Let's Talk: Post Critical Incident Debriefing Project

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Abstract

Problem and Purpose: Structured debriefings inconsistently occur in a level IV Neonatal

Intensive Care Unit (NICU). Lack of a structured debriefing process negatively impacts provider

physical/emotional health and patient outcomes. Lack of debriefing conversations leads to

unconstructive feedback and unidentified areas for team and patient outcome improvement. The

purpose of this quality improvement (QI) project is to implement, the Team Strategies and Tools

to Enhance Performance and Patient Safety Debriefing Tool (TeamSTEPPS) following high-risk

deliveries in infants 22-32-week gestation and emergency/resuscitation codes in a 52 bed, level

IV NICU in the mid-Atlantic region. The goal is to facilitate debriefings after 100% of the

critical events and enhance positive team communication during debriefings.

Methods: The project was implemented for 12 weeks*.* The population included a

multidisciplinary NICU staff. The project involved training staff on the use of the standardized

debriefing tool, documenting high-risk deliveries, frequency of debriefing guided by the

TeamSTEPPS debriefing tool, and evaluating debriefing outcomes using the REFLECT Tool.

The primary QI metrics included the number of staff trained and educated, patient gestational

age, high-risk delivery and emergency codes, occurrence of debriefing, debriefings guided by

TeamSTEPPS Debriefing Tool, and staff assessment of the debriefings using the REFLECT

Tool. Data was analyzed using descriptive statistics to identify trends in the percentage of

debriefings that occurred following 22-32 weeks gestation deliveries and

emergency/resuscitation codes.

Results: During implementation phase, twenty percent of the NICU staff were trained/educated

in the debriefing process. A total of four debriefings occurred using the TeamSTEPPS

Debriefing Tool. Post critical events debriefings increased from one percent to fifteen percent. Team communication, role delineation, and patient stabilization time improved during a subsequent critical event.

Conclusions: This QI project demonstrated the feasibility of implementing a structured debriefing tool in a high acuity NICU, to improve team communications and patient outcomes following critical events. Increased nursing and provider staff engagement, and ongoing training would enhance debriefing facilitation. Future considerations include expanding debriefing after all emergent deliveries, including the labor and delivery team, and piloting in smaller NICUs.

Key Words: Debriefing, Critical Incident Debriefing, Emergency Debriefing, NICU, team communication, TeamSTEPPS Debriefing

Let's Talk: Post Critical Incident Debriefing Project

Introduction

Critical events in a fast-paced high-stress unit may result in negative physical and emotional responses in providers. After an emergent situation, it is essential for the medical team to review the event; addressing team strengths and areas for improvement in a structured debriefing session. Debriefing is a process that allows a systematic review of critical events, such as emergency codes and resuscitations, deaths, and injuries. Debriefing in healthcare should be done to facilitate discussion of actions and thought processes, encourage reflection, and improve practice behaviors (Kessler, Cheng, & Mullan, 2015). When the medical team fails to debrief, areas of improvement in emergent care may not be identified, unconstructive feedback may occur, and areas of self-improvement may not be recognized. Failure to recognize areas of improvement may jeopardize patient care in future emergencies and patient's outcomes (Kessler et al., 2015). A standardized debriefing tool is a strategy to implement post-emergent debriefings in a consistent, positive, and professional manner. A standardized debriefing tool provides direction during the debriefing session, allowing the team to concentrate on specific issues and focus on improving patient care and outcomes. Clinical team debriefing after critical events leads to improved learning, performance, team communication, resuscitation outcomes, and patient-focused outcomes (Agency for Healthcare Research and Quality, 2019b; Couper, Salman, Soar, Finn & Perkins, 2013).

Currently in a 52-bed, Level IV NICU in an academic medical center in the mid-Atlantic region preliminary data revealed the NICU team was called to 67 deliveries and of those deliveries, 22% were for neonates between 22-32 weeks gestation. Zero debriefings were

initiated after the deliveries. Nine emergency/code events occurred. One debriefing occurred post an emergency/code event. Resulting in only 1% of critical events were debriefed.

During previous debriefing sessions, the NICU team, consisting of Neonatologists, Fellows, Residents, Neonatal Nurse Practitioners (NNPs), Physician Assistants (PAs), Registered Nurses (RNs), and Respiratory Therapists (RTs), can openly discuss the event, but currently no process or format is followed. This causes the team to focus on irrelevant issues, unconstructive feedback, and results in decreased team cohesiveness and communication, and jeopardizes providing quality patient care in future events.

The purpose of the QI project was to implement a structured post-critical incident debriefing process, using the TeamSTEPPS Debriefing Tool following 100% of high-risk deliveries in infants 22-32-week gestation and emergency/resuscitation codes in the NICU to enhance positive team communication during debriefings. Also, to assist the NICU team in consistently facilitating more structured, successful, and purposeful debriefing sessions. Kessler et al. (2015) stated "debriefing is a powerful quality and education tool that can potentially change team behavior and influence patient outcomes".

Literature Review

An advanced search was conducted through CINAHL and Medline databases to retrieve relevant evidence-based articles. The selected articles were three review articles, one systematic review/meta-analysis, one retrospective observational cohort study, one prospective pre-test/post-test, and three pre-test/post-test quasi-experimental designs. Using the Johns Hopkin's Nursing Evidence-Based Practice Model, for evidence appraisal and grading, the level of

evidence of the articles ranged from level one to level seven, with quality grades of A's and B's (Melnyk & Fineout-Overholt, 2014; Newhouse, 2006).

Based on the literature review, debriefing sessions should be structured and provide a platform where participants can openly discuss the event. Evidence demonstrated that effective debriefing sessions have similar key essential elements. These elements included a trained facilitator to lead the debriefings, setting a positive atmosphere, acknowledging members feelings, clarifying data, what went well and what areas need improvement, what can be done differently, summarization of the debrief (key learning points and take away points), and emotional support (Kessler et al., 2015; Mullan et al., 2013; Sawyer, Loren & Halamek, 2016; Thompson et al., 2018; Zinns et al., 2017). Reflective debriefing helps increase learner self-assessment, leading to performance changes, better engagement, and improved communication amongst team members (Nwokorie et al., 2012; Thompson et al., 2018; Zinns et al., 2017). Although each of the studies used different debriefing tools common elements included a structured method of debriefing that encouraged positive judgments and feedback, improved communication amongst the team, and improved self-assessment and awareness. The studies found that these key elements resulted in improved quality of patient safety and care (Kessler et al., 2015; Thompson et al., 2018).

The TeamSTEPPS Debriefing Tool was developed by the Agency for Healthcare Research and Quality (AHRQ) and the U.S. Department of Defense (DoD) and was chosen to guide the development and implementation of the Let's Talk Post-Critical Incident Debriefing Project. The tool provided the key aspects of debriefing as entailed in the literature review. Completion of the TeamSTEPPS training curriculum has proven to increase communication between team members, improve teamwork skills, improve team structure, leadership, situation

monitoring, and mutual support in the NICU (Nwokorie et al., 2012; Sawyer et al., 2013). The

Team STEPPS debriefing process and tool entails the key essential elements that were outlined

in the literature review; such as having a trained facilitator, quick (hot) debriefs after critical

incidents, setting a positive atmosphere, acknowledging members feelings, clarifying data, what

went well and what areas need improvement, and what can be done differently (Agency for

Healthcare Research and Quality, 2019b). Also, the NICU staff at the project site completed the

full TeamSTEPPS training curriculum. AHRQ recommends adapting the TeamSTEPPS tools to

fit the organizational needs (Agency for Healthcare Research and Quality, 2019a). The Let's

Talk Post-Critical Incident Debriefing process is based on the key components of the

TeamSTEPPS Debriefing Tool and adapted to meet the unique needs of the NICU and project

criteria. See Appendix A for the TeamSTEPPS Debriefing Tool.

The articles were mainly consistent, results could be generalizable to other NICUs, based

on similarities in emergency resuscitation and critical incidents that occur in the pediatric

emergency room and NICU. All studies conducted comprehensive literature reviews, and

recommendations were based on scientific evidence. Some limitations are that many of the

experimental studies were based on simulations, only one simulation was done in the NICU, and

sample sizes were small; although efficient for the studies. See Table 1 for the Evidence Review

Table.

Theoretical Framework

Kurt Lewin's Change Theory was used to guide the Let's Talk Post-Critical Incident

Debriefing Project in the NICU. Kurt Lewin's Change Theory is a planned changed theory in

three stages: unfreezing, moving, and refreezing (Lewin, 1951; Shirey, 2013).

The first stage is the unfreezing stage that involves recognizing the need for change and identifying a solution (Shirey, 2013). Also, barriers and facilitators for the proposed change were acknowledged (Lewin, 1951; Shirey, 2013). Strategies to help facilitate the change and negate the barriers should be developed during this phase (Shirey, 2013). During the unfreezing stage, the problem was identified as the NICU team inconsistently debriefs after critical events and does not use a standardized debriefing tool. Internal evidence was obtained from NICU staff assessing their perceived need for post critical incident debriefing sessions. The project leader conducted a literature review to provide evidence to support the proposed practice change.

The second stage is the moving phase that involves developing a detailed plan, engaging people in the proposed change, and implementing the practice change. This phase is facilitated by maintaining clear communication throughout the process (Shirey, 2013). During this stage, for the proposed change to be successful, it is important to get people actively involved and help overcome the fears of change (Lewin, 1951; Shirley 2013). The moving phase consisted of training champions/facilitators to facilitate debriefings, educating remainder staff on the new debriefing process, implementation of the Let's Talk Post Critical Incident Debriefing process, and maintaining open communication with the NICU staff throughout the implementation process.

Refreezing, the 3rd stage of the theory, demands stabilizing the change so that it becomes part of the practice. The refreezing stage includes evaluation of findings and determining any adjustments that need to be made to maintain sustainability (Lewin, 1951; Shirley 2013). The project leader, analyzed the data, evaluated whether goals were met, and disseminated findings to the NICU team members at the conclusion of the project. In addition, discussed the changes needed to increase the number of post critical incident debriefings, overcome barriers, and

maintain sustainability. A diagram of Kurt Lewin's change theory and the stages that guided

project implementation are described in Appendix B.

Methods

Let's Talk Post Critical Incident Debriefing QI Project was implemented in a 52 bed

Level IV NICU located in an urban academic medical center in the mid-Atlantic region. The

project focused on implementation of the structured TeamSTEPPS Debriefing Tool following

delivery room resuscitations of neonates between 22-32 weeks gestations, and

resuscitation/emergency codes that occurred in the NICU. During the project implementation, no

patients or human subjects were at risk. The University of Maryland Baltimore Institutional

Review Board approved the QI project and determined the project to be a Non-Human Subjects

project.

The QI project was conducted over 12 weeks. A standard debriefing process was

established and a set criterion on which critical incidents to debrief was determined. To establish

consistency and increase the number of debriefings, it was determined by the stakeholders and

project leader to debrief after 22-32-week gestation deliveries and resuscitation/emergency

codes. Emergency/resuscitation codes and 22-32-week deliveries are very critical and high-risk

emergent situations, which constitutes the need for a post debriefing (Sawyer et al., 2016). To

test the feasibility of structured debriefings in the NICU the 22-32-week gestational age range

was selected because a small subset was expected allowing for analysis of the strengths and or

weaknesses of the project implementation strategies. Staff who were part of the simulations and

the debriefing team were chosen to be facilitators/champions. Charge nurses, resource nurses,

Fellows, and NNPs were chosen as facilitators/champions because they are always present on the unit.

Structural changes included online and face to face training for champions/facilitators (RN and providers) regarding the TeamSTEPPS Debriefing Tool and documentation of the post-critical incident debriefings. Facilitator training highlighted elements of the tool, strategies for organizing the meeting, use of nonjudgmental language, and reflective learning strategies to guide appropriate questions during the debriefing. See Appendix C for Champion/Facilitators Training Objectives.

During pre-implementation, charge nurses, resource nurses, and the project leader collected baseline data on the number of deliveries, emergency/resuscitation codes, deliveries that met the debriefing criteria, and debriefs that occurred. The NICU staff (RNs, Residents, RTs) was educated on the new debriefing process with a self-education PowerPoint presentation folder that was passed around the unit. See Appendix D for the NICU Staff Education Objectives. The debriefing tool was exercised during code/delivery simulations to get staff accustomed to debriefing following code/delivery situations. Let's Talk laminated posters and cards were placed at the charge nurse desk and NICU staffs' workstations, as a reminder to debrief.

During the 8-week active implementation phase, post-critical incident debriefing sessions were conducted using TeamSTEPPS Debriefing Tool. The charge nurse, resource nurse, and project leader documented, daily on the paper data sheets, the number of critical incidents, debriefings that occurred after critical incidents, and debriefings that occurred using the TeamSTEPPS Debriefing Tool. See Appendix E for the Data Collection Tool. After the

debriefing, the debriefing participants completed the REFLECT Tool to evaluate the structure of

critical debriefing process. See Appendix F for the REFLECT Tool.

Audits were conducted weekly to assess any implementation barriers. In-person meetings

with stakeholders and champions took place once every two weeks until the end of the project; to

discuss concerns and the progression of the project. Open communication via email or in-person

was available for NICU staff to address questions and/or concerns. Reminders to debrief were

posted on the NICU Facebook, voiced in nursing huddles before shifts, text messages sent via

staff phones, and in-person reminders.

Collected data was entered manually in an excel database and descriptive analysis was

conducted on the number of staff trained and educated, emergency deliveries and resuscitation

codes that occurred, the number of debriefings that occurred after critical incidents, and the

number of debriefings that occurred using the TeamSTEPPS Debriefing Tool. The evaluation of

the debriefing process was analyzed based on participants' answers from the completed

REFLECT Tool.

Results

A total of twenty-six (11%) NICU staff members were trained as champion/facilitators to

facilitate debriefings. Sixteen staff members, consisting of RN's and NNP's were trained during

the in-person facilitator training sessions. A voice-over PowerPoint presentation was developed

as additional training and e-mailed to charge nurses, resource nurses, NNPs, and Fellows. Ten

staff members completed the online training. A total of twenty-two additional staff (RNs, RTs,

and Residents) (9%) were educated on the new debriefing process and the TeamSTEPPS

Debriefing tool. Figure 1 and 2 displays the NICU staff demographics and the staff that was trained and educated.

During the 8-week implementation phase, a total of 27 critical incidents occurred. Twenty-three involved 22-32-week gestation deliveries, three involved emergency/code events, and one 36-week gestation delivery did not meet the project inclusion criteria. A total of four debriefs were facilitated using the TeamSTEPPS Debriefing Tool. The frequency of post-critical incident debriefs increased from 1% prior to the project to an average of 15% over the course of the project (Figure 3). Seven out of nineteen REFLECT tools were completed by debriefing participants. All respondents indicated affirmatively that using the TeamSTEPPS Debriefing Tool resulted in more focused reviews of the critical events, encouraged participation, and improved team communication.

Barriers during the implementation phase included multiple projects being implemented simultaneously in this setting (resulting in provider fatigue), high patient acuity, and conflicting unit priorities. Project facilitators included support from unit champions and stakeholders. Strategies and tactics that served to facilitate the project were reminder conversations with staff to debrief, posts on the NICUs Facebook page, reminding staff in huddles, texts sent via work phones during the shift, and placing reminder to debrief posters and workstation cards around the unit.

Discussion

Formally training facilitators and educating staff in the debriefing process increased post-critical incident debriefs from 1% to 15% in the NICU. This project supported the findings of Sawyer et al. (2016) who reported that trained debriefing facilitators increase the number of

debriefs initiated in the NICU. Using the structured TeamSTEPPS Debriefing Tool led to focused and positive communication during debriefings, as evidenced by the responses on the REFLECT Post Debrief Evaluation Tool which indicated agreement that the debriefings were focused, encouraged participation, and involved effective communication. These findings were consistent with the AHRQ (2019b), Kessler et al. (2015) and Thompson et al. (2018), Zinns et al. (2017) findings that debriefing tools assist in providing structure debriefings, encourage positive judgments and feedback, and improve communication amongst team members.

During implementation, a debriefing was conducted after an emergency/resuscitation code and staff discussed some concerns regarding poor team communication and lack of role delineation leading to delayed infant improvement response time. In a subsequent emergency incident, involving the same patient and the same team that participated in the previous debrief, team communication, role delineation, and the patient's status improved in less time. Similar to the literature review, the Let's Talk QI project findings indicate that structured debriefings demonstrated improved team cohesiveness, communication, organization, role delineation, and decreased patient stabilization time (Couper et al., 2013; Mullan et al., 2013; Nwokorie et al., 2012).

Limitations to the project include implementing on a large unit (n=239), high acuity, and limited implementation time resulted in 20% of the staff completing training and/or education; therefore, limiting the number of resources available to engage in structured debriefings (n=4) following critical events. Increasing the number of educational sessions available or incorporating training and education during TeamSTEPPS mandatory staff training, may increase the number of facilitators trained and staff educated. This could potentially increase the number of debriefings initiated. Several staff members voiced the unit is extremely busy and there is not enough time to debrief. Some champions/facilitators stated they were too busy and forgot to debrief. When present, the project leader would remind the facilitator to initiate a

debriefing when the opportunity arose. One Neonatologist suggested educating residents during

the morning educational meetings, to increase residents' knowledge and participation in the

debriefing process.

Conclusion

The QI project demonstrated feasibility in implementing a structured debriefing tool in a

high acuity NICU, to improve team communications and patient outcomes following critical

events. Increased nursing and provider staff engagement, and ongoing training would enhance

debriefing facilitation. Providing adequate time to educate and train staff could increase the

number of post-critical incident debriefs initiated. Including post-critical incident debriefing

training within the TeamSTEPPS mandatory unit training curriculum would increase the number

of staff who are educated in the debriefing process. Continuation of mock emergency code

simulations, followed by a debriefing with the TeamSTEPPS Debriefing Tool can continue to

familiarize the NICU staff with the debriefing process; therefore, maintaining sustainability. To

maintain sustainability, the TeamSTEPPS Debriefing Tools are available at the charge nurse

desk and reminders are still in place to remind staff to debrief. Future considerations include

expanding debriefing sessions after all emergent deliveries, including the labor and delivery

team, and piloting in smaller NICUs.

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Table 1

Evidence Review Table

Author, year	Objective	Design	Sample (N)	Outcomes Studied (how measured)	Results	Level Quality
Cho (2015)	Review on debriefing in pediatrics.	Review Article	N/A	N/A	Debriefing after a critical incident is useful to most trainees. Debriefing approaches can be classified by the time they take place. Hot (immediately after) and Cold (in the future) debriefings. Cold debriefings have a positive effect on the staff's knowledge of performance and confidence.	VII A
Couper, Salman, Soar, Finn & Perkins (2013)	Perform a review to evaluate the effect of debriefing after life-threatening emergencies and considers the implications for intensive care training and practice.	Systematic Review and meta-analysis of a variety of non-experimental and experimental studies.	Total studies: n=27 • 19 (clinical studies) • 8 (simulation studies) 4 cardiac case studies used for meta-analysis	Measured in four levels based on Kirkpatrick's four-level system for evaluating educational interventions. • Clinician reaction/feedback to debriefing • Effect on clinician learning • Effect on clinical process variables • Patient-focused outcomes	Debriefing can be used as an educational strategy to improve knowledge, skills, and implementation of debriefing skills in practice. 20 studies supported the use of debriefing. Positively viewed debriefing (n=3) Improved learning (n=1) Enhanced non-technical performance (n=4), and technical performance (n=16) Improved patient outcomes (n=2) Meta-analysis: Improved resuscitation outcomes (p=<0.001)	I B

					Improved short term patient outcomes (p=0.05) No effect on survival to hospital discharge (p=0.55)	
Kessler, Cheng, & Mullan (2015)	A structured guide to debriefing in the emergency department after clinical events.	Article Review	N/A	N/A	"Debriefing is a powerful quality and education tool that can potentially change team behavior and positively influence patient outcomes." The article discusses the important aspects of who, why, what, how, where, and when of debriefing. Discussion of the facilitator's role and importance of debriefing techniques.	VII A
Mullan, Wuestner, Kerr, Christopher, & Patel (2013)	Describe the debriefing content predictors, patient outcomes, and patient characteristics for the first year after implementation of the DISCERN tool.	Retrospective observational cohort study.	241 Resuscitations (intubation, CPR, and/or defibrillation) occurred during the time of the study. 191 DISCERN forms were completed. 63 Required a debriefing.	Outcomes measured were obtained from completed DISCERN forms. • The outcomes measured were adherence to the DISCERN tool, • Different characteristics of the resuscitations during the study, • Characteristics of the resuscitated patients that were debriefed or not, The content of the debriefing sessions measured by Team	The DISCERN tool was completed more for higher acuity resuscitations, very brief about 10 mins, and included most of the personnel who attended the event. Starting the DISCERN tool briefly after resuscitation showed easier participant recall of events, addressing teamwork, communication, and coordination and co-operation.	IV B

				Emergency Assessment Measure (TEAM).		
Nwokorie, Svoboda, Rovito & Krugman, (2012)	To determine if a post mock debriefing session improved communication skills.	Pre-test/Post Test Quasi-experimental	A convenience sample of 20 members from the pediatric emergency department, and 2 from the respiratory department. (n=22) The members were divided into 2 teams. The teams received a presentation on communication skills, mock resuscitation, debriefing session, and completed a survey. The mock survey was repeated in one month for 3 consecutive months.	Outcomes measured: • Team Communication video performance measured by one observer using a validated team performance checklist • Participant self-assessment scores measured by an 18-item survey based on Team STEPPS evaluation. • Participants' perception of communication measured by 9 item survey.	The mock resuscitation videos showed an improvement between sessions 1 to 3(P= 0.03). All providers' mean self-assessment scores increased over the three sessions. The multifunctional technicians (MFTs) showed the greatest improvement (P=.0005). Improvement in participant's perceptions of communication.	IV B
Sawyer, Laubach, Hudak, Yamamura & Pocrnich, (2013)	Determine the impact of Team STEPPS training on teamwork skills during neonatal resuscitation	Prospective, Pre-test/Post-test design	42 NICU personnel participated in the Team STEPPS courses, including 29 nurses, 10 physicians (4 attendings, 6 fellows), and 3 respiratory therapists.	Outcomes measured: • Attitudes toward teamwork were evaluated using the Team STEPPS Teamwork Attitudes Questionnaire (T-TAQ) • Teamwork skills during the simulations were measured using the Team STEPPS Team Performance Observation Tool (T-TPOT) • Nurses ability to speak up and challenge the	• Attitudes toward teamwork on the T-TAQ improved. (95 percent CI −0.34 to −0.22, p <.001). • Teamwork knowledge on the Team STEPPS Learning Benchmarks improved. (95 percent CI −8.32 to −3.26, p <.001). • Significant improvements in teamwork skill after Team STEPPS training were seen for team structure, leadership, situation monitoring, mutual support, and communication (p <.001)	IV B

				- incorrect medication dose - The resuscitation leader's identification and correction of ineffective compressions		
Sawyer, Loren & Halamek, (2016)	A guide to help facilitates more frequent post-event debriefings in neonatal care.	Review Article	N/A	N/A	The article discusses the important aspects of who, why, what, how, where, and when of debriefing. Discussion of the facilitator's role and importance of debriefing techniques. Recommendations for when and where debriefing sessions should take place. Structured debriefing using the Gather, Analyze, Summarize approach. Discussion of potential barriers to post-emergent debriefing and solutions.	VII A
Thompson et al. (2018)	Introduction of a debriefing tool (TEAM Debrief Tool) in a simulation setting to see if it facilitates high-quality debriefing techniques. Improve the ratio of judgmental, nonjudgement,	Pre-Test/Post-Test Quasi-experimental	7 trauma teams: Two surgery residents, emergency medicine resident, and two emergency medicine nurses. 7 simulation sessions conducted, and video recorded. Each team participated in 2 simulation scenarios. The first	Outcomes measured: - Learner self-assessment - Focused facilitation - Directive performance feedback. The debriefing videos were viewed, and dialogue analyzed and transcribed based on education and learning strategies used during the debriefings.	Percentage of learner self – assessment increased significantly with the use of the tool. (7.23% vs 24.99%) (p=0.00004) Directive performance feedback decreased significantly (56.13% vs 32.75%) (p=0.0042) No significant change in the percentage of talk using focused facilitation.	IV B

and good judgment statements from facilitators. Improve the percentage towards self-assessment and focused facilitation conversation.			simulation followed with a debriefing with the TEAM tool. Then a second simulation. Teams did not participate in the same simulation twice.		After implementation of the tool, there was a significant decrease in the use of the nonjudgmental debriefing style (60.63% vs 37.31%, p = 0.00017) A significant increase in the use of good judgment debriefing (38.77% vs 59.82%, p = 0.00038). A slight increase in judgmental debriefing (0.60% vs 2.87%, p = 0.0027).	
Zinns, Mullan, O'Connell, Ryan & Wratney (2017)	Create and assess the feasibility of a time-limited, structured post-resuscitation debriefing framework entitled REFLECT.	Pre-Test/Post-Test Quasi-experimental	Pediatric Emergency Medicine fellows (n = 9) at a single center. Acted as a team leader of a pre-intervention and post-intervention videotaped simulated resuscitation. Followed by a facilitated team Post-resuscitation debriefing lasting less than 5 minutes.	Outcomes measured: • Feasibility of use of the REFLECT framework • Perception of facilitator and team member performance during the debriefings • Assessment of improvement in debriefing characteristics. Measurements were obtained by written assessments completed by the pediatric emergency fellows. Debriefing videos were analyzed to assess for use of the REFLECT characteristics.	Improvement in the pre-intervention and post-intervention assessment of the REFLECT debriefing characteristics, as determined by fellow perception (63% to 83%, P < 0.01) and team member perception (63% to 82%, P < 0.001). There was no statistical difference between pre-intervention and post-intervention debriefing time (P = 1.00).	IV B

Rating System for the Hierarchy of Evidence

Level of the Evidence   Type of the Evidence

I (1) Evidence from a systematic review, meta-analysis of randomized controlled trials (RCTs), or practice guidelines based on systematic review of RCTs.

II (2)	Evidence obtained from well-designed RCT
III (3)	Evidence obtained from well-designed controlled trials without randomization
IV (4)	Evidence from well-designed case-control and cohort studies
V (5)	Evidence from systematic reviews of descriptive and qualitative studies
VI (6)	Evidence from a single descriptive or qualitative study
VII (7)	Evidence from the opinion of authorities and/or reports of expert committees

Melnyk, B.M. & Fineout-Overholt, E. (2014). *Evidence-based practice in nursing & healthcare: A guide to best practice* (3rd ed.). New York: Lippincott, Williams & Wilkins.

Rating Scale for Quality of Evidence

A: High – consistent results with sufficient sample, adequate control, and definitive conclusions; consistent recommendations based on an extensive literature review that includes thoughtful reference to scientific literature

B: Good – reasonably consistent results; sufficient sample, some control, with fairly definitive conclusions; reasonably consistent recommendations based on a fairly comprehensive literature review that includes some reference to scientific evidence

C: Low/major flaw – Little evidence with inconsistent results; insufficient sample size; conclusions cannot be drawn

Newhouse, R.P. (2006). Examining the support for the evidence-based nursing practice. *Journal of Nursing Administration, 36*(7-8), 337-4

NICU Multidisciplinary Staff
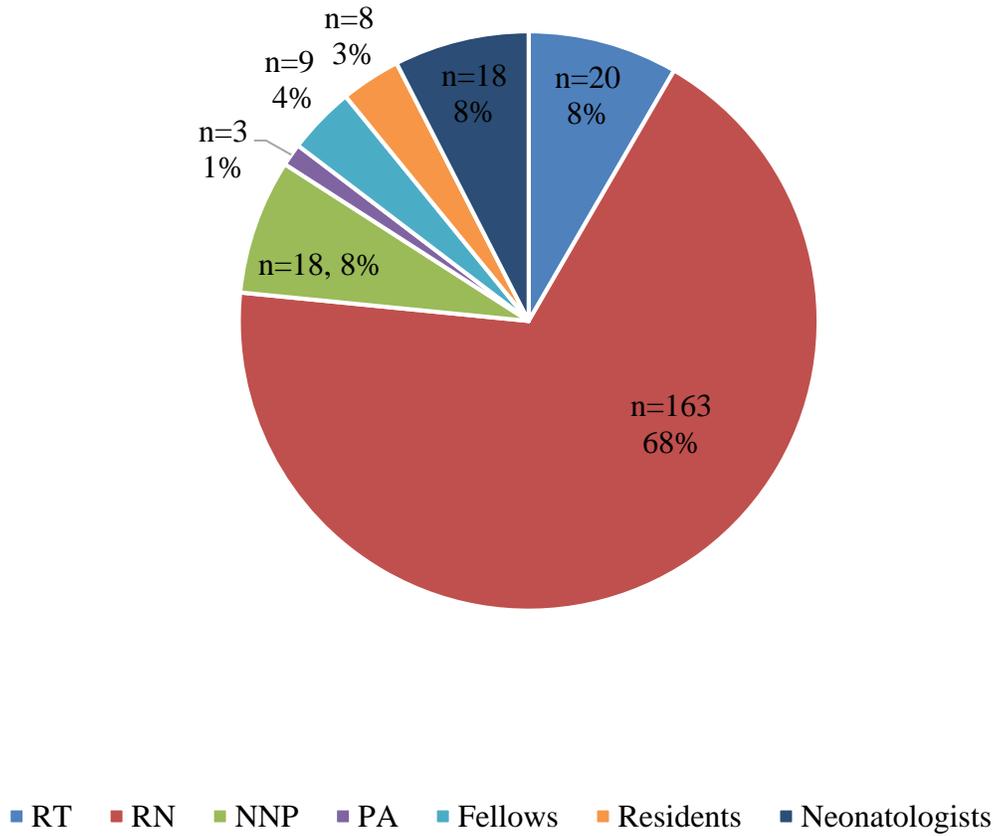
Figure 1. NICU Staff (n=239)

NICU Staff Trained and Educated

n=26
11%

n=22
9%

n=191
80%

■ Total Trained
   Champions/Facillitators

■ Total NICU Staff
   Educated

Total NICU Staff= 239
% Staff
Trained/Educated= 20%

■ Total NICU Staff Not
   Educated/Trained
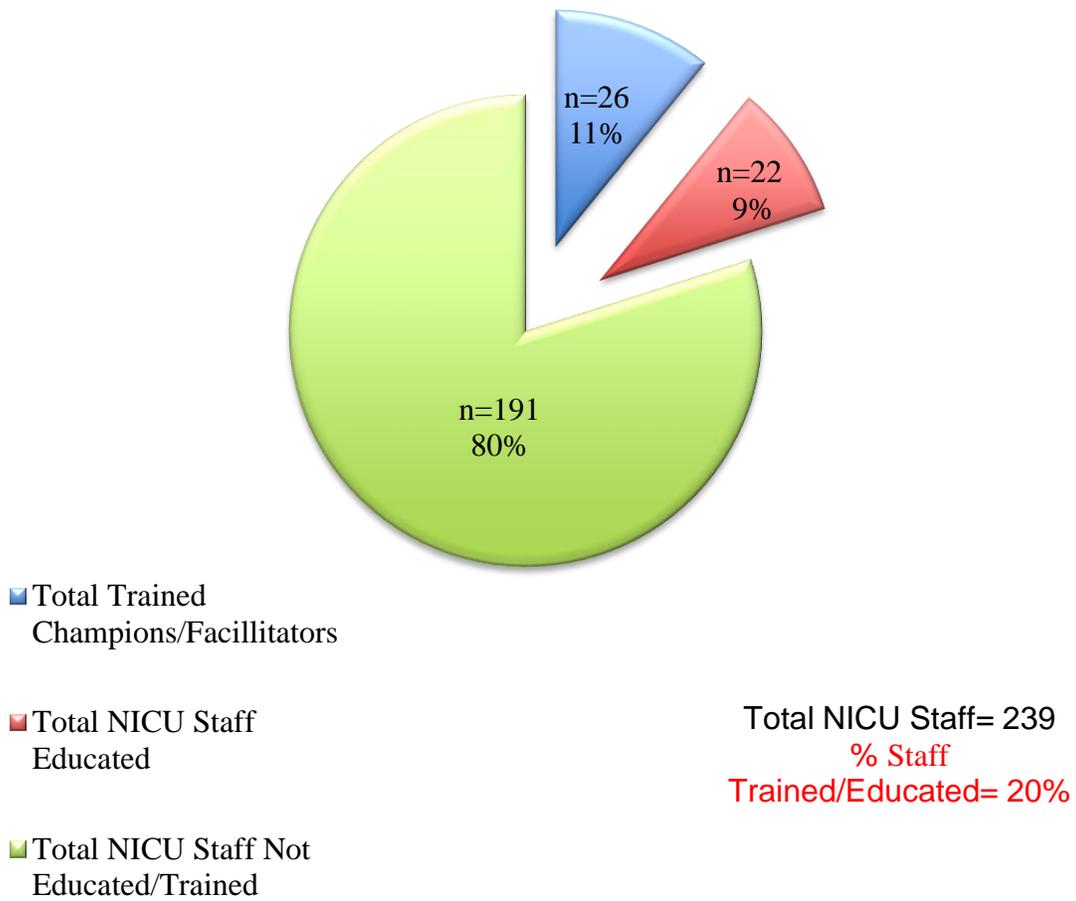
Figure 2. NICU Staff Trained/Educated

Critical Incidents and Debriefings

Total Debriefs
n=4
15%

Total Did Not
Debrief
n=23
85%

■ Total Debriefs

■ Total Did Not
   Debrief

* One debrief
that occurred
did not meet
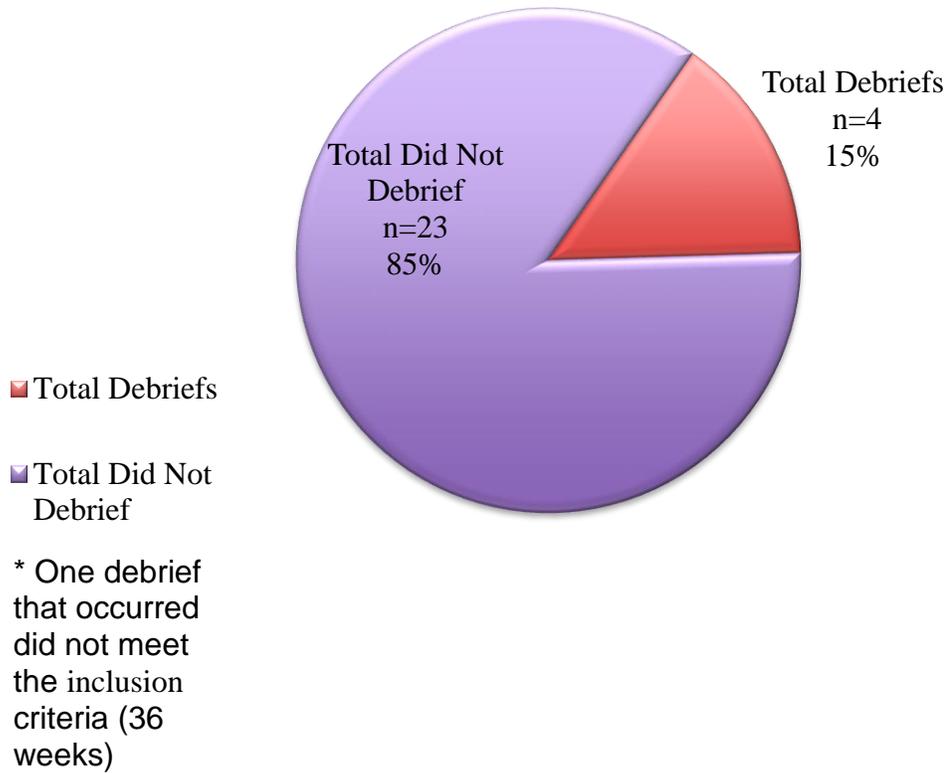the inclusion
criteria (36
weeks)

Figure 3. Total 22-32 Week Deliveries and Emergency Resuscitation
Codes (n=27*)

Appendix A

Let's Talk

NICU Debriefing Data Collection Tool

For use after: (Please check the box that pertains to the critical event that occurred) ☐ • Emergency/Resuscitation codes ☐ • 22-32-week deliveries	**Debriefing Date:** _____ **Debriefing Time:** _____ **Event Date:** _____ **Event Time:** _____

Debriefing Facilitator: _____

NICU Team Members: _____

_____

_____

Complete at the conclusion of the debriefing session:

- **Any issues that should be discussed in depth at a follow up debriefing session?**

  _____

  _____

- **Is there a need for another debriefing session? Yes or No**

  _____
  _____
  _____

Thank you for participating in this debriefing session!

If anyone needs emotional support due to a critical event, please see the debriefing team for support. Support can also be provided through the Employee Assistance Program (EAP)

(Appendix A continued)

*Example of good judgment phrase: I noticed (state the action), (state the potential concern regarding the action). Ask the team/individual to discuss their reasoning/thought process surrounding the action in question.

TeamSTEPPS Debriefing Tool

Introduction: This is a quick post-event debrief. It should take approximately 15 minutes. Our discussion is confidential. The goal is to improve team performance, communication, and patient care. Please keep all dialogue constructive, educational, and nonjudgmental. Everyone is welcomed and encouraged to participate.

2. **Team STEPPS Debriefing core components:** (Engage NICU team members in recalling

    the event) **Circle yes or no**. Additional comments as needed.

    - **Was communication clear throughout the event?** (Closed loop communication,

      orders clearly understood, appropriate tone used amongst team members, etc.)**: Yes**

      or No

      _____
      _____

    - **Were roles and responsibilities understood? Yes or No**

      _____
      _____

    - **Was the workload distribution clear? Was the team members present sufficient?**

      (Too many, too few, key personnel missing, etc.) **Yes or No**

      _____
      _____

    - **Was situation awareness maintained?** (Team members aware of their surroundings

      and the needs of the NICU team during the critical incident) **Yes or No**

      _____
      _____

    - **Did the team ask for or offer assistance? Yes or No**

(Appendix A continued)

_____
_____

- **Were errors made or avoided,** and/or any other issues? (Process, medication,

  equipment, etc.) **Yes or No**

_____
_____
_____

- **What went well?**

_____

_____

_____

- **What did not go well?** (Allow members to openly discuss team problems or

  individual. *Respond using good judgment statements.)

_____

_____

_____

- **What should change?**

_____

_____

_____

Agency for Healthcare Research & Quality. (2019). TeamSTEPPS. Retrieved from
https://www.ahrq.gov/teamstepps/instructor/fundamentals/module4/slleadership.html#im15

Appendix B

Theoretical Framework: Lewin's Change Theory and the Let's Talk Post Critical Incident Debriefing Project

| Unfreezing | Moving | Refreezing |

– **Finding a solution for the problem:**
  • Implementation of a structured debriefing process with use of the TeamSTEPPS debriefing tool.
– **Identification of the driving forces to help initiate the change:**
  • Assessed the NICU team's motivation for change
  • The NICU's key stake holders are identified and project buy in is obtained.
    – Neonatologists, NP's, Fellows, Nurse Manager, and Charge Nurses.
– **Identification of project goals**
– **Recognition of the barriers to overcome:**
  • Education of champions and staff
  • Time to debrief
  • Set area to debrief
– **Recognizing a problem:**
  • NICU interdisciplinary team does not consistently have structured debriefings after critical events. Also, the team does not utilize a standardized debriefing tool during the debriefings.

– **Identifying the need for the change:**
  • Internal evidence was obtained from NICU staff assessing their perceived need for post critical incident debriefing sessions.
  • Project leader conducted a literature review to provide evidence to support the proposed practice change.
– **Getting others to acknowledge the need for change:**
  • Evidence was provided to the NICU team members that support the use of a structured debriefing process and use of a standardized debriefing tool to guide the post critical incident debriefings.

– **Creating a detailed plan and engaging people in the proposed change**
  • Educated and trained champions/facilitators, Educated RN's, RTs, and, residents on the new debriefing process.
– **Implementation of the practice change**
  • Implementation of the Let's Talk Post Critical Incident Debriefing process was initiated after 22-32-week gestational deliveries and NICU codes.
– **Maintaining Clear communication**
  • Provided open communication with the NICU staff, through face to face interactions and email to address any concerns throughout the implementation process.

– **Evaluation**
  • The project leader:
    – Analyzed data
    – Evaluated whether goals were met
    – Disseminated findings to the NICU team members at the conclusion of the project.

– **Sustainability**
  • Discussed with the NICU team any changes needed to increase the number of post critical incident debriefings
  • Discussed how to overcome barriers.
  • Discussed how to continue to educate new staff.

Appendix C

Champion/Facilitators Training Objectives

- Discuss the current NICU's debriefing process.

- Discuss the need for a change in the debriefing process.

- Identify the benefits of facilitating positive debriefing sessions.

- Discuss the **Let's Talk debriefing process.**

  - How to effectively debrief?

    Identify positive communication techniques to use during a debriefing session.

  - When to initiate a debriefing?

  - Who should facilitate a debriefing?

  - Who should be involved?

  - Where can debriefings be held?

  - How long should the debriefings last?

  - What documents to complete?

  - What happens during a debriefing?

  - What happens after a debriefing?

- Learn how to use the TeamSTEPPS Debriefing Tool that will be used in the NICU following post critical incidents.

Appendix D

NICU Staff Education Objectives

- Discuss NICU's current debriefing process.

- Discuss the need for change.

- The NICU staff will be knowledgeable of the benefits of facilitating positive debriefing sessions.

- The NICU staff will be aware of the new Let's Talk Debriefing process

  - When will the debriefing occur?

  - Who facilitates the debriefing?

  - Who should be involved?

  - Where the debriefings can be held?

  - How long should the debriefings last?

  - What happens during a debriefing?

  - What happens after a debriefing?

- The NICU staff will be knowledgeable of the TeamSTEPPS Debriefing Tool that will be used following post critical incident in the NICU.

Appendix E

Let's Talk Critical Incident Debriefing Log Sheet

Dates	Critical Incidents (22-32 wks. gestation or NICU resuscitation codes)	Debriefings Occur		REFLECT Tool Completed by Debriefing Facilitator	
		Yes	No	Yes	No

Appendix F

REFLECT Post Debrief Evaluation Tool

Focusing on the debriefing, did you and your team REFLECT? (Circle One)

R- Reviewed the case:	YES	NO	UNSURE
E- Encouraged team participation:	YES	NO	UNSURE
F- Feedback given to team:	YES	NO	UNSURE
L- Listened to team members:	YES	NO	UNSURE
E- Emphasized key points:	YES	NO	UNSURE
C- Communicated effectively with team members:	YES	NO	UNSURE
T- Talked about transforming the future:	YES	NO	UNSURE

Zinns, L., Mullan, P., O'Connell, K., Ryan, L., & Wratney, A. (2017). An Evaluation of a New Debriefing Framework. *Pediatric Emergency Care*, *00*(00), 1. doi: 10.1097/pec.0000000000001111