

RESEARCH AND DEVELOPMENT FUND PROJECT SPOTLIGHT

NEOPENDA

A WIRELESS VITAL SIGNS MONITOR FOR NEWBORN BABIES

This project aims to pilot an affordable and wireless vital signs technology in low-resource health facilities in East Africa. The technology will continuously monitor the temperature, pulse rate, oxygen saturation and respiration rate of critically ill newborns.

Vital signs monitoring has the potential to improve newborn health outcomes by providing health staff with early warning scores of a patient's declining status. This can help trigger more timely and effective interventions. In low-resource settings, however, the equipment required to monitor vital signs in critically ill newborns is too expensive and difficult to maintain.

Neopenda's neoGuard technology provides an affordable and sustainable patient monitoring solution allowing clinical staff to monitor up to 20 patients at a time from a central monitoring application hosted on a tablet. They are also able to receive real-time visual and audio alerts if any of the vital signs fall out of the acceptable range.

Incorporating feedback from over 400 health workers, Neopenda's technology has been designed to operate efficiently in dynamic clinical settings. This includes potential space constraints, weak or interrupted power supply and other infrastructure challenges.

The neoGuard technology has been in development since 2017 and undergone two small-scale pilot studies to test for safety and accuracy. Neopenda's project aims to assess neoGuard's feasibility in the real world and evaluate its preliminary efficacy on 600 newborns. The system will be introduced in six to eight health facilities in Kenya, Tanzania and Uganda.



AT A GLANCE

R&D Awardee
Neopenda

**Efficiency for Access
Funding**
£75,000

**R&D Funding Unlocked
from Neopenda**
£49,784

Project Locations
Kenya, Tanzania, Uganda,
USA