

Preterm newborn simulator

Country of origin | Norway

Primary function | Simulation

Health problem addressed

Prematurity is the major cause of newborn death and disability globally. Each year, preterm complications account for over 1 million deaths, often from preventable causes. Skin-to-skin, proper feeding and infection prevention (Kangaroo mother care method) can avert up to 450 000 preterm deaths each year by 2015 if near-universal coverage is achieved (Lancet, 2013).

A recent Lancet article reports that scaling up of breastfeeding to a near universal level could prevent 823 000 deaths annually.

Disease addressed

Certain conditions originating from the perinatal period.

Technical descriptions

The product represents a preterm baby around 32 weeks gestational age or a 1.6 kg low birth weight newborn. It can help train health providers in skin-to-skin care, feeding with nasogastric (NG) feeding tube, and attachment and positioning during breastfeeding. The product can be used along with a breastfeeding simulator.

The product is filled with 1.5 litres of water before use to provide realistic weight and can be emptied and deflated, for convenient and light weight transportation.

Developer's claims of products benefits

Compared to existing high-end solution, the product enables role-play, provides realistic simulation and feedback of NG tube placement and feeding, is affordable (60 USD vs 400 USD) to enable large scale deployment and is light weight for ease of transport. Compared to existing low-end solutions, the product is anatomically accurate for preterm identification and enables realistic training of NG tube placement and feeding.

Operating steps

Fill body foil with about 1500 mL of water (lukewarm water will simulate realistic temperature). Fill simulated stomach with 10 mL of water. Use simulator for training in preterm newborn care, like nasogastric tube insertion and feeding, breastfeeding positioning and attachment, skin-to-skin and Kangaroo mother care. Leave simulator available for retraining, or empty water from simulator for convenient transport.

Regulatory status and standards compliance

The preterm simulator has been developed according to the manufacturers quality system. There are no standards that apply for this type of product.

Use and maintenance

User: Trained caregiver (e.g family member), midwife, nurse, general physician, specialised physician.

Maintenance/Calibration required: No

Environment of use

Setting: Rural settings, urban settings, outdoors, indoors, primary level (health post, health centre), secondary level (general hospital), tertiary level (specialists hospital), anywhere.

Product specifications

Weight (kg): 29

Dimensions: 300mm x 270mm x 170mm

Lifetime: 2-5 years

In UN catalog: No

Commercial information

Reference price (USD): \$60.00

Year of commercialization: 2015

Number of units distributed: 1 001-10 000

Model: PremieNatalie

Other features: Portable, reusable (assuming appropriate decontamination and/or other reprocessing between uses)

