

# Newborn simulator for resuscitation training

Country of origin | Norway

## Health problem addressed

UN Millennium Development Goal (MDG) 4 aims at reducing child mortality by 2/3 from 1990-2015. To date, the improvement is far from sufficient, particularly for neonatal mortality. To reach MDG 4, there is an urgent need to train large numbers of birth attendants in developing countries in neonatal routine care and resuscitation.



## Product description

The proposed solution is a highly realistic and affordable newborn simulator. The baby's status can be simulated as desired to facilitate role playing in relevant scenarios covering basic newborn care as well as standard resuscitation measures. The simulator is available with therapeutic tools.

## Product functionality

By squeezing the bulbs connected to the simulator, an instructor can simulate three vital signs: Crying; spontaneous breathing; and palpable umbilical pulse. Depending on how the learner assesses the situation and acts, the instructor can easily provide feedback to the learner by changing the vital signs.

## Developer's claims of product benefits

The simulator facilitates effective and affordable simulation training in low-resource settings that can improve quality of neonatal resuscitation as it is: Very low cost (available at USD 50); Allows assessment of key competencies (e.g. ability of trainee to ventilate adequately); Durable, easy to take apart/reassemble/transport; Culturally sensitive (available in dark or light complexion).

The simulator is also highly realistic. It has the size and appearance of a newborn baby, and natural weight, feel and touch when filled with water. As it comes deflated in a compact container and can be emptied between uses, distribution and transport of the simulator is convenient.

## Operating steps

The simulator is easily prepared for use by filling the body with 2 liters of water (alternatively by air). An instructor can simulate vital signs by squeezing the simulation bulbs. The simulator facilitates practice in effective bag-mask-ventilation as the chest only will rise with correct technique.

## Development stage

The product was introduced in 2009. It is available on a not-for-profit basis for projects in the 68 developing countries identified by UN as focus countries for MDG4. The use of the Simulator was validated in pilot tests in Kenya, Tanzania, Pakistan and India and is today a fundamental part of several courses in developing countries in basic newborn resuscitation.

## Future work and challenges

**Financing:** Although the product is available on not-for-profit basis, individual health care facilities and educational institutions in low-and middle income countries often have limited financial resources and may need to obtain funding from governments or international aid organizations.

**Distribution channels:** Bureaucracy and often prohibitive customs rates render import to countries where the need is greatest difficult.

## User and environment

**User:** Nurse, midwife, physician, course instructors, students, all other health care personnel needing refresher training

**Maintenance:** Any user

## Environment of use

**Setting and Requirements:** The product can be used in any setting, there are no specific requirements to the infrastructure.

## Product specifications

**Dimensions during transport (mm):** 300 x 200 x 70  
(simulator deflated in a kit with accessories)

**Dimensions in use (mm<sup>3</sup>):** 480 x 230 x 120

**Weight during transport (kg):** 0.8

**Weight filled (kg):** 2.2

**Life time:** 3 years

**Retail Price (USD):** 50

**Other features:** The simulator is portable and reusable.

**Year of commercialization:** 2009

**Currently available in:** 68 countries identified by UN as focus countries relative to UN Millennium Development Goal 4.

Contact details Ingrid Lærdal | Email [newbornsimulator@gmail.com](mailto:newbornsimulator@gmail.com) | Telephone +47 51 511 855, +47 95 145 168 | Fax +47 51 523557

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