

# MEDICAL PREMATURE INFANT MANNEQUIN

**A realistic premature infant positioning mannequin designed to train neonatal intensive care unit (NICU) nurses in proper developmental positioning.**

**Case ID:**

ID2021-011

**IP Position:**

Patent Pending

**Development Status:**

TRL 3: Concept demonstrated on lab platform - analytical models to support lab design

**Opportunity**

Partners sought for development and prototype testing.

**Category(s):**

Neonatal Care, Nursing Education, Training, Preterm Infants, Healthcare Simulation

**Keywords:**

Premature Infant, Developmental positioning, Mannequin, Neonatal Care Unit (NICU), Healthcare cost, Patient outcomes

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1.0

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## Technology Overview

A novel mannequin that accurately replicates the size, proportions, and flexibility of a 26-week gestation infant, allowing nurses to practice and improve developmental positioning techniques in supine, prone, and side lying positions, mimicking the challenges faced by preterm infants.

By using the mannequin, neonatal intensive care unit (NICU) nurses can enhance their skills in providing proper developmental support, which helps prevent long-term complications such as poor weight gain, respiratory issues, and musculoskeletal deformities. This, in turn, can lead to improved patient outcomes and reduced healthcare costs.

Overall, this technology offers a realistic and cost-effective solution to train NICU nurses in the essential skill of developmental positioning, ultimately improving the care and well-being of preterm infants.

## Key Features & Benefits

**Features:**

- Realistic size and proportions of a 26-week gestation infant.
- Flexibility and range of motion to practice developmental positioning techniques.
- Scalability to simulate full-term infants for parent education.

**Benefits:**

- Improved nursing skills in providing optimal care for preterm infants.
- Prevention of long-term complication and negative outcomes.
- Cost-effective solution for training, potentially reducing healthcare costs.
- Realistic simulation enhances confidence and competence in NICU nurses.

## Potential Applications

- Education and training tool for NICU nurses to enhance their skills in developmental positioning for preterm infants.



**Fig.1.**

Version 1 of a premature infant mannequin.



**Fig.2.**

A premature infant mannequin in supine position

