

# Training strategies in palliative care for professionals in neonatal intensive care: a scoping review

Estratégias de capacitação em cuidados paliativos para profissionais no cuidado intensivo neonatal: revisão de escopo  
Estrategias de formación en cuidados paliativos para profesionales de cuidados intensivos neonatales: una revisión de alcance

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## Abstract

**Objective:** To map palliative care training strategies to prepare the healthcare team working in the Neonatal Intensive Care Unit.

**Methods:** A scoping review carried out in the Pubmed, BDNF, Medline and LILACS databases between June and August 2023, based on the inclusion criteria: scientific articles published and available in Portuguese, English or Spanish, published between 2018 and 2023 and available in full for online access. The review followed the JBI recommendations and used the PRISMA extension.

**Results:** Seven studies were included, and from the data analysis, three categorical strategies emerged that involved the main educational strategies for palliative care in neonatology: theoretical expository approach; clinical discussion and simulation.

**Conclusion:** There is a need to train health professionals from the time they graduate, using the various teaching methods presented, as well as to draw up and implement ongoing training protocols for professionals working in neonatal units, since palliative care approaches involve integrated care for NBs and their families.

## Resumo

**Objetivo:** Mapear as estratégias de capacitação em cuidados paliativos para o preparo da equipe de saúde que atua em Unidade de Terapia Intensiva Neonatal.

**Métodos:** Revisão de escopo realizada nas bases de dados Pubmed, BDNF, Medline e LILACS, entre os meses de junho a agosto de 2023, a partir dos critérios de inclusão: artigos científicos publicados e disponíveis em português, inglês ou espanhol, publicados de 2018 a 2023 e que estivessem disponibilizados na íntegra para acesso online. A revisão seguiu as recomendações da JBI e utilizou a extensão PRISMA.

**Resultados:** Foram incluídos sete estudos, e a partir da análise dos dados, emergiram três estratégias categoriais que envolveram as principais estratégias educacionais para o cuidado paliativo em neonatologia: abordagem expositiva teórica; discussão clínica e simulação.

**Conclusão:** Há necessidade de treinamento dos profissionais de saúde desde a formação na graduação, dentro das diversas modalidades de ensino apresentadas, assim como a elaboração e a implementação de protocolos de capacitação continuada aos profissionais que atuam em unidades neonatais, uma vez que abordagens em cuidados paliativos preveem uma atenção integrada no cuidado ao RN e à sua família.

## Resumen

**Objetivo:** Mapear estrategias de formación en cuidados paliativos para preparar el equipo de salud que trabaja en la Unidad de Cuidados Intensivos Neonatales.

**Métodos:** Revisión scoping realizada en las bases de datos Pubmed, BDNF, Medline y LILACS entre junio y agosto de 2023, a partir de los criterios de inclusión: artículos científicos publicados y disponibles en portugués, inglés o español, publicados entre 2018 y 2023 y disponibles en su totalidad para acceso online. La revisión siguió las recomendaciones del JBI y utilizó la extensión PRISMA.

**Resultados:** Se incluyeron siete estudios y, del análisis de los datos, surgieron tres estrategias categóricas que implican las principales estrategias educativas para los cuidados paliativos en neonatología: enfoque teórico expositivo; discusión clínica y simulación.

**Conclusión:** Es necesaria la formación de los profesionales de la salud desde el pregrado en las diversas modalidades de enseñanza presentadas, así como el desarrollo e implementación de protocolos de formación continuada para los profesionales que trabajan en las unidades neonatales, dado que el abordaje de los cuidados paliativos implica la atención integral de los RN y sus familias.

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## Keywords

Intensive Care Units Neonatal; Palliative care; Neonatal nursing; Health personnel; Health education

## Descritores

Unidades de Terapia Intensiva Neonatal; Cuidados paliativos; Enfermagem neonatal; Profissionais de saúde; Educação em saúde

## Descriptoros

Unidades de Cuidado Intensivo Neonatal; Cuidados paliativos; Enfermeria neonatal; Personal de salud; Educación en salud

## Introduction

The Neonatal Intensive Care Unit (NICU) is a setting in which healthcare professionals take the responsibility of providing comprehensive life-sustaining care to newborns (NBs) who have serious and/or life-threatening conditions. In this setting, it is common to receive NBs with different health conditions, such as congenital anomalies, prematurity, low birth weight, who require vasoactive drugs or blood transfusions, in addition to major surgeries.<sup>(1)</sup>

Despite technological and therapeutic advances, many NBs' survival is uncertain, resulting in a perinatal mortality rate of 3.1% and a neonatal mortality rate of 1.8%, which is equivalent to the death of one baby before completing one month of life for every 476 births.<sup>(2)</sup> This high rate of neonatal morbidity and mortality requires a team composed of healthcare professionals who are skilled in managing babies with life-limiting conditions and in applying interventions aimed at palliative care.<sup>(3)</sup>

The World Health Organization (WHO) defines palliative care (PC) as a multidisciplinary care that cares for the body, mind and spirit, developed by a multidisciplinary team, with the purpose of providing quality of life to patient and family, when faced with a life-threatening illness. The focus of PC is to alleviate suffering through the early identification, assessment and treatment of pain and other symptoms of a physical, social, psychological and spiritual nature.<sup>(4)</sup>

According to the International Children's Palliative Care Network and the Royal College of Paediatrics and Child Health, the classification of pediatric diseases that require palliative care is divided into four groups, based on the following criteria: group I - diseases that are life-threatening, but have curative treatment; group II - diseases with inevitable premature death, but survival can be prolonged; group III - progressive diseases with no possibility of curative treatment; group IV - irreversible diseases with the risk of causing early death.<sup>(4)</sup>

In this context, neonatal PC aims to promote holistic, dynamic and integrated care, centered on the family that experiences the diagnosis of a child whose life expectancy is limited or has no prognosis. This care encompasses the pregnancy period, birth, post-birth and mourning, in order to ensure a dignified ter-

minality for NBs and to offer the family the necessary resources to deal with the mourning process.<sup>(3,5)</sup>

Studies have shown that PC professionals play a crucial role in decision-making and providing care to families facing uncertain perinatal outcomes, which can have a negative and traumatic impact on everyone involved.<sup>(6,7)</sup> For the team, providing assistance focused on PC in a NICU is challenging and requires specific knowledge and awareness among professionals, whose assistance must be based on the principles of care centered on the NB and the family, taking into account mothers' emotional aspects and NBs' needs for comfort and pain relief.<sup>(8)</sup> However, there are still gaps in the training of these professionals, who find it difficult to deal with the needs of families faced with life-limiting diagnoses.

In practice, it is recommended that PC team professionals work closely with the team made up of professionals who assist NBs and their family daily in the NICU, establishing a long-term relationship during NBs' hospitalization.<sup>(5,9)</sup> It is important that all team members develop PC skills, regardless of whether they belong to the specific PC team. Therefore, it is essential that these professionals have knowledge of PC and are able to implement it in the neonatal context.<sup>(5)</sup>

Given the above, it is necessary to analyze the available scientific production on how healthcare professionals have been prepared to care for a NB and their family who require PC. Thus, this review aimed to map the training strategies in PC to prepare the health team working in a NICU.

## Methods

This is a scoping review, whose focus is to map, analyze and synthesize the main concepts that support a given topic, making it possible to analyze the extension, scope and nature of the study, synthesizing the data.<sup>(10)</sup> This scoping review was conducted according to the method proposed by JBI, which systematizes the process in four stages: I- Research question elaboration, composed of the PCC mnemonic (Population (P) involved, Concept (C) and Context (C)); II- Databases and search strategy selection; III - Study selection and data extraction; and IV - Analysis, synthesis and presentation of results.<sup>(11)</sup>

In stage I, the Population (P) was defined as healthcare professionals; the Concept (C) was defined by PC teaching strategies; and the Context (C) was defined by the NICU. Afterwards, the guiding question was defined as follows: What educational strategies have been used in the training of healthcare professionals to perform PC for NBs and their families in a NICU?

To conduct stage II, a consultation was carried out with a librarian of a higher education institution (HEI) linked to the study to define the most appropriate keywords and the search strategy. The searches were carried out in the National Library of Medicine (PubMed), *Base de Dados em Enfermagem* (BDENF), Medical Literature Analysis and Retrieval System Online (MEDLINE) and Latin American and Caribbean Literature in Health Sciences (LILACS) databases between June and August 2023. The study used the Boolean operator "AND" and Health Sciences Descriptors (DeCS) in Portuguese, such as *Unidade de Terapia Intensiva Neonatal*, *Profissionais de Saúde*, *Cuidados Paliativos*, *Família*, *Capacitação e Educação em Saúde*, with their Medical Subject Headings (MeSH) correspondences, which were paired with each other, as follows: *Unidade de Terapia Intensiva Neonatal AND Cuidado Paliativo*; *Neonatal ICU AND Training AND Palliative care*; *Unidade de Terapia Intensiva Neonatal AND Cuidado Paliativo AND Educação em Saúde*; *Neonatal ICU AND Palliative Care AND Health Education*; *Unidade de Terapia Intensiva Neonatal AND Profissionais de Saúde AND Cuidado Paliativo*; *Neonatal ICU AND Health Personnel AND Palliative Care*; *Unidade de Terapia Intensiva Neonatal AND Família AND Cuidado Paliativo AND Capacitação*; *Neonatal ICU AND Family AND Palliative Care AND Training*; *Unidade de Terapia Intensiva Neonatal AND Família AND Cuidado Paliativo AND Educação em Saúde*; *Neonatal ICU AND Family AND Palliative Care AND Health Education*.

Scientific articles published and available in Portuguese, English or Spanish, between 2018 and 2023, and available in full for online access were included. Research that was not available in full and materials such as books, editorials, reflection studies, literature reviews, editorials and opinion articles were excluded.

In stage III, data collection was conducted between June and August 2023, and the selection process was conducted by two independent researchers. First,

the titles and abstracts found in the search were read and analyzed by one of the authors to select those that would be part of the research. When there were doubts, the articles moved on to the next phase, which involved the complete reading of each of selected articles by two independent authors, with the aim of confirming the relevance of the review in question and, if positive, the extraction of the data of interest. The last stage consisted of checking the results, defining disagreements by consensus between the two researchers. Divergences were resolved by a third researcher, and for the presentation of results, the Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) recommendations were followed.<sup>(12)</sup>

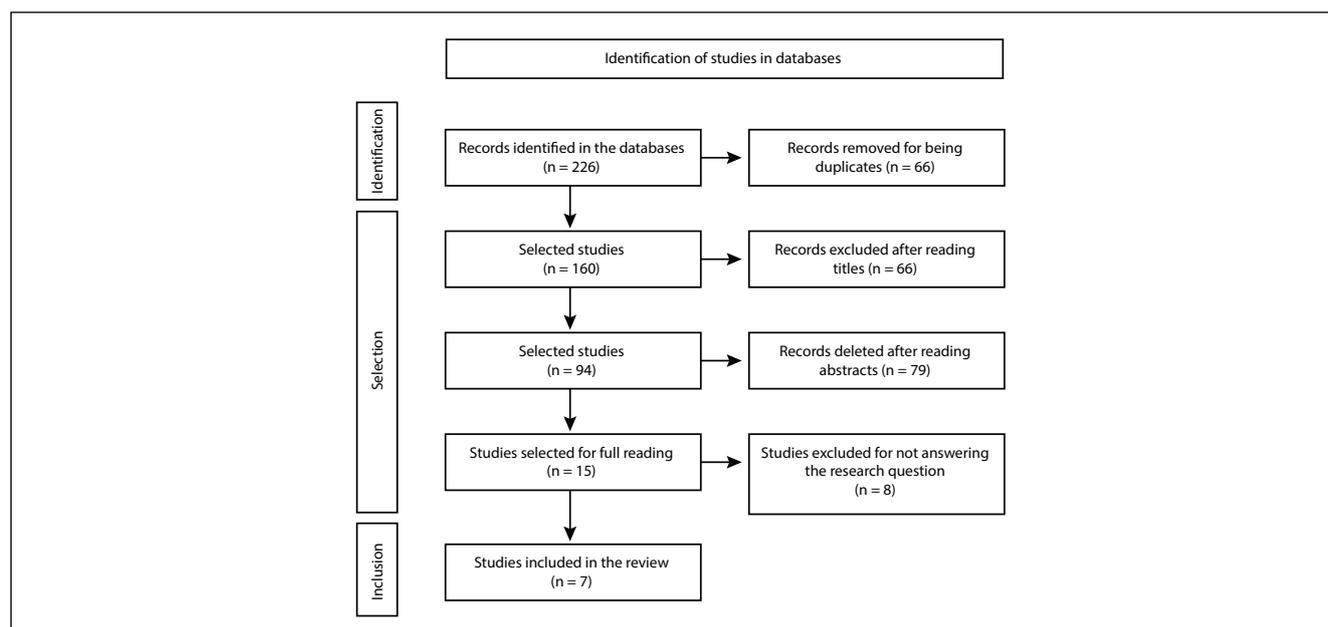
To organize the data obtained, a structured instrument was developed to enable the recording of published data, and the following information was extracted: year of publication; title; author; objective; and methodological strategy. The studies were also classified according to the level of evidence according to the JBI methodology, which classifies according to a hierarchy, ranking the study designs with the greatest strength of evidence first and so on, determining the scientific evidence quality.<sup>(11)</sup>

In stage IV, analysis was carried out as follows: the data were organized by reading the materials in full, after which information such as title, year of publication, country of origin, objective and applied training strategy were grouped. Subsequently, the information that answered the review question was selected and organized into relevant categories, resulting in three topics, revealing the main training strategies for the health team found in the context of neonatal intensive care.

## Results

A total of 226 articles were identified from the combination of descriptors in the databases. After removing articles by reading titles, abstracts, duplicates and for not answering the research question, seven articles were included, which presented a strategy for training healthcare professionals to perform PC for NBs and their families in the NICU (Figure 1).

Regarding the languages in which the articles were written, all were published in English, and the majority were published in the United States of Ame-



**Figure 1.** Study selection process according to PRISMA-ScR

rica, followed by England and one study from Iran. Concerning the year of publication, it was observed that two articles were published in 2019, two in 2020, two in 2021 and one in 2022 (Chart 1). As for the study area, two studies were conducted by medical professionals, four by professionals from the multidisciplinary team and one study in the nursing area. Regarding the level and quality of evidence of the articles, it was found that four included studies were classified as level 2<sup>(13-16)</sup> and three studies were classified as level 3<sup>(17-19)</sup> according to the JBI (Chart 2).

## Theoretical activities

Educational sessions are being implemented in continuing education for healthcare professionals. A study conducted with teams using theoretical foundations to understand educational content on PC in the neonatal context was conducted with 64 participants. After this intervention, it was observed that more babies were introduced to PC by the teams, revealing increased confidence among professionals in including their patients early in PC directive measures.<sup>(13)</sup> Still on the importance of teaching PC, another study assessed the introduction of this topic during internships with undergraduate students in nursing. The results reveal that teaching PC during internships favored the quality of care provided by students, in addition to pro-

moting the training and awareness of undergraduate students about the importance of humanized PC.<sup>(18)</sup> Another innovative aspect revealed by the studies and which has been gaining strength is the need to implement quality indicators that are capable of measuring how much neonatal PC is performed. In this regard, the study aimed to assess the implementation of quality indicators for perinatal/neonatal PC, such as offering PC as a therapeutic option, including parents in decision-making, managing NBs' pain and discomfort, knowing the family's cultural values, among others. After and after one year of its implementation, it was observed that the professionals who had participated in the course applied more quality indicators in care. Professionals also reported that the knowledge acquired from the course also gave them more confidence to support the family during PC of their child.<sup>(17)</sup>

## Clinical discussions

Clinical discussions are already routinely conducted in NICUs, and their conduct favors evidence-based decision-making by the professionals involved, allows for continuous and individualized assessment of NBs, ensures patient safety, and is a way to support and humanize care for families. Therefore, it is essential that this strategy be promoted. Thus, a study focused on intensifying clinical discussions in a NICU and on cas-

**Chart 1.** Characterization of studies regarding year, country of origin, study objective and palliative care training strategy applied

Title/year/country of origin	Objective	Applied palliative care training strategy
The Impact of Provider Education on Pediatric Palliative Care Referral <sup>(13)</sup> 2020 USA*	Determine whether standardized palliative care referral guidelines and an educational initiative associated with these guidelines would have an impact on referrals.	Educational sessions
Improving Neonatal Intensive Care Unit Providers' Perception of Palliative Care through a Weekly Case-Based Discussion <sup>(14)</sup> 2021 USA*	Assess the effectiveness of weekly case discussions for infants in palliative care.	Weekly case discussion
A simulation-based difficult conversations intervention for neonatal intensive care unit nurses: a randomized controlled trial <sup>(15)</sup> 2020 USA*	Assess whether a workshop to conduct difficult conversations based on simulations and lectures increases the ability to communicate bad news.	Simulation-based difficult conversations workshop
A Network Approach to Neonatal Palliative Care Education Impact on Knowledge, Efficacy, and Clinical Practice <sup>(16)</sup> 2019 England	Assess the effectiveness of a workshop to improve professionals' confidence in providing palliative care to newborns and their families.	Workshops
Implementation of Quality Indicators of Perinatal/Neonatal Palliative Care One-Year Following Formal Training <sup>(17)</sup> 2021 USA*	Assess the implementation of the course in healthcare services and its effectiveness in increasing knowledge about palliative care.	Course containing lectures, dramatizations, discussions, interviews with parents and practical demonstrations
Design of a Palliative Care Program for Nursing students in the neonatal intensive care unit: a mixed-method study <sup>(18)</sup> 2022 Iran	Assess the undergraduate curricular internship as a teaching method on neonatal palliative care.	Clinical discussion in the curricular internship
Perinatal/neonatal palliative care: Effecting improved knowledge and multi-professional practice of midwifery and children's nursing students through an inter-professional education initiative <sup>(19)</sup> 2019 England	Assess the effectiveness of multidisciplinary discussions for the development of knowledge in palliative care.	Clinical discussions

\*United States of America

es of babies who were undergoing PC. After a period of intensified clinical discussions, medical and multi-disciplinary team professionals felt more comfortable teaching about PC and confident with end-of-life care.<sup>(14)</sup> Clinical discussions were also conducted with nursing students who were specializing in child health and obstetrics. The discussions focused on preparing students with essential elements of perinatal/neonatal PC, and students also had contact with professionals working in PC and with family members who had experienced grief in this context. Students understood the importance of providing holistic care to infants and their family, with an emphasis on the role of caregiver. They also reported that their performance within a multidisciplinary team was improved.<sup>(19)</sup>

## Workshops and simulations

The workshop has established itself as a recommended and highly effective strategy for training healthcare

professionals working in the NICU, where critical and emotionally intense situations are frequent. This type of workshop provides a structured and safe learning setting in which participants can experience complex interactions with family members of NBs in serious or terminal situations.<sup>(15)</sup> The methodology allows nurses to practice empathic communication skills, active listening, and emotional reaction management, which are essential for conversations about bad news, limited therapeutic support, or shared decision-making. In the field of PC, especially in the context of neonatal care, difficult conversations are part of healthcare professionals' work routine, requiring technical and emotional preparation to deal with situations of suffering, uncertainty, and decision-making at critical moments. Nurses working in neonatal units often face the need to communicate bad news, discuss delicate prognoses, or support families facing imminent losses. In view of this, the studies included in this scoping review point to clinical simulation as an effective pedagogical

strategy for developing communication skills specific to these contexts. Simulation, when structured based on settings that reproduce typical situations of neonatal practice, allows professionals to safely experience real challenges in clinical settings. Teaching settings should be carefully planned to reflect the emotional, ethical, and relational complexity present in difficult conversations when caring for NBs and their families. The role of trained actors to simulate parents or caregivers increases the authenticity of the experience, favoring participant engagement and internalization of learning. In addition, the importance of facilitated debriefing sessions after each simulation is highlighted. This stage is essential to promote critical reflection on the actions taken, the communication strategies used, and the emotional reactions involved. Through debriefing, participants have the opportunity to review their behaviors, share perceptions with colleagues, and receive constructive feedback, which enhances learning and strengthens nurses' self-confidence to act with sensitivity and competence in highly challenging situations in neonatal PC.<sup>(15)</sup>

**Chart 2.** Classification of included studies according to year, study design and level of evidence

Year	Study design	Level of evidence
2020 <sup>(13)</sup>	Quasi-experimental clinical trial	Level 2
2021 <sup>(14)</sup>	Quasi-experimental clinical trial	Level 2
2020 <sup>(15)</sup>	Randomized controlled trial	Level 2
2019 <sup>(16)</sup>	Quasi-experimental clinical trial	Level 2
2021 <sup>(17)</sup>	Mixed-methods cross-sectional research study	Level 3
2022 <sup>(18)</sup>	Mixed-methods (quantitative-qualitative) study	Level 3
2019 <sup>(19)</sup>	Intervention study	Level 3

## Discussion

The results of this scoping review reveal that the educational strategies employed to teach PC in the context of care for NBs and their families focused on theoretical activities, clinical discussions, workshops, and simulations.

The expository approach as a verbal component of teaching continues to be one of the main tools of the cognitive process, and includes dialogic methods such as workshops, expository classes, slide presentations or written texts, configuring themselves as the most valued and used teaching methods in the selected

studies. The results of studies that used this approach showed an increase in healthcare professionals' satisfaction, knowledge, and clinical skill levels, which in turn, increased the indication of palliative medications as comfort measures for NBs and improved communication with families of babies in NICU settings.<sup>(13,16,17,19)</sup>

A quasi-experimental clinical trial conducted in the United Kingdom involved 73 healthcare professionals working in the NICU. Workshops were conducted over 24 months, focusing on settings, group work and PC case presentations. Participants reported increased clinical skills, confidence, attitude towards care and perceived efficacy in neonatal PC settings after participating in the workshops.<sup>(16)</sup>

Another quasi-experimental before-and-after clinical trial conducted at a hospital in Dallas assessed the effect of educational sessions presenting guidelines on PC. The study population included healthcare professionals from the NICU, PICU, and oncology units. The educational sessions lasted 15 minutes and were held twice a day for one week. The pretest collected demographic data and information on how comfortable professionals felt referring infants and children for PC, while the posttest assessed professionals' acquired knowledge about PC. Participants demonstrated understanding of the material, considering it valuable for their care practice and increasing their confidence in referring PC.<sup>(13)</sup>

A mixed-method study in Iran investigated the use of internships in nursing education to teach neonatal PC. Students received six sessions of theoretical instruction before internships and participated in interviews after internships. Results indicated that internships and theoretical instruction were effective in emphasizing the importance of PC in service delivery, family support, and improving quality of care.<sup>(18)</sup>

A cross-sectional, mixed-methods study conducted in the United States describes an interdisciplinary training course in perinatal/neonatal comfort care provided by a multidisciplinary team at a university-based medical center in New York City. The course aimed to develop a medical and interdisciplinary support plan for each infant and their families. The study population included physicians, nurses, psychologists, social workers, and other healthcare professionals. The study found that most participants reported that the course helped them implement PC programs

and policies in their work settings, increasing their preparedness and ability to deal with PC cases.<sup>(17)</sup>

The qualitative analysis of the mixed-methods study carried out by the researchers in New York also pointed out four barriers to the implementation of PC, such as resistance from the institutions' board, difficulties for nurses in breaking protocols in relation to management members, recognizing the need to continue to increase skills in perinatal PC and identifying inconsistency in care and the need to improve communication among teams.<sup>(17)</sup>

Among the educational dialogical methods, clinical discussions are one of the interventions designed to improve communication skills, enabling the exchange of experiences among professionals and the formulation of ideas and attitudes on how to deal with death. They have been used by healthcare professionals as a way to expand non-specialized professionals' knowledge, learn, reflect and establish better care in a more comprehensive manner, since they can involve inter-professional healthcare with families of NICU NBs in PC situations.<sup>(14,18)</sup>

A quasi-experimental clinical study conducted at a midwestern hospital in the United States used weekly meetings to discuss PC cases for high-risk NBs in the NICU as an educational method. These meetings occurred over the course of a year and involved 16 NICU professionals and five PC professionals. During the meetings, approximately one hour long, four cases were discussed per day. The results indicated that the meetings increased the knowledge of PC among non-specialist professionals, improving the provision of care and professionals' confidence in PC.<sup>(14)</sup>

A mixed-methods study in southern England involved final year midwifery and pediatric nursing students in a workshop. The workshop was divided into two parts, using case studies to prepare students and encouraging group discussion. Participants were divided into balanced midwifery and pediatric nursing groups and given settings with guiding questions. The author concluded that the workshop effectively developed students' knowledge and skills, highlighting the advantage of co-teaching and the importance of meaningful conversations in understanding the roles of each profession in perinatal/neonatal PC.<sup>(18)</sup>

A study<sup>(15)</sup> on PC professionals' education proposes simulation as a way to learn content more ef-

fectively. Some communication interventions include intensive simulation training, others offer workshops with simulations on difficult news, and specific and targeted protocols to improve communication between parents and healthcare professionals. In addition to promoting considerations and discussions about the topic experienced in the activity, which may help in the future in decision-making and interventions by the health team, the studies showed that this strategy improved participants' communication skills and empathy.

A randomized controlled trial was conducted in a NICU in northeastern United States to assess a simulation-based workshop on difficult conversations that aimed to improve skills in conducting difficult conversations. Thirteen professionals participated, five in the intervention group and seven in the control group, in three-hour sessions. The workshop consisted of a lecture on difficult communication skills, simulations of settings, and debriefing sessions. The intervention group participated in the workshop before the test setting, while the control group participated only in the test setting. The study found that the simulation-based workshop improved communication skills and perceived empathy among participants.<sup>(15)</sup>

It is observed that a new setting for perinatal/neonatal PC is beginning, bringing important advances in the quality of care offered to NBs and their families in the context of life-limiting diseases. The process of evolution of PC for this population will depend on continuous multidisciplinary collaboration and qualified professionals who are able to provide early care, based on a holistic approach.

## Conclusion

This review mapped educational strategies to train the team working in NICUs so that they can acquire essential technical skills for a PC approach to NBs and their families, considering that those evidenced in practice were in theoretical activities, clinical discussions, workshops, and simulations. It is necessary that HEIs introduce content on PC during undergraduate courses, which will allow professionals to improve their knowledge on the subject, if they wish, in graduate courses. On the other hand, managers in institutions should also

favor the training of healthcare professionals, employing successful models of perinatal/neonatal PC.

## References

1. Agência Nacional de Vigilância Sanitária (ANVISA). Resolução da Diretoria Colegiada - RDC nº 930, de 8 de dezembro de 2020. Dispõe sobre os requisitos mínimos para funcionamento das Unidades de Terapia Intensiva Neonatais. Brasília: ANVISA; 2021.
2. World Health Organization; Partnership for Maternal, Newborn and Child Health; United Nations Children's Fund (UNICEF); United Nations Population Fund. Born too soon: decade of action on preterm birth. Geneva: WHO; 2023.
3. Bertaud S, Montgomery AM, Craig F. Paediatric palliative care in the NICU: a new era of integration. *Semin Fetal Neonatal Med.* 2023;28(3):101436.
4. World Health Organization. Palliative Care. Fact Sheet No. 402. Geneva: WHO; 2015.
5. Balbino FS. Cuidados paliativos ao recém-nascido pré-termo e à família. In: Gaíva MA, et al. *Cuidado Integral ao Recém-nascido pré-termo* [Internet]. [place unknown]: SOBEP. Available from: [https://journal.sobep.org.br/wp-content/uploads/2021/10/Livro-cuidado-SOBEP-2.x19092.pdf#page=288](https://journal.sobep.org.br/wp-content/uploads/2021/10/Livro-cuidado-SOBEP-2.x19092.pdf#page=288)
6. Grauerholz KR, Fredenburg M, Jones PT, Jenkins KN. Fostering vicarious resilience for perinatal palliative care professionals. *Front Pediatr.* 2020;8:572933.
7. Carter BS. Pediatric palliative care in infants and neonates. *Children (Basel).* 2018;5(2):21.
8. Jackson C, Vasudevan C. Palliative care in the neonatal intensive care unit. *Paediatr Child Health.* 2020;30(4):124-8.
9. Marc-Aurele KL. Cuidados paliativos primários em terapia intensiva neonatal. *Semin Perinatol.* 2017;41(2):133-9.
10. Cordeiro L, Soares CD. Revisão de escopo: potencialidades para a síntese de metodologias utilizadas em pesquisa primária qualitativa. *BIS Bol Inst Saúde.* 2019;20(2):37-43.
11. The Joanna Briggs Institute. Joanna Briggs Institute Reviewers' Manual: 2014 edition [Internet]. Adelaide: Joanna Briggs Institute; 2014. Available from: [http://joannabriggs.org/assets/docs/sumari/ReviewersManual-2014.pdf](http://joannabriggs.org/assets/docs/sumari/ReviewersManual-2014.pdf)
12. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med.* 2018;169(7):467-73.
13. Newton K, Sebbens D. The impact of provider education on pediatric palliative care referral. *J Pediatr Health Care.* 2020;34(2):99-108.
14. Allen JD, Shukla R, Baker R, Slaven JE, Moody K. Improving neonatal intensive care unit providers' perceptions of palliative care through a weekly case-based discussion. *Palliat Med Rep.* 2021;2(1):93-100.
15. Bowen R, Lally KM, Pingitore FR, Tucker R, McGowan EC, Lechner BE. A simulation based on difficult conversations intervention for neonatal intensive care unit nurse practitioners: a randomized controlled trial. *PLoS One.* 2020;15(3):e0229895.
16. Knighting K, Kirton J, Silverio SA, Shaw BN. Uma abordagem em rede para a educação em cuidados paliativos neonatais: impacto no conhecimento, eficácia e prática clínica. *J Perinat Neonatal Nurs.* 2019;33(4):350-60.
17. Wool C, Parravicini E. Implementation of quality indicators of perinatal/neonatal palliative care one-year following formal training. *Front Pediatr.* 2021;9:752971.
18. Heidari H, Mardani-Hamooleh M, Fooladi M. Design of a palliative care program for nursing students in the neonatal intensive care unit: a mixed-method study. *Creat Nurs.* 2022;28(2):126-32.
19. Price JE, Mendizabal-Espinosa RM, Podsiadly E, Marshall-Lucette S, Marshall JE. Perinatal/neonatal palliative care: effecting improved knowledge and multi-professional practice of midwifery and children's nursing students through an inter-professional education initiative. *Nurse Educ Pract.* 2019;40:102611.