

Newborn ventilation trainer*

Country of origin		China
Primary use		Healthcare provider education and training
Category		Training manikin

Commercial information

List price (USD): 285*

Year of commercialization: 2023

Number of units distributed: 400

Currently marketed in: Globally

Model: NeoNatalie Live - Newborn Ventilation Trainer

* Not-for-profit price for SDG3 qualifying countries
<https://tinyurl.com/ycx62jp5>



Product description

NeoNatalie Live is a smart manikin that enables short and flexible training in newborn ventilation.

Together with a complementary app, NeoNatalie Live allows health workers to practice ventilation skills on their own. The manikin and app also enable newborn resuscitation team training and scenarios aligned with WHO's Essential Newborn Care Course and the Helping Babies Breathe program.

Product details

Accessories: NeoNatalie Live includes the manikin itself (with user guide, baby cap, blanket, USB charger and cable), and the accompanying app to be downloaded from AppStore/GooglePlay. Products like Upright (with/without PEEP - 25 USD/30 USD), NeoBeat (190 USD) and mobile devices may be purchased separately to be used together with NeoNatalie Live.

Consumables: None

Warranty duration: 1 year

Lifetime: Shelf life is 3 years (if properly stored and maintained). It is advised to charge the device occasionally during long time storage.

Energy requirements: 110-240 VAC, 50/60Hz input power wall socket.

Facility requirements: Wifi is required when downloading the NeoNatalie Live app for first use.

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* **Information reported by manufacturer, October 2023**

WHO assessment**

Clinical



Clinical



Recommended

session. The app also enables newborn resuscitation team training.

Overall, this technology is very useful in effectively training healthcare professionals, particularly in LMICs, where simulation-based education can be limited or absent.









This technology is intended to train healthcare professionals on newborn ventilation. The manikin simulates four different patient cases and provides real-time training performance feedback through a complementary app that debriefs on each training

Comparison with WHO technical specifications

Compliant.

The manufacturer provided the necessary detailed technical specifications, also supporting their declarations with the requested technical documentation (user guide or manual). In particular, WHO has a recent publication (“WHO neonatal resuscitation manikin: technical specifications. Geneva: World Health Organization; 2021 (WHO medical device technical series”)) that can be used to compare the technical requirements provided. Following the release of the WHO technical specifications, WHO has issued additional guidelines regarding new born resuscitation, which eliminate the necessity for chest compressions in neonates. Consequently, the technology can be considered “compliant” with the existing WHO technical criteria and practical guidelines based solely on the stimulation and positive-pressure ventilation actions.










Regulatory

 Pre-market assessment	 Not applicable
 Post-market assessment	 Not applicable
 Quality system assessment	 Not applicable
 Security	 Not applicable

This product is not a medical device, and hence it is not applicable to assess it based on medical devices regulatory requirements.

Health technology assessment

Indicators Evidence assessment Innovation

 Medical	
 Safety	
 Economy	
 Organizational	
 Legal	
 Social	
 Ethical	
 Green environment	

NeoNatalie Live is a smart manikin that enables short and flexible training on newborn ventilation. Some early results of the provided evidence show promising outcomes from the implementation of the technology. It simulates various patient cases and provides objective performance feedback to help build competence and confidence in health workers. NeoNatalie Live system increased training frequency, staff participation, and ventilation quality. This device serves as a critical learning experience and opportunity to practice clinical assessment, decision-making and the execution of interventions.

Repeated practice may also improve provider comfort in managing such high-pressure scenarios independently. However, advantages compared to other solutions that could be employed in the same task should be discussed in detail. Although it is sold for a not-for-profit price for eligible LMICs, only preliminary cost-effectiveness studies exist, showing its cost effectiveness is largely dependent on the scaling and region of its implementation.

Technology readiness level **9**

Technology evidence assessment **Recommended with caution**

Health technology management



Durability	N/A
Ease of Use	N/A
Ease of maintenance	N/A
Environmental conditions	→
Affordability	!
Local access to technical support	!
Ease of cleaning	N/A
Infrastructure requirements	!

Health-care delivery platform

The NeoNatalie Live is designed to mimic the real-life responses of a newborn, such as variable heart rates, respiratory rates, and crying, providing a realistic platform for training in neonatal resuscitation and other essential newborn care skills. No durability or chemical resistance testing was uploaded. Preventive maintenance required is basic; corrective maintenance is undefined. The manufacturer is working on the development of a service repair program that will make spare parts available. At 285 USD, NeoNatalie Live is a significant investment, especially for training institutions with limited budgets and health facilities trying to implement on-the-job orientation programs with already stretched budgets.

Although this price point is lower than many options for simulation mannequins on the market, balancing cost and functionality is key to making it accessible to a broader range of users. More extensive testing of usability, durability, chemical resistance, and market need is required before the product can be effectively recommended for scale. As the product works using an app, infrastructural requirements for mobile devices should also be considered.

Intellectual property and local production

Technology transferability	!
Open source/access	🎧
Local production	🛑

Intellectual property: The product is protected by copyright, trade secrets, and trademarks. A clearance is required to use this technology.

Local production: The business case is weak if this product alone is considered for local manufacturing: volumes are low, required materials are import-dependent, the skill required is high, added manufacturing and technology are already in an optimal cost environment, and the final product is in the form of a semi-knocked-down kit.

WHO guidance

- WHO Essential Newborn Care Modular Course. (2022). https://cdn.who.int/media/docs/default-source/mca-documents/nbh/enc-course/modules/11-facilitator-notes-kangaroo-mother-care-16.03.22.pdf?sfvrsn=ab181d02_5
- Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors. (2017). <https://iris.who.int/bitstream/handle/10665/255760/9789241565493-eng.pdf?sequence=1>
- WHO neonatal resuscitation manikin technical specifications (2021). <https://www.who.int/publications/i/item/9789240031333>
- WHO Technical specifications of Neonatal Resuscitation Devices (2016). <https://www.who.int/publications/i/item/9789241510264>