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### Improving communication and teamwork among emergency department nursing staff.

Phoebe Girgis

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IMPROVING COMMUNICATION AND TEAMWORK

**Improving Communication and Teamwork Among Emergency  
Department Nursing Staff**

by

Phoebe Girgis

Paper submitted in partial fulfillment of the  
requirements for the degree of

Doctor of Nursing Practice

School of Nursing, University of Louisville

July 27, 2021

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### Abstract

**Background:** Emergency Department (ED) nurses are experiencing a rise in patient visits, staffing shortages, lower levels of job satisfaction, higher nurse to patient ratios, increased acuity for trauma patients, and increased psychiatric admissions. Tension, frustration, and breakdowns in communication are among reasons for lateral violence among emergency nursing staff.

**Setting:** This evidence-based practice project took place at a level one trauma academic medical center in the Southeastern region of the United States. Emergency Psychiatric Services (EPS) is a subunit within the ED which has a capacity of 24 patients for psychiatric services. The main ED, Medical ED (MED), or the Medical Emergency Room (MER) is the part of the ED that treats physical trauma and any medical condition. The MER has a capacity of 31 treatment beds.

**Purpose:** The purpose of this evidence-based practice (EBP) scholarly project was to improve communication and professional relationships/teamwork among nurses working in the ED, specifically between the MER and EPS.

**Procedures:** This project consisted of two phases: 1) an educational content session focused on professional communication and teamwork and 2) implementation of a safety huddle between MER and EPS nurses (RNs). The education and safety huddle were based on Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS).

**Method:** Nurses in the MER and EPS completed a pre-test prior to the educational session and a post-test at the completion of the TeamSTEPPS educational content and implementation of the Huddle. Improvement in communication and teamwork among the RNs were measured by the TeamSTEPPS Teamwork Perceptions Questionnaire (TTPQ) and TeamSTEPPS Teamwork Attitudes Questionnaire (TTAQ). Data collected from the TTPQ and TTAQ were analyzed by descriptive analysis and an independent t-test.

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**Results:** The results of this study showed that there was an increase in TeamSTEPPS knowledge from pre-test to post-test. The independent t-test revealed that there was no statistically significant difference between the pre- and post-tests using the TTPQ ( $P=.988$  &  $.904$ ) and TTAQ ( $P=.779$  &  $.898$ ). There was a measurable decrease in the number of patients who needed to be transferred back to the MED from EPS during the huddle intervention implementation.

*Key words:* TeamSTEPPS, improving, communication, teamwork, Huddle, Nursing staff, ED, EPS.

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### **Background**

Communication is an essential skill nurses and healthcare workers use to facilitate patient care and improve health outcomes. Standardized communication tools, such as SBAR and TeamSTEPPS model, are gold standards in meeting patient safety goals (Joint Commission, 2012). Deviations from standardized communication may result in medical errors and complications in a patient's hospital admission. Breakdowns in communication often occur interdepartmentally among nursing units. Reasons for breakdowns in communication include burnout, hierarchies, job dissatisfaction, dysfunctional leadership, and poor employee engagement (Pettit & Duffy, 2015). Without resolution, animosity between nursing units may increase, which may result in delayed care and disruptions in safe care, or worse, staff misconduct.

The World Health Organization (WHO) (2013) reported that caring for patients requires several resources, including staff, technology, machines, and medication. Health care workers must make many decisions and judgements daily. According to WHO (2013), ineffective teamwork among healthcare workers can lead to diagnostic delays and poor management of life threatening events. When communication and teamwork are effective between healthcare workers, risk of errors and sentinel events decrease (Guimond et al, 2009). Clear, precise communication enhances patient safety. Risk for errors increases during care transitions due to an absence of critical information, misunderstanding of misinformation, and incomplete reporting (Pettit & Duffy, 2015).

According to Occupational Safety and Health (OSH), bullying, disrespect, and verbal abuse behavior between healthcare workers is common (Yarbrough, 2019). Both the medical and psychiatric ED have a high nurse turnover rate and a stressful working environment due to



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dealing with highly critical patients. Many nurses experienced horizontal violence, which is explained by Stanley et al. (2007) as any unwanted abuse and hostility in the workplace.

Incivility, bullying, and horizontal/lateral violence are examples of workplace mistreatment that affect the staff and the organization (Lachman, 2015). When these behaviors are happening, nurse job satisfaction and even retention are affected. The Code of Ethics for Nurses (ANA, 2001) clearly identifies intimidating behaviors as unethical.

The Joint Commission and Institute of Medicine (IOM) reported that patient harm and sentinel events are linked to communication failure and lack of coordination of care (Pettit & Duffy, 2015). Stanley et al. (2007) stated that approximately 65% of nurses reported frequently observing horizontal violence behavior among coworkers in the workplace. Quality and Safety Education for Nurses (QSEN) (2018) recognized that teamwork and collaboration are key competencies for nurses. For teamwork and collaboration to happen, it requires open communication, mutual respect, and shared decision making among the team (Badowski, 2018).

Positive communication among healthcare team members has been shown to increase the quality of working relationships and job satisfaction (Vermeir et al., 2017). Clear communication about tasks and responsibilities has been associated with reduced workforce turnover, especially among nursing staff (DiMeglio et al., 2005). Research conducted during the 10-year period of 1995-2005 has shown that ineffective communication is the root cause for nearly 66% of all medical errors (Institute for Healthcare Communication (IHC), 2011).

### **Review of Literature**

The online University of Louisville library website was used to conduct this EBP literature review. Databases that were used for this research include CINAHL, MEDLINE, Middle Search Plus, Primary Search, Psychology and Behavioral Sciences Collection, and APA

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PsycInfo. The MeSH terms were used to refine the search. On the first MeSH heading, the words communication and teamwork were used, which resulted in 16,589 articles. The search was refined by only including articles that were published between 2014 to 2020. This search resulted in 8,259 articles. The results were further reduced to 7,232 when including only academic journals. After selecting the English language and studies within the U.S., the results included 1,138 articles. Three hierarchical and interconnect terms were used by adding health care professionals on the second MeSH heading. This addition refined the search to 196 articles. The final delimiter was adding the term “Improve” on the third line of the MeSH heading. The search was then refined to 26 articles. After analyzing all of them, four specific methods in the literature review were found to improve communication and teamwork among health care workers.

A Google scholar search was conducted, and the same articles (n=26) were identified by this search. Twelve of the 26 articles met the inclusion criteria, which included a) took place in a hospital setting and b) involved adult populations.

### **Four Ways to Improve Communication and Teamwork**

The four different approaches found in the literature to improve communication and teamwork were Crew Resource Management (CRM) training, Team Situational Awareness (TSA), adding a nurse attending work position, and Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) training program.

#### ***Crew Resource Management Training***

CRM was implemented by the air travel industry when it was developed by the National Aeronautics and Space Administration (NASA) after several airline crashes. These crashes were due to failures in interpersonal communication, decision making, and leadership human factors that eventually affected teamwork (Schwartz et al., 2017). The CRM training initially focused on

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pilots, but later included the whole crew. CRM training improved situational awareness, communication, safety, leadership, and problem-solving skills in high fidelity crises. Clinical Team Training (CTT) is a program based on CRM training that led to improved patient safety at Veterans Health Administration (VHA/VA) facilities (Schwartz et al., 2017). CTT teaches all health care workers to enhance teamwork, to enhance communication, and to transform their environment into a workplace implementing a culture of safety concepts within the realm of a just and fair culture. Two of the twelve articles in this review were related to training based on the CRM team training.

Turkelson et al. (2017) used a multifaceted educational approach that included high fidelity simulation to introduce a structured, evidence based (EB) communication procedure (adapted from the Nursing Crew Resource Management [NCRM] program) to nursing staff of a front-line medical intensive care unit (MICU). The goals for this project included exploring the effects of the educational intervention, the EB structured communication tool, and the simulation training on the MICU nursing team members' perceptions of interprofessional communication, knowledge, and attitudes (i.e., satisfaction, self-efficacy, and self-confidence). This project also sought to study their simulation performance and manikin outcomes measured during a simulated crisis scenario. Turkelson and associates found that pre-intervention perceptions of interprofessional communication were low in both nurse-to-nurse and nurse-to-physician communication, but the nurse-to-nurse levels were slightly higher. The post-intervention showed improvement in the nurses' perceptions. A Wilcoxon signed rank test determined that there was a statistically significant ( $P < .0001$ ) post-intervention increase in knowledge scores ( $M = 95.86$ ,  $SD = 6.22$ ) compared with pre-intervention scores ( $M = 82.4$ ,  $SD = 13.38$ ). There were high satisfaction levels within their learning experiences during the simulation exercises.

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Approximately 50% of nursing teams observed during the simulation used or attempted to use the communication tools that had been taught (the 3W's and 4-step assertive communication tool) (Turkelson et al., 2017).

Schwartz et al. (2017) used CTT training to enhance patient safety and improve communication and teamwork among health care professionals. A 27-item Teamwork and Safety Climate Questionnaire (TSCQ) was used. The TSCQ is a shorter version, representing 3 of the Safety Attitudes Questionnaires (SAQ); 6 factor models cover teamwork, safety climate, and perceptions of management. Questions 1 through 10 and 12 through 14 assess the teamwork climate. Question 11 and 15 through 23 evaluated the safety climate, and questions 24 through 27 examined perceptions of management in the respondents' clinical areas and the institutions' leadership. The TSCQ was administered before the initial CTT session and in the recurrent session that occurred 12 months later. The comparison of TSCQ results at baseline (during the initial CTT session) and at 12 months (during the recurrent CTT leaning session) showed statistically significant results in different aspects of the survey. The researcher correlated the TSCQ questions to the topics covered in the CTT curriculum and developed categories, which included communication, teamwork, patient safety/patient care, culture/work environment, leadership, followership, behaviors of leader and follower, leadership management/direction, organization-al/staffing, and perception. In all but one case, survey scores improved from baseline to 12 months, with scores for 10 of the 27 questions showing a statistically significant improvement at 12 months after the CTT program implementation. Significant improvement in teamwork post-CTT was evident based on the TSCQ results. The participants responded saying that they had the support needed from others to care for patients and they found it easier to ask

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questions when they did not understand something. These results reflected positive teamwork and showed the spirit of collaboration present in the workplace post-CTT training.

### *Team Situation Awareness Display Training*

An important part of teamwork is Team Situation Awareness (TSA), which is a meta-construct referring to cognitive processes involved in team members acquiring and sharing situational information and knowledge about the situation (Parush et al., 2017). This process includes team and task-oriented information and the mutual understanding of the situation. TSA is more than the accumulated knowledge across team members, it is also the interactive team processes, such as communication and collaboration, that allow shared knowledge to be created and maintained among team members. By having effective teamwork processes, TSA is improved and maintained, thus ensuring that every team member is aware of what is happening and of who does what and when. Only one study was found that tested if a situation display could lead to higher scores on the following scales: the Clinical Teamwork Scale (CTS), context-specific Situational Awareness Global Assessment Technique (SAGAT) tool, and team communication patterns that reflect teamwork and Situational Awareness (SA).

Parush et al. (2017) conducted a study involving two emergency physicians and two researchers with clinical simulation expertise, creating three ED resuscitation scenarios. The study was conducted in a typical medical simulator setting with two rooms: one was a partial full-scale mockup of the resuscitation bay, and the other was a control room. It included three video cameras, a manikin with a full patient simulator, and proper resuscitation equipment. Resuscitation teamwork, as measured by the CTS, was overall better with the presence of the situation display compared with no situation display. Specific aspects of teamwork that improved with the situation display were overall communication, situational awareness, and decision

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making. There were no overall clear and consistent differences in situation awareness scores, as measured by the SAGAT probes, between the scenarios with and without the situation display. However, there were consistent differences as a function of profession, with the team leader and resident having increased situational awareness with the situation display. In summary, the potential benefit of the situation display was evident in teamwork effectiveness and only partially effective in team communication.

### *The Nurse Attending Work Position*

Revamping workforce training in a disintegrated health system is progressively necessary (Rahman et al., 2019). Increasing interest has been influential in transforming the health system with Interprofessional Education (IPE), collaborative practice, and team-based education (Brandt, 2015). In 2010, WHO developed a global framework for action on IPE and proposed a collaborative practice to prepare the work force in regard to strengthening health systems and improving patient outcomes. The implementation of a Nurse Attending work position is a way in which IPE and collaborative practice can be improved. An example of an institution that has created a Nurse Attending position is the Johns Hopkins School of Nursing and School of Medicine, where healthcare leaders “implemented an innovative nursing role: a Nurse Attending who has worked in this role for the last 1.5 years on one of the medical teams” (Rahman et al., 2019, p.154).

Rahman et al. (2019) were the only researchers who examined the role of the Nurse Attending by concentrating on education, communication, collaboration, patient satisfaction, and staff satisfaction. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) was used to measure nurse communication scores. The Attitudes Towards Interdisciplinary Teams (ATIT) survey was used to assess attitudes toward interprofessional

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healthcare teams and team approaches. At the end of the 2-week rotation, interns, residents, attending physicians, and medical students were asked to complete the survey. A longitudinal survey was also conducted with nurses on both units at initiation, 3 months, and 6 months after the implementation. The participant feedback showed that the Nurse Attending helped in identifying important decisions, such as discontinuing medically unnecessary telemetry, catheters, and central lines that saved nurses time and led to improved patient care (Rahman et al., 2019). The Nurse Attending role has been proven to help close the gap in communication between physicians and clinical nurses. The primary issue with this article is that there were no tangible data or numbers, therefore it was difficult to illustrate the results.

### *TeamSTEPPS Training*

The TeamSTEPPS program was created by the Agency for Healthcare Research and Quality (AHRQ) and the Department of Defense (DoD), and offers tools and strategies for improving communication and teamwork to reduce the chance of error and provide safer patient care (Hunt, 2010). The TeamSTEPPS program uses a systematic approach designed to integrate teamwork into practice by focusing on four core areas of competency: team leadership, situational monitoring, mutual support, and communication (Lisbon et al., 2016). Teamwork training has been the most popular evidence-based approach found in the literature. Eight of the twelve chosen articles were related to educational training approaches based on TeamSTEPPS. Obernarder et al. (2019) used three assessment tools in their study examining ED staff before and after the TeamSTEPPS training (i.e., at 15- and 30-days post-intervention): TeamSTEPPS Teamwork Perceptions Questionnaire (TTPQ), TeamSTEPPS Teamwork Attitudes Questionnaire (TTAQ), and the Nursing Culture Assessment Tool (NCAT). The training was presented by a master trainer who used video vignettes, table discussions, and role playing to

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learn and practice new communication skills. Obernarder et al. (2019) found that communication scores continued to improve after the TeamSTEPPS training occurred. The TTPQ and NCAT scores indicated that teamwork among the group improved, and the TTAQ scores also showed that the team members of the ED had improved with respect to their perceptions of and attitudes about communication and teamwork following the TeamSTEPPS training. Lisbon et al. (2016) also used three time point assessments. The first assessment was administered at baseline, then again at 45 and 90 days after the TeamSTEPPS training. Master trainers and coaches were used to educate the entire staff of an academic ED. The TeamSTEPPS training included video vignettes and small group discussions. In this study, staff decided to use TeamSTEPPS safety intervention after each training session to implement in their area to improve teamwork. They implemented briefs, huddles, and DESC/CUS. The DESC script is a constructive way for handling and resolving conflict: describe the situation; express the concerns; suggest other alternatives; and state the consequences. The CUS script includes, “I am Concerned,” “I am Uncomfortable,” and “This is a Safety Issue,” which were statements staff used to bring more clarity and understanding to a situation. Patient safety knowledge, as confirmed by the knowledge survey, showed statistically significant improvement in all 21 questions after training.

Reed et al. (2017) used an online module and Interprofessional Education (IPE) simulations for TeamSTEPPS training curriculum in an academic tertiary care medical center setting. This training was for both medical and nursing students. This study was the only one that included a demographic questionnaire (i.e., age, gender, race, health care discipline, previous health care experience, and previous exposure to TeamSTEPPS). Like the studies previously mentioned, Reed et al. (2017) also had pre- and post-training assessments. However, two points of assessment were used instead of three; one before the online module and IPE simulations, and



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the second after both were conducted. The three measurement tools used in this study were the TeamSTEPPS Fundamentals Examination, team performance evaluation, and self-efficacy measure of interprofessional practice competencies. The online module was used to prepare the students for the simulation, which included two scenarios involving high fidelity patient care experience. The students showed a significant increase in knowledge, self-efficacy, and team performance from pre-intervention as shown by the measurement tool.

Peters et al. (2018) implemented the TeamSTEPPS training in the ED of a Level 1 trauma hospital. The training involved two different sessions: the morning session consisted of lectures, role play, and discussion, and the evening session involved multidisciplinary simulation-based education on real situations that had occurred in the ED. Peters et al. (2018) also used pre- and post-test evaluations to determine the effect of the training. The tools used to measure the TeamSTEPPS training were the knowledge test (knowledge of staff), Trauma Team Performance Observation Tool (TTPOT) (evaluation filled by the trainer), and trauma patient efficiency outcomes (patients' outcomes). There was a significant increase in the knowledge, leadership, situation monitoring, mutual support of team members, communication, and overall team performance rating scores among trauma team members during post-intervention. Patient outcomes were measured by reporting time to arrival in the computed tomography scanner, time to arrival in the operating room, and time to endotracheal intubation, which all improved after the TeamSTEPPS training.

Mahoney et al. (2012) used a psychiatric hospital as the setting to implement TeamSTEPPS training by utilizing pre- and post-training assessments. The study had two points of assessment; one before the training and the second a year after the training. The assessment tool used was the Team Assessment Questionnaire (TAQ) to measure staff perceptions of team

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attributes. This study used a computer-based questionnaire. Training was implemented for the entire hospital's faculty, staff, and administrators. Debriefing luncheons and rounds were utilized to maintain the training and resolve any issues that occurred. The TAQ is a computer administered survey questionnaire consisting of 55 Likert-type scale items measuring 7 subscales: team foundation (3.76 to 4.10), team functioning (3.88 to 4.16), team performance (3.78 to 4.10), team skills (3.76 to 4.08), team leadership (4.07 to 4.23), team climate and atmosphere (3.68 to 3.97), and team identity (4.09 to 4.22). Mahoney and colleagues found that the TeamSTEPPS program improved team performance, as defined by the 6 items on the TAQ, which is critical to the safety and quality of patient care (Mahoney et al., 2012).

Ballangrud et al. (2017) used inter-professional TeamSTEPPS intervention in a surgical ward at one hospital, while having two control wards in two different hospitals. In this study, there were three points of assessment: one before training, one at 6 months after the training, and one at 12 months following the training. The measurement tools that were used were TeamSTEPPS Teamwork Perceptions Questionnaire (TTPQ), TeamSTEPPS Teamwork Attitude Questionnaire (TTAQ), and Hospital Survey on Patient Safety Culture (HSOPSC). This study was the only one found that involved a control group and provided the Quality from Patient's Perspective (QPP) questionnaire to the patients. The researchers also collected patient records before and after the intervention to test the impact on patient outcomes (i.e., infections, falls, postoperative complications, readmission within 30 days, and ulcers). The TeamSTEPPS training that the researchers conducted were classroom trainings of 6 hours involving videos, role-plays, lectures, and discussions, as well as 2 hours of high-fidelity simulation. During the year of implementation, a 75-minute refresher training for nurses was conducted once every 6 months (Aaberg et al., 2019). Aaberg et al. (2021) reported the results of this study, revealing

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that all dimensions of the TTPQ showed no significant changes after 6 months of intervention. However, significant improvements were found after 12 months of intervention in three dimensions on the TTPQ: situation monitoring, mutual support, and communication. Another important finding of this study that was reported after 12 months of intervention was a positive association between Patient Safety Grade and improved teamwork dimensions, or “Mutual Support.”

Turner (2012) implemented TeamSTEPPS in the ED of a Level 1 pediatric center, an adult trauma center, and a burn center. Master trainers designed a 4-hour TeamSTEPPS curriculum for the ED staff. Components of the curriculum included briefs, huddles, debriefs, and team wrap-ups. In this study, there were no questionnaire assessments before the training or after. No defined measurements were used to show effective results of the training. Positive results of the training were recorded as stories of instances where the staff were able to adapt and make a change for the benefit of a patient due to the TeamSTEPPS tools that were used.

### **Purpose**

The purpose of this EBP project was to improve the communication process and teamwork among nurses in EPS and MED. The goals of TeamSTEPPS were to improve a) teamwork and communication, b) nurses’ work satisfaction, and c) patients’ outcomes and quality of care for patients who need psychiatric/mental health services. According to Hunt (2010), improving teamwork in healthcare can enhance patient and process outcomes, increase patient and staff satisfaction, and decrease clinical errors. This EBP project addressed communication and teamwork among nurses in the MED and EPS when patients were transferred between the two units.

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### **Conceptual Framework**

The framework used to implement this evidence-based practice (EBP) project in improving communication and teamwork among nurses in the MED and EPS was the Iowa Model. The Iowa Model can help nurses or healthcare workers translate research related findings into their clinical practice to provide optimal patient care (Brown, 2014). The first step in the Iowa Model is to identify the issue (if it is a problem-focused trigger or a knowledge-focused trigger), which will require an EBP to make the necessary changes. Problem-focused triggers are the problems that have to do with risk management data, financial data, or the identification of clinical problems, for example, patient falls. The knowledge-focused triggers occur when new research findings are presented, or new guidelines have been established. For this QI project, the problem-focused triggers consisted of: poor communication and teamwork among the nursing staff affecting safe care and nurse retention. TeamSTEPPS has been found to improve teamwork among healthcare workers, which reduces incivility and increases nurse retention (Krivanek et al., 2020). Through improved communication, this method can also be used to reduce the number of incidents of patients who are not medically stable being placed in the EPS area.

The next step in the Iowa Model is to determine how important the problem at hand is and its priority to the organization, department, unit, and manager (Brown, 2014). The organization in this study placed a significant emphasis on nursing retention and reducing the amount of money lost when an employee decides to leave after the orientation process (personal communication, Nursing Development Coordinator, March 5, 2020). The Director of Professional Practice in the nursing education and research office at the facility stated that one of the goals of the ED primary manager is to work on helping staff in both areas of the ED to

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reduce conflict and work as a team. The organization and the two managers over both ED units were interested in reducing patients' risk and improving safety and quality of care.

After establishing this EBP scholarly project as quality improvement, the next step was to form a team consisting of members that will help develop, evaluate, and implement the EBP change (Brown, 2014). The team formed for this project included nursing staff from both ED areas, the education department, and the MED/EPS managers. The next step was to gather the information for the desired practice change and create PICO(T) question (Brown, 2014). After finding the evidence in the literature and determining that the EBP can be implemented into practice, the next step was to implement the intervention into a pilot EBP project. If the intervention was successful in the ED, then it could be adapted to organizational practice changes in all the units. Even after practice changes had been implemented, the team can continue to evaluate the practice changes and evaluate any variation in practice or decrease in desired unit-based and/or hospital outcomes (Brown, 2014).

## Methods

### Setting

The project took place at an academic, Level 1 trauma medical center with 404-bed capacity in the southeastern region of the United States. This hospital is nationally recognized for its ED trauma care. Few hospitals in the country have an Emergency Psychiatric Services (EPS) unit in their ED that is open 24 hours, 7 days a week providing psychiatric services to the community. Specifically, the setting of interest included staff who worked in the MED and EPS. The EPS is a subunit within the ED, which has 5 holding observation beds for overnight admission and a capacity for 20 patients seeking psychiatric services. The ED provides services to adults who are experiencing medical and psychiatric problems and sees approximately 60,000

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patients per year. The MED has 31 treatment rooms, four (4) trauma bays, and a triage area for emergency medical services. Participants in this project were full time, part time, and as needed (PRN) nurses working in MED and EPS. Agency nurses and float nurses from other units during the EBP project implementation were excluded. The sample size at the beginning of the project consisted of 71 nurses from MED and 17 nurses from EPS. There were ten (10) charge nurses in MED and two (2) charge nurses in EPS. However, when charge nurses were not on the schedule, a nurse in each area was designated on the work schedule as charge nurse for that shift. Due to unforeseen circumstances, only the 10 charge nurses from MED, plus the 17 nurses in EPS, made up the total sample size of 27 in this project. From the 27, only 19 participated.

### **Ethics**

This proposal was submitted to the University of Louisville IRB for approval prior to implementation. All pre/post-tests, data collection, evaluations, and questionnaires were stored at the EPS manager office. For confidentiality, the original plan was that the envelopes and forms would have matching numbers, but due to COVID-19 (nurses joined the staff meetings virtually), the pre/post-tests were sent by email anonymously by monkey survey. Additionally, this project received approval from the Research Committee at the academic medical center in which the EBP scholarly project took place. The staff who participated in this EBP project did so voluntarily.

### **Intervention and Rationale**

The intervention method of this EBP project was to provide TeamSTEPPS education materials during staff meetings and in nurse's break rooms. Additionally, a safety huddle was created where both charge nurses from the MED and EPS convened at the beginning of each shift to discuss the topics in the Huddle form after a local report was given (see Appendix F).

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The rationale behind the investigator student choosing to implement TeamSTEPPS in this project was supported by the literature. Both TeamSTEPPS and CRW are similar and have been proven as effective. In addition, TeamSTEPPS involves more communication and practical ways to apply in practice. It is also more commonly used in the literature. The Nurse Attending role is useful, but its major drawback is the cost of the position. After the study was completed, Rahman et al. (2017) mentioned how it may not be something hospitals will want to continue supporting due to the high cost of hiring a Nurse Attending. Another strength of TeamSTEPPS is that it has its own questionnaire instruments (TTPQ, TTAQ and TAQ) to measure the improvement in communication and teamwork. To combat the interdepartmental communication issue that occurs when patients are moving between the two areas in the ED, communication sheets were created by this project and used to reduce the number of patients arriving to EPS without pre-arrival information and to overall avoid gaps in patient care information.

There is strong evidence demonstrating that TeamSTEPPS training significantly improves communication and teamwork among health care workers. These improvements should ultimately result in improved patient care, staff work satisfaction, rate of staff turnover, and a more productive working environment. Most of the studies were conducted using convenient samples. A common theme among most studies was the use of in-person training classes based on the TeamSTEPPS curriculum. A limitation of the studies was attrition from pre- to post-testing. While many of the educational trainings showed improvement in staff communication and teamwork, another limitation was the lack of data examining the impact of the interventions on patient care outcomes. Further studies are needed to examine the effects of TeamSTEPPS training more thoroughly on patient care. Most of the literature discussed how

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TeamSTEPPS training was beneficial in enhancing teamwork among health care workers, which will ultimately impact patient care and nursing shortages in a positive way.

### **Procedures**

The procedures for implementing and evaluating this EBP project took place in three phases: 1) TeamSTEPPS education; 2) “Huddle,” and 3) evaluation of the project.

#### ***Phase I***

Phase one consisted of participants completing a demographic questionnaire and pre-test prior to the TeamSTEPPS education sessions. Sessions were conducted during staff meetings over one month in both units. Each unit conducted two staff meetings during the month, with a total of 4 meetings between the two units. Before the staff meetings, nurses received the pre-test by email anonymously through monkey survey. The pre-test included demographic questions (gender, age, education achievement, years of experience as RN, and years in their current position), and knowledge questions about TeamSTEPPS, TTPQ, and TTAQ. After presenting the TeamSTEPPS education material, the participants filled out the knowledge post-test on paper. The post-test was to measure knowledge about TeamSTEPPS. See Appendix A, B, C, D, and E for all the questionnaires used. During this phase, 19 participated in the pre-knowledge test and 11 participated in the post-knowledge session.

During each staff meeting, RNs were informed of the implementation phase. The MED held charge nurse meetings, at which time the DNP student conducting the project introduced TeamSTEPPS and the project. This method was used since only the MED charge nurses were going to be part of the project, not the whole nursing staff. In the MED, the charge nurse group was always in charge, which was not the case in EPS. Staff were also informed of the “Huddle” that was implemented between the two units. In the Huddle the charge nurses completed a



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communication form (see Appendix F). When charge nurses were not on the schedule for EPS, whoever was on the schedule to cover as charge participated in the Huddle. The Huddle included discussion of the acuity of the units and any issues or transfer expectations between the two units. After the Huddle, the two charge nurses returned to their units and informed the nurses of the updates from the Huddle communication. The forms were kept in a Huddle folder placed in the EPS nurse station.

### *Phase II*

Phase two consisted of implementing the Huddle between the two units in the ED. The intervention was implemented over a two (2) month timeframe. The Huddle occurred twice daily (once during day shift and once during night shift). The Huddle occurred after unit shift reports or any time during the shift that both charge nurses agreed upon. The Huddle occurred over a 5-to-10-minute period. The EPS charge nurse met with the MED charge nurse in the main ED to discuss 1) current issues for the shift, including patient acuity levels for both units, 2) anticipation of patient transfers, 3) review of previous issues, 4) new issues, and 5) staff concerns/recommendations (see Appendix F). The two charge nurses engaged in the Huddle shared their staffs' concerns and recommendations for the shift. At the completion of the Huddle, the information discussed in the Huddle was communicated to both units' staff by the charge nurses. The DNP student conducting this project sent emails out after the Huddle forms were performed to provide updates to the nursing staff. TeamSTEPPS materials were available on bulletin boards in break rooms of both units.

### *Phase III*

Phase three took place following the completion of the implementation phase. Phase three consisted of evaluating the EBP project. An email was sent out anonymously via monkey

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survey asking the participants to complete the evaluation questionnaires that elicit their feedback regarding barriers and facilitators of the EBP project, as well as how the project changed their communication practices. Additionally, nurses' communication and teamwork with respect to their attitudes and perceptions was evaluated by two questionnaires: TTAQ and TTPQ. During this post-test, only 8 nurses participated.

### **Measures**

The TTAQ consists of 30 items assessing five dimensions: team structure, leadership, situation monitoring, mutual support, and communications (see Appendix B). The dimensions that were measured in this EBP project were mutual support attitudes and communication attitudes. Each dimension measured consisted of six (6) items. Baker et al. (2008) reported that the TTAQ can be used to assess TeamSTEPPS effectiveness regarding desirable attitude changes about teamwork, but should be administered prior to and after the TeamSTEPPS training education. The reliability coefficients to all six dimensions of the TTAQ were 0.70 and higher (Baker et al., 2008). Content validity has also been reported on the TTAQ (Baker et al., 2008). The Pearson correlation coefficients are among the constructs, with coefficients ranging from 0.36 (mutual support and team structure) to 0.63 (situation monitoring and communication) (Baker et al., 2008). Baker et al. (2010) stated that because the TTAQ focuses on core teamwork skills, it can be used to support quality improvement activities associated with teamwork beyond just the implementation of TeamSTEPPS.

The TTPQ can be used to assess all five dimensions (team structure, leadership, situation monitoring, mutual support, and communications) (see appendix A), but as previously mentioned, this project assessed only mutual support perceptions and communication perceptions. These two dimensions in the TTPQ consist of 7 items each. The participants were

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asked to respond on a Likert scale from strongly disagree, disagree, neutral, agree, to strongly agree. Keebler et al. (2014) reported that the TTPQ is a valid measure in healthcare settings. The overall reliability of the TTPQ was excellent (Cronbach's  $\alpha=0.978$ ) (Keebler et al., 2014). The reliability of the individual TTPQ dimensions was reported at  $\alpha=0.9$  or higher with high internal consistency, making it a reliable measure of individual perceptions of teamwork (Keebler et al., 2014). Keebler et al. (2014) recorded that the P value in the study was  $<0.0001$ , the Tucker-Lewis Index was 0.942, the comparative fit index was 0.947, and the root mean square error of approximation was 0.057. These results indicated that the TTPQ has construct validity. Battles (2010) emphasized that the TTPQ should be administered right before and after TeamSTEPPS training, as well as several months after the training.

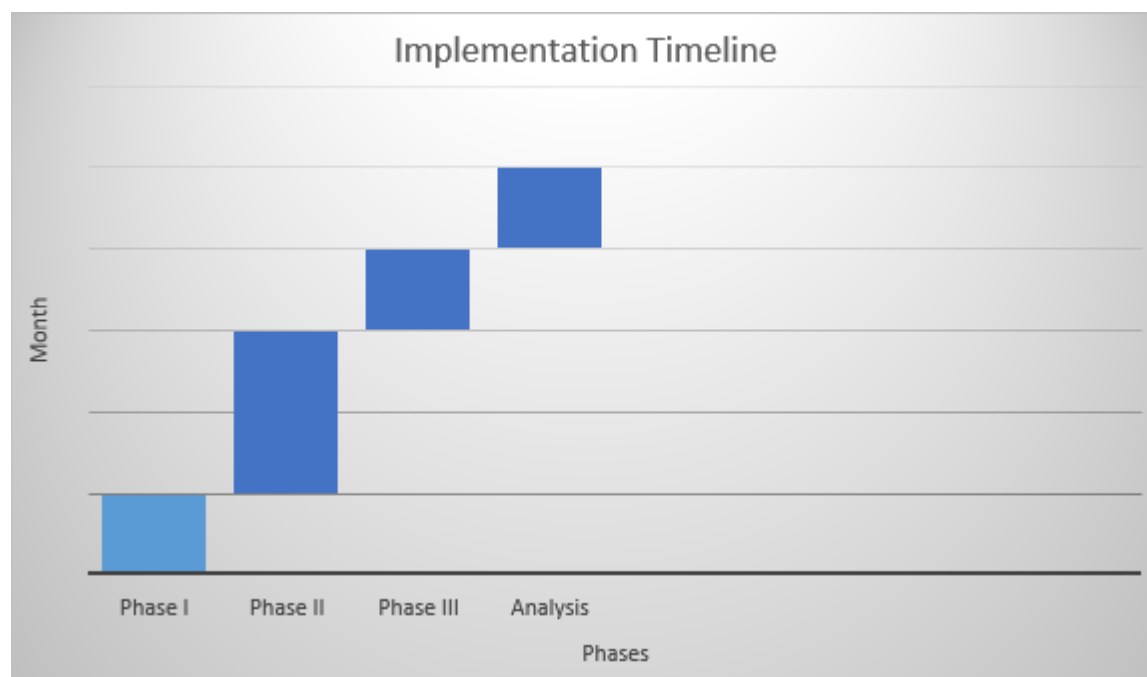
### **Analyses**

Descriptive statistics were used to describe the sample. Independent t-tests were used to evaluate the pre-test and post-test regarding the TTPQ and TTAQ from time 1 (beginning of the project) to time 2 (conclusion of the project). Due to COVID-19, the pre/post-tests had to be sent by monkey survey, which meant the DNP student was unable to match the tests to the participants. Percent averages were used to compare the TeamSTEPPS knowledge test from time 1 (before the education session) to time 2 (after the education session). Additionally, percentages and means were conducted to compare 1 (the number of patients who were admitted to EPS but transported back to MED or admitted to a medical floor for medical reasons) to 2 (the number of patients arrived at EPS without any pre-arrival information before and during implementation of the "Huddle"). The data collected from the Huddle via the Huddle forms were analyzed by looking for common themes.

### Implementation Timeline

The IRB and academic teaching hospital research committee approval were obtained in January 2021. The education intervention of Phase I was performed in late February at the EPS staff meetings and MED charge nurse meetings. Phase II, which consisted of implementing the communication Huddles, took place during March and April. Phase III of evaluating the project and performing post-tests was completed during the first three weeks of May (see Figure 1). Data was collected in June, then analyzed, and results were ready for dissemination by July 2020. In December, January, and February, data were examined regarding how many patients were admitted into EPS, but had to be sent back to MED, or was admitted to a medical floor due to medical issues. Data were also collected during the same three months on how many patients were arriving at EPS without any communication or information regarding their arrival situation. The same data were examined during Phase II in March and April.

**Figure 1**



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### **Feasibility and Sustainability**

This project required RNs to attend a 30-minute education session and take 15 minutes to complete pre- and post-testing. The Huddle required the two charge nurses on the schedule in each unit of the ED to meet for 5-10 minutes each shift during Phase II. The interdepartmental communication sheets were not used at this time due to environmental reasons. The evaluation and post-test in Phase III required 10-15 minutes from all RNs who participated in the project. This EBP project was feasible because all the requirements were able to be fulfilled by participants during their staff meetings or on the unit during their shift, which means it required no extra time out of their regular schedule. The project may have required nurses to have time away from patient care or use their break time. The cost of time was approximately \$25 to \$40 per nurse, depending on the nurse's hourly pay. This amount was multiplied by how many nurses participated in the study to get the total cost, which is approximately \$475 to \$760. This intervention was cost effective compared to creating and hiring a Nurse Attending work position. The cost benefit analysis of this intervention can also be seen by comparing the cost of implementation with the outcome benefits (increased nurse work satisfaction, increased nurse retention rate, and improved patient care, safety, and satisfaction). Additionally, the managers in the MED and EPS were supportive of this project. The staff were aware and have voiced that there are communication/teamwork issues happening, so the participants were open and welcoming to this EBP project to try to solve these issues. Finally, the time frame of the project was within a feasible length of time, which is evident through the main implementation of Phase II taking only two months.

In regard to sustainability, after completion of the EBP project, the programs and methods implemented in this study can be reused in a variety of settings. The educational

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content can be presented and included during new hire orientations in the MED and EPS, as well as in the Nurse Leader Academy Course. The Huddle can continue, which will encourage ongoing communication and help solve any issues that may arise. Clearly, policy and procedures would need to be developed in order to include the Huddle as a regular practice within the healthcare environment.

### **Budget**

All the education materials were available free of charge on the AHRQ website. The cost of printing the materials to be available for nursing staff participants was \$194.62. The TeamSTEPPS educational materials were printed in color at a Staples store to be available for each participant, plus extra to be posted on the bulletin board in the nurses' break rooms, which cost \$182.98. One binder was purchased to hold the Huddle forms. The approximately 60 forms used (two a day for the two-month implementation period) along with the binder cost \$11.64. All the staff who participated were already at the site for their staff meetings or for their work schedule during both the Huddle and the post-test. The graduate student investigator provided snacks during the education time in the staff meetings, which cost \$36.22 (Costco box of fruit gummies, \$11.39 x 3 boxes). This investigator student spent time training themselves, turning the education into a PowerPoint for those attending virtually, providing the education, creating all the forms for the study, and printing the materials. This investigator student completed other tasks that were essential to accomplishing this EBP project, such as preliminary research and developing the steps of the study. This investigator student spent time collecting the data, analyzing the data, disseminating the results, meeting with stakeholders, and meeting with professors/the project chair to accomplish this project. The total time of this DNP project was approximately 330 hours in total, costing about \$11,550 (this student's hourly salary was \$35 x

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330 hours). The pre/post-tests were sent by email with a link to the anonymous monkey survey. The monkey surveys were created on a computer in the education department of the hospital by this investigator student at no cost. No funding or grants were received for this EBP project. The total expense for this project was approximately \$11,780.84. The only out of pocket expenses were for printing the education materials and Huddle forms, the binder, and the snacks, which came to a total of \$425.46.

### **Dissemination**

The results of this project will be shared with staff in the MED and EPS, the EBP Nursing Council, the Mental Health Caucus, and presented at the University of Louisville School of Nursing DNP poster presentation day. This EBP project can be disseminated at a psychiatric/mental health nursing conference. Additionally, a manuscript will be prepared with the findings from this project and can be submitted to a psychiatric/mental health nursing journal.

### **Data Analysis**

To test for statistically significant changes in the staff attitude and perception regarding communication and teamwork from baseline and at the end of the QI project after 2 months, an independent t-test was applied on the TTPQ and TTAQ scores. The Knowledge test was also being compared from pre to post education. Statistical Package for Social Sciences (SPSS) version 24 was used to analyze the data.

### **Results**

The average score on the post-education knowledge questionnaire was 83.33%, while the post-education knowledge test average was 90.91%. These results show that there was an increase in TeamSTEPPS knowledge after the education session. The education session and the

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Huddles as intervention did not show significant differences in the nurses' perception and attitude regarding mutual support and communication scores. These findings were opposite of Obernarder et al. (2019) and Lisbon et al. (2016), who found the perceptions of and attitudes about communication and teamwork improved following the TeamSTEPPS training. Lisbon et al. (2016) found these improvements were sustained after 45 and 90 days of training.

The independent t-test was used for analyzing the data collected from the pre and post TTPQ and TTAQ results. There was no statistically significant difference between the nurses' TTPQ regarding mutual support ( $p = .988$ ) before the project and at the end of the project. The difference between nurses' TTPQ regarding communication in the pre- and post-test was not statistically significant ( $p = .904$ ). There was no statistical significance for the difference between the nurses' TTAQ regarding mutual support between pre- and post-test ( $p = .779$ ). The difference between the pre- and post-tests for the nurses' TTAQ regarding communication also showed no statistical significance ( $p = .898$ ) (see table 1).

**Table 1**

*Independent t test Results*

	Time	N	Mean	P
TTPQ for Mutual Support	Pre	19	4.1128	.988
	Post	8	4.2321	
TTPQ for Communication	Pre	19	4.1128	.904
	Post	8	4.0893	
TTAQ for Mutual Support	Pre	19	4.1175	.779
	Post	8	3.7917	
TTAQ for Communication	Pre	19	4.1754	.898
	Post	8	3.9583	



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50% of the sample of the pre-test were between age 26-35 while 50% of the sample of the post-test were between age 18-25. Detailed information regarding the demographics data on the sample for pre- and post- test are listed in table 2 and 3.

**Table 2***Demographic Data*

Age	Pre	Post	Position	Pre	Post	Unit/Shift	Pre	Post
18-25	4(22.2%)	4(50%)	FT RN	13(72%)	7(87.5%)	MED/D	2(11.1%)	0
26-35	9(50%)	1(12.5%)	PT RN	1(5.6%)	0	MED/N	6(33.3%)	3(37.5%)
36-45	2(11.1%)	1(12.5%)	PRN	4(22.2%)	1(12.5%)	EPS/D	4(22.3%)	2(25%)
46-55	2(11.1%)	1(12.5%)				EPS/N	6(33.3%)	3(37.5%)
56-65	1(5.6%)	1(12.5%)						
Total(N)	18(100%)	8(100%)	Total(N)	18(100%)	8(100%)	Total(N)	18(100%)	8(100%)

**Table 3***Demographic Data*

Gender	Pre	Post	Years of experience	Pre	Post	Ethnicity	Pre	Post
Male	1(5.6%)	2(25%)	<=4	10(55.6%)	5(62.5%)	Caucasian	16(89%)	6(75%)
Female	17(94.4%)	6(75%)	>=5	8(44.4%)	3(37.5%)	African American	1(5.5%)	1(12.5%)
						Asian American	1(5.5%)	1(12.5%)
Total(N)	18(100%)	8(100%)	Total(N)	18(100%)	8(100%)	Total(N)	18(100%)	8(100%)

An important finding from this project was that there was a 46% decrease in the number of patients arriving to EPS from the MED triage without patient information during the two months of Huddle implementation compared to the two months prior to the implementation. Before the project in January, four patients came to EPS from the MED triage without pre-

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arrival information, and nine in February. During the project and the Huddle implementation, these numbers shifted to four patients in March and three patients in April (see Table 4).

**Table 4**

*Tracking Number of Pt. Transferred to MED and Arrived Without Information*

	January - Before the project	February - Before the project	March - during the project: Huddle occurred 63% by day shift and 60% by night shift	April - during the project: Huddle occurred 50% by day shift and 40% by night shift.
Patients transferred from EPS to MED	9	12	3	12
Patients arrived at EPS without information	4	9	4	3

A review of the Huddle documentation form (see Appendix F) showed the recurring themes included clarifying situations regarding transferred patients, MED nurses finishing specific tasks before transferring patients to EPS, and clarification of the security hold process by the MED triage nurse when patients arrive at the hospital for EPS. From the eight (8) participants who completed the evaluation survey at the conclusion of the project, seven (87.5%) indicated the TeamSTEPPS education was helpful, that they participated in the Huddles themselves, and that they think the Huddle intervention was beneficial (see Table 5).

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**Table 5***Project Evaluation Questionnaire and Results*

Evaluation Questions	NO	Yes	No Answer	Given an answer
Do you think learning the TeamSTEPPS tools was helpful?	1	7	0	8
Did you use any of the CUS or DESC?	4	4	0	8
Have you participated in any Huddles between ED and EPS?	1	7	0	8
When you were not in charge of the unit, did you receive the Huddle updates from your charge?	3	5	0	8
Do you think the Huddle was beneficial?	1	7	0	8
What went well during this EBP project?			5	3
				1- Communication 2- Communication 3- MED and EPS participating in the huddle
What are your recommendations to improve communication and teamwork among the staff in EPS and the Medical Emergency Room?			8	0
How will your practice change as a result of your participation in this EBP project?			7	1
				1- Communicating more with the MED for clarification when needed regarding patient transfer
What did not go well during this EBP Project?			7	1
				1- When the acuity is high, there are no opportunities to do the Huddle
What other ideas or comments do you have?			8	0

### Discussion

The average score on the post-education knowledge questionnaire was 83.33%, while the post-education knowledge test average was 90.91%. These results show that there was an increase in TeamSTEPPS knowledge after the education session. The education session and the Huddles as intervention did not show significant differences in the nurses' perception and attitude regarding mutual support and communication scores. These findings were opposite of Obernarder et al. (2019) and Lisbon et al. (2016), who found the perceptions of and attitudes about communication and teamwork improved following the TeamSTEPPS training. Lisbon et al. (2016) found these improvements were sustained after 45 and 90 days of training.

Even though no significant difference was found when comparing the TTPQ and TTAQ results from pre- to post-test, there was a 29% decrease in the number of patients who were admitted to EPS, but transferred back to the MED due to being medically unstable. Before the project, there was a higher number of these patients than there was while the project was being implemented. The month of March was when the most Huddles occurred (63.3% by day shift and 60% by night shift) and when the lowest number of patients (3) had to be transferred from EPS to MED, while the numbers during the two months before the project were 9 and 12. The Huddles were done at a lower rate the second month of implementation; only 50% by day shift and 40% by night shift. During that second month, 12 patients were transferred from EPS to MED for being medically unstable (see Table 5). While no statistical significance was found between the measures, this is likely due to the small sample size. Despite the lack of statistical significance, this EBP project still showed an increase in knowledge of TeamSTEPPS from pre-test to post-test following the education session. This result is consistent with Peters et al. (2018), who showed a significant increase in TeamSTEPPS knowledge after training. A review

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of the evaluation survey responses suggested the “Huddle” intervention was effective in increasing communication and teamwork among nursing staff. Lisbon et al. (2016) also implemented a type of Huddle that resulted in positive outcomes in communication and staff attitudes.

By examining how many times the Huddle was done, comments on the Huddle forms, and the end project evaluation results, staff observations and suggestions could be deducted. One of these observations was that it was hard to meet and do the Huddle at times due to high acuity in both units of the ED. One recommendation was to reimplement a previous practice of having a monthly meeting between the MED nurses regarding patients on hold or considered for psychiatric services while receiving care in the MED. This recommendation also included allowing RNs from EPS to attend these meetings to improve communication and understanding between the two units.

### **Limitations**

There were several limitations to this EBP project. First, the sample was small(N=19). Additionally, attrition during the study was a significant factor; there was a 44% attrition rate at Time 1 with only 11 of the 19 participants completing the post knowledge test following the education session, and from Time 1 to Time 2, there was a 58% attrition rate with only eight participants completing the TTPQ, TTAQ, and project evaluation at the conclusion of the EBP project.

Due to COVID-19 causing some nurses to join virtually during the staff meetings, the pre/post-tests were sent via Survey Monkey, which may have contributed to the significant attrition rate. Another issue may have been that the nurses completed the surveys during their work shift, which may not have been optimal.

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### **Recommendations**

Due to both areas in the ED being unpredictable and having high volume and acuity, a possible recommendation would be to hold a joint charge nurse meeting once a month between the MED and EPS. This may be a more viable method to enhancing the communication and understanding going between the two units. The Huddle between the two charge nurses from both units was found to be a beneficial practice. Further examination of when the “Huddle” intervention would be most useful and how often this intervention should be implemented is warranted to determine best practice for an ED setting.

### **Conclusion**

Communication and teamwork are essential parts of any health care team’s ability to provide a positive work environment and high-quality patient care. Breakdowns in communication bring a high risk for error and negative patient outcomes. When nurses work in an environment that does not have mutual support and teamwork, it creates a hostile working environment, leading to job dissatisfaction and higher nurse turnover. The literature has revealed different ways to improve communication and teamwork in health care facilities. One of the methods emphasized in the literature is TeamSTEPPS, which is an EBP that has been proven to benefit communication and teamwork in the healthcare field. This project has used TeamSTEPPS and Huddle implementation as a tool to improve communication and teamwork among nurses in two units of an ED at a healthcare facility in the Southeastern region of the United States. Health care administrators should consider the implementation of TeamSTEPPS tools in their staff education and training in order to prioritize quality patient care and a positive work environment.

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## Appendix A

# Teamwork Perceptions Questionnaire (T-TPQ)

**Instructions:** Please respond to the questions below by placing a check mark (✓) in the box that corresponds to your level of agreement from *Strongly Agree* to *Strongly Disagree*. Please select only one response for each question.

Team Function	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The skills of staff overlap sufficiently so that work can be shared when necessary.					
2. Staff are held accountable for their actions.					
3. Staff within my unit share information that enables timely decision making by					

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the direct patient care team.					
4. My unit makes efficient use of resources (e.g., staff supplies, equipment, information).					
5. Staff understand their roles and responsibilities.					
6. My unit has clearly articulated goals.					
7. My unit operates at a high level of efficiency.					
<b>Leadership</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
8. My supervisor/manager considers staff input when making decisions about patient care.					
9. My supervisor/manager provides opportunities to					

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discuss the unit's performance after an event.					
10. My supervisor/manager takes time to meet with staff to develop a plan for patient care.					
11. My supervisor/manager ensures that adequate resources (e.g., staff, supplies, equipment, information) are available.					
12. My supervisor/manager resolves conflicts successfully.					
13. My supervisor/manager models appropriate team behavior.					
14. My supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.					

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<b>Situation Monitoring</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
15. Staff effectively anticipate each other's needs.					
16. Staff monitor each other's performance.					
17. Staff exchange relevant information as it becomes available.					
18. Staff continuously scan the environment for important information.					
19. Staff share information regarding potential complications (e.g., patient changes, bed availability).					
20. Staff meets to reevaluate patient care goals when aspects of the situation have changed.					

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21. Staff correct each other's mistakes to ensure that procedures are followed properly.					
<b>Mutual Support</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
22. Staff assist fellow staff during high workload.					
23. Staff request assistance from fellow staff when they feel overwhelmed.					
24. Staff caution each other about potentially dangerous situations.					
25. Feedback between staff is delivered in a way that promotes positive interactions and future change.					
26. Staff advocate for patients even when their opinion conflicts with that of a senior member of the unit.					



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27. When staff have a concern about patient safety, they challenge others until they are sure the concern has been heard.					
28. Staff resolve their conflicts, even when the conflicts have become personal.					
<b>Communication</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
29. Information regarding patient care is explained to patients and their families in lay terms.					
30. Staff relay relevant information in a timely manner.					
31. When communicating with patients, staff allow enough time for questions.					
32. Staff use common terminology when					

## IMPROVING COMMUNICATION AND TEAMWORK

communicating with each other.					
33. Staff verbally verify information that they receive from one another.					
34. Staff follow a standardized method of sharing information when handing off patients.					
35. Staff seek information from all available sources.					

TeamSTEPPS® Teamwork Perceptions Questionnaire (T-TPQ) Manual*Page last reviewed April 2017**Page originally created March 2014*

**Internet Citation:** Teamwork Perceptions Questionnaire (T-TPQ). Content last reviewed April 2017. Agency for Healthcare Research and Quality, Rockville, MD.  
<https://www.ahrq.gov/teamstepps/instructor/reference/teampercept.html>



## Appendix B

# Teamwork Attitudes Questionnaire (T-TAQ)

**Instructions:** Please respond to the questions below by placing a check mark (✓) in the box that corresponds to your level of agreement from *Strongly Agree* to *Strongly Disagree*. Please select only one response for each question.

Team Structure	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. It is important to ask patients and their families for feedback regarding patient care.					
2. Patients are a critical component of the care team.					
3. This facility's administration influences the success of direct care teams.					
4. A team's mission is of greater value than the goals of individual team members.					

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5. Effective team members can anticipate the needs of other team members.					
6. High performing teams in health care share common characteristics with high performing teams in other industries.					
<b>Leadership</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
7. It is important for leaders to share information with team members.					
8. Leaders should create informal opportunities for team members to share information.					
9. Effective leaders view honest mistakes as meaningful learning opportunities.					
10. It is a leader's responsibility to					

## IMPROVING COMMUNICATION AND TEAMWORK

model appropriate team behavior.					
11. It is important for leaders to take time to discuss with their team members plans for each patient.					
12. Team leaders should ensure that team members help each other out when necessary.					
<b>Situation Monitoring</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
13. Individuals can be taught how to scan the environment for important situational cues.					
14. Monitoring patients provides an important contribution to effective team performance.					
15. Even individuals who are not part of the direct care team should be encouraged to scan for and report					

## IMPROVING COMMUNICATION AND TEAMWORK

changes in patient status.					
16. It is important to monitor the emotional and physical status of other team members.					
17. It is appropriate for one team member to offer assistance to another who may be too tired or stressed to perform a task.					
18. Team members who monitor their emotional and physical status on the job are more effective.					
<b>Mutual Support</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
19. To be effective, team members should understand the work of their fellow team members.					
20. Asking for assistance from a team member is a sign that an individual does not know how to					

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do his/her job effectively.					
21. Providing assistance to team members is a sign that an individual does not have enough work to do.					
22. Offering to help a fellow team member with his/her individual work tasks is an effective tool for improving team performance.					
23. It is appropriate to continue to assert a patient safety concern until you are certain that it has been heard.					
24. Personal conflicts between team members do not affect patient safety.					
<b>Communication</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
25. Teams that do not communicate effectively significantly increase					

## IMPROVING COMMUNICATION AND TEAMWORK

their risk of committing errors.					
26. Poor communication is the most common cause of reported errors.					
27. Adverse events may be reduced by maintaining an information exchange with patients and their families.					
28. I prefer to work with team members who ask questions about information I provide.					
29. It is important to have a standardized method for sharing information when handing off patients.					
30. It is nearly impossible to train individuals how to be better communicators.					

Please provide any additional comments in the space below.



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[TeamSTEPPS® Teamwork Attitudes Questionnaire Manual](#)

*Page last reviewed April 2017*

*Page originally created March 2014*

**Internet Citation:** Teamwork Attitudes Questionnaire (T-TAQ). Content last reviewed April 2017. Agency for Healthcare Research and Quality, Rockville, MD.  
<https://www.ahrq.gov/teamstepps/instructor/reference/teamattitude.html>



## IMPROVING COMMUNICATION AND TEAMWORK

**TeamSTEPPS® 2.0** Communication

**Communication**

- Effective communication skills are vital for patient safety
- Enables team members to effectively relay information
- The mode by which most TeamSTEPPS strategies and tools are executed

*Team Strategies & Tools to Enhance Performance & Patient Safety*

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**TeamSTEPPS® 2.0** Communication

**Importance of Communication**

- Joint Commission data continues to demonstrate the importance of communication in patient safety
  - 1995 - 2005: Ineffective communication identified as root cause for nearly 66 percent of all reported sentinel events\*
  - 2010 - 2013: Ineffective communication among top 3 root causes of sentinel events reported\*\*

\* (JC Root Causes and Percentages for Sentinel Events (All Categories) January 1995–December 2005)

\*\* (JC Sentinel Event Data (Root Causes by Event Type) 2004-2012)

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## IMPROVING COMMUNICATION AND TEAMWORK

**TeamSTEPPS® 2.0** Communication

## Communication Challenges

- Language barrier
- Distractions
- Physical proximity
- Personalities
- Workload
- Varying communication styles
- Conflict
- Lack of information verification
- Shift change

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Team Strategies & Tools to Enhance Performance & Patient Safety

**TeamSTEPPS® 2.0** Mutual Support

## Mutual Support

- Dependent upon information gathered through situation monitoring
- Moderated by the communication of information
- Enhanced by leaders who encourage and role model mutual support behaviors

The diagram is a large triangle labeled 'PATIENT CARE TEAM' at the bottom. At the top vertex is 'PERFORMANCE'. At the bottom-left vertex is 'KNOWLEDGE' and at the bottom-right vertex is 'ATTITUDES'. In the center of the triangle is a smaller triangle labeled 'SKILLS'. Inside this central triangle are three overlapping boxes: 'Leadership' (top), 'Communication' (left), and 'Situation Monitoring' (right). Below these boxes is a yellow box labeled 'Mutual Support'. Red double-headed arrows connect 'PERFORMANCE' to 'Leadership', 'KNOWLEDGE' to 'Communication', and 'ATTITUDES' to 'Situation Monitoring'. A red arrow points from 'Mutual Support' up towards 'PERFORMANCE'.

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Team Strategies & Tools to Enhance Performance & Patient Safety

**TeamSTEPPS® 2.0** Introduction

## Outcomes of Team Competencies

- **Knowledge**
  - Shared Mental Model
- **Attitudes**
  - Mutual Trust
  - Team Orientation
- **Performance**
  - Adaptability
  - Accuracy
  - Productivity
  - Efficiency
  - Safety

*Team Strategies & Tools to Enhance Performance & Patient Safety*

**TeamSTEPPS®** Office-Based Care

## Mutual Support Tools

- Task Assistance
- Feedback
- Advocacy and Assertion
- Two-Challenge Rule
- CUS
  - I'm Concerned
  - I'm Uncomfortable
  - This is a Safety Issue
- DESC Script
- Collaboration

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## IMPROVING COMMUNICATION AND TEAMWORK

**TeamSTEPPS® 2.0** Mutual Support

## Mutual Support

**Mutual support involves members:**

1. Assisting each other
2. Providing and receiving feedback
3. Exerting assertive and advocacy behaviors when patient safety is threatened

Team Strategies & Tools to Enhance Performance & Patient Safety

**TeamSTEPPS®** Essentials

## CUS

I am **C** ONCERNED!

I am **U** NCOMFORTABLE!

This is a **S** AFETY ISSUE!

*"Stop the Line"*

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**TeamSTEPPS<sup>®</sup>** Office-Based Care

## Conflict Resolution DESC Script

A constructive approach for managing and resolving conflict:

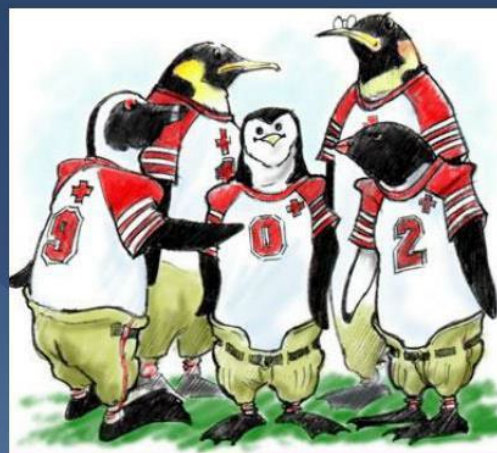
- D** — **Describe** the specific situation
- E** — **Express** your concerns about the action
- S** — **Suggest** other alternatives
- C** — **Consequences** should be stated

Team Strategies & Tools to Enhance Performance & Patient Safety

## TeamSTEPPS Tools

### Huddle

Problem solving  
 Hold ad hoc, "touch-base" meetings to regain situation awareness.  
 Discuss critical issues and emerging events.  
 Anticipate outcomes and likely contingencies.  
 Assign resources.  
 Express concerns.



## IMPROVING COMMUNICATION AND TEAMWORK

**Knowledge Test:**

- 1) What is **TeamSTEPPS** all about?
  - a) It is a game to play.
  - b) It is a program that teaches tools that improves communication and teamwork among staff for patient safety.
  - c) It is an exercise program.
  - d) It is a medical device.
  
- 2) The BEST method of *conflict resolution* for medical teams in the workplace is:
  - a) Compromise.
  - b) Avoidance.
  - c) Collaboration using the DESC script.
  - d) Dominance.
  
- 3) What are the benefits of a **Huddle**?
  - a) Socialize.
  - b) Gossip.
  - c) Discuss patient's situation, any concerns, and touch base regarding the work environment on the units.
  - d) Waive nurses time.
  
- 4) The attribute *least likely* to be found in a medical team that is functioning in a **highly effective** manner is:
  - a) Adaptability.
  - b) Complacency.
  - c) Trust.
  - d) Respect.
  - e) Information sharing.
  
- 5) The **CUS** technique is a tool that should be used to do all of the following **EXCEPT**:
  - a) Escalate an information conflict into a personal conflict.
  - b) State your concern about a situation.
  - c) Advocate for a patient.
  - d) State why you are uncomfortable about a situation.
  - e) Communicate to all team members that there is a safety issue.
  
- 6) Seeking and offering task assistance is a form of providing mutual support. All of the following are reasons to offer task assistance **EXCEPT**:
  - a) People often delay asking for help for fear of appearing incompetent.
  - b) To prevent errors and support patient safety.
  - c) To prove your competence to the rest of the team.
  - d) To prevent work overload and stress.
  - e) To improve trust and team orientation.

## IMPROVING COMMUNICATION AND TEAMWORK

## Appendix D

**Demographic Questionnaire:**

Gender: F M

Age: (18-25) (26-35) (36-45) (46-55) (56-65) (66 and up)

Race/Ethnicity: American Indian or Alaska Native Asian Black or African American  
Hispanic or Latino White or Caucasian OtherLanguage: English is your first language English is your second  
language

Years of experience as a nurse: \_\_\_\_\_

What is your current position?

Psychiatric/Mental Health Technician  
Nursing Assistant/Certified Nursing Assistant  
Licensed Practical Nurse  
Registered Nurse

Years of experience in your current position \_\_\_\_\_

Current unit and shift you work: EPS ED / Days Nights

Position is full-time Part-time PRN

Highest educational level achieved:

High school graduate \_\_\_\_\_

Some college \_\_\_\_\_

College graduate \_\_\_\_\_

Completed graduate school \_\_\_\_\_



## IMPROVING COMMUNICATION AND TEAMWORK

## Appendix E

**Evaluation Questionnaire:**

- |   |     |    |
|---|-----|----|
| 1) Do you think learning the TeamSTEPPS tools were helpful?   | Yes | No |
| 2) Did you use any of the CUS or DESC?  | Yes | No |
| 3) Have you participated in any Huddle between ED and EPS?  | Yes | No |
| 4) When you were not in charge of the unit, did you receive the Huddle updates from your charge?                              | Yes | No |
| 5) Do you think the Huddle was beneficial?  | Yes | No |
| 6) What went well during this EBP project?  |     |    |
| 7) What are your recommendations to improve communication and teamwork among the staff in EPS and the Medical Emergency Room? |     |    |
| 8) How will your practice change as a result of your participation in this EBP project?                                       |     |    |
| 9) What did not go well during this EBP Project?  |     |    |
| 10) What other ideas or comments do you have?   |     |    |

## IMPROVING COMMUNICATION AND TEAMWORK

## Appendix F

**Huddle form:**

Date: \_\_\_\_\_

Shift:   Days           Nights

Time: \_\_\_\_\_

EPS Charge nurse: \_\_\_\_\_

ED Charge nurse: \_\_\_\_\_

Discuss:

1) Acuity of the ED/EPS.

2) Anticipation of transfers.

3) Update on past issues.

4) New issues.

5) Ideas from ED/EPS staff or questions.

Any other staff present:

\_\_\_\_\_

Charge Nurses on shift Shared the Huddle info with the staff on her/his unit:

Yes

No

IMPROVING COMMUNICATION AND TEAMWORK

Appendix G

**Interdepartmental ED to EPS communication sheet:**

**Arrived by:** walk in                  dropped by family/friend                  CIT                  MIW  
EMS/type\_\_\_\_\_

**Medical assessment concerns (tased, OD):**    Yes                  No

**Family/Friend info:** \_\_\_\_\_

**Hold required:** \_\_\_\_\_

**Pref report (reason for being here):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Interdepartmental EPS to ED communication sheet:**

**Status:** Hold    Voluntary                  **Expecting pt. to come back to EPS:**    Yes  
No

**Belongings is still in EPS:**    Yes                  No

**Reason for transfer (concerns):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Recommendations before returning to EPS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## IMPROVING COMMUNICATION AND TEAMWORK

## Appendix H



530 S. Jackson Street, Louisville, KY 40202 502-562-3000 UofLhospital.org

To whom it may concern,

This letter is to confirm the University of Louisville Hospital is committed to supporting the DNP project of Phoebe Girgis titled "Improving Communication and Teamwork Among Nurses in the Two Parts of the Emergency Department".

Ms. Girgis will have access to any resources in EPS and ED that is needed to accomplish her EBP project.

Sincerely,

*C. Hoops BSN, RN-BC*

**Chelsea Hoops, BSN, RN-BC**  
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Emergency Psychiatric Services  
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