ICU
MANAGEMENT & PRACTICE

Masimo Receives Gates Foundation Grant to Develop Combined Pneumonia-Screening Device

Masimo has announced, in advance of World Pneumonia Day tomorrow, that it has received a grant of $4.95 million from the Bill & Melinda Gates Foundation (BMGF). The grant will support Masimo's efforts to develop a low-cost pulse oximeter for use in pneumonia screening in several low-resource areas outside the U.S. While still in development, the device will likely measure oxygen saturation (SpO2) and respiration rate (RR) - two key parameters that would provide additional information to clinicians when screening potential pneumonia cases in high-burden settings. The grant will also support studying the clinical use environment in such settings to ensure that the device is user friendly and fit for its purpose. The grant may also support the education materials to promote proper training and use of the device at all literacy levels.

Pneumonia remains the single largest treatable infectious cause of death in children worldwide, causing over 900,000 deaths each year among children under 5 years of age.[1] In a study funded by the BMGF Diagnostics Modelling Consortium, the researchers concluded that in settings where supplemental oxygen is available, the addition of pulse oximetry to standard integrated management of child illness protocols could reduce pneumonia mortality rates.[2] More recently, the World Health Organization (WHO) has sponsored an ongoing multi-country study to further assess how to enhance community case management of pneumonia treatment.[3]

Enhancing patient screening is critically important to reducing the global burden of pneumonia. Moreover, enhanced screening may empower healthcare providers by supporting informed decisions related to pneumonia diagnosis and treatment, with the appropriate administration of antibiotics and oxygen therapy when needed. Masimo and BMGF hope that Masimo SET® Measure-through Motion and Low Perfusion™ pulse oximetry technology can help better screen children in even the most challenging conditions.

Rasa Izadnegahdar, Senior Program Officer on the Pneumonia Team at BMGF, commented, "We are excited to partner with Masimo for the purpose of improving screening for pneumonia to allow improved referral decisions by health workers in low-resource settings. Evaluating a child for fast breathing is the cornerstone of pneumonia assessment and combining this with a reliable and effective approach to assessing oxygen saturation can have significant impact in ensuring children with pneumonia receive appropriate care. Our landscape review of pneumonia diagnostic aid technologies has clearly demonstrated the poor performance of existing diagnostic aids, particularly respiratory rate timers. Diagnostic aids with improved sensitivity and specificity that are adapted and designed for use by health workers and caregivers can make a significant impact on pneumonia treatment. We look forward to working with Masimo to adapt their precise and accurate technology to respond to

the needs of health workers, caregivers, and children in countries where pneumonia burden and deaths remain unacceptably high."

Masimo SET® Measure-through Motion and Low Perfusion™ pulse oximetry is used to monitor millions of patients around the world. This project demonstrates the company's strong commitment to reducing the unnecessarily high global burden of pneumonia by bringing its proven patient screening and monitoring technology to the areas of the world that need it most.

"We are gratified to be able to partner with BMGF, which recently joined us in co-founding the *United for Oxygen* Alliance to increase access to oxygen and pulse oximetry in Ethiopia, in supporting our efforts to help fight pneumonia," said Joe Kiani, Founder and CEO of Masimo. "We hope to bring a much-needed screening tool to areas of the world blighted by countless needless deaths that are due to an illness considered low-risk in the developed world."

Source & Image Credit : Masimo

References

1. Pneumonia Fact Sheet, World Health Organization (WHO), September 2016. http://www.who.int/mediacentre/factsheefts/fs331/en/.
2. Floyd J et al. Evaluating the impact of pulse oximetry on childhood pneumonia mortality in resource-poor settings. *Nature*. 2015 Dec 3;528(7580):S53-9.
3. World Health Organization (WHO), 2016.

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