# Effectiveness of an Interdisciplinary Pediatric and Neonatal Palliative Care Simulation Program in India

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## Background

- Palliative care is a human right
- Neonatal and pediatric patients have unique needs
- Palliative care for children require a holistic/multidisciplinary approach (ICPCN, 2022)
- Interdisciplinary team palliative care education is endorsed by several organizations (AAP, 2019; NCPQPC, 2018; NHPCO, 2020)
- India had poorest inequity score for newborns and child health intervention in the SE Asian Region (WHO, 2016)
- Needs assessment revealed gap in neonatal and pediatric palliative care services in Bengaluru region, India (Flippo et al. 2021)

## Purpose

The primary purpose was to determine the impact of a pediatric and neonatal palliative care specialty education and simulation program among health providers and ancillary support team at Bangalore Baptist Hospital in India. The secondary aim was to assess relationships between sociodemographic variables, health provider and ancillary support team expertise, and their pre- and post-test results.


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## Sample Selection

- Quantitative one-arm pre-test/post-test and descriptive correlational design
- Participants employees of a 440-bed tertiary care hospital in South India
- Invited to a Pediatric and Neonatal Palliative Care Conference on the hospital premises
- Research study participation was optional – not a requirement for conference attendance
- 42 attended and 35 meeting criteria were in study
- Inclusion: > 18 years old; pediatric health and support team provider and understood, read, and spoke English,

## Intervention

- 3-day workshop hosted by APRNs and pediatric and neonatal palliative care specialists
- Due to pandemic, workshop held in hybrid format, with virtual and face to face educational sessions
- Topics: palliative care models, medical management, coping strategies, procedural prep, medical ethics, resilience, self-care
- Simulation with SPs was included with INACSL best practice standards. Scenarios focused on a neonatal or pediatric palliative care subject

## Results

**Table 3** – Comparison of the Scores Between Pre- and Postintervention

| Variable | n | Pre Mean (SD) | Post Mean (SD) | t | *p*-value |
|---|---|---|---|---|---|
| Self-Assessment | 31 | 72.81 (14.87) | 91.94 (11.86) | −9.808 | <.001 |
| Education Assessment | 33 | 20.67 (5.13) | 25.67 (4.61) | −5.965 | <.001 |
| Barriers | 27 | 20.37 (4.72) | 21.07 (6.49) | −0.616 | .543 |
| Knowledge | 35 | 4.14 (2.37) | 5.60 (2.12) | −4.960 | <.001 |

## Results (cont.)

**Table 1** – Demographic Characteristics of the Participants

| Characteristic | Mean (SD) | n (%) |
|---|---|---|
| Gender | | |
| Male | | 1 (3.1) |
| Female | | 31 (96.9) |
| Age | 38.9 (7.6) | |
| Race | | |
| Asian Indian | | 27 (87.1) |
| Other | | 4 (12.9) |
| Profession | | |
| Nurse | | 22 (66.7) |
| Physician | | 10 (30.3) |
| Chaplain | | 1 (3.0) |
| Department | | |
| Oncology | | 6 (17.6) |
| Palliative Care | | 7 (20.6) |
| PICU | | 10 (29.4) |
| Pediatrics | | 7 (20.6) |
| Nursing College | | 1 (2.9) |
| Physical Medicine | | 1 (2.9) |
| SPW | | 2 (5.9) |
| Years of Experience | 10.4 (6.5) | |

## Discussion/Implications

- Statistically significant increase in mean post-intervention education assessment ($p < .001$) and improvement in knowledge assessment (< 0.001) scores
- Highlights the value of structured educational and simulation programs for neonatal and pediatric palliative care
- Nurses scored higher in self-assessment ($p$=.004), but their knowledge scores were significantly lower than physicians ($p$<.001), indicating a need for a focus on palliative care in nursing school curriculum
- With the workshop intervention, both physicians and nurses improved their scores in both knowledge and self-assessment
- Simulation scenarios were reported as most useful
- This study suggests educational and simulation activities can enhance neonatal and pediatric palliative care knowledge