Micro-Preemie Parents’ Perceptions of New Care Model and the NICU's Readiness to Integrate Evidence-based Practice

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Funding

Special thanks to RWJBarnabas Health for their support through a Harvey E. Nussbaum Research Grant which partially supported this study.
Background- State of the Evidence

- Micro-preemies (<26 week gestation)
  - Significant implications

- Neonatal Integrative Developmental Care (NIDC)
  - Neuroprotective, family-centered, multidisciplinary care
  - Designed to mitigate the negative effects of noxious stimuli
    - Noise, light, stimulation, negative touch, temperature, multiple caregivers
  - Improve outcomes and parents' perceptions of nursing care
Attempt to Simulate Womb

- Area designated as Small Baby Room (SBR)
- Targeted sensory areas/neuroprotection

- **Touch:** Minimize touch
  - Kangaroo care

- **Hearing:** Soft voices in SBR
  - Alarm volume low

- **Smell:** Scent cloths

- **Sight:** Minimal lighting
  - Isolettes covered

- **Taste:** Colostrum swab w/in 24 hr

- **Proprioception:** Positioning/handling
Nurses Readiness to Adopt New Model

- Nurses readiness to implement EBP
  - Preparation: 8 one-hour classes focused on new care model with 7 neuroprotective core measures
  - All nurses encouraged to attend
  - Intentional
  - Consistent
  - Empower parents to be part of team
Study Aims

- Ascertain parents of micro-preemies perceptions’ of new care model
- Evaluate the nurses' perceptions of readiness to integrate EBP
Methods: Parents

- Single-site: 56-bed level III NICU
- Parent completed the Nurse Parent Support Tool (Miles, 1998)
- Measures parents’ perceptions of nursing support and care
  - 21-item five-point Likert-type scale
  - Ranked from 1 to 5
  - Included two open-ended questions
- Higher scores indicate greater degrees of perceived support from the nursing staff
Methods: Nurses

Surveyed at 0, 6, 12 mo: *Organizational Culture & Readiness Survey for Integration of Evidence-based Practice- UNIT* (Melnyk & Fineout-Overholt)

Measures:
- nurses' perceptions of the readiness to implement EBP
- the degree of influence cultural factors exert on implementation of EBP

Higher scores indicate:
- greater perceived readiness to integrate EBP into nursing practice
- greater organizational readiness for or movement towards EBP
Sample

Parents

- Parents of infants ≥23 but < 26 week gestation
- No major congenital anomaly
- Invited when infant's LOS in SBR ≥ 30 days

NICU Nurses

- 13-hour shifts
- Approximately 100 nurses
- All NICU nurses invited
- All RNs could be placed in SBR
Results: Parents

- Far fewer births during study period than expected
- Eligible parent pairs of micro-preemie infants (N= 26)
  - 15 parents completed the questionnaire
    - Parents ages 21- 42 years (M = 32)
    - Infant’s gestational ages ranged from 23 weeks + 0 days to 25 weeks + 6 days (M= 24 weeks 4 days)
## Demographics

<table>
<thead>
<tr>
<th>Parents</th>
<th>N (%)</th>
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<tbody>
<tr>
<td>Parent:</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>12 (80%)</td>
</tr>
<tr>
<td>Father</td>
<td>3 (20%)</td>
</tr>
<tr>
<td>Ethnicity:</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>3 (20%)</td>
</tr>
<tr>
<td>Asian</td>
<td>1 (6.7%)</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>7 (46.7%)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>2 (13.3%)</td>
</tr>
<tr>
<td>Not reported</td>
<td>2 (13.3%)</td>
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</table>
Parents Survey: NPST

- Cronbach’s alpha .95
- Total scores ranged 77-105 (M = 97.07, SD 9.57)
- Item scores ranged from 3.66 – 5 (M = 4.62)
- Item weighted averages ranged from 4 - 4.93
  - Gave good care to my baby.
  - Responded to my worries or concerns.
Parents: Survey

- Overwhelmingly felt supported by nurses
- Recognized high quality of care given to infant
- Verified parents’ high degree of perceived support from nurses
Open-ended responses

Included two open-ended questions:
- Are there other things the nurses have done that have been helpful to you as a parent?
- Are other things that you wish the nurses would do to help you as a parent?

Themes
- Felt cared for and appreciated the care given to infant
- Treasured the input from nurses in learning to care for their baby
- Valued their inclusion in the plan and execution of infant's care
- Appreciated the nurses' explanations, daily email updates
Nurse Survey: OCRSIEP-UNIT

- Completed survey either on unit or from home
- Responses were not paired
- Inconsistent understanding of EBP
- Reluctance of staff to participate
## Nurse Survey: OCRSIEP-UNIT

| Time          | # of Responses | Ranges of Total Scores | Total Score Mean (SD) | Range of Item Scores | Item Mean (SD) |
|---------------|----------------|------------------------|-----------------------|----------------------|----------------|-----------------|
| Baseline      | 38             | 36 - 122               | 78.54 (18.58)         | 1.38 – 4.69          | 2.95 (0.77)    |
| 6 Months      | 52             | 54 - 118               | 81.37 (15.50)         | 2.07 – 4.54          | 3.15 (0.61)    |
| 12 Months     | 24             | 54 - 111               | 85.42 (16.36)         | 2.08 – 4.27          | 3.31 (0.62)    |
### Nurse Survey

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICU’s Readiness to Implement EBP</td>
<td>3</td>
<td>3.35</td>
<td>3.46</td>
</tr>
<tr>
<td>Movement Towards a Culture of EBP</td>
<td>3.05</td>
<td>3.28</td>
<td>3.46</td>
</tr>
</tbody>
</table>

\( \alpha = 0.95 \)  No statistical difference between groups  \( p < .05 \)
Perceived barriers influencing readiness to integrate EBP

System
- Limited input from staff as to new care model
- NICU Nurse Educator on LOA for entire duration of study
- Nurse Manager resigned at midpoint
- Uncertainty as NICU prepared for transition to new unit

Individual Nurses
- Many graduated >20 years ago
- Confusion about constitutes EBP; lack of knowledge, skills
- Worries about management identifying responses and possible retribution
Observations

- Initially, nurses verbalized resistance to many of the components (especially minimal lighting and alteration in assessment schedule)
- Components were "applied" to other areas within the NICU
- Nurses were implementing the new care model well in SBR
- Nurses volunteered to be Primary Nurse for individual infants; remained throughout hospitalization
- Nurses language changed from “my baby” to the mother’s baby
Conclusion/Implications

- Parents felt supported; developed strong bonds with the nurses caring for their infants.
- Parents more readily participated in their infant’s care.
- Organizational culture evolves slowly towards a culture of EBP.
- Additional organizational support is required to execute a major change in practice.
- Planning requires intentionality, ongoing education, and interventions to promote and support change.
Further Research

- Identify additional ways to promote collaboration between parents and the health care team
- Design strategies to overcome barriers
- Consider alternate strategies and interventions to promote a culture of EBP


Thank you!

https://mothersmilkbankofmt.org/