63% 8	22.22% 6	11.11% 3	3.70% 1	27	4.00

Figure 37

Q12 Results Graph

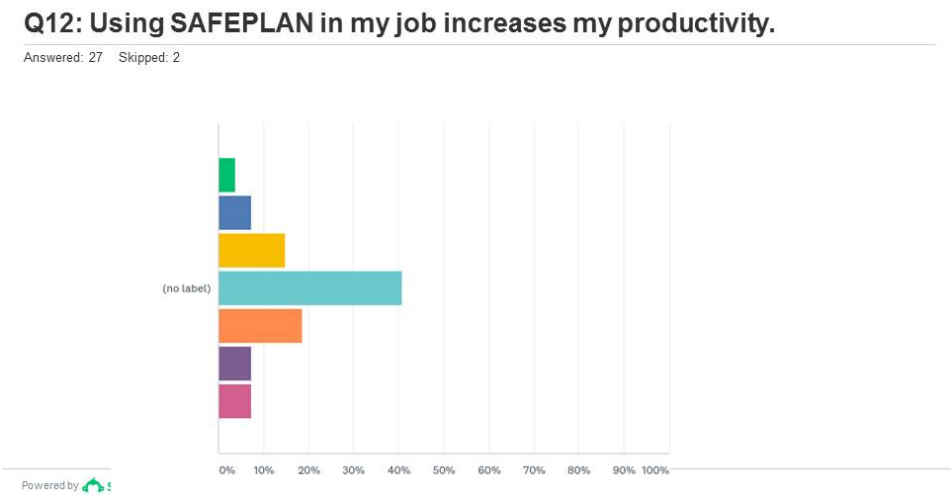


Figure 38

Q12 Answer Choices

Q12: Using SAFEPLAN in my job increases my productivity.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	3.70% 1	7.41% 2	14.81% 4	40.74% 11	18.52% 5	7.41% 2	7.41% 2	27	4.15

Powered by SurveyMonkey

Figure 39

Q13 Results Graph

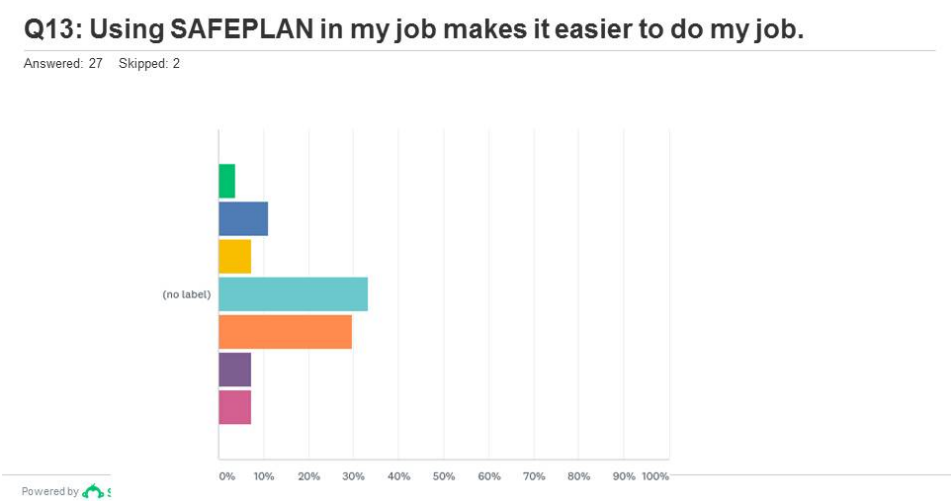


Figure 40

Q13 Answer Choices

Q13: Using SAFEPLAN in my job makes it easier to do my job.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	3.70% 1	11.11% 3	7.41% 2	33.33% 9	29.63% 8	7.41% 2	7.41% 2	27	4.26

Powered by

Figure 41

Q14 Results Graph

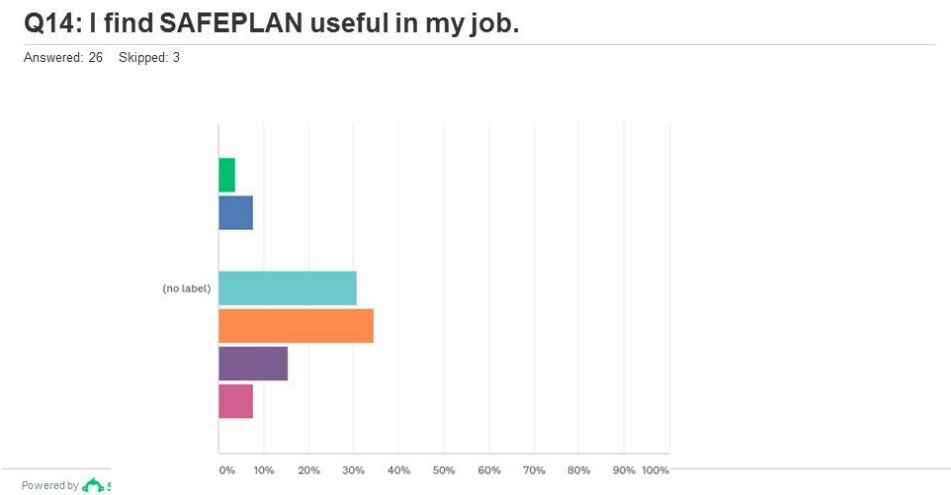


Figure 42

Q14 Answer Choices

Q14: I find SAFEPLAN useful in my job.

Answered: 26 Skipped: 3

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	3.85% 1	7.69% 2	0.00% 0	30.77% 8	34.62% 9	15.38% 4	7.69% 2	26	4.62

Powered by SurveyMonkey

Figure 43

Q15 Results Graph

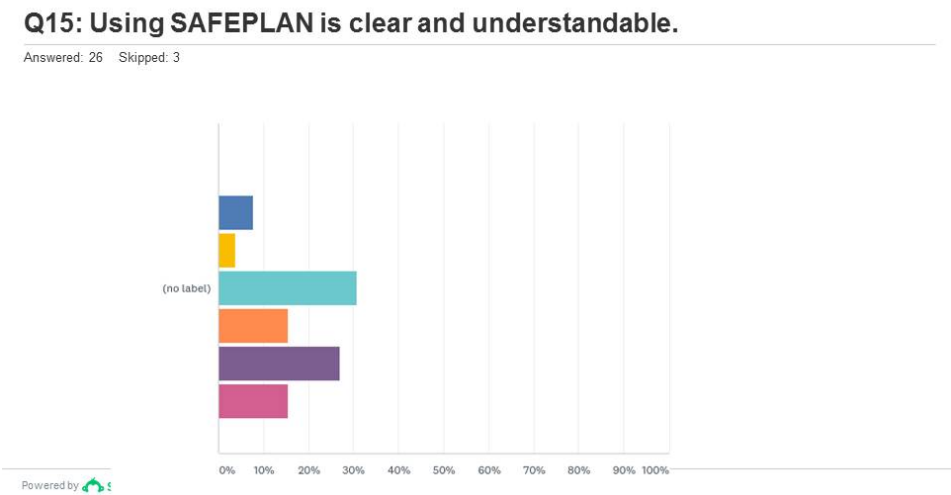


Figure 44

Q15 Answer Choices

Q15: Using SAFEPLAN is clear and understandable.

Answered: 26 Skipped: 3

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	7.69% 2	3.85% 1	30.77% 8	15.38% 4	26.92% 7	15.38% 4	26	4.96

Powered by SurveyMonkey

Figure 45

Q16 Results Graph

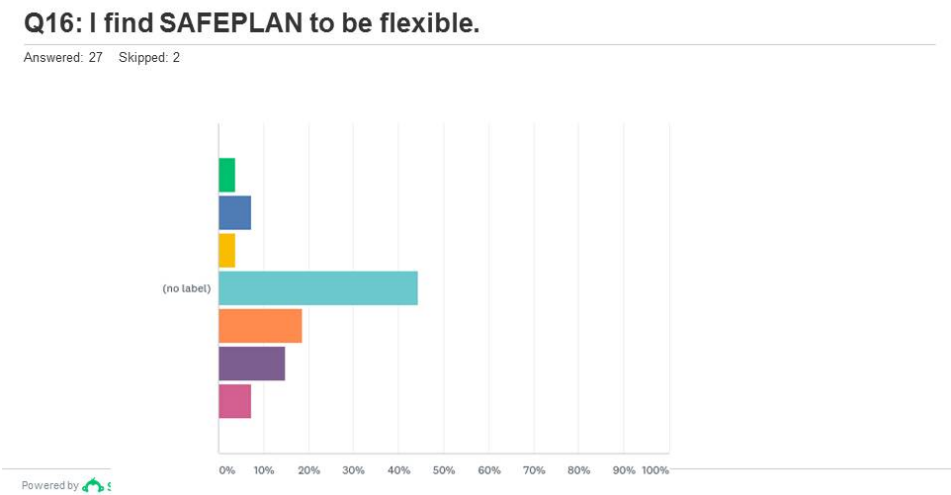


Figure 46

Q16 Answer Choices

Q16: I find SAFEPLAN to be flexible.

Answered: 27 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	3.70% 1	7.41% 2	3.70% 1	44.44% 12	18.52% 5	14.81% 4	7.41% 2	27	4.41

Powered by SurveyMonkey

Figure 47

Q17 Results Graph

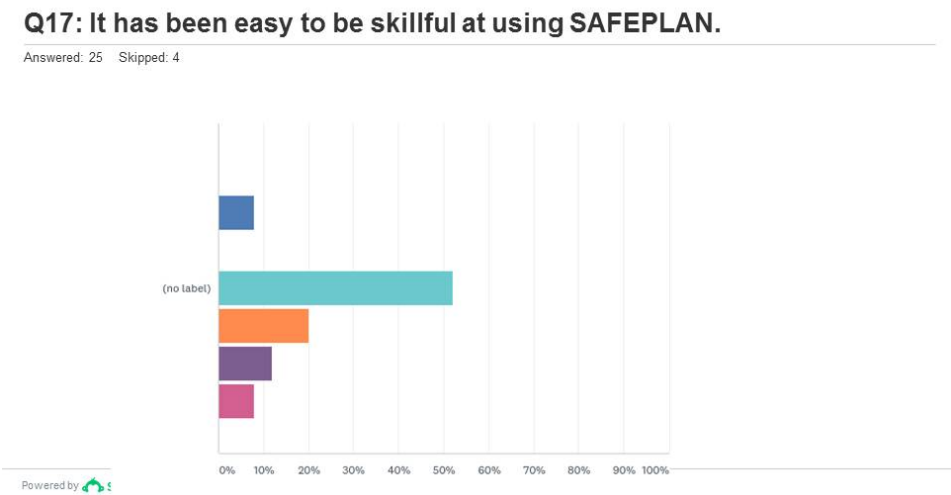


Figure 48

Q17 Answer Choices

Q17: It has been easy to be skillful at using SAFEPLAN.

Answered: 25 Skipped: 4

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	8.00% 2	0.00% 0	52.00% 13	20.00% 5	12.00% 3	8.00% 2	25	4.52

Powered by SurveyMonkey

Figure 49

Q18 Results Graph

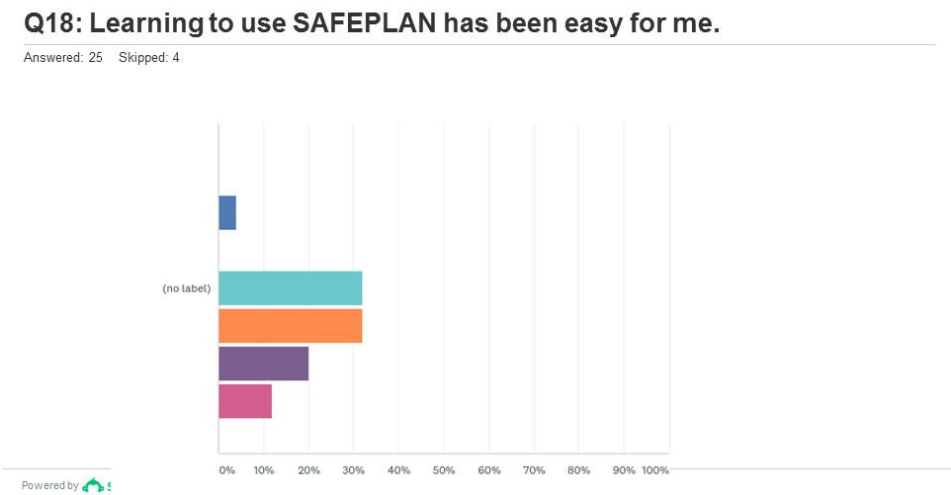


Figure 50

Q18 Answer Choices

Q18: Learning to use SAFEPLAN has been easy for me.

Answered: 25 Skipped: 4

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	4.00% 1	0.00% 0	32.00% 8	32.00% 8	20.00% 5	12.00% 3	25	5.00

Powered by SurveyMonkey

Figure 51

Q19 Results Graph

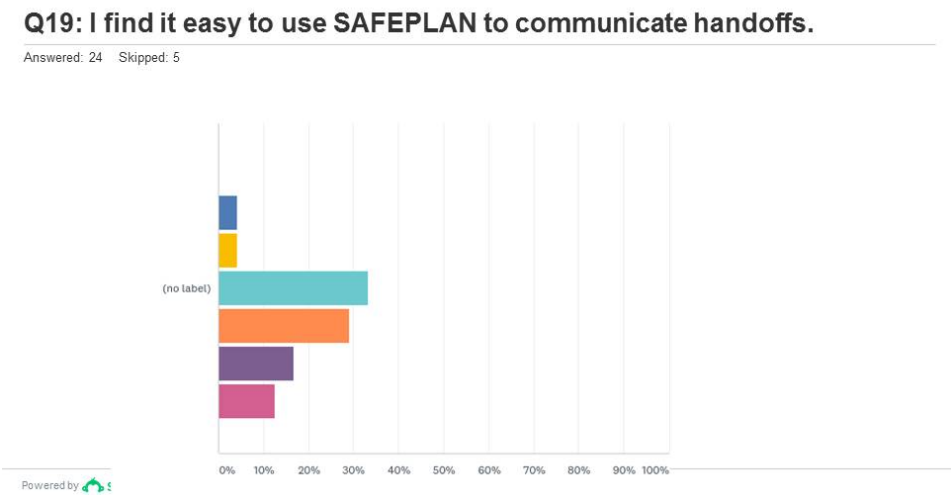


Figure 52

Q19 Answer Choices

Q19: I find it easy to use SAFEPLAN to communicate handoffs.

Answered: 24 Skipped: 5

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	4.17% 1	4.17% 1	33.33% 8	29.17% 7	16.67% 4	12.50% 3	24	4.88

Powered by SurveyMonkey

Figure 53

Q20 Results Graph

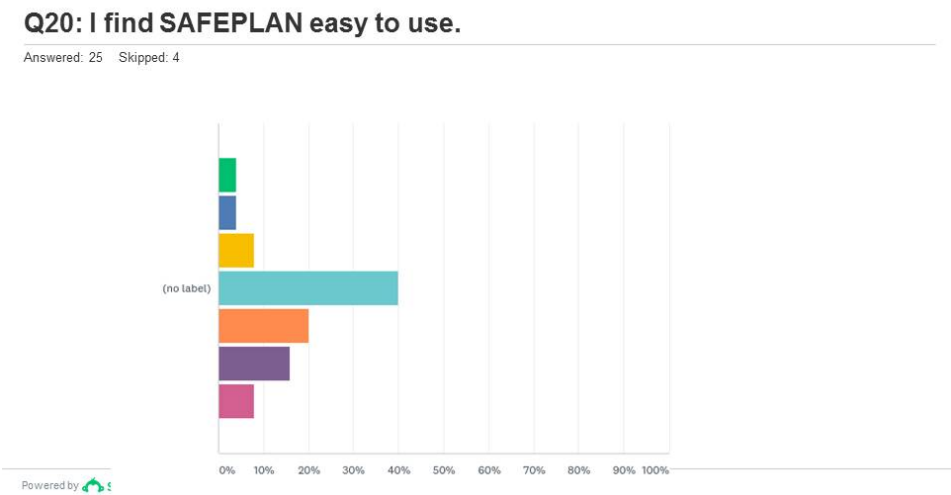


Figure 54

Q20 Answer Choices

Q20: I find SAFEPLAN easy to use.

Answered: 25 Skipped: 4

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
(no label)	4.00% 1	4.00% 1	8.00% 2	40.00% 10	20.00% 5	16.00% 4	8.00% 2	25	4.48

Powered by SurveyMonkey

For the quantitative PU and PEU questions, averages were calculated as seen in Table 2.

Table 2

Average of Responses for PU and PEU

Question	Mean
PU-11	3.72
PU-12	3.86
PU-13	3.96
PU-14	4.28
PU-15	4.59
PEU-16	4.10
PEU-17	3.90
PEU-18	4.31
PEU-19	4.03
PEU-20	3.86

Additionally, there were three qualitative questions on the survey. These questions are below with the comments following.

Q21- What parts of the SAFEPLAN template were most helpful to you?

- Having open spaces makes it more flexible. Also, items easily forgotten, but important- anticipated needs, pain, plan to admit/refer

- Standardization in general. Examples provided=helpful
- All
- The 'S'
- The plan of care, expected treatment, why patients are waiting
- Information regarding patient behaviors, date they came in, circumstance, medical history, issues, etc.
- All aspects
- The template seemed to be geared toward medical patients more so than psych patients. It was difficult to figure out where to write what I needed in which bracket, and it did not have many of the elements that the traditional psych report templates have (rounds, Columbia, level of supervision areas). It was a great idea, however, could use some restructuring.

Q22- Was there anything missing from the SAFEPLAN template?

- Length of stay, age, allergies, schedule of meds, PRNs, provider/contact
- It is too medical focused, it needs more of a psych assessment focus
- Rounds, level of supervision, Columbia score area
- No
- None that I can think of

Q23- Is there anything that should be changed in the SAFEPLAN template?

- Having online customizable template to add or take away items as applicable to unit
- None that I can think of

- Letters need to be bigger and it needs to be set up like a care plan, with different sections, nicer to the eye, then will be easier to read
- Maybe instead of handwriting everything, have items to be circled if you really want it to be used
- No
- Not at this time
- Too much information required for a changing fast paced unit
- More psych/psychosocial assessment focus
- As stated above, the template seems to be too medical and would benefit from some restructuring. I have not seen it used much at all, the general consensus being that it was bulky and too difficult to use

SECTION VIII

Interpretation of Data

Limitations

The sample consisted of 29 nurses of which the majority (79%) stated they were ED nurses and that they did not have prior experience as a psychiatric nurse (76%). The majority (64%) also had 5 years or greater nursing experience. Of this sample, 65% stated they used SAFEPLAN less than 25% of the time. Lack of use of the template is a major limitation to data interpretation and muddles attempts to do so. In comparing the needs assessment data to the post-implementation data (Figure 55), one can see that after SAFEPLAN implementation a greater percentage of the sample reported that they received inconsistent information greater than 51% of the time. However, with a majority of the sample using the template less than 25% of the time, no conclusions regarding SAFEPLAN's impact can be drawn from this. However, there was a distinct increase in the number of the sample that reported using a structured report (defined by the project administrator as using SAFEPLAN greater than 51% of the time).

Figure 55*Comparison to Needs Assessment*

Comparison to Needs Assessment	
'Report' (Pre-implementation)	'SAFEPLAN' (Post-implementation)
<ul style="list-style-type: none"> • Contributes to patient safety= 95% • Contributes to department safety= 95% • Receive unclear information >51% of time= 22% • Receive inconsistent information >51% of time= 21% • Use structured report= 10% of sample 	<ul style="list-style-type: none"> • Contributes to patient safety 96% • Contributes to department safety 96% • Receive unclear information >50% of time= 21% • Receive inconsistent information >51% of time= 26% • Use SAFEPLAN >51% of time= 21% of sample

There were two additional limitations that affected this project and the data collected for project evaluation. First, an event out of the control of the project administrator occurred less than 1 month prior to the rollout of the project education. The medical center had their triennial credentialing visit from The Joint Commission. In the findings from this visit, the setting had to put in place multiple changes in process related to caring for psychiatric patients in the ED and house-wide. Most of the changes directly affected nursing staff with process, documentation, and education. During the education and implementation phase of this project, nurses were receiving multiple emails, sometimes each day, about process changes with this patient population. These processes were sometimes changing week-to-week, and the nursing staff were expected to 'keep up' with the changes. Change fatigue has been described in the nursing literature as "a real phenomenon experienced by frontline nursing staff during large-scale organizational change conditions" (Camilleri et al., 2019, p. 655). Change in the workplace causes

nurses to experience feelings of stress, burnout, and exhaustion (Camilleri et al., 2019). Change fatigue became a real force against and barrier to the success of this project. The project was one more change that the nurses were asked to participate in; whereas, the changes required by the Joint Commission were mandated for continued credentialing. The frontline ED nurses who could have been participants in the project felt significant pressure from nursing management to achieve the changes in process, documentation, and education in rapid fashion. These mandated changes are still occurring at the study site. Thus, participating in a doctoral nursing project may not have been seen as important. The second limitation noted in the data is the small sample size. The survey was emailed to 180 potential participants. There were 29 respondents to the survey. This yields a 16% participation rate. Some questions were skipped by the respondents, leading to an even smaller sample. Due to this, the statistician did not complete any correlational statistics between the demographic variables and the other variables. The small participation rate affects the generalization of the findings that will be discussed in the next section.

These limitations will affect the generalization of findings. The project administrator has chosen to not re-educate staff at this time due to continued fluidity of processes and procedures related to care of mental health patients in this department. In addition, there are current effects on ED nurses due to the global COVID-19 pandemic and changes in workflows due to this.

Project Evaluation

In developing this project two PICOT questions along with six project outcome goals were identified.

Discussion of PICOT

There are two PICOT questions that are addressed by this project. First, for nurses working in an emergency department with psychiatric patients, will implementation and use of a standardized shift handoff report template, SAFEPLAN, result in an increase in nurses reporting an improvement in clarity and consistency of handoff, patient safety, and departmental safety as measured by ‘agree’ or ‘strongly agree’ responses on a Likert scale survey tool six weeks after implementation? Second, for nurses working in an emergency department with psychiatric patients, will implementation of a standardized shift handoff report template, SAFEPLAN, result in an increase in nurses reporting using a consistent handoff format, as measured by using the template greater than 50% of the time six weeks after implementation?

Each PICOT question was developed to determine SAFEPLAN’s impact. For PICOT 1, 22.2% of sample agree or strongly agree that using SAFEPLAN impacts clarity of report. The majority of respondents were neutral on this issue at 59.3%. Only 3.7% of respondents chose disagree categories. However, 79.3% report receiving clear information in report 50% of time or more during the project implementation time. In comparing this to needs assessment data, it is not statistically significant (Chi-Square (3 df) = 4.96, $p = 0.175$). In terms of report consistency, 15.8% of the sample agree or strongly agree that SAFEPLAN impacts consistency. There was no category that received a majority of responses; slightly agree responses were 25.9% and neutral responses were 44.4%. Only 3.7% of respondents chose disagree categories. However, 74.1% reported receiving consistent information in report 50% of the time or more during project implementation. In comparing this to needs assessment data, it is not statistically

significant (Chi-Square (3 df) = 4.96, $p = 0.175$). For patient and department safety, 26.9% and 29.6%, respectively, of the sample agree or strongly agree that SAFEPLAN has impacts. For PICOT 2, nurses reporting using template greater than 50% time was 19.6% of the sample. The majority, 65.5%, reported using SAFEPLAN less than 25%.

Discussion of Outcome Goals

The project administrator has identified six project outcome goals for this quality improvement project. One goal was met while five goals were partially met.

1. Nurses caring for emergency psychiatric patients will be provided an educational module related to the SAFEPLAN Report Template (SAFEPLAN).

This goal was met. The SAFEPLAN educational module was offered at two staff meetings. 12 RN staff were present. 73 views of the educational module occurred online by staff.

2. Nurses caring for emergency psychiatric patients will begin to use SAFEPLAN when communicating handoff reports.

This goal was partially met. Only 29 nurses responded to the post-intervention survey indicating use. Of this sample, 19.7% stated they used the template >51% of the time with report. In contrast, the majority 65.5% of the sample stated they used the template <25% with report.

3. SAFEPLAN will be a template that is simple to use.

This goal was partially met. Three of the five sub-scores' means were higher than neutral responses. These three higher sub-scores were for 'flexible', 'learning...has been easy for me', and 'easy to use ... to communicate handoffs'. The mean for the total PEU score is 20.2, which is higher than neutral response.

4. SAFEPLAN will be a usable template.

This goal was partially met. Two of the five sub-scores' means were higher than neutral responses. These two higher sub-scores were for 'useful in my job' and 'clear and understandable'. The mean for the total PU score is 20.4, which is higher than neutral response.

5. SAFEPLAN use will impact nurses' perception of patient safety.

This goal was partially met. For SAFEPLAN's impact to patient safety, 26.9% of the sample answered agree or strongly agree. No answer category received a majority. Of the remaining categories, nurses answered slightly agree 23.1% and neutral 46.2% of the time. All disagree categories accounted for 3.9%.

Comparing this to the needs assessment data, which 5% did not feel that 'report' contributed to patient safety, there was a lesser degree noted here; however, the positive impact, measured by agree or strongly agree respondents was not as positive as the project administrator would have liked.

6. SAFEPLAN use will impact nurses' perception of departmental safety.

This goal was partially met. For SAFEPLAN's impact to department safety, 29.6% of the sample answered agree or strongly agree. No answer category received a majority. Of the remaining categories, nurses answered slightly agree 25.9% and neutral 44.4% of the time. There were no answers in any of the disagree categories. Comparing this to the needs assessment data, which 5% did not feel that 'report' contributed to patient safety, there were no respondents that felt that SAFEPLAN affected department safety in a negative fashion. However,

the positive impact as measured by agree or strongly agree respondents was not as positive as the project administrator would have like.

Recommendations for Improvement

While this project had some successes, there is room for improvement. As with any quality improvement project, the PSDA cycle is iterative. The project administrator had intentions to revise the template and re-educate if goals were not met; however, due to the current healthcare environment in the study setting at present, revision and re-education were not completed at this time. The project administrator plans to revise the template based on feedback from the respondents and will consider re-educating in the future. Although the project administrator had support of management and used multiple modes of communication about this project, the project administrator also received feedback that some nurses were unaware of the project. More frequent communication related to the project during the implementation phase may have impacted the number of nurses participating and improved the response rate to the survey. Finally, in future iterations of the survey, the administrator may consider taking out the 'neutral' answer option. While this will not allow for direct comparison of answers, taking this response out of the survey will make a significant number of nurses choose the positive or the negative, which will make determining impact clearer.

Achievements

The educational module and the template were received well overall. Nurses reported that they felt standardization of the template was helpful. Additionally, most of the comments related to changing of the template were with layout issues and not items

of substance issues. Of the six outcome goals, one goal was fully met and five goals were partially met.

Plan for Sustainability

All of the material to continue to use the SAFEPLAN template for nursing handoffs remains available in the department for use. The educational module is still available for new staff to view. When the healthcare environment becomes less volatile for nurses, a revised template with re-education may be implemented and evaluated.

Implications for Practice and Quality Improvement

In looking at adult learning theory and TAM, nurses who find practicality in learning new processes and perceived usefulness and perceived ease of use with a process will be more likely to use the process. Although the sample of participants was small, the findings of this DNP project showed that ED nurses caring for psychiatric patients in the ED appreciated the standardization and flexibility the SAFEPLAN template offered. ED nurses also found the template to be easy to learn to use. Using SAFEPLAN was also useful to ED nurses. More study is needed related to ED nurses' perceptions to using the SAFEPLAN template to generalize the findings found in this project. Since this project was based on subjective findings, further study is needed to determine if SAFEPLAN template use can impact objective factors related to care of these patients in the ED.

Conclusion

Development of this DNP project included a detailed needs assessment, extensive literature review, formal and informal consultation with study site's ED nursing management team, approvals at the study site's Nursing Research Council and the university IRB, and in consultation with the project administrator's doctoral committee.

The data from the needs assessment was the driver for this project and it was supported by evidence-base of literature and theory. ED nurses were educated, and a handoff process implemented to use a standardized template, SAFEPLAN, when caring for psychiatric patients. While this project had small successes, it really opens the door to further study related to the issue of standardizing nursing handoffs in the emergency department environment when caring for psychiatric patients.

References

ACEP. (2014). *Care of the psychiatric patient in the emergency department: a review of the literature.*

https://www.acep.org/uploadedFiles/ACEP/Clinical_and_Practice_Management/Resources/Mental_Health_and_Substance_Abuse/Psychiatric%20Patient%20Care%20in%20the%20ED%202014.pdf

ACEP. (2016). *Emergency department crowding: High impact solutions.*

<https://www.acep.org/content.aspx?id=32050>

AHRQ. (2016). *Handoffs and signouts.* <https://psnet.ahrq.gov/primers/primers/9>

Ardoin, K. B., & Broussard, L. (2011). Implementing handoff communication. *Journal for Nurses in Staff Development*, 27(3), 128-35.

<https://www.doi.org/10.1097/NND.0b013e318217b3dd>

Camilleri, J., Cope, V., & Murray, M. (2019). Change fatigue: The frontline nursing experience of large-scale organisational change and the influence of teamwork. *Journal of Nursing Management*, 27, 655-660.

<https://www.doi.org/10.1111/jonm.12725>

Copeland, J. N. (2017). *NC mental health system needs rebuilding.*

<https://www.newsobserver.com/opinion/op-ed/article139744578.html>

Cornell, P., Gervis, M. T., Yates, L., & Vardaman, J. M. (2013). Improving shift report focus and consistency with the situation, background, assessment, recommendation protocol. *The Journal of Nursing Administration*, 43, 422-8.

<https://www.doi.org/10.1097/NNA.0b013e31829d6303>

- Cornell, P., Townsend-Gervis, M., Vardaman, J. M., & Yates, L. (2014). Improving situation awareness and patient outcomes through interdisciplinary rounding and structured communication. *The Journal of Nursing Administration*, 44, 164-9. <https://www.doi.org/10.1097/NNA.0000000000000045>
- Dictionary.com. (2017). *Technology*. <https://www.dictionary.com/browse/technology?s=t>
- Duffield, C. M., Roche, M. A., Homer, C., Buchan, J., & Dimitrelis, S. (2014). A comparative review of nurse turnover rates and costs across countries. *Journal of Advanced Nursing*, 70, 2703-12. <https://www.doi.org/10.1111/jan.12483>
- Eberhardt, S. (2014). Improve handoff communication with SBAR. *Nursing 2014*, 44(11), 17-20. <https://www.doi.org/10.1097/01.NURSE.0000454965.49138.79>
- Emergency Nurses Association (ENA). (2013). *Care of the psychiatric patient in the emergency department: White paper*. https://ena.org/docs/default-source/resource-library/practice-resources/white-papers/care-of-psychiatric-patient-in-the-ed.pdf?sfvrsn=3fc76cda_6
- Emergency Nurses Association (ENA). (2014). *Trauma nursing core course instructor supplement* (7th ed.). DesPlaines, IL: ENA.
- Farhan, M., Brown, R., Woloshynowych, M., & Vincent, C. (2012). The ABC of handover: A qualitative study to develop a new tool for handover in the emergency department. *Emergency Medicine Journal*, 29, 941-946. <https://www.doi.org/10.1136/emmermed-2011-200199>

Gopwani, P. R., Brown, K. M., Quinn M. J., Dorosz, E. J., & Chamberlain, J. M. (2015).

SOUND: A structured handoff tool improves patient handoffs in a pediatric emergency department. *Pediatric Emergency Care*, 31(2), 83-7.

<https://www.doi.org/10.1097/PEC.0000000000000034>

Kerr, D., Klim, S., Kelly, A., & McCann, T. (2016). Impact of a modified nursing

handover model for improving nursing care and documentation in the emergency department: A pre- and post-implementation study. *International Journal of*

Nursing Practice, 22(1), 89-97. <https://www.doi.org/10.1111/ijn.12365>

Klim, S., Kelly, A., Kerr, D., Wood, S., & McCann, T. (2013). Developing a framework

for nursing handover in the emergency department: An individualized and systematic approach. *Journal of Clinical Nursing*, 22, 2233-2243.

<https://www.doi.org/10.1111/jocn.12274>

Mathias, J. M. (2006). A SHARED tool strengthens handoffs. *OR Manager*, 22(4), 15-6.

<https://www.ormanager.com>

National Institutes of Health (NIH). (n.d.). *Technology acceptance model (perceived*

usefulness and perceived ease of use). <https://chirr.nlm.nih.gov/tam.php>

Shalini, Castelino, F., & T, L. (2015). Effectiveness of protocol on situation, background,

assessment, recommendation (SBAR) technique of communication among nurses during patients' handoff in a tertiary care hospital. *International Journal of*

Nursing Education, 7(1), 123-7. [https://www.doi.org/10.5958/0974-](https://www.doi.org/10.5958/0974-9357.2015.00025.2)

[9357.2015.00025.2](https://www.doi.org/10.5958/0974-9357.2015.00025.2)

- Staggers, N., & Blaz, J. W. (2012). Research on nursing handoffs for medical and surgical settings: an integrative review. *Journal of Advanced Nursing*, 69(2), 247-62. <https://www.doi.org/10.1111/j.1365-2648.2012.06087.x>
- Stevens, J. D., Bader, M. K., Luna, M. A., & Johnson, L. M. (2011). Implementing standardized reporting and safety checklists: Developing processes to create a culture of safety. *American Journal of Nursing*, 111(5), 48-53. <https://www.doi.org/10.1097/01.NAJ.0000398051.07923.69>
- Thomas, K. C., Owino, H., Ansari, S., Adams, L., Cyr, J. M., Gaynes, B. N., & Glickman, S. W. (2018). Patient-centered values and experiences with emergency department and mental health crisis care. *Administration and Policy in Mental Health Services Research*, 45, 611-622. <https://www.doi.org/10.1007/s10488-018-0849-y>
- The Joint Commission (TJC). (2017). *National patient safety goals effective January 2017: Hospital accreditation program*. https://www.jointcommission.org/assets/1/6/NPSG_Chapter_HAP_Jan2017.pdf
- UNC Health Care. (2017). *About us*. <https://www.unchealthcare.org/about-us>
- Younan, L. A., & Fralic, M. A. (2013). Using “best-fit” interventions to improve the nursing intershift handoff process at a medical center in Lebanon. *The Joint Commission Journal on Quality and Patient Safety*, 39(10), 460-7. <https://www.jcrinc.com/the-joint-commission-journal-on-quality-and-patient-safety/>

Appendix A

SAFEPLAN Template and Report Form

	The SAFEPLAN Report Template
S	Status- IVC or Voluntary Situation- what brought the patient to the ED? Service- what service is following the patient?
A	Assessments- General and Psychiatric Specific - Activity/Agitation - Alcohol/Substance withdrawal
F	Forbidden -Items or people, specific to the patient -Known triggers to avoid
E	Events of the Last Shift - ADLs - Group activity participation - PRNs needed - Restraint use
P	Pertinent PMH Pain Prior attempts/hospitalizations Password Privileges Plan to admit/transfer/DC
L	Labs- Abnormalities Legal Guardian/POA Legal Issues
A N	Anticipated Needs (including but not limited to): - VS frequency/Abnormalities - Accuchecks/Labs to be drawn - Wound care/Medical complaints - Special diets - Increased supervision (fall risk, cognitive impairment, developmental delay, incontinence)

Room

Pt Initials

SAFEPLAN Report Template Form

Not Part of the Medical Record

SHRED AFTER USE

M

F

S	Status- IVC or Voluntary Situation- what brought the patient to the ED? Service- what service is following the patient?	
A	Assessments- General and Psychiatric Specific - Activity/Agitation - Alcohol/Substance withdrawal	
F	Forbidden -Items or people, specific to the patient -Known triggers to avoid	
E	Events of the Last Shift - ADLs - Group activity participation - PRNs needed - Restraint use	
P	Pertinent PMH Pain Prior attempts/hospitalizations Password Privileges Plan to admit/transfer/DC	
L	Labs- Abnormalities Legal Guardian/POA Legal Issues	
A N	Anticipated Needs (including but not limited to): - VS frequency/Abnormalities - FSBG/Labs to be drawn - Wound care/Medical complaints - Special diets - Increased supervision (fall risk, cognitive impairment, dev. delay, incontinence)	

Appendix B

Permission to Use and Adapt Tools

DF

Davis, Fred <fred.davis@ttu.edu>

Mon 6/19, 5:16 PM

Michele Rudisill

Reply all

Hi Michele

You have my permission to adapt and use the perceived usefulness and ease of use tools for your research.

Best wishes

Fred Davis

...

From: Michele Rudisill <mrudisill1@gardner-webb.edu>

Sent: Monday, June 19, 2017 3:30 PM

To: Davis, Fred

Subject: Permission to use tools

Hello Dr. Davis-

My name is Michele Rudisill and I am a DNP student at Gardner-Webb University. I am inquiring about receiving permission to use and adapt your perceived usefulness and perceived ease of use tools in my doctoral capstone project related to nursing acceptance and use of a communication handoff tool.

Thank you for your time and consideration.

Best regards,

Ms. Michele L. Rudisill, MSN, MHA, RN, CPEN, EMT-P

Appendix C

Education Link and Survey Question Screenshots

Education link: https://youtu.be/V-dJD_fvJPs

The live survey can be accessed here for viewing:

<https://www.surveymonkey.com/r/2YNXHWH>

Screenshots of the survey (questions appear 1 at a time):

Please answer the following questions based on your work experiences in the past six weeks caring for psychiatric patients in the emergency department. [Star Snap](#)

You may skip any question at any time.

OK

1. I am a(n):

- ☐ Emergency department nurse (assigned to 27031 or 27041)
- ☐ Float/flex team nurse who has been assigned to work in the emergency department in the past 6 weeks

2. I have had prior experience as a psychiatric nurse.

- ☐ Yes
☐ No

3. I have been a nurse:

- ☐ less than 1 year. ☐ between 5 and 10 years.
☐ between 1 and 3 years. ☐ more than 10 years.
☐ between 3 and 5 years.

Rectangular Snip

4. I use SAFEPLAN with psychiatric patient handoffs:

- ☐ Less than 25% of the time
☐ 25-50% of the time
☐ 51-75% of the time
☐ More than 75% of the time

5. I receive information in report on psychiatric patient that is *unclear*:

- ☐ Less than 25% of the time
☐ 25-50% of the time
☐ 51-75% of the time
☐ More than 75% of the time

[illegible]

12. Using SAFEPLAN in my job increases my productivity.

[illegible]

13. Using SAFEPLAN in my job makes it easier to do my job.

[illegible]

14. I find SAFEPLAN useful in my job.

[illegible]

15. Using SAFEPLAN is clear and understandable.

[illegible]

20. I find SAFEPLAN easy to use.

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. What parts of the SAFEPLAN template were most helpful to you?

22. Was there anything missing from the SAFEPLAN template?

23. Is there anything that should be changed in the SAFEPLAN template?

Appendix D

Recruitment Script

Fellow nurses,

You are being asked to voluntarily participate in the DNP project “*Implementing SAFEPLAN: A Communication Template for Emergency Nurses Caring for Psychiatric Patients*”. The Project Administrator is Michele L. Rudisill, MSN/MHA, RN, CPEN, a doctoral student in the Hunt School of Nursing at Gardner-Webb University. This project is being completed in partial fulfillment of requirements to complete a doctorate in nursing practice degree at Gardner-Webb University. The purpose of this project is to determine the impact of the SAFEPLAN template.

This project consists of completing a survey related to communication and caring for psychiatric patients in the emergency department using the SAFEPLAN template and should take not more than 15 minutes of your time. The benefit of participation includes increasing communication among nurses caring for psychiatric patients which could impact safety on many levels. There is minimal risk to participating registered nurses. Participants may decline to answer any survey questions that cause discomfort and may stop the survey at any time. Employee support services are available to those participating in the project and can be contacted at 855-394-5547 should the participant become upset during the project.

Participation in this study is voluntary. You have the right to withdraw from the research study at any time without penalty. You also have the right to refuse to answer any question(s) for any reason without penalty. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identified state. There is no compensation for participating. Participation or lack of participation will not affect your work status in the emergency department. Consent is implied through participation.

The information that you give in the study will be handled confidentially. Your data will be anonymous which means that your name will not be collected or linked to the data. Because of the nature of the data, it may be possible to deduce your identity; however, there will be no attempt to do so, and your data will be reported in a way that will not identify you.

The survey data collected during the project will be confidential and will only be discussed with emergency department management in aggregate form. Once the project is completed, results will be shared with nurses during a department staff meeting.

There are no direct benefits associated with participation in this project. The project may help us to understand the impact of a consistent handoff template to nurses caring for emergency department psychiatric patients.

You have the right to withdraw from the project without penalty.

The link to access the SAFEPLAN survey:

<https://www.surveymonkey.com/r/2YNXHWH>

If you have questions about the project, contact the following individuals:

Michele L. Rudisill, MSN, MHA, RN, CPEN, EMT-P

Hunt School of Nursing

Gardner-Webb University

Boiling Springs, NC 28017

Telephone: 919-906-0822

Email: michele.rudisill@unchealth.unc.edu

Dr. Nicole Waters, DNP, RN

Hunt School of Nursing

Gardner-Webb University

Boiling Springs, NC 28017

Telephone: 704-406-2302

Email: nwaters@gardner-webb.edu

If the research design of the study necessitates that its full scope is not explained prior to participation, it will be explained to you after completion of the study. If you have concerns about your rights or how you are being treated, or if you have questions, want more information, or have suggestions, please contact the IRB Institutional Administrator listed below.

Dr. Sydney K. Brown

IRB Institutional Administrator

Gardner-Webb University

Boiling Springs, NC 28017

Telephone: 704-406-3019

Email: skbrown@gardner-webb.edu

Thanks for your time.