

# Masimo SET Performance Improves Detection of Hypoxemia

## *International Study Presented at Annual American Thoracic Society*

*San Francisco, California, May 22, 2001* - A leading international physiologist, Ha Trang, PhD, MD, Director of the Pulmonary Laboratory at the Robert Debre Hospital in Paris, France, yesterday presented her department's research at the 2001 American Thoracic Society's Annual Meeting in San Francisco. Dr. Trang's research concluded that Masimo SET pulse oximetry improved the detection of obstructive sleep apnea related hypoxemia.

Obstructive Sleep Apnea (OSA) is a cessation in breathing which can result in death if undetected. Low arterial oxygen saturation or hypoxemia is an early warning of a significant apnea episode. The number of hypoxemic episodes, and the time spent with desaturation during sleep are considered as major indicators for severe OSA. Pulse oximetry is the most common method of measuring hypoxemia but it has been proven to be unreliable due to patient movement and other types of interference.

This study evaluated the impact of Masimo SET pulse oximetry as compared to the most commonly used pulse oximetry technology from Nellcor, the N200, as well as Nellcor's newest technology, the N-395, on the detection of such sleep apnea-related hypoxemias. In the data presented, the researchers demonstrated that Masimo SET detected 35% more hypoxemic events than the Nellcor N-395 and 65% more hypoxemic events than Nellcor's older technology, the N-200. Dr. Trang concluded, "Hypoxic episodes were more frequently detected by Masimo SET than conventional oximeters. Nellcor's failure to identify hypoxemia may be due to its methods of "freezing" in the last reliable value".

The "freezing" referred to by Dr. Trang, relates to Nellcor's Oxismart and Oxismart XL alarm management techniques. Both rely on the monitor to hold alarms for programmed periods of time when interference is detected. Other leading clinicians have also recently reached similar conclusions regarding Nellcor's latest iteration of their Oxismart technology and their alarm management strategy. In a recent study conducted by Dr. Mitchell Goldstein and presented at the Pediatric Research Society meeting in Minneapolis in May 2001, the researchers found entire runs of periodic breathing and true hypoxemic episodes missed using Oxismart XL with SatSeconds, and even warned against its use in those patients at risk for apnea.

"We are delighted by Dr. Trang's results," stated Joe E. Kiani, President and CEO of Masimo Corporation. "Our job and mission is to make instruments that report true physiology with utmost fidelity. The fact that clinicians are seeing and reporting on the strength and value of Masimo SET and its ability to accurately capture true events is extremely rewarding. False alarms cannot be reduced at the expense of true alarms. Masimo is dedicated to full disclosure of clinical data to empower the clinician to make the most informed decisions on patient care. This is clearly a defining characteristic between Masimo SET and the other technologies which claim accuracy during motion."

Mr. Kiani continued: "The results from Dr. Trang's study parallel those recently presented by Dr. Steven J. Barker, at the Society of Technology in Anesthesia's Annual Meeting held in January 2001. In his independent motion and low perfusion study, involving all the major pulse oximetry providers, Dr. Barker also noted increased levels of missed events in the non-Masimo devices and found Masimo SET performance significantly superior to all other "motion tolerant" pulse oximeters. He concluded that Masimo SET pulse oximetry represents a significant step forward by providing clinicians with more accurate data with which to treat their patients, particularly in clinical settings in which patient motion was likely."