

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Managing Moral Distress in the Workplace:



Creating a Resiliency Bundle

Melodie Davis, DNP, RN, CPN, and Joyce Batcheller, DNP, RN, NEA-BC, FAA

Nurse leaders within a 43-bed pediatric intensive care unit introduced a pre- and post-implementation evidence-based practice project to determine which resilience enhancing techniques were helpful among a multidisciplinary team. A statistically significant increase in post-intervention group resilience (79.9 to 83.4, p < 0.0001) was achieved within 6 months of the "resiliency bundle" implementation. Forty-seven critical care staff including registered nurses, respiratory therapists, unit secretaries, medical doctors, chaplains, child life specialists, patient care techs, and nurse practitioners self-selected resiliency bundle components and provided their feedback and resilience level pre- and post-implementation. Preferred uses of resilience enhancement techniques were analyzed by discipline, experience level, and age.

ealth care occurs in highly stressful workplaces that require precision, intensity, and care. As a result, staff often report moral distress and burnout. Reducing the risk of moral distress and burnout is paramount. One example is the pediatric intensive care unit (PICU) staff who experience increased risk for moral distress due to the demanding work environment.¹⁻⁴ Resilience, a protection against burnout, is the ability to positively respond to aversity.⁵ Following a particularly difficult season, the nursing director heard from a staff nurse, "We have so many bundles to protect our patients; why don't we have bundles to protect our staff?" This conversation

KEY POINTS

- Repeated exposure to complex and ethically challenging situations in the pediatric intensive care unit increases professionals' moral distress leading to burnout and turnover.
- Resilience has protective properties to decrease the effects of moral distress.
- A resiliency bundle, implementing evidence to increase resilience, coupled with institutional practices to support the health care team was applied to determine the effects on moral distress.

prompted the successful creation of the resiliency bundle. A pre- and post-implementation evidencebased practice (EBP) project was instigated to evaluate the outcome of applying a multifaceted resiliency bundle for staff in the PICU. In addition, the resilience bundle was essential to decrease stress during the COVID-19 global pandemic because this unit housed positive patients and required quick development of staff safety processes and required an environment of flexibility.

BACKGROUND, PROBLEM, AND PURPOSE

The Institute for Healthcare Improvement's (IHI) Triple Aim influenced health care organizations to focus on improving the health care system through the patient experience, population health, and reduction of the cost of care. A fourth component was added, and the Triple Aim is now considered the Quadruple Aim. The forth aim has gained national attention as a call for leaders to focus on clinicians' work environment to decrease burnout.⁶ The Quadruple Aim includes building institutional infrastructure that supports joy in work for clinical staff thereby reducing the risk of burnout for clinicians. Nurses and physicians experience significant burnout. The US incidence of burnout in hospital registered nurses has been as high as 70% in large studies.⁷ When this is compared to national statistics for burnout and suicide in the general population, both physicians and nurses experience significant

distress. US physicians suffer from their high stress roles, contributing to a decline in mental health and a suicide rate of 28 to 40 per 100,000, a stark contrast to the 12.5 rate in the general US population.⁸

Health care providers in the PICU experience significant stress and are exposed to morally distressing situations.¹ Moral distress occurs when one cannot act upon what is morally correct, compromising their integrity.⁹ Health care leaders can support staff by decreasing the effect of moral distress through focusing on moral resilience, an approach to increase health care providers' resilience when facing ethically challenging situations.⁵ Moral resilience allows/empowers clinicians to respond positively to the distress of complex ethical situations.⁹

Moral distress is unlikely to be eliminated; however, leaders can shift their focus from distress to solutions by cultivating resilience practices. Extensive research has demonstrated moral distress as a compounding factor leading to burnout, which increases medical errors and the cost of care while decreasing patient satisfaction.¹⁰ The PICU leadership team identified that locally, the turnover rate was higher than the organization rate, and staff verbalized feelings of moral distress. Staff engagement scores were lower than benchmark scores of nursing peers within the organization.

The purpose of this project was to address the IHI's fourth Quadruple Aim—improve clinician's joy at work through implementation of a resiliency bundle. The National Academy of Medicine has identified clinician well-being and resilience as an important step towards improving patient care.¹¹ The American Nurses Association (ANA) established a call to action for health care organizations and leaders to address moral distress through moral resilience enhancement.¹² PICU leadership evaluated the impact of implementing a multifaceted resiliency bundle in the PICU.

LITERATURE SYNTHESIS

PICU staff have increased risk for moral distress due to the stressful environment, life-sustaining equipment, conflict over treatment, and futile family preferences.^{2,3} Stress in the PICU leads to anxiety, burnout, and decreased job satisfaction.⁴ Moral distress is a strong indicator of a nurse's intent to leave their job, with up to 25% of nurses leaving high-intensity work settings due to distress.⁴ Resilience is protective against burnout. Cultivating resilience may be possible; however, the evidence on successful interventions is mixed. Rushton⁹ discusses the keys to cultivate moral resilience through leadership and infrastructure. Moral resilience is developed through mindfulness, ethics training, and organizational support.⁹

In 2017, ANA¹² issued a call to action for health care organizations to cultivate a culture of moral resilience. ANA calls for leaders to create an

environment that supports their nurses and health care teams through mitigating moral distress and cultivating moral resilience. 6

Mealer et al.¹³ used focus groups to develop content for a resiliency training program. Their results suggest that nurses have differing preferences for instruction and want short alternatives to in-person sessions such as online content, podcasts, or phone options.¹³ One large descriptive study identified the 2 most used and impactful resources for cultivating resiliency as 1-on-1 discussions with colleagues and informal social events. Underused, yet impactful, resiliency builders include taking a break from stressful patients, leaving after a patient death, meaningful group debriefing, palliative care support, and structured social events.¹

Mistretta et al.¹⁴ found that mind-based resiliency training and resiliency training via a smartphone application improved well-being over time. One study demonstrated a decrease in moral distress through structured ethics rounds in a PICU.¹⁵ Proactive wellbeing interventions such as exercise, rest, meditation, and journaling coupled with situational awareness and case conferences increased resiliency for PICU staff.¹⁶ Varied strategies for resiliency development are necessary to reach all individuals and have a positive impact.¹

After significant review of current evidence, the project lead, with support from content experts and the host site's director of nursing research and EBP, concluded a multifaceted approach to increasing moral resilience was needed to meet the needs and individual preferences of all team members in the PICU.

FRAMEWORK AND DESIGN

The Iowa Model of EBP¹⁷ was implemented for this project. The project team involved stakeholders, evaluated current evidence on moral resilience, surveyed the PICU multidisciplinary team, integrated evidence into practice, and evaluated the effectiveness of interventions.¹⁷ The project utilized a descriptive and comparative interventional EBP project; the institutional review board approved the project (2018-043). All PICU staff received the moral resilience education intervention, but consent was inferred when participants volunteered to complete the pre- and post-intervention survey.

PROJECT SUMMARY

Methods

The project had 3 phases. Beginning March 2019, phase 1 included a pre-survey of PICU staff participants utilizing the well-validated Connor-Davidson Resilience Scale (CD-RISC-25),^{18,19} a 25-question assessment of personal resilience, and a pre-assessment of previous moral distress training and

resiliency-enhancing factors. Forty-seven multidisciplinary participants were recruited and completed the pre-survey. In April 2019, phase 2 of this project included implementing the intervention, the resiliency bundle. Electronic moral distress education was provided to all PICU staff via the electronic education portal (*Table 1*). The education module also included an in-depth description of each of the following resilience strengthening techniques: ethical issue resolution process, mindfulness reminders available through cell phone applications, a patient death process reminder, case conference discussion availability, structured debriefings, discussions with colleagues and supportive staff, leadership notification, social events, host site educational courses, and availability of the employee assistance program. In September 2019, phase 3 of the program included reassessing participants' knowledge of moral distress and the moral resiliency bundle, and examining the use and effectiveness of each bundle component. Finally, knowledge of moral distress and resiliency-enhancing factors as well as resilience of the PICU staff using the CD-RISC-25 were reassessed. The same group of 47 participants was assessed, with 1 subject lost to attrition.

Results

Using a dependent 1-sample *t*-test, there was a statistically significant increase in group resilience from 79.9 to 83.4 within 6 months of bundle implementation (p < 0.0001) (*Table 2*). The multidisciplinary participant team were 47 critical care staff including RNs (64%), respiratory therapist (9%), unit secretary (6%), and MD, chaplain, child life, patient care tech, and nurse practitioner (4% each). Preferred uses of resilience enhancement techniques were analyzed by discipline, experience level, and age. Participant age and experience level match national trends of health care workers in high intensity inpatient areas; 36% (20 to 30 years), 32% (31 to 40 years), 22% (41 to 50 years), and 11% (>50 years) (Tables 3 and 4). The project team noted a change in participant acknowledgement of training on moral distress (51% to 83%), acknowledgement of training on personal resilience (53% to 83%), and awareness of resources available to them (62% to 92%)pre- and post-project implementation.

Pre-project implementation, participants described the use of their personal resilience enhancing techniques. Among the 47 participants who completed the pre-survey, the top 3 activities to enhance personal resilience were each referenced 22 times (47% of the participants) and included exercise, social events with friends, and time with family. The top 3 preferred methods of enhancing resilience included exercise (34%), discussions with peers in the work area (32%), and prayer and mindfulness activities (21%). Postproject implementation, 51% of the 46 remaining participants (1 RN fell out due to attrition) stated that

Table 1. Components of the Resiliency Bundle

The PICU Resiliency Bundle

Ethical issue resolution process

Mindfulness reminders through cell phone applications

Patient death process outline

Case conference discussions

Structured debriefings with pastoral care

Discussions with colleagues and supportive staff

Leadership notification

Social events

Host site educational courses aimed at improved clinician well-being

Employee assistance program

PICU, pediatric intensive care unit.

they used at least 1 of the common resilienceenhancing techniques that were described in the resilience bundle. Participants self-selected the following techniques from the resilience bundle within the 6-month period: informal discussions with colleagues (92%), social events (89%), mindfulness activities such as meditation or thankfulness journaling (52%), structured/formal debriefings (45%), case conference discussion (36%), and organization provided educational activities to enhance personal resilience (4%).

In addition to detailing their use of the resilience bundle elements provided through the work environment, participants were asked to name the activities, beyond those described in the resilience bundle, they utilized to enhance personal resilience again after the 6-month project period. The top 10 qualitative mentions for resilience enhancement techniques postimplementation are outlined in Table 5. Exercise continued to be a top response and increased in mentions (61%), and social activities with friends (39%), time with family (35%), and informal debriefing with coworkers (35%) were all important as well. Journaling had a large increase in qualitative mentions from pre- to post-implementation from 13% preproject and to 30% post-implementation.

Counseling (employee assistance program) was mentioned in the resilience bundle education; however, its use was not specifically asked about due to the sensitive nature for some participants. In the preassessment data, an interesting finding was that the younger age group (20 to 30 years) qualitatively mentioned counseling 41% of the time, whereas it was only mentioned twice by all other age groups. Another

Table 2. Pre- and Post-CD-RISC Scores, Dependent Sample t-Test								
	t	df	Mean Difference	95% CI Lower	95% Cl Upper			
Pre-CD-RISC Score	62.452	46	79.957*	77.38	82.53			
Post- CD-RISC Score	69.407	45	83.435*	81.01	85.86			

CI, confidence interval. *p < 0.0001.

unanticipated finding was that of the group who mentioned exercise for 1 of their top choices, 93% were in the 20 to 30 age group or 31 to 40 age group. There were 2 mentions in the 41 to 50 age group and 0 in the >50 age group. In the post-assessment data, the use of formal or informal debriefing and family time was equally distributed by age and experience level. Social activities were identified and differed across age categories: 20 to 30 years (63%), 31 to 40 years (20%), 41 to 50 years (40%), and >50 years (25%).

APPLICATION OF THE FINDINGS TO PRACTICE

This project aimed to meet IHI's, American Nurses Association's, and the American Medical Association's goal of improving clinician's joy at work through enhancing team resilience with a resilience bundle. Additionally, insight was gained into preferred resilience enhancement techniques further contributing to the body of evidence on resilience and decreased burnout of PICU staff. The outcomes validate current literature on the application of a few top methods to reduce burnout including debriefing, 1-on-1 conversations with peers, and social activities outside of work. It also identified a few areas that staff find especially valuable outside of traditional institutional-supported methods, including exercise, faith, and family. As staff increasingly wish to have their organization's support, this project helped enhance the idea that a multitude of options are necessary to meet individual's needs and expectations. The varied age and experience levels of staff correlated with different use and preference of the various resilience-enhancing techniques. It is likely that no single technique will meet the needs of every staff member, therefore a multifaceted approach is essential. Although the practice setting for this project was the DICIT . . 11 1.1

stressful. Health care staff, in general, are subject to morally distressing situations on a regular basis thus making the concept of a resilience bundle applicable to multiple practice sites.

Generalizability of this project's outcomes may be limited due to the single-site and unit implementation, small sample size (N = 47), decreased percentage of involvement beyond the nursing profession, and limited quantifiable data regarding time for use of the individual resilience techniques. Continued advancement in the area of resiliency for medical staff is necessary.

IMPLICATIONS FOR NURSING LEADERS

Repeated exposure to morally stressful situations in the PICU increases professionals' moral distress leading to burnout and turnover. Resilience has protective properties to decrease the effects of moral distress. A resiliency bundle, implementing evidence to increase resilience, should couple with institutional practices to decrease moral distress for the health care team. Nurse leaders have the opportunity to educate their staff on the perils of moral distress including burnout. They also can empower staff to utilize the resources already available to them through their organizations, advocate for additional resources, and develop implementation plans with their teams. Staff are experts at acknowledging their needs. Bundling resilience techniques for staff helps to meet IHI's Ouadruple Aim and focus on clinician well-being as recommended by the American Nurses Association and the American Medical Association. Nurse leaders must work with hospital

Table 4. Participant Years of Experience in Current Role

	PICU, it is well	known all health car	re settings are	Years of Experience in		
Table 3. Participant Age				Current Role	Frequency	Percent
	Age, Years	Frequency	Percent	0–5	24	50
	20–30	17	36	6–10	12	26
	31–40	15	32	11–15	5	11
	41–50	10	22	16–20	1	2
	>50	5	11	>20	5	11

. .

Activity	Number of Mentions	Percent of Participants
Exercise	28	61
Friends/social activities	18	39
Debrief with peers	16	35
Time with family	16	35
Journaling	14	30
Prayer/faith	13	28
Meditation	11	24
Reading	11	24
Paid time off/ vacation	10	22
Counseling	9	20

Table 5. Top 10 Activities to Increase PersonalResilience Post-Project Implementation

administrations and unit-based champions to provide opportunities for increased resilience. A varied approach is necessary to meet the individual needs of all staff in nursing care settings. The findings from this project support the idea that various methods are helpful to increase resilience and combat the effects of moral distress in the high intensity health care environment. In unprecedented stressful times, such as the COVID-19 pandemic, resilience bundle elements will help staff lessen the effects of burnout.

REFERENCES

- Lee K, Forbes M, Lukasiewica G, et al. Promoting staff resilience in the pediatric intensive care unit. *Am J Crit Care Nurs*. 2015;24(5):422-430.
- Hiler CA, Hickman RL, Reimer AP, Wilson K. Predictors of moral distress in a US sample of critical care nurses. *Am J Crit Care*. 2018;27(1):59-65.
- Garros D, Austin W, Carnevale FA. Moral distress in pediatric intensive care. JAMA Pediatr. 2015;169(10):885-886.
- **4.** Rushton CH, Batcheller J, Schroeder K, Donohue P. Burnout and resilience among nurses practicing in high-intensity settings. *Am J Crit Care.* 2015;24(5):412-420.
- Rushton CH, Caldwell M, Kurtz M. Moral distress: a catalyst in building moral resilience. *Am J Nurs*. 2016;116(7):40-41.
- **6.** Perlo J, Balik B, Swensen S, Kabcenell A, Landsman J, Feeley D. *IHI Framework for Improving Joy at Work: a IHI White Paper.* Cambridge, MA: Institute for Healthcare Improvement; 2017.
- 7. Bakhamis L, Paul D, Smith H, Coustasse A. Still and epidemic: the burnout syndrome in hospital registered nurses. *Health Care Manag (Frederick)*. 2019;38(1):3-10.

- **8.** Castellucci M. Breaking the silence: the industry is responding to high physician suicide rates and the stigma of mental illness. *Modern Healthc*. 2018;48(40):20.
- **9.** Rushton CH. Cultivating moral resilience. *Am J Nurs*. 2017;177(2 Suppl 1):S11-S15.
- **10.** Morrow E, Call M, Marcus R, Locke A. Focus on the Quadruple Aim: development of a resiliency center to promote faculty and staff wellness initiatives. *Jt Comm J Qual Patient Saf.* 2018;44(5):293-298.
- National Academy of Medicine. 2018 Annual Report. Promoting Clinician Well-Being & Resilience: The Next Chapter for Quality Care. Washington, DC: National Academy of Medicine; 2018.
- American Nurses Association. A Call to Action Report: Exploring Moral Resilience Toward a Culture of Ethical Practice. Silver Spring, MD: American Nurses Association; 2017.
- **13.** Mealer M, Hodapp R, Conrad D, Dimidjian S, Rothbaum B, Moss M. Designing a resilience program for critical care nurses. *AACN Adv Crit Care*. 2017;28(4):359-365.
- Mistretta E, Davis M, Temkit M, Lorez C, Darby B, Stonnington C. Resilience training for work-related stress among health care workers. *J Occup Environ Med.* 2018;60(6):559-568.
- **15.** Wocial L, Ackerman V, Leland B, et al. Pediatric ethics and communication excellence (PEACE) rounds: decreasing moral distress and patient length of stay in the PICU. *HEC Forum*. 2017;29(1):75-91.
- Dryden-Palmer K, Garros D, Meyer E, Farrell C, Parshuram C. Caring for dying children and their families in the PICU: promoting clinical education, support, and resilience. *Pediatr Crit Care Med.* 2018;19(8S):S79-S85.
- 17. Lloyd ST, Derrico E, Bristol ST. Use of the lowa model of research in practice as a curriculum framework for doctor of nursing practice (DNP) project completion. *Nurs Educ Perspect*. 2016;37(1):51-53.
- Connor KM, Davidson JRT. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety*. 2003;18(2):76-82.
- **19.** Davidson JRT. Connor-Davidson Resilience Scale (CD-RISC) Manual. Available at: http://www.connordavidsonresiliencescale.com/aRISC%20Manual%2001-01-20_F.pdf. Accessed October 30, 2018.

Melodie Davis, DNP, RN, CPN, is PICU director at Cook Children's Medical Center in Fort Worth, Texas. She can be reached at melodie.davis@cookchildrens.org. Joyce Batcheller, DNP, RN, NEA-BC, FAA, is adjunct professor at Texas Tech University Health Sciences Center School of Nursing in Lubbock, Texas, and executive nurse advisor, Center for the Advancement of Healthcare Professionals, AMN Healthcare.

Note: We wish to express our gratitude to Mary Cazzell, PhD, RN, for her strategic planning support and statistical expertise. We would also like to show our gratitude to Cynda Rushton, PhD, RN, for sharing pearls of wisdom with us during the course of this project. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

> 1541-4612/2020/\$ See front matter Copyright 2020 by Elsevier Inc. All rights reserved. https://doi.org/10.1016/j.mnl.2020.06.007