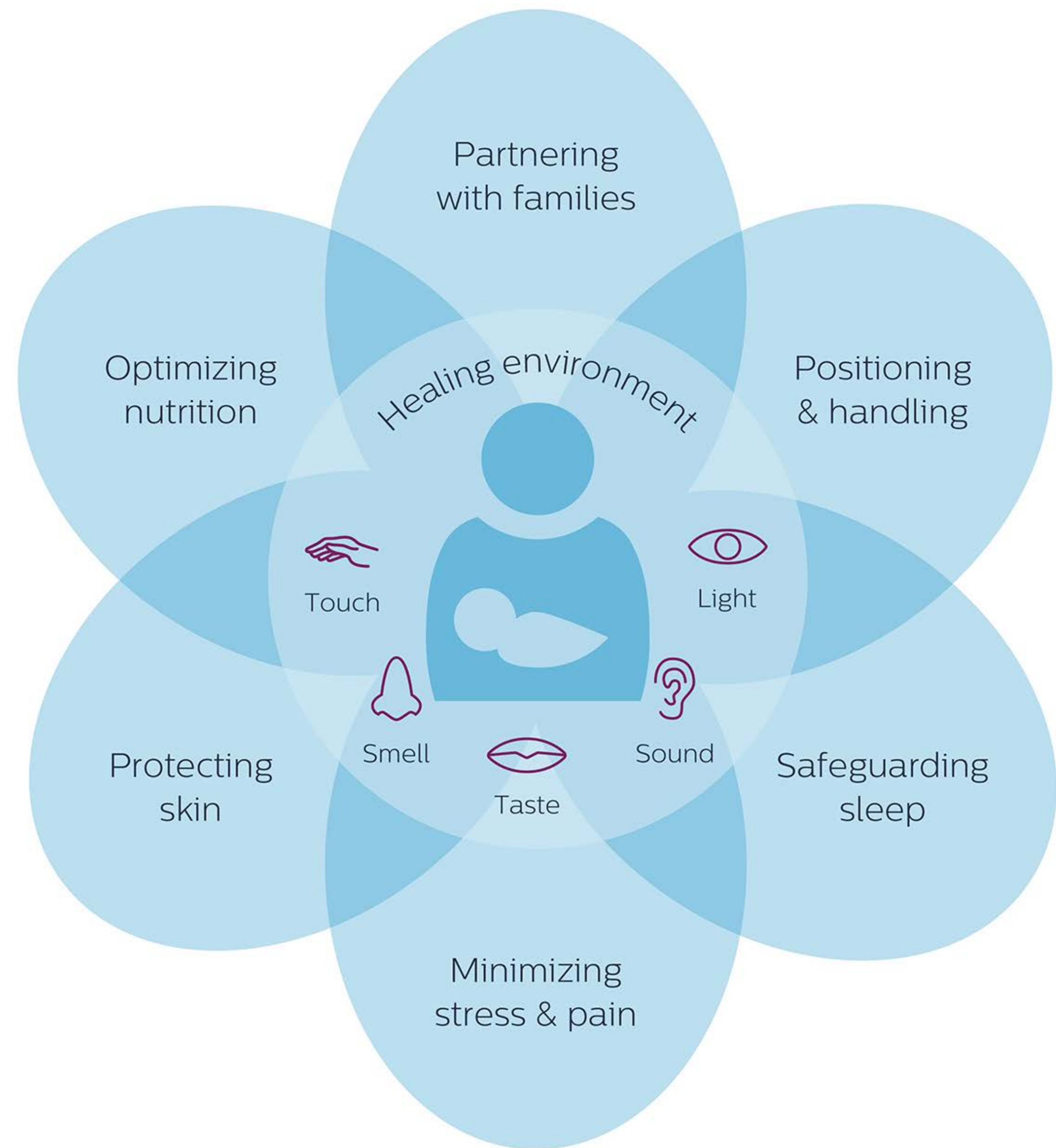


Neonatal Integrative Developmental Care Model

An evidence-based framework that offers a holistic approach to developmentally appropriate and family-centered care for infants and families in the NICU.

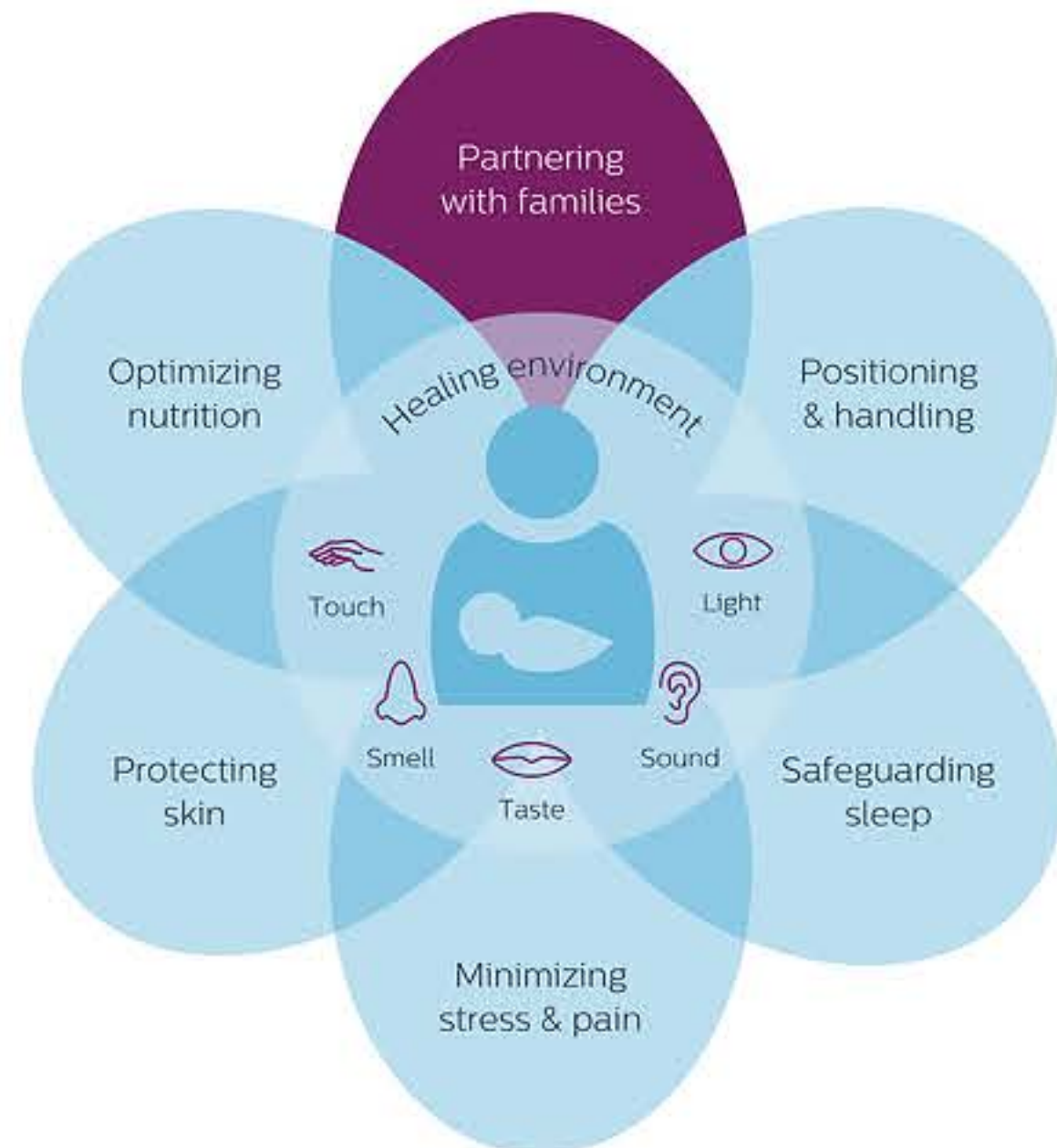
Philips' Mother and Child Care's philosophy is to consider these Core Measures in the development of its products and solutions.



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Partnering with families is essential as the care received from the mother and father helps shape the infant's emotional and cognitive development.¹

Neonatal Integrative Developmental Care Model



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Wee Care program

The Wee Care program focuses on family-centered care and developmentally appropriate ways to hold, feed, bathe and interact with the infant.



NICU



Core Measure: Partnering with Families

1

Máxima Medical Center and Philips collaborated on the Wee Care Neuroprotective NICU program, an 18-month clinical education and transformation program, which helps hospitals develop family-centered neuroprotective developmental care practices in the NICU.



Partnering with Families resources

List of references

1. Sullivan, R., Perry, R., Sloan, A., Kleinhaus, K. & Burtchen, N. (2011). Infant Bonding and Attachment to the Caregiver: Insights from Basic and Clinical Science. *Clinics in Perinatology*. 38: 643 – 655. doi: 10.1016/j.clp.2011.08.011.

Videos



➤ Mercy Springfield Wee Care



➤ The Sacred Hour,
Máxima Medical Centre, Veldhoven
the Netherlands

Premature babies need assistance with appropriate handling and proper positioning that mimics the womb, nurtures growth, and enhances musculoskeletal development.

Neonatal Integrative Developmental Care Model



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- Professional Development programs provide the latest in evidence-based practices on positioning techniques for NICU care providers.
- Positioning products support midline orientation, flexion, and the containment that the premature infant needs for enhanced neurosensory and muscle development
- WeePee diapers are sized for the smallest infants to support proper hip alignment



Positioning provides appropriate containment to decrease unnecessary energy expenditure, calorie depletion, oxygen consumption and stress.¹

The best care demands **exceptional support**

Create prone, side-lying, and supine positionings to promote infant well-being and stress-reduction

Properly prone Prone positioning can reduce lateral skull flattening and skin breakdown during extended hospital stays. It also encourages better breathing, active neck movement, and head turning.

Softly supine An infant may be placed in supine position for treatment - or for "tummy time" - in all non-feeding positions, before feeding time.

Side-lying support The challenge of the side-lying position is proper alignment. Shoulders are rounded, and the head may have a tendency to turn. Feet are slightly flexed.

PHILIPS



NICU



Core Measure: Positioning & Handling

2

Philips' positioning products are used to achieve flexion, containment, and midline orientation for premature babies in the hospital.



Positioning and Handling resources

List of references

1. A Neuro Developmental Care Guide to Positioning & Handling: The Premature, Fragile, or Sick Infant(2011), Page 20. DF Publishing. Dana Fern.

PDFs



➤ Product poster

Videos



➤ Philips NICU Positioning

NICU

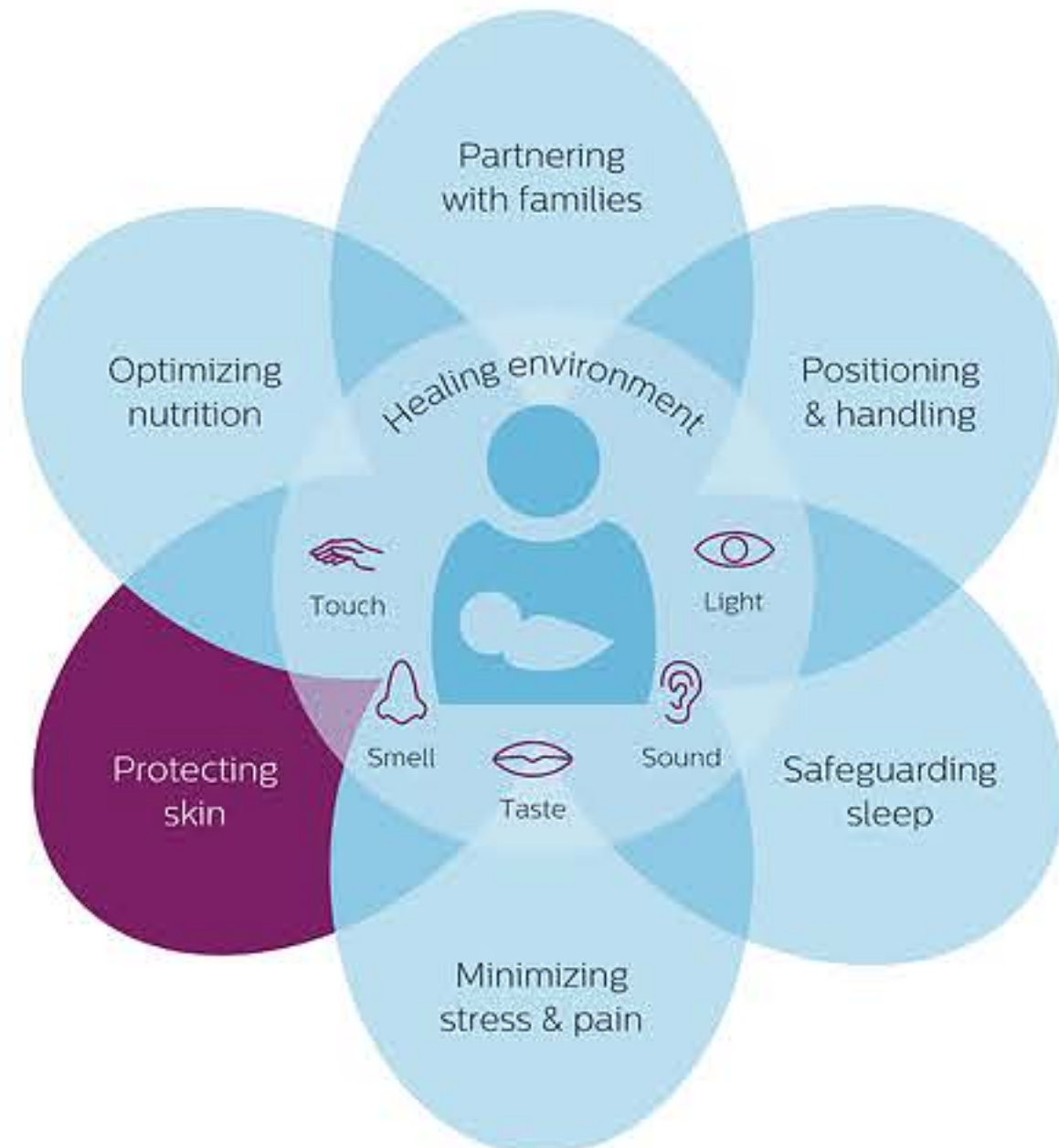


Core Measure: Protecting Skin

3

In the premature baby, the skin is not fully developed, leaving the neonate vulnerable to infection, hypothermia, and increased water loss.

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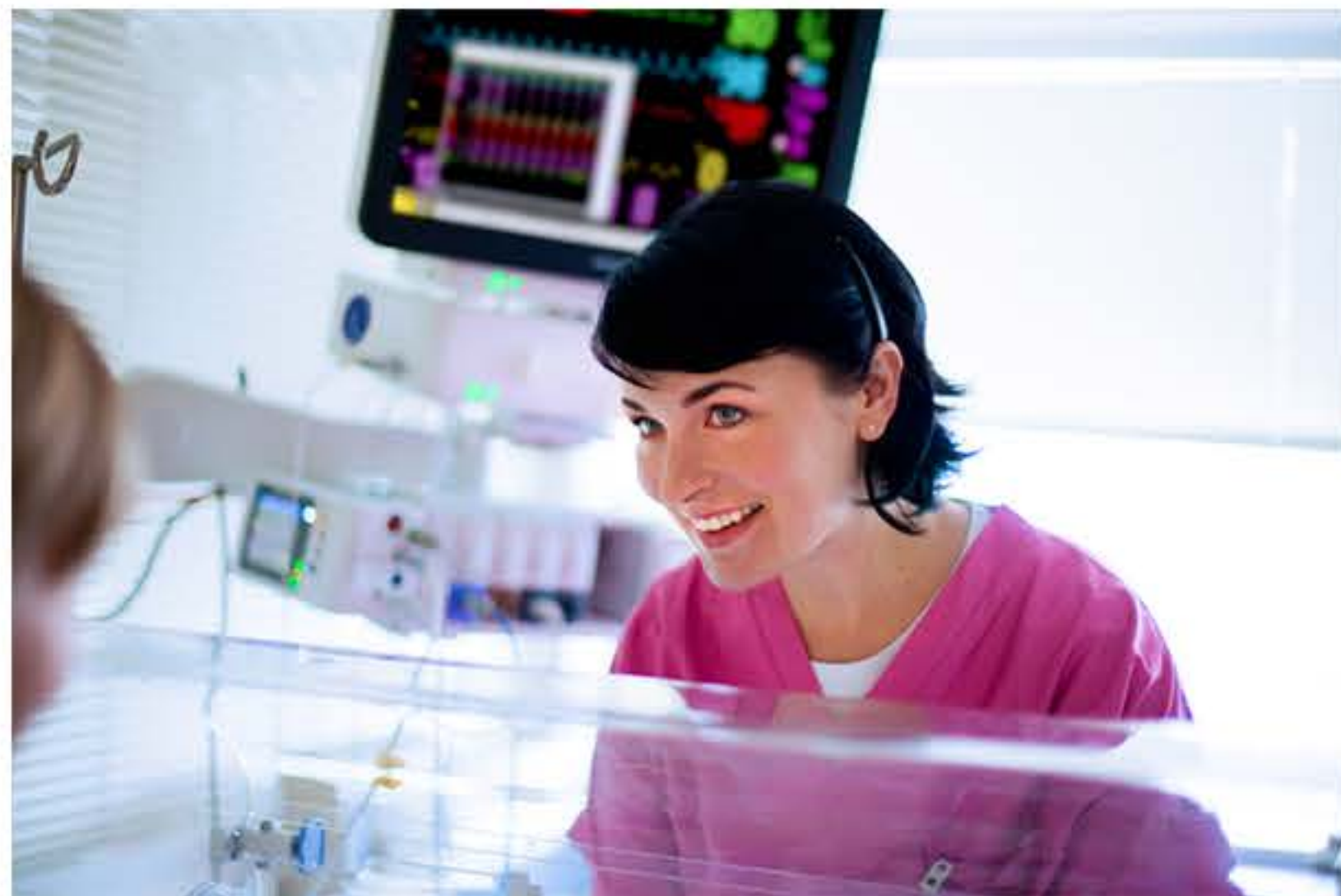
NICU



Core Measure: Protecting Skin

3

Clinical education focuses on best practices for developmentally appropriate bathing, touch, diapering, incision care, and use of adhesives.



NICU



Core Measure:
Protecting Skin

3

BiliChek protects skin by reducing the number of heel sticks.



NICU



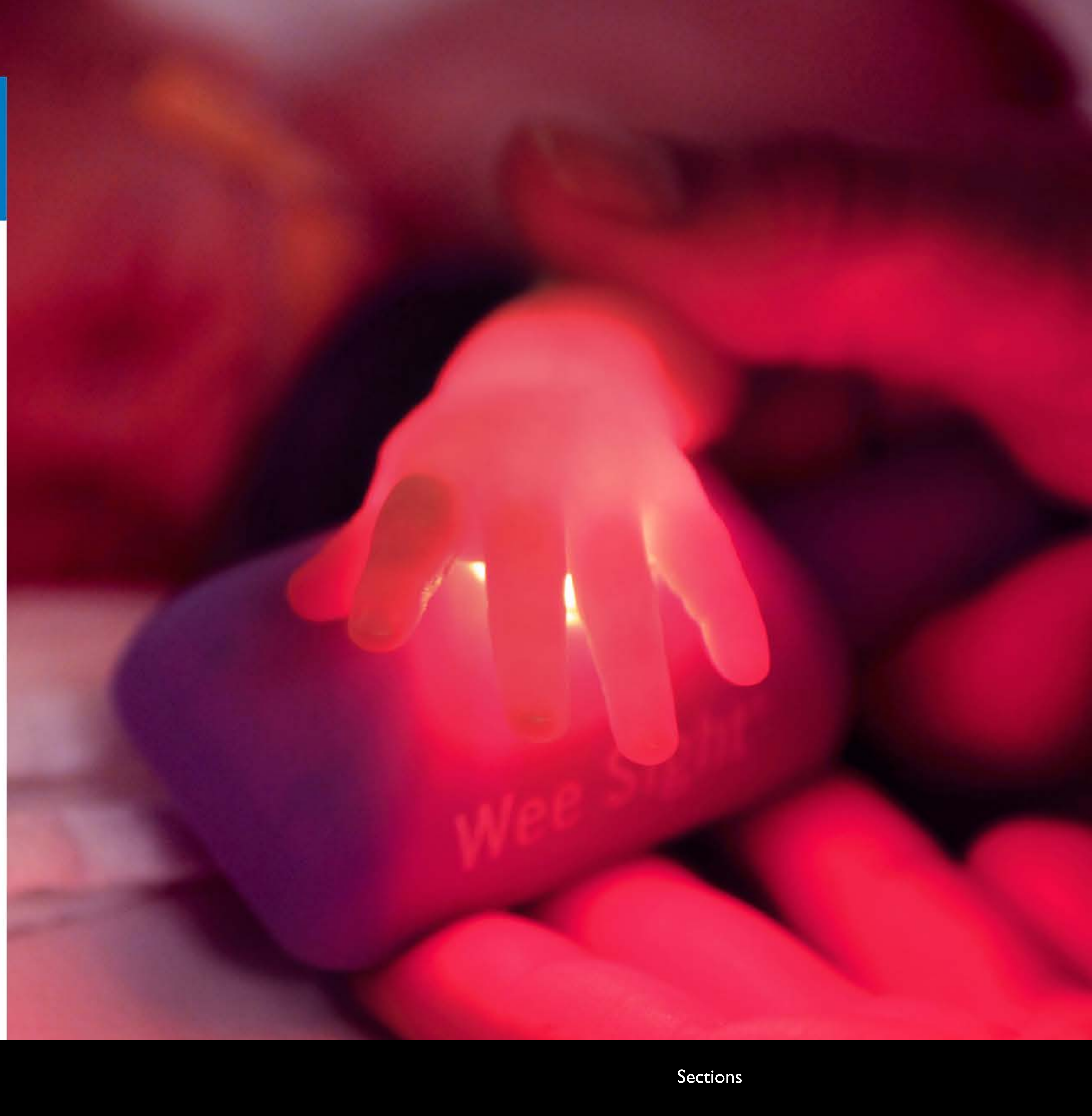
Core Measure: Protecting Skin

3

Supportive positioning can be enhanced by using positioning aids and gel products to help reduce pressure points.¹



Wee Sight transilluminator can help to locate tiny veins for improved intravenous access.



Protecting Skin resources

List of references

1. A NeuroDevelopmental Care Guide to The Premature, Fragile or Sick Infant by Dana Fern. Pages 20-23.

NICU

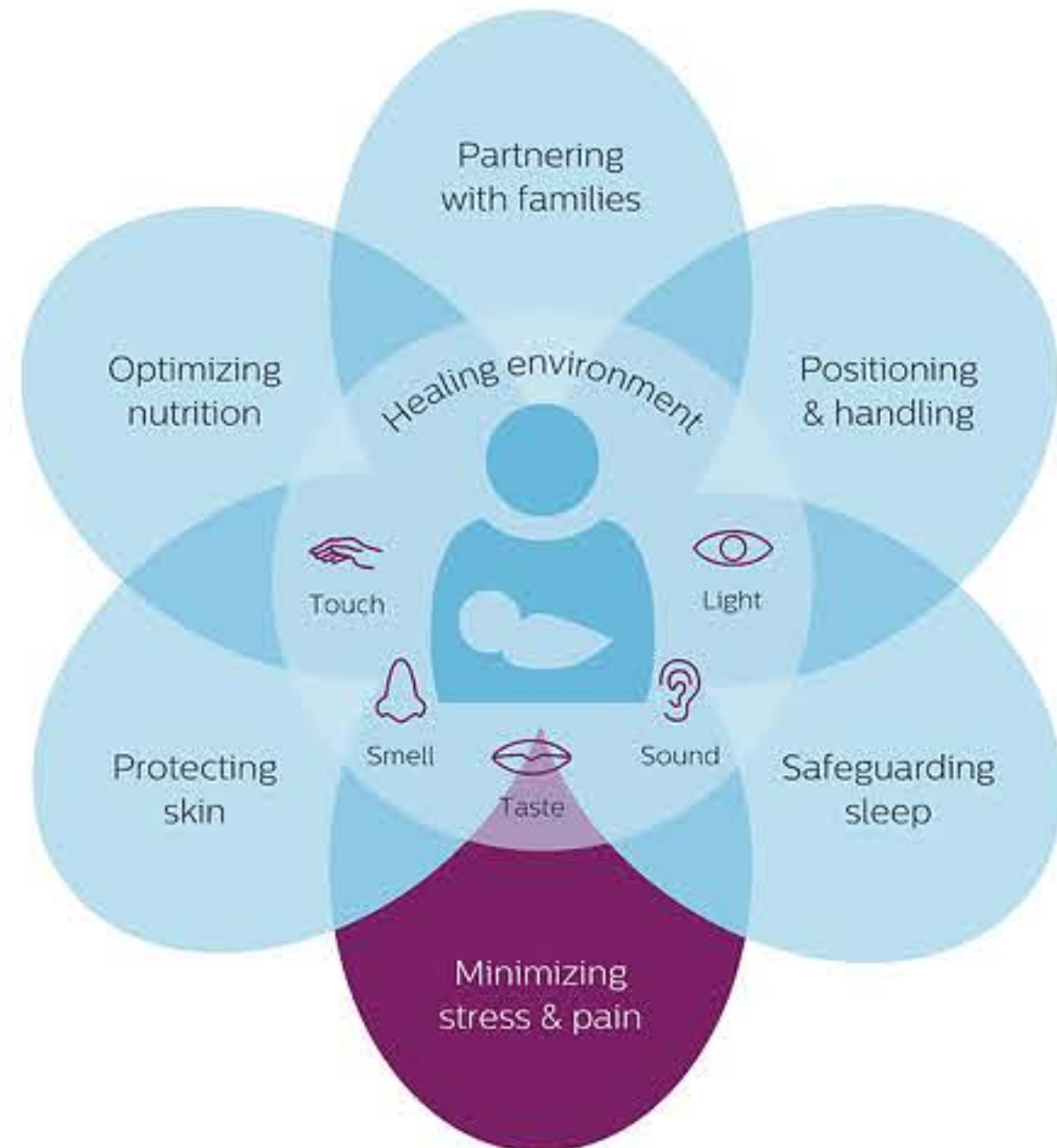


Core Measure: Minimizing Stress & Pain

4

Continuous stress and pain may negatively influence brain development.¹

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Core Measure:
Minimizing Stress & Pain

4

A non-invasive bilirubin assessment

Provides flexibility in monitoring jaundice in the hospital while helping to manage the costs of hospital stays and reducing readmissions.



NICU



Core Measure: Minimizing Stress & Pain

4

Education programs focus on the Developmental Care practices that help caregivers to address the issues associated with stress and pain.²



Minimizing Stress & Pain resources

List of references

1. American Academy of Pediatric Committee on Fetus and Newborn and Section on Surgery. Prevention and Management of Pain in the Neonate: An Update, *Pediatrics* 2006;118(5):2234.
2. Hendricks-Munoz KD, Prendergast CC, Caprio MC, and Wasserman RS. (2002) Developmental Care: The Impact of Wee Care Developmental Care Training on Short-term Infant Outcome and Hospital Costs. *Newborn and Infant Nursing Reviews*, 2(1), 39-45.
3. Lasky, R. & Williams, A. (2009). Noise and Light Exposure for Extremely Low Birth Weight Newborns During Their Stay in the Neonatal Intensive Care Unit. *PEDIATRICS*. 2009; 123(2).
4. Salavitarbar, A., Haidet, K., Adkins, C., Sussman, E., Palmer, C., Storm, H. 2010 Preterm Infants' Sympathetic Arousal and Associated Behavioral Responses to Sound Stimuli in the Neonatal Intensive Care Unit. *Advances in Neonatal Care*; 10(3) 158-166.

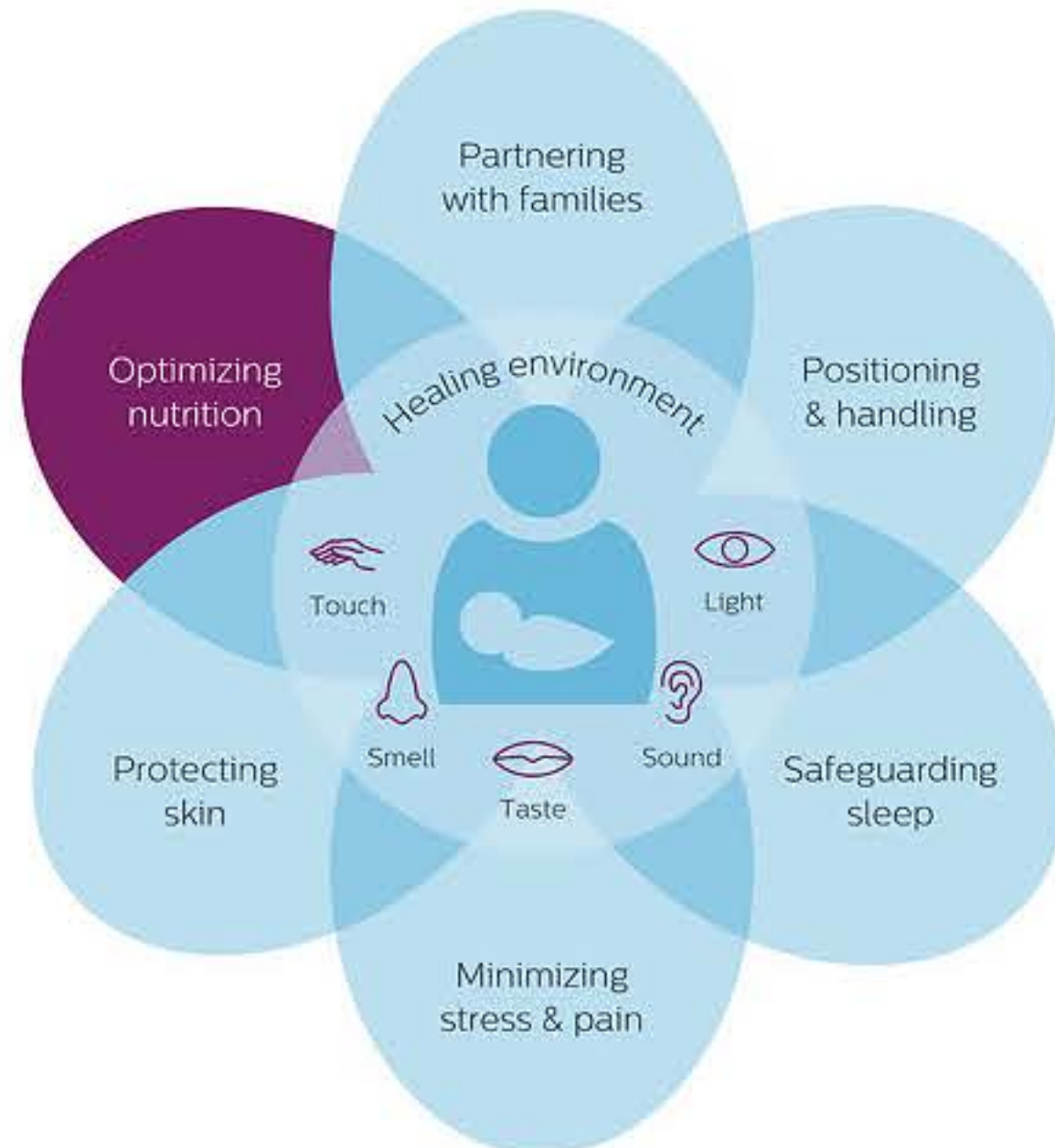
Videos



- Philips BiliChek
In-Service Tutorial

Nutritional support, which is important for growth and development, is challenging for premature infants whose feeding skills are not mature.

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NICU



Core Measure: Optimizing Nutrition

5

Breastfeeding support products can be introduced in the NICU and can continue to support mom through the transition home.



NICU



Core Measure: Optimizing Nutrition

5

Non-nutritive sucking with pacifiers facilitates the development of sucking behavior and the transition from gavage to breast or bottle feeding.¹



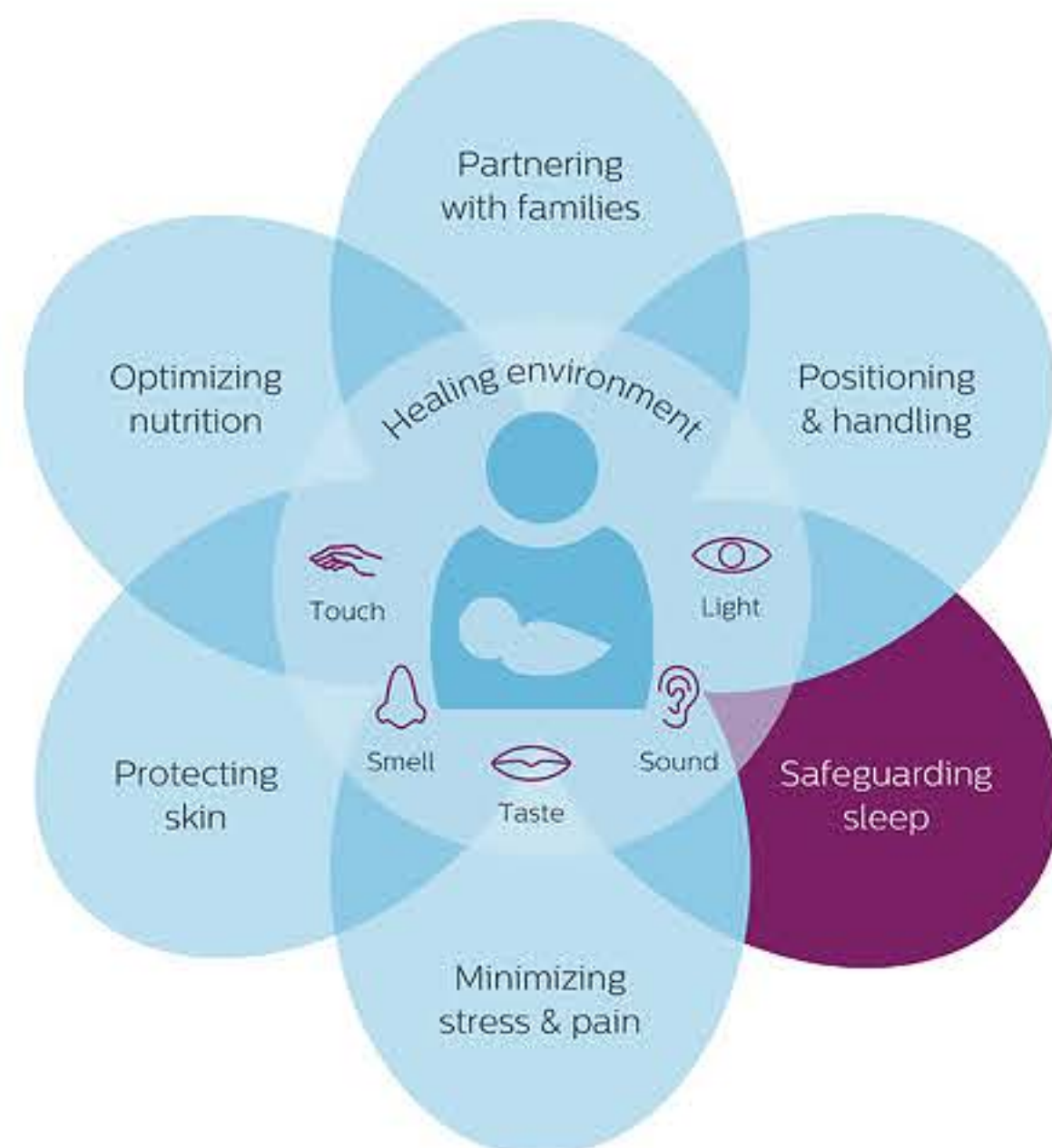
Optimizing Nutrition resources

List of references

1. Pinelli, J., & Symington, A.(2005).Non-nutritive sucking for promoting physiologic stability and nutrition in preterm infants. Cochrane Database of Systematic Reviews, 4, Article CD001071.

Uninterrupted sleep and sleep cycles are essential to create long-term memory circuits, preserve precious calories needed for growth, and correlate with improved outcomes.¹

Neonatal Integrative Developmental Care Model



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NICU



Core Measure: Safeguarding Sleep

6

Clinical education encourages Kangaroo Care and clustering activities around the sleep-wake cycle.



NICU



Core Measure: Safeguarding Sleep

6

Safeguarding sleep is essential for neurosensory development.¹



Safeguarding Sleep resources

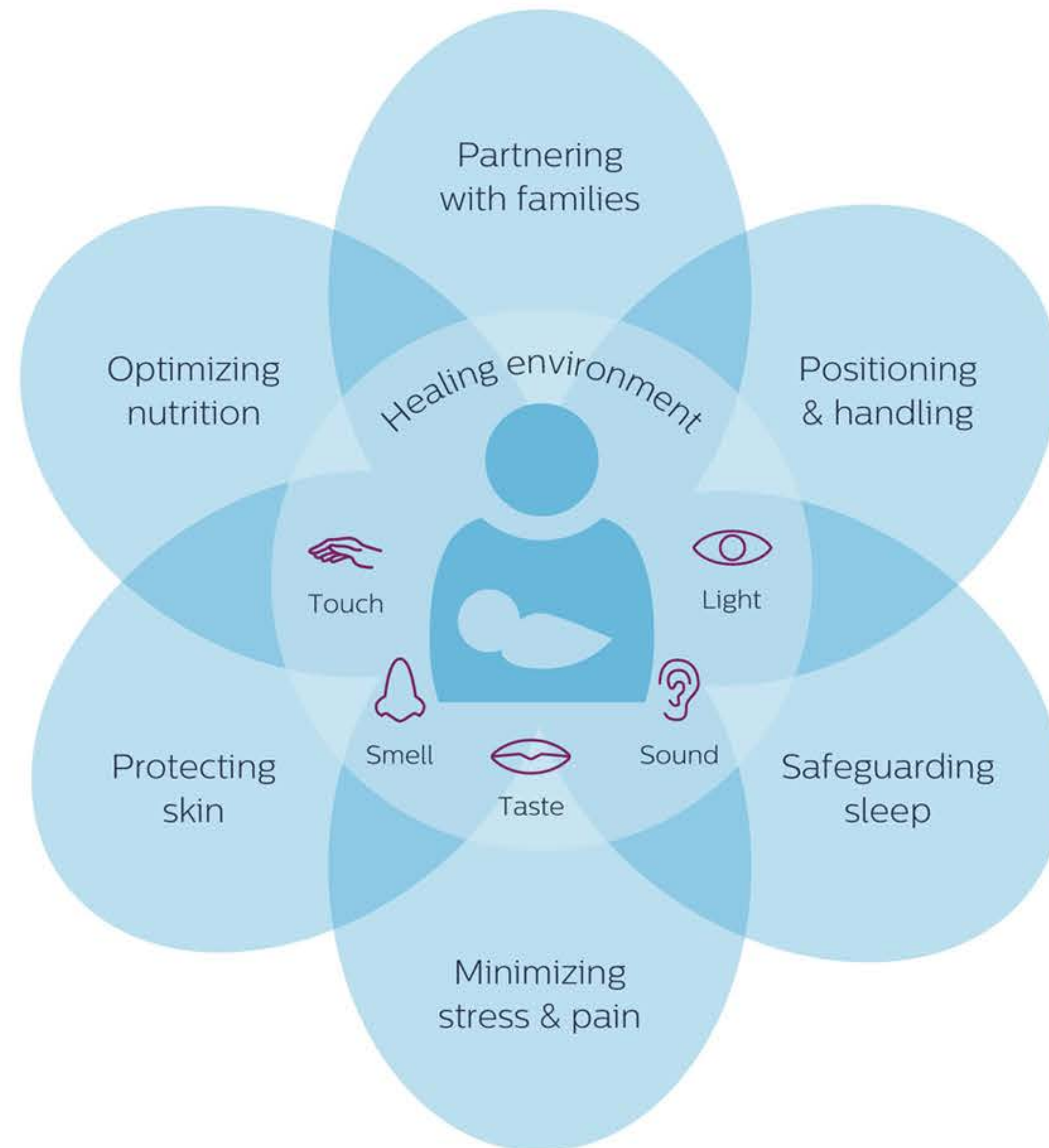
List of references

1. Graven & Browne (2008) Sleep and Brain Development: Sensory Development in the Fetus, Neonate, and Infant: Introductions and Overview. *Newborn & Infant Nursing Reviews*, 8(4), 169-172.

The center of the model represents elements of the Core Measure known as the healing environment, which incorporates the sensory system and the physical environment.

Our Wee Care education program focuses on the Core Measures represented in the Integrative Developmental Care Model and helps hospitals to implement customized quality improvement initiatives around the Core Measures selected by the institution.

Neonatal Integrative Developmental Care Model



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NICU



Core Measure: The Healing Environment

7

Premature babies are exposed to fluctuations in temperature, touch, light, sound, smell, oxygen and nutrients, which can negatively affect the development of the brain.¹



NICU

Core Measure: The Healing Environment



7

Philips' Mother and Child Care's philosophy is to consider these Core Measures in the development of its products and solutions.



The Healing Environment resources

List of references

1. Rees, S., Harding, R., & Walker, D. (2011).
The biological basis of injury and neuroprotection
in the fetal and neonatal brain. *International Journal
of Developmental Neuroscience*, 29(6), 551-563.
doi: 10.1016/j.ijdevneu.2011.04.004.