

Providing Support for Neonatal Intensive Care Unit Health Care Professionals: A Bereavement Debriefing Program

Katheleen Hawes, PhD, RN^{1,2} Justin Goldstein, MD³ Sharon Vessella, MSW, LICSW³
Richard Tucker, BA³ Beatrice E. Lechner, MD^{1,3}

¹ Department of Pediatrics, Warren Alpert Medical School of Brown University, Providence, Rhode Island

² Brown Center for the Study of Children at Risk, Women and Infants Hospital, Providence, Rhode Island

³ Department of Neonatology, Women and Infants Hospital, Providence, Rhode Island

Address for correspondence Katheleen Hawes, PhD, RN, Brown Center for the Study of Children at Risk, Women and Infants Hospital of Rhode Island, 101 Dudley Street, Providence, RI 02905 (e-mail: khawes@wihri.org).

Am J Perinatol

Abstract

Objective The aim of this study is to evaluate formal bereavement debriefing sessions after infant death on neonatal intensive care unit (NICU) staff.

Study Design Prospective mixed methods study. Pre- and postbereavement debriefing intervention surveys were sent to clinical staff. Evaluation surveys were distributed to participants after each debriefing session. Notes on themes were taken during each session.

Results More staff attended sessions ($p < 0.0001$) and attended more sessions ($p < 0.0001$) during the postdebriefing intervention epoch compared with the predebriefing epoch. Stress levels associated with the death of a patient whose family the care provider have developed a close relationship with decreased ($p = 0.0123$). An increased number of debriefing session participants was associated with infant age at the time of death ($p = 0.03$). Themes were (1) family and provider relationships, (2) evaluation of the death, (3) team cohesion, (4) caring for one another, and (5) emotional impact.

Conclusion Bereavement debriefings for NICU staff reduced the stress of caring for dying infants and contributed to staff well-being.

Keywords

- ▶ NICU staff
- ▶ professional quality of life
- ▶ end-of-life experiences
- ▶ end-of-life care

Key Points

- Providing end-of-life care in NICU is challenging.
- Debriefings assist staff in coping with grief.
- Staff well-being impacts patient care.

Neonatal loss is a catastrophic event for families and health care providers (HCP). In the United States, more than 23,000 infants died in 2016.¹ For neonatal intensive care (NICU) health care professionals, providing end of life care (EOLC) for dying infants and their families is challenging and can

result in strong negative psychological and emotional responses. The provision of EOLC entails providing support to the infant and family at the end of the infant's life, including the alleviation of physical pain as well as of social, emotional, psychological, and spiritual suffering. The

received
March 27, 2020
accepted after revision
July 31, 2020

Copyright © by Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001, USA.
Tel: +1(212) 760-0888.

DOI <https://doi.org/10.1055/s-0040-1716481>.
ISSN 0735-1631.

emotional toll of EOLC can result in feelings of frustration, guilt, burnout, moral distress, and in secondary traumatic stress, depressive, and psychosomatic symptoms.^{2,3} The scientific literature on neonatal loss has primarily emphasized its impact on maternal and family outcomes and less so on the effects of loss on HCP. Providing formalized support for grieving parents and families is considered part of standard patient care. In recent years, there is increasing attention to the need for facilitated bereavement support for neonatal HCPs.⁴⁻⁷

Formal bereavement debriefings, in which the events of the death are reviewed and reflected upon, are considered an effective strategy to assist staff with processing and coping with the emotional and psychological response to death in the NICU.^{6,8,9} The purpose of debriefing is to provide emotional support to lessen the impact of difficult events, such as patient death, and to promote provider well-being with education about maladaptive responses to stress and healthy coping strategies.⁶ Participation in bereavement debriefing sessions can decrease workplace-related stress and increase professional satisfaction.¹⁰ Decreasing the stress among NICU staff related to caring for dying infants and their families may positively affect patient outcomes.¹¹

Prior to the initiation of the bereavement debriefing intervention, there was no standard protocol for the scheduling of BD sessions, which were held only when requested by team members. The institution's perinatal palliative care committee informally observed and queried NICU staff members and determined that there was a need for staff support when a death occurred and that this need was not being met. The members of the committee developed a formal BD intervention to meet the emotional needs of the NICU providers. The purpose of this study was to evaluate the impact of formal bereavement debriefing sessions on health care staff in a tertiary care NICU, discover recurrent themes expressed by NICU staff during the sessions, and evaluate the association between the clinical case characteristics and attendance at BD sessions.

Materials and Methods

The setting was a level III 80-bed single family room NICU in a major teaching hospital in the northeastern United States with approximately 8,500 births annually. A prospective Survey-Monkey survey of multidisciplinary NICU staff (attending physicians, neonatal perinatal medicine fellows, nurses, nutritionists, occupational therapists, neonatal pharmacist, case managers, nurse practitioners, respiratory therapists, clinical social workers, chaplains, lactation consultants, and assistant nurse managers) was conducted during the pre- and post-intervention period. The preintervention survey was sent at the beginning of the study, the postintervention survey was sent at the conclusion of the study after 2 years of regularly scheduled bereavement debriefings. Two reminder emails were sent out to nonresponders. The access link to the survey was posted in the NICU staff work room and lounges and Sharepoint, the online internal NICU nursing communication platform. The survey addressed issues of perception of the quality of care provided to infants at the end of life, perceived workplace stress levels, and perceived professional climate in terms of end-of-life care.

Debriefing sessions were scheduled within 72 hours after the death. Information on the time and place of the session was made readily available to all staff members (sent via work email, posted on Sharepoint, and posted in staff areas of the NICU). Participation was voluntary. One of two facilitators (a chaplain or psychiatric clinical nurse specialist) moderated the session using the debriefing structure⁸ (→Table 1). Another study group member took notes on general themes of the discussion, for example "conflict with parents," "attachment to baby," "cultural difficulties," as well as specific quotes by participants related to the themes. No personal identifying information was noted, neither on the patient nor the debriefing participant. The debriefing session evaluation surveys were distributed to participants at each death debriefing session for completion, and were collected at the end of the session. Participation in the survey was voluntary. This paper

Table 1 Neonatal intensive care unit bereavement debriefing session⁸

Welcome and introductions	Purpose of BD sessions reviewed with participants Invite participants to introduce self and describe role with family
Basic facts	Review events at the time of death
Case review	What was it like caring for this patient? What was the most distressing aspect of this case? What was the most satisfying aspect of this case?
Emotional components of the case	What will you remember most about this patient and family?
Grief responses	Please describe what you have been feeling, thinking, and doing since the death
Wellness strategies for navigating grief	How are you taking care of yourself so you can continue to provide care for other patients and families? Review healthy grieving strategies Review available resources
Reflection	What lessons did we learn from caring for this patient and family?
Conclusion	Acknowledge and validate care provided to this patient and family.

Abbreviation: BD, bereavement debriefing.

survey of debriefing participants was separate from the online pre- and postintervention surveys of the multidisciplinary NICU staff.

Demographic and clinical data extracted from the medical record after the debriefing session on the patient included: maternal age, race/ethnicity, marital status, insurance (public or private), maternal language (English or other), gestational age, diagnosis at death, and length of stay in NICU.

The project received institutional review board approval. Documentation of informed consent was waived.

Analysis Plan

Statistical analysis of the quantitative data was performed as follows: categorical variables/proportions were compared between pre- and postsurvey cohorts using the Chi-square test. Continuous data were compared using the Wilcoxon's test. The association of number of participants and continuous variables was tested with Spearman correlations. Linear models were used to test the association of number of participants and categorical variables.

Qualitative Data Analysis

Notes on themes were recorded during each session by a member of the research team. An inductive approach was used whereby the theme development was directed by the content of the data.¹² After the first 12 sessions, the sessions' theme notes were analyzed by two members of the research team (first and third author). After completion of the project, the remaining sessions' theme notes were analyzed along with the first 12 by two members of the research team (first and last author). Differences were reconciled by reviewing the data and reaching consensus. Findings were reviewed by all of the authors. Recurrent patterns in meaning were derived from the data and five of the most prevalent themes are presented.

Results

Quantitative Results

Forty bereavement debriefing sessions were held between June 2015 and June 2017. After the debriefing session intervention epoch, more participants had attended a staff bereavement debriefing session (31.4% preintervention vs. 68.6% postintervention; $p < 0.0001$) and they had attended a higher number of sessions (0 sessions: 70 vs 12.5%; 1–2 sessions: 22.9 vs. 53.1%; 3–5 sessions: 5.7 vs. 31.3%; 6+ sessions: 1.4 vs. 3.1%; $p < 0.0001$) in the previous 12 months. There was no difference in how many respondents had experienced the death of one or more patient(s); whether they had been present at the time of death of one or more patient(s), the number of patient deaths they had been present for, and the number of deaths they had experienced in the previous 12 month period between the preintervention and postintervention group. There were 115 responses to the preintervention survey and 39 responses to the postintervention survey.

The percentage of survey participants in specific clinical roles is presented in [Table 2](#).

Table 2 Participants in pre- and postbereavement debriefing intervention survey by role

Role	Preintervention (n = 115) n (%)	Postintervention (n = 39) n (%)
Primary nurse	10 (8.7)	2 (5.1)
Nurse at time of death	14 (12.2)	2 (5.1)
Nurse of another patient in proximity of the patient who died	12 (10.4)	0 (0.0)
Nurse assigned to the patient at least once	9 (7.8)	1 (2.6)
Charge nurse	4 (3.5)	2 (5.1)
Case manager	0(0.0)	0 (0.0)
ANM	9 (7.8)	2 (5.1)
Lactation counselor/consultant	2 (1.7)	1 (2.6)
Social worker	2 (1.7)	3 (7.7)
Respiratory therapist	9 (7.8)	5 (12.8)
Occupational therapist	2 (1.7)	1 (2.6)
Pharmacist	0 (0.0)	1 (2.6)
Nutritionist	3 (2.6)	1 (2.6)
Chaplain	4 (3.5)	1 (2.6)
Attending physician	14 (12.2)	8 (20.5)
Fellow	7 (6.1)	6 (15.4)
Consultant physician	0 (0.0)	0 (0.0)
Nurse practitioner	14 (12.2)	3 (7.7)

Abbreviation: ANM, assistant nurse manager.

Clinical care provider/respondent satisfaction with various aspects of the care process ([Table 3](#)) was unchanged between the epochs.

Among situations that commonly occur in a work setting ([Table 3](#)), respondents' self-reported stress levels were decreased between the preintervention and postintervention epoch on the death of a patient whose family they have developed a close relationship with (preintervention: 3.4, postintervention: 3.0 on a scale of 1 to 4, and never stressful to extremely stressful; $p = 0.0123$).

Debriefing session participants were asked to complete feedback questionnaires after each debriefing session they attended. [Table 4](#) reflects mean scores on a scale of 1 to 7 (1 = extremely ineffective/abysmal, 2 = consistently ineffective/very poor, 3 = mostly ineffective/poor, 4 = somewhat effective/average, 5 = mostly effective/good, 6 = consistently effective/very good, 7 = extremely effective/outstanding). There were 148 responses to this survey. Of these participants in the debriefing sessions, 30 were nurses, 64 physicians, four charge nurses, five chaplains, five nurse practitioners, two nutritionists, five respiratory therapists, 22 social workers, eight others, and three who did not indicate their role.

When comparing professions grouped into physician/nurse practitioner (MD/NP), registered nurse/assistant nurse manager (RN/ANM), social worker/chaplain, respiratory therapist

Table 3 Pre- and postbereavement debriefing intervention survey questions			
How satisfied you are with: (on a scale of not very (1), somewhat (2), very (3), completely (4), do not know; not applicable)	Preintervention	Postintervention	p-Value
How well we manage the infants' symptoms	3.16 (0.79)	3.14 (0.89)	0.88
How well we address providing comfort care	2.94 (0.71)	3.14 (0.97)	0.31
The emotional support provided to the family	3.09 (0.71)	3.36 (0.62)	0.11
Assistance from colleagues in caring for the family	3.27 (0.78)	3.39 (0.57)	0.43
How well we attend to the cultural needs of the family	3.00 (1.0)	3.32 (1.09)	0.21
Teamwork (shared mental model) regarding the care of the infant	2.97 (0.82)	3.32 (0.67)	0.06
Communication among members of the team with the family	3.02 (0.77)	3.21 (0.79)	0.24
Communication among members of the team with one another	2.92 (0.84)	3.21 (0.74)	0.10
Overall, how satisfied are you with the care of infants and families receive at the end of life?	3.02 (0.77)	3.14 (0.76)	0.50
If you attended any debriefings, how satisfied were you with the debriefing process?	3.38 (0.78)	3.22 (0.93)	0.56
For each situation, you have encountered in your present work setting. Please indicate how stressful it has been for you. (on a scale of not very (1), somewhat (2), very (3), completely (4), do not know; not applicable)	Preintervention	Postintervention	p-Value
Performing procedures that patients experience as painful	2.51 (0.71)	2.27 (0.67)	0.10
Feeling helpless in the case of a patient who fails to improve	2.81 (0.73)	2.5 (0.76)	0.07
Listening or talking to families about an infant's approaching death	2.83 (0.72)	2.52 (0.70)	0.07
The death of a patient	2.91 (0.68)	2.67 (0.73)	0.13
The death of a patient whose family you have developed a close relationship with	3.40 (0.71)	3.00 (0.72)	0.01
Watching a patient suffer	3.67 (0.60)	3.48 (0.65)	0.15

(RT)/nutritionist or other, the mean score differed by profession for questions "how helpful was the session?" ($p = 0.035$) and "how informative was the session?" ($p = 0.01$; ▶Table 4). In case of both the questions, RN/ANM, social worker/chaplain and other scored similarly, MD/NP scored lower, and RT/Nutritionist scored the lowest. For all other questions, no difference was noted between different clinical role groups.

General descriptive analysis of the patients whose deaths were debriefed in these sessions is depicted in ▶Table 5.

An increased number of participants in the debriefing sessions was associated with age of the infant at the time of death, which—in a NICU setting—is a proxy for how long the infant was cared for in the NICU ($r = 0.33$; $p = 0.03$). The number of participants per debriefing session was not associated with maternal age, gestational age, maternal primary language, race/ethnicity, insurance type, marital status, days elapsed between death and debriefing session, or type of diagnosis (congenital anomaly, genetic syndrome, encephalopathy, extreme prematurity, and prematurity).

Qualitative Results

Five predominant themes were identified: (1) the relationship between the family and the providers (challenging versus not challenging), (2) an evaluation of the death ("how the death went"), (3) team cohesion: having a shared mental model ("we were all on the same page"), (4) the importance of caring for each other ("having each other's backs"), and (5) the emotional impact of the death on the staff.

Theme 1: The relationship between the family and the provider

Bereavement debriefing participants consistently described the quality of their relationship with the family as falling into one of two categories, challenging versus not challenging. There were emotional factors and communication factors related to describing families that were considered challenging:

"They were very angry."

"I felt disconnected from the family."

"They seemed to understand what was said during the meeting, but then they would say these things that made me think they did not understand."

When discussing families that were considered not challenging, staff made comments, such as:

"Family was on the same page as we were."

"Parents were ready (relieved) to redirect care."

"Parents were willing to let us use our clinical judgement."

"Some families you just click with. I clicked with this family."

Theme 2: An evaluation of the death

Participants discussed the type of death, for example, did it go well, a "good" death, or was it difficult.

"Baby and family were peaceful by the end..."

"Given the horrible situation it went as well as could have"

"What was difficult ... was the prolonged code and infant not given pain meds"

"I'm glad the baby went peacefully and we weren't doing heroics"

Table 4 Individual debriefing session evaluation survey

On a scale of 1–7: (1 = extremely ineffective/ abysmal 7 = extremely effective/outstanding)	Responses (n)	Mean (SD)
Environment felt safe to express my feelings/concerns	148	6.8 (0.48)
I had the opportunity to share my experience	147	6.8 (0.47)
The session was emotionally supportive	148	6.8 (0.47)
The session helped me to express and manage my grief	142	6.5 (0.75)
How helpful was the session?	146	6.5 (0.78)
How informative was the session?	144	6.6 (0.68)
How meaningful was the session?	145	6.6 (0.75)
Overall satisfaction with the session?	148	6.7 (0.69)
How helpful was the session? ^a (<i>p</i> = 0.035)		
Profession	n	Mean score
Registered nurse/assistant nurse manager	34	6.7 (0.73)
Social worker/chaplain	27	6.6 (0.69)
Physician/nurse practitioner	68	6.4 (0.82)
Respiratory therapist/nutritionist	6	5.8 (0.98)
Other	8	6.6 (0.74)
How informative was the session? ^a (<i>p</i> = 0.01)		
Profession	n	Mean score
Registered nurse/assistant nurse manager	34	6.7 (0.62)
Social worker/chaplain	27	6.7 (0.67)
Physician/nurse practitioner	68	6.4 (0.71)
Respiratory therapist/nutritionist	6	6.0 (0.63)
Other	8	6.8 (0.46)

Abbreviation: SD, standard deviation.

^aFor both questions, registered nurse/assistant nurse manager, social worker/chaplain, and other scored similarly, physician/ nurse practitioner scored lower, and respiratory therapist/nutritionist scored the lowest.

Theme 3: team cohesion: having a shared mental model.

For those who were present at the death, or regularly involved in the care of the infant, how well the team were in agreement with the plan of care was important.

“I felt that we communicated well, we were all on the same page.”

“RN and others very professional, good help, communication.”

“Good team response, well organized, good team work.”

“I felt frustration about treatment...felt things were mishandled...”

“Seems like no one was taking the lead in the care that day.”

Theme 4: The importance of caring for each other.

Table 5 Characteristics of patients

	Mean (SD) n = 44
Maternal age (y)	28.6 (6.8)
Gestational age (wk)	29.9 (6.3)
Age at death (d)	16.4 (22.4)
Days elapsed between death and debriefing	4.3 (1.9)
Number of participants	5.1 (3.3)
Diagnosis	n (%)
Congenital anomalies	3 (7)
Encephalopathy	6 (14)
Extreme prematurity	22 (50)
Prematurity	9 (20)
Genetic syndrome	4 (9)
	n (%) n = 44
Maternal primary language	
English	40 (91)
Spanish	4 (9)

Abbreviation: SD, standard deviation.

Staff members commented on the emotional support provided by colleagues as well as their assistance with medical/nursing care for the family/infant during and after the death.

“It was a bonding experience with the team” (after an especially difficult case).

“The fellow did a great job.”

“The doctors did a great job, quiet and supportive, the family could tell that they could feel their pain.”

“You (MD to RN) took wonderful care of this family.”

Theme 5: The emotional impact of the death on staff

Individuals in attendance described how they felt during the infant's death and on how they are currently coping after the death.

“I'm not doing well. Very sudden death. Unexpected. Out of the blue... Feel helpless, as if I failed.”

“Feel guilty, I felt shocked, still mourning, was it my decision that caused this, difficult to handle.”

“It is a miserable feeling to have share such bad news... over and over...”

“Guilt, did I miss something...”

“Frustration...I felt tired of saying for days that I was concerned and feeling ignored and brushed off.”

Discussion

There's scant literature regarding the effect of perinatal loss on NICU HCP.³ HCP are not exempt from the experience of grief related to the death of a patient.^{13,14} Formal debriefing sessions have been identified as an effective strategy to help NICU staff cope with the emotional response to infant death and to aid in improving the ability to manage grief.^{8,9,15}

The main goals of this study were to evaluate the bereavement debriefing intervention among NICU HCP and to explore

themes related to HCP's experience of caring for families when an infant died in the context of participation in the BD session, and also to evaluate the association between the clinical case characteristics and attendance at BD sessions.

Postintervention, HCPs reported having attended more debriefing sessions than preintervention, showing that more sessions and thus more participation occurs when sessions are routinely scheduled after each patient death, as opposed to on an ad hoc basis, with no clear process in place for scheduling them. Our results demonstrating a decrease in the perceived stress levels associated with the death of a patient whose family the HCP had developed a close relationship with suggest a useful role for scheduled debriefing sessions, while others have shown that provider well-being is associated with patient safety.¹⁶

Interestingly, there was a difference in how helpful and how informative participants found the sessions, depending on their role on the health care team. RN/ANMs found the sessions to be most helpful and informative, MD/NPs second, and RT/nutritionists the least. These findings may correlate with the level of contact that these different provider groups have with the patient and family, as nurses spend the most amount of time at the bedside and RTs and nutritionists likely less time.¹⁷ Another explanation may be to consider the traditional nursing role as patient advocate² along with the challenges of engaging in interprofessional collaboration.¹⁶ When frontline RNs and physicians disagree with aspects of the patient's care, the physician's treatment decisions usually prevail. Nurses who are distressed with the direction of the infant's care and think that they are unable¹⁸ to influence the course of treatment, and who also believe that they are contributing to the infant's prolonged suffering and may have more of a need to debrief and discuss how it felt to provide care in this scenario.^{19,20}

It is also interesting to note that the number of participants at sessions was not associated with any clinical scenario, which we had postulated, such as communication challenges with the family, or specific diagnoses, such as being a full term infant as opposed to an extreme premature infant, or sudden death as opposed to expected death but was only associated with the age of the infant, which was a proxy for the length of hospitalization. This result is not unexpected, as the HCPs, likely develop more meaningful relationships and bonding with the family the longer the patient is cared for in the NICU, as well as more HCPs coming into contact with the family.^{21,22}

The "quality of the relationship between providers and the families" (Theme 1) was the predominant theme which was described as challenging versus not challenging. The quality of the relationships between the NICU team and families can have an impact on team's ability to provide care.²¹ The parental role can be altered in the NICU setting when parents of critically ill infants may not be able to feed, bathe, or hold their child. The nurses and other HCPs often are seen as surrogate parents. Implementing family-centered developmental care in the NICU supports parents as "full participatory, essential healing partners within the NICU team"^{23(p.56)}. When parents and their NICU team partners

collaborate effectively with feelings of regard toward each other and with effective communication, parents are not reduced to being bystanders and thereby watching others care for their child.²⁴ Adherence to the patient and family-centered care (PFCC) principles of collaboration, information sharing, respect, and negotiation²⁵ is necessary for positive provider and family relationships.

A second theme that arose from the debriefing discussions was "the type of death." Many of the comments were related to the perception of whether or not the baby suffered, that is, was it a "good death." The Institute of Medicine defines a good death as one that is "free from avoidable distress and suffering for patients, families, and caregivers; in general accord with patients' and families' wishes; and reasonably consistent with clinical, cultural, and ethical standards"²⁶. In the context of the NICU, "bad" deaths may occur when treatment goals differ between the providers' and families' wishes and among HCPs team members.²⁷ Physicians and nurses report experiencing "moral distress" when families want them to continue with aggressive treatment, even though the team has communicated that there is nothing more they can do medically to change the prognosis of death.²⁸ Moral distress, the feeling of having a moral obligation to act, but being prevented from doing so, is related to HCP burnout, uncertainty, and lack of support.^{29,30} The desire to provide a "good" death is likely related to the providers' primary duties of beneficence and nonmaleficence, as well as possibly to the relationship with the family.

The next theme observed is "team cohesion/having a shared mental model" (Theme 3). As mentioned above, collaboration among interdisciplinary team members is a necessary component in healthy work environments, with effective communication and shared purpose being essential to the collaborative process.^{11,31,32} In the debriefing sessions, participants commented on how well the team communicated and on how well they worked together. HCPs expressed distress when it was felt that communication and team work were less than ideal. According to the American Association of Critical-Care Nurses (AACN)¹¹ skilled communication and true collaboration are the most important standards in creating healthy work environments in which patient and family centered care can flourish and where HCP's well-being is valued and supported.

The "importance of caring for one another" (Theme 4) was expressed by NICU HCPs who attended debriefings. The statements supporting this theme had an emotional tone with participants using words and statements referring to the care given to the infant, family, and other HCPs. Participants complimented one another during the sessions by commenting on how well a colleague took care of the infant and family during the NICU course and/or at time of death. They also described what it meant to have the emotional support of other team members. It has been noted that emotional support from colleagues and supervisors at the time of a patient's death is important to HCPs^{5,10} and contributes to a healthy work environment.

Lastly, Theme 5 is concerned with the "emotional impact of the death" on the HCP. Debriefing participants commented on how they have been feeling since the death. HCPs reported

experiencing feelings of guilt, frustration, non-well-being, helplessness, and misery. These are not uncommon emotional responses to the death of a patient.^{14,33} Disenfranchised grief is a phenomenon in which grief is not made public, not supported socially, and not openly acknowledged.³⁴ This is not uncommon among HCP.^{35,36} The grief process can be stunted when HCP's grief is not acknowledged or allowed emotional expression. When HCPs do not have the opportunity to grieve, bereavement overload can occur. Bereavement overload happens when providers experience multiple losses without having the opportunity to grieve in between patient deaths.³⁷ Bereavement overload is related to compassion fatigue. Compassion fatigue is the presence of emotional and/or distress associated with providing patient care. Allie et al³⁸ found that half of the HCPs in their study experienced grief overload, and the majority of these providers also experienced compassion fatigue. Providing emotional support and the opportunity to grieve can prevent maladaptive coping responses in healthcare staff and promote a healthy workplace.

A strength of this study is the mixed method approach, in which both quantitative and qualitative data are collected and analyzed. The pre-post surveys measured the impact of the formal bereavement debriefing program, and the qualitative analysis revealed important concerns of NICU staff when caring for dying babies and their families. Conducting the study in one facility limits the generalizability of the quantitative findings; however, this is consistent with qualitative methodology. An additional limitation is the fact that nursing participation in the study was lower than would be expected based on the proportion of the bedside care that is provided by nurses. In spite of trying different strategies to engage nurses to participate in the debriefings, such as personally inviting them individually to participate and scheduling sessions during off shifts, nurse attendance, and survey participation did not increase during the project. It is not unusual given that nurses report "not having enough time" as the largest barrier to participation in research.³⁹ While there were no obvious differences in incentives, physicians are possibly more likely to fill out surveys as they are more likely to have experience with research and surveys and may thus be more comfortable with and more willing to engage with surveys than other multidisciplinary team members. Additionally, physician schedules better lend themselves to attending sessions during the day than nurses and respiratory therapists, who often either have patient care responsibilities or are not available given shift scheduling. Finally, nurses may not feel comfortable discussing their feelings about a case in the presence of physicians. Thus, future directions will include how to specifically target nurses for support after deaths in the NICU. Further research should include family perceptions of EOL care and the impact of debriefing sessions on provider-patient relationships and other quality outcomes.

Conclusion

The loss of a patient can have a significant emotional impact on HCP. Providing a formal bereavement debriefing program, in

which HCPs are able to express their feelings of grief and other emotional responses related to patient loss, such as the themes demonstrated here may reduce the emotional impact associated with caring for dying neonates and their families. The provision of bereavement of debriefing sessions may help staff be better prepared to care for the next patient and themselves.

Authors' Contributions

K.H. drafted the initial manuscript, participated in the study, critically reviewed and revised the manuscript, and approved the final manuscript as submitted. J.G., S.V., and R.T. participated in the study, critically reviewed and revised the manuscript, and approved the final manuscript as submitted. B.E.L. conceptualized and designed the study, participated in the study, critically reviewed and revised the manuscript, and approved the final manuscript as submitted. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

Funding

None.

Conflict of Interest

None declared.

Acknowledgments

We are grateful for the assistance and expertise of hospital chaplains Rev. Caroline Patterson Inlow and Rev. Helen Bodell for facilitating several of the debriefing sessions.

References

- Rossen LM. Quarterly provisional estimates for infant mortality, 2015-Quarter 1, 2018. Available at: <https://www.cdc.gov/nchs/nvss/vsrr/infant-mortality-dashboard.htm> Accessed 2019
- Lewis SL. Exploring NICU nurses' affective responses to end-of-life care. *Adv Neonatal Care* 2017;17(02):96-105
- Gandino G, Bernaudo A, Di Fini G, Vanni I, Veglia F. Healthcare professionals' experiences of perinatal loss: a systematic review. *J Health Psychol* 2019;24(01):65-78
- McGrath JM. Neonatal nurses: what about their grief and loss? *J Perinat Neonatal Nurs* 2011;25(01):8-9
- Levick J, Fannon J, Bodemann J, Munch S. NICU bereavement care and follow-up support for families and staff. *Adv Neonatal Care* 2017;17(06):451-460
- Dietz D. Debriefing to help perinatal nurses cope with a maternal loss. *MCN Am J Matern Child Nurs* 2009;34(04):243-248
- McDermott A, Brook I, Ben-Isaac E. Peer-debriefing after distressing patient care events: a workshop for pediatric residents. *MedEdPORTAL* 2017;13:10624
- Keene EA, Hutton N, Hall B, Rushton C. Bereavement debriefing sessions: an intervention to support health care professionals in managing their grief after the death of a patient. *Pediatr Nurs* 2010;36(04):185-189, quiz 190
- Catlin A, Carter B. Creation of a neonatal end-of-life palliative care protocol. *J Perinatol* 2002;22(03):184-195
- Eagle S, Creel A, Alexandrov A. The effect of facilitated peer support sessions on burnout and grief management among health care providers in pediatric intensive care units: a pilot study. *J Palliat Med* 2012;15(11):1178-1180
- McCauley K, Irwin RS. Changing the work environment in intensive care units to achieve patient-focused care: the time has come. *Am J Crit Care* 2006;15(06):541-548

- 12 Braun V, Clark V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101
- 13 McNamara K, Meaney S, O'Connell O, McCarthy M, Greene RA, O'Donoghue K. Healthcare professionals' response to intrapartum death: a cross-sectional study. *Arch Gynecol Obstet* 2017;295(04):845–852
- 14 Wilson J, Kirshbaum M. Effects of patient death on nursing staff: a literature review. *Br J Nurs* 2011;20(09):559–563
- 15 Rushton CH, Reder E, Hall B, Comello K, Sellers DE, Hutton N. Interdisciplinary interventions to improve pediatric palliative care and reduce health care professional suffering. *J Palliat Med* 2006;9(04):922–933
- 16 Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare staff wellbeing, burnout, and patient safety: a systematic review. *PLoS One* 2016;11(07):e0159015
- 17 Butler R, Monsalve M, Thomas GW, et al. Estimating time physicians and other health care workers spend with patients in an intensive care unit using a sensor network. *Am J Med* 2018;131(08):972.e9–972.e15
- 18 Fackler CA, Chambers AN, Bourbonniere M. Hospital nurses' lived experience of power. *J Nurs Scholarsh* 2015;47(03):267–274
- 19 Furingsten L, Sjögren R, Forsner M. Ethical challenges when caring for dying children. *Nurs Ethics* 2015;22(02):176–187
- 20 Puia DM, Lewis L, Beck CT. Experiences of obstetric nurses who are present for a perinatal loss. *J Obstet Gynecol Neonatal Nurs* 2013;42(03):321–331
- 21 Kukora S, Keefer P, Pituch K, Firn J. Thematic analysis of interprofessional provider perceptions of pediatric death. *J Pediatr Nurs* 2019;47:92–99
- 22 Butler AE, Hall H, Copnell B. Becoming a team: the nature of the parent-healthcare provider relationship when a child is dying in the pediatric intensive care unit. *J Pediatr Nurs* 2018;40:e26–e32
- 23 Craig JW, Glick C, Phillips R, Hall SL, Smith J, Browne J. Recommendations for involving the family in developmental care of the NICU baby. *J Perinatol* 2015;35(Suppl 1):S5–S8
- 24 Armentrout D, Cates LA. Informing parents about the actual or impending death of their infant in a newborn intensive care unit. *J Perinat Neonatal Nurs* 2011;25(03):261–267
- 25 Kuo DZ, Houtrow AJ, Arango P, Kuhlthau KA, Simmons JM, Neff JM. Family-centered care: current applications and future directions in pediatric health care. *Matern Child Health J* 2012;16(02):297–305
- 26 Institute of medicine. *Approaching Death: Improving Care at the End of Life*. Washington, DC: The National Academies Press; 1997
- 27 Fortney CA, Steward DK. A new framework to evaluate the quality of a neonatal death. *Death Stud* 2014;38(1-5):294–301
- 28 Prentice T, Janvier A, Gillam L, Davis PG. Moral distress within neonatal and paediatric intensive care units: a systematic review. *Arch Dis Child* 2016;101(08):701–708
- 29 Austin CL, Saylor R, Finley PJ. Moral distress in physicians and nurses: impact on professional quality of life and turnover. *Psychol Trauma* 2017;9(04):399–406
- 30 Larson CP, Dryden-Palmer KD, Gibbons C, Parshuram CS. Moral distress in PICU and neonatal ICU practitioners: a cross-sectional evaluation. *Pediatr Crit Care Med* 2017;18(08):e318–e326
- 31 House S, Havens D. Nurses' and physicians' perceptions of nurse-physician collaboration: a systematic review. *J Nurs Adm* 2017;47(03):165–171
- 32 Khowaja-Punjwani S, Smardo C, Hendricks MR, Lantos JD. Physician-nurse interactions in critical care. *Pediatrics* 2017;140(03):e20170670
- 33 Jonas-Simpson C, Pilkington FB, MacDonald C, McMahon E. Nurses' experiences of grieving when there is a perinatal death. *SAGE Open* 2013;3(02):1–11
- 34 Doka K. *Disenfranchised Grief: Recognizing Hidden Sorrow*. Lexington, MA: Lexington Books; 1989
- 35 Kim M. The right to grieve. *JAMA* 2019;321(16):1569–1570
- 36 Redinbaugh EM, Sullivan AM, Block SD, et al. Doctors' emotional reactions to recent death of a patient: cross sectional study of hospital doctors. *BMJ* 2003;327(7408):185
- 37 Neimeyer A, Stewart AE, Anderson J. AIDS related death anxiety: a research review and clinical recommendations. In: Gendelman HE, Swindells S, Grant I, Lipton S, Everall I (eds). *The neurology of AIDS*. 2nd ed. New York: Chapman and Hall; 2004:787–799
- 38 Allie Z, Le Roux E, Mahlatsi K, et al. Bereavement overload and its effects on, and related coping mechanisms of health care providers and ward administrators at National District Hospital in Bloemfontein, Free State. *Afr J Prim Health Care Fam Med* 2018;10(01):e1–e7
- 39 Hagan J, Walden M. Development and evaluation of the Barriers to Nurses' Participation in Research Questionnaire at a large academic pediatric hospital. *Clin Nurs Res* 2017;26(02):157–175