



Fact Sheet

INSPIRE™



mHealth Sensor technology

Perform automated Respiratory count and vitals in one minute

Improve Outcomes

Reduces error rate and antibiotic wastage

Appropriate Affordable Technology

\$50 per unit brings technology to each village

User Friendly

Designed for caregivers of all levels, individuals to Doctors

INSPIRE is a portable pediatric device using patented technology to automate the counting of respiratory rate, to assist in the early diagnosis of pneumonia in children in developing countries.

The Pediatric Respiratory Rate Sensor – INSPIRE is a patented electronic device that can help identify one of the key signs of pneumonia – rapid breathing. The device is designed to eliminate error and enhance the ability of health workers to correctly record an accurate reading of breath rate and an indication of an abnormal rate for a specific age group. It is designed so that Caregivers of all levels, individuals to Doctors, can perform an automated respiratory and vitals measurement in one minute, for local and remote diagnosis.

How It Works

INSPIRE uses a proprietary algorithm and assembles data from 7 sensors to determine breath count, the standard stated protocol for diagnosing pneumonia as stated by the WHO IMCI guidelines. INSPIRE can provide a numeric and pictorial result. A special non-slip material on the back can safely adhere to the body to keep the unit in place. This material can be rinsed with clean water or saline and it retains stickiness for multiple uses.

How to Operate INSPIRE

Place it on the child, push the start button and Inspire will measure breath rate, temperature, and other vitals in about a minute. Thus permitting healthcare workers to observe other signs of distress and ease parent's concerns. Healthcare providers do not need to hold INSPIRE or manually count the respiration rate.

Features:

- Easy to use,
- Adjustable for size/age of child
- Functional in all body positions
- Rugged for harsh environments
- Re-chargeable battery with a small hand crank
- Affordable Appropriate Technology
- Data Storage in device
- Securely transmit data via Bluetooth/cellular
- Can carry entire device on wrist

Pneumonia Facts



In the 5 minutes it took you to read this – 15 children died.

Pneumonia: the leading killer of children under 5 years.

- In 2011 alone, nearly 1.4 million children died from this preventable and treatable illness, accounting for 18% of child mortality.
- 90% of child pneumonia deaths occur in developing countries-especially sub Saharan Africa and S. Asia.
- Only 60% of children with pneumonia are reportedly taken to a qualified healthcare provider in developing countries.
- Only 43% of caregivers report fast or difficult breathing as a sign to seek immediate care.
- Fewer than 30% of children with suspected signs of pneumonia actually receive an antibiotic.
- **A superbug strain of k pneumonie that is antibiotic resistant has been found across the globe. It is estimated that 50% of those who contract it will likely die.**

Millennium Development Goal #4 – Reducing Infant Mortality.

The WHO and UNICEF have a commitment to reducing child mortality through the **Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhea*. The Action Plan sets clear goals for the world to achieve by 2025: a 75% reduction in incidence of severe pneumonia and diarrhea from 2010 levels among children under five, and the virtual elimination of deaths from both diseases in the same age-group.



The Problem

The current recommended global method for assessing a sick child is WHO's Integrated Management of Childhood illness (IMCI). This method includes the health worker counting the breaths visually and using a one-minute stop watch. UNICEF and other agencies have documented errors using this method. A moving child, a distracted health worker, losing count or having difficulty counting; all contribute to mistakes and inaccurate counts. Also the health worker must know the age of the child and normal breathing rates for that age to determine whether the child is breathing abnormally.

INSPIRE is designed to meet the field Protocols for use in remote areas to enhance a healthcare workers ability to improve the recognition of pneumonia and to make a diagnosis quickly.

Despite its deadly toll, pneumonia in children can be treated and Inspire, an appropriate affordable technology could potentially save countless young lives.

The goal is to increase children's access to life-saving interventions through health care workers, and to make the device accessible at the household and village level, as well as heath centers and hospitals.



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