Taking Noninvasive Monitoring to New Sites and Applications™

MASIMO

A Letter from the Chairman & CEO

DELIVERING ON OUR MISSION AND GUIDING PRINCIPLES

Over 23 years ago, Masimo started with a bold mission to improve patient outcomes and reduce the cost of care by taking noninvasive monitoring to new sites and applications. We also set forth guiding principles that stay with us today:

> Remain faithful to your promises and responsibilities
> Thrive on fascination and accomplishment and not on greed and power
> Strive to make each year better than the year before both personally and for the team
> Make each day as fun as possible
> Do what is best for patient care

We continue to launch more breakthrough noninvasive measurements, grow the number of customers and partners, and expand the markets for our products. In the process, we delivered record 2011 revenue in a challenging global economy and changing healthcare market.

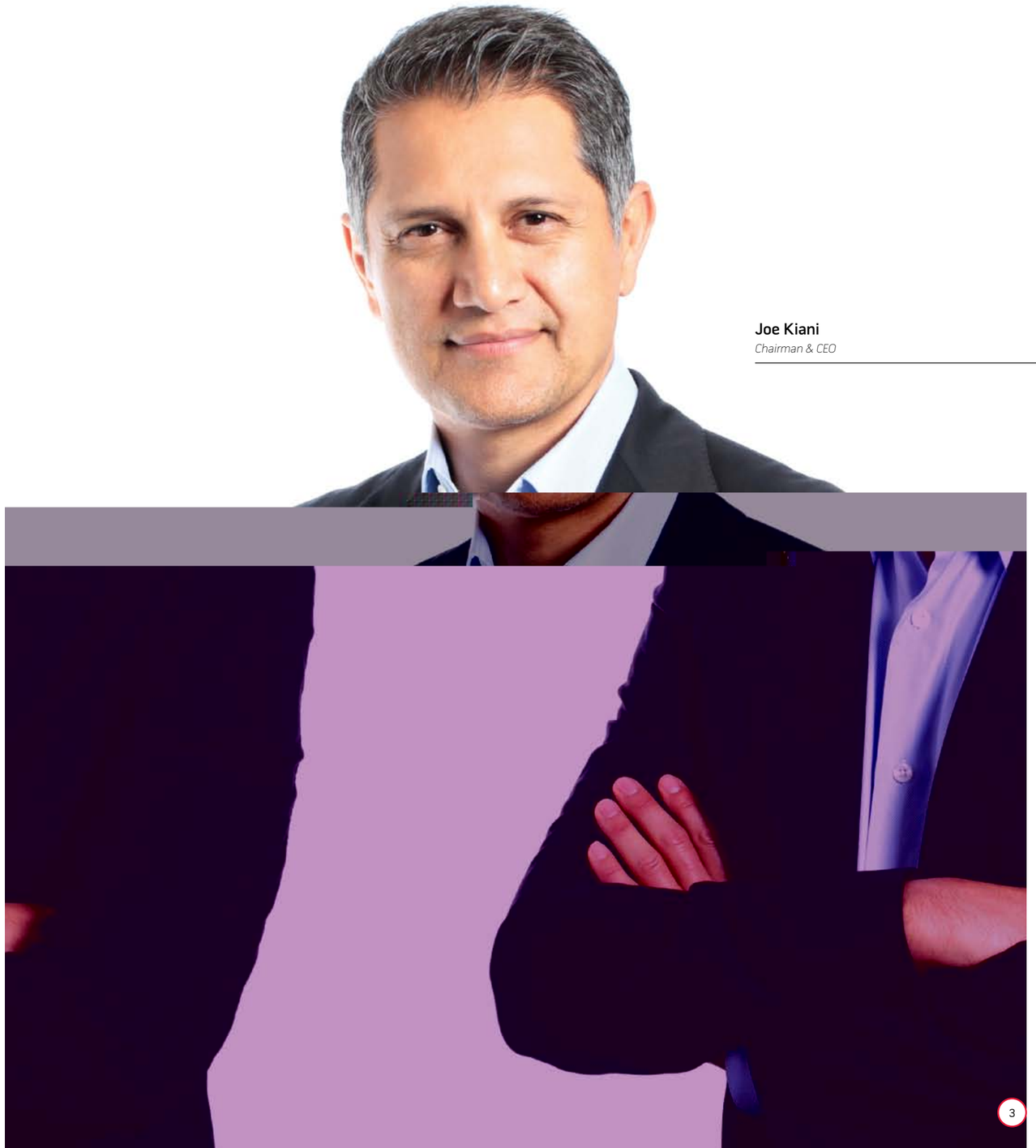
STAYING CLOSER TO THE HEART

Much has changed since 1989, when I founded Masimo in my home. But after more than two decades of technical innovation, broad clinical impact, and solid growth, the most important things remain the same. From the outset, Masimo resolved to be different from any other company. We didn't just set out to create breakthrough technologies, we also wanted to improve patient lives more significantly than any company. And at the same time, by the way we conducted ourselves, we hoped to improve the way business is practiced. By standing and striving for truth while relentlessly pursuing our mission and adhering to our guiding principles, we have continued to focus on solving unsolvable problems, protecting patients, and innovating for the future. In the process, we have built an enterprise in which over 2,500 talented people deliver on our promises in an environment where fascination, accomplishment, and fun can thrive.

PROVING WE MEAN IT

The pages of this annual report are full of innovations that are testaments to everything we originally set out to accomplish. It has been said that the true test of character is what you do when no one else is looking. While less noticeable, there have been many other things that happened along Masimo's journey that also stand as proud examples of the promises we made to ourselves over 20 years ago.

When we discovered our Rad-9® product (acquired in 2002 from one of our OEMs) could visually but not audibly alarm by design if a sensor failed, we proactively issued a recall for the device to ensure the highest level of patient safety – while the FDA stated it didn't require one as the behavior met industry standards. When no other pulse oximetry company put two speakers in their devices to ensure that patient alarms would be heard, even in the rarest cases of a speaker failing, we looked beyond product costs and did it for all of our bedside devices anyway. When we won the patent



Joe Kiani
Chairman & CEO

infringement lawsuit against Nellcor, we received enough funds to take advantage of the automatic stock redemption of early investors. While this would have resulted in great personal gain to some insiders, we instead let stockholders keep their preferred shares and fully benefit from a large dividend while we geared up to take our company public.

When other companies refused to provide their pulse oximeters for use in home care because of the potential liabilities vis-à-vis high-risk patients, we decided to make our products available because we knew they provided the best and sometimes only solution possible for patient care. When we won the antitrust lawsuit against Nellcor in Federal Court, we kept fighting for a final ruling so our case could help other companies avoid what we experienced – instead of focusing on a possible large settlement. And when the final rulings were in, instead of banking the legal proceeds, we used a significant portion of those funds to set up the Masimo Foundation for Ethics, Innovation, and Competition in Healthcare.

CONTINUING INNOVATION

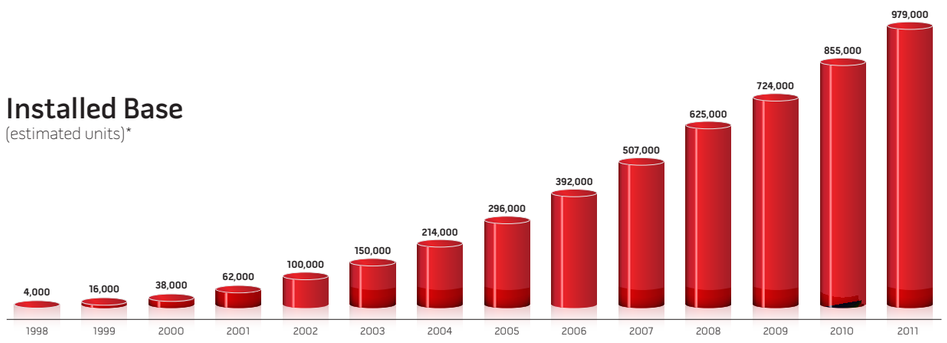
Masimo's innovation engine has fueled many industry firsts, which have significantly improved patient care and reduced costs. Masimo SET® overcame the technological limitations of conventional pulse oximetry and made pulse oximetry accurate during challenging conditions. Masimo SET has now been shown to help clinicians reduce retinopathy of prematurity, detect congenital heart disease in newborns, reduce medical errors in critical care, wean patients from the ventilator faster, and save lives and costs in the post-surgical patients on the general floor. Approximately 10 years after the introduction of Masimo SET, Masimo rainbow® SET has ushered in noninvasive and continuous measurements that previously required invasive or complicated procedures, allowing clinicians to make earlier and better decisions to care for patients in ways they never thought possible.

As one example, our noninvasive and continuous total hemoglobin (SpHb®) monitoring has been shown to help clinicians reduce the number of risky and costly blood transfusions in surgical patients, and in multiple cases has demonstrated its lifesaving ability to help clinicians detect occult bleeding. Masimo rainbow® technology has also been shown to help clinicians assess fluid responsiveness, improve fluid management, identify pauses in breathing, and assess carbon monoxide levels to detect CO poisoning. With growing clinical evidence and customer advocacy, multiple OEM partners have decided to include rainbow® technology into their products, including large multiparameter monitoring companies such as Welch Allyn, Dräger, Philips, and GE.

Masimo's technology innovation has continued with the introduction of our MS-2040 board with reduced size and power consumption, allowing Masimo SET performance in new sites and applications. New measurement innovation continued with the debut of Halo Index,™ which allows continuous global trending and assessment of multiple physiological measurements of a patient with a single number. Halo Index was designed to mimic the systematic approach that expert clinicians use in assessing patient physiologic deterioration, which now empowers clinicians with constant assessment of all of their monitored patients. With our acquisition of SEDLine® technology, Masimo has also entered into brain function monitoring, which provides important information about a patient's response to anesthesia.

In response to the hospital market's growing needs to implement environmentally friendly, or "green," products and to decrease costs, Masimo introduced the Universal Pulse Oximetry ReSposable™ sensor system. The ReSposable sensor, part reusable and part disposable, combines the performance and comfort of single-use adhesive sensors with the economic and green advantages of reusable sensors. And most recently, Masimo launched its 2012 version of our flagship product, the Radical-7.™ Once again raising the technologic bar, the new Radical-7 leverages Masimo's breakthrough noninvasive measurements with breakthrough functionality such as an intuitive, gesture control touchscreen and standard integrated wireless functionality. The new Radical-7 is designed to automate the process of care and enable clinicians to instantly adapt to changing monitoring needs in individual patients and care areas.

In March 2012, we acquired substantially all of the assets of Spire Semiconductor, LLC, maker of advanced light emitting diode (LED) and other advanced component-level technologies. Masimo Semiconductor Inc., a newly-formed,



* Excludes Handheld Devices

Signal Extraction Technology®: Solving the "Unsolvable"

Twenty-three years ago, two young engineers asked themselves why pulse oximetry wouldn't work during patient motion and low perfusion – and by doing so, set a new course that created a revolution in patient monitoring.

OVERCOMING THE LIMITATIONS OF CONVENTIONAL PULSE OXIMETRY

Since its inception, pulse oximetry was plagued by unreliability when it was needed most – during patient motion and low perfusion. The industry had given up and considered the problem "unsolvable." Clinicians were forced to live with the results – excessive false alarms, delayed notification due to long averaging times, inaccurate data, and an inability to obtain data on the most critical patients.

Conventional pulse oximetry works under the assumption that by looking at only the pulse and normalizing the pulsating signal over the non-pulsating signal, oxygen saturation (SpO_2) can be measured without calibration. Although this was a big step forward in the evolution of pulse oximetry, it has one major flaw – it assumes the only pulsating component is arterial blood. Unfortunately for conventional pulse oximetry, venous blood moves every time the patient moves or breathes. This causes conventional pulse oximeters to display false low or high SpO_2 and pulse rates – resulting in false alarms as high as 90% in ICUs and recovery rooms.

UNLEASHING BREAKTHROUGH PERFORMANCE

When Joe Kiani and Mohamed Diab looked at the same pulse oximetry signal differently than anyone had before, they created possibilities that never before existed. By employing advanced signal processing techniques – including parallel engines and adaptive filters – they believed they could find the true arterial signal that would allow accurate monitoring of arterial oxygen saturation and pulse rate even during the most challenging conditions. Signal Extraction Technology, or Masimo SET, assumes that both the arterial and venous blood can move and uses parallel signal processing engines – DST®, FST®, SST™, and MST™ – to separate the arterial signal from sources of noise (including the venous signal) to measure SpO_2 and pulse rate accurately, even during motion.

PERFORMANCE DURING MOTION AND LOW PERFUSION[1]

95% FALSE ALARM SPECIFICITY

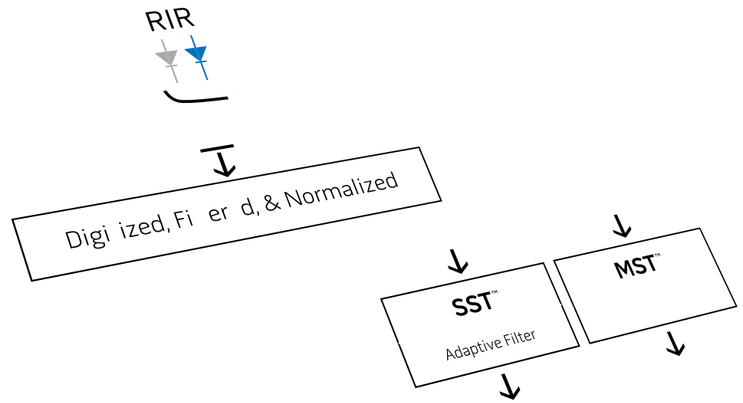
97% TRUE ALARM SENSITIVITY

In this hospital-based study, investigators measured SpO_2 in 10 subjects during motion and low perfusion conditions and calculated the of false alarm rate during 120 full oxygenation events (specificity) and true alarm rate during 40 de-oxygenated events (sensitivity).

After six years of dedicated and focused research and development, Masimo SET debuted in 1995 at the Society for Technology in Anesthesia and won the prestigious Excellence in Technology Innovation Award. Thereafter, skeptical clinicians around the world sought actively to compare Masimo SET to the best pulse oximetry technologies other companies had to offer. But in study after study, the breakthrough signal processing of Masimo SET consistently resulted in significantly fewer false alarms and far superior true alarm detection.

With Masimo SET, false alarms have been reduced by over 95% while true alarm detection has increased to over 97% – even during the challenging conditions of motion and low perfusion.[1]

[1] Shah N et al. . 2006;105:A929. (abstract)



"Conventional pulse oximeters are a fair-weather friend. Masimo SET is a foul-weather friend."

JEREMY SWAN, MD

Former Chairman of Masimo's Scienti fc Advisory Board and Chairman Emeritus
Cedars-Sinai Medical Center's Division of Cardiology

Industry-leading Pulse Oximetry Solution

Masimo SET is the world's leading pulse oximetry technology, proven by both independent and objective research and the real-world success of our customers and partners.

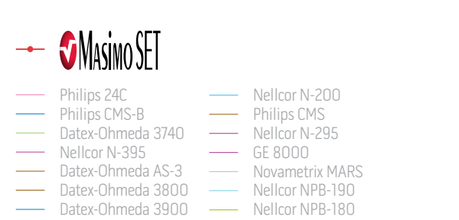
THE CHOICE OF CLINICIANS IN THE WORLD'S LEADING HOSPITALS

Because of its unmatched reliability during challenging conditions of motion and low perfusion, clinicians at thousands of hospitals around the world count on Masimo SET every day to help them care for patients. And while many leading hospitals – including seven of the top ten hospitals on the U.S. News & World Report Honor Roll – have already integrated Masimo SET pulse oximetry technology, more are converting every day.

These hospitals and clinicians trust Masimo SET to help them deliver the most effective and efficient patient care possible. With fewer false alarms[1], clinicians can focus on the patients who need the most attention. With more trustworthy measurements, clinicians can more tightly control oxygenation levels. And with more timely detection of true events, clinicians can intervene earlier for better patient outcomes and improved patient safety.

INTEGRATED IN MORE INDUSTRY-LEADING PRODUCTS THAN ANY OTHER PULSE OXIMETRY TECHNOLOGY

Each company manufacturing multiparameter monitors has a choice as to which pulse oximetry technologies it offers in its products. Today, Masimo SET is integrated in more industry-leading products than any other pulse oximetry technology – available in more than 100 OEM monitors from 50 leading brands. In many of these monitors, Masimo SET is the only pulse oximetry technology provided.



VALIDATED BY INDEPENDENT AND OBJECTIVE RESEARCH

To date, more than 100 independent and objective studies have shown that Masimo SET outperforms all other pulse oximetry technologies, providing clinicians with unmatched sensitivity and specificity to make critical patient care decisions.

"Masimo SET is advantageous because even though it significantly reduces false alarms, it doesn't do that by ignoring physiological changes."

CHRISTIAN POETS, MD
Director, Neonatal Intensive Care Medical School, Hanover, Germany

Freeing Hospitals to Choose the Best Technology for Patient Care

Masimo has also helped change and improve healthcare by being a champion for free choice in the market and the protection of new technology development.

GROUP PURCHASING REFORM

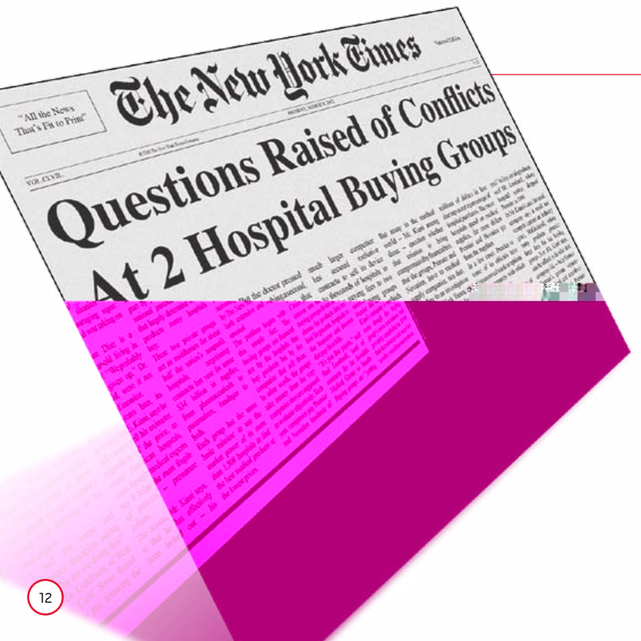
A short decade ago, many hospitals wanted to choose Masimo SET pulse oximetry to provide the best care for their patients, but could not do so because their group purchasing organization (GPO) did not offer Masimo SET – instead engaging in exclusive arrangements with a competitor, which inhibited Masimo's innovative technology from entering the market. The struggles that hospitals endured fighting to choose Masimo created broader awareness of the need for GPO reform – leading to fewer exclusive arrangements for higher-priced and sometimes even inferior products.

FIGHTING ANTICOMPETITIVE BEHAVIOR

When large medical technology companies tie discounts of unrelated products to the exclusive purchase of their products across multiple categories, it can be considered anticompetitive if it is done in a large enough market.

Masimo has fought hard to prevent this type of behavior, testifying twice at Senate hearings regarding these practices and bringing a successful antitrust suit against Nellcor, a division of Tyco Healthcare (now Covidien). Masimo has also worked diligently to overcome the decision of some patient monitoring companies to limit access to technologies with proven patient care benefits.

These efforts are just a few examples of how Masimo has stood for transparency and truth to open markets so that medical products are judged on their individual merits rather than on artificial restraints on hospital purchasing. With open competition in the pulse oximetry market, pulse oximetry pricing has decreased by an estimated 30% or more over the last decade while in the previous decade prices were estimated to have hardly changed. But more importantly, countless lives have either been saved or improved as a direct result of access to Masimo SET.



"Masimo has led the industry's efforts to encourage innovation and free choice by healthcare providers."

MARK LEAHEY
›resident & CEO of the Medical Device Manufacturers Association

ENABLING INNOVATION THROUGH PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

Innovation can flourish if companies have the ability to protect their inventions for the term of their patents. The patent system is designed to protect intellectual property rights, but some companies still infringe on legitimate patents of small companies that are unable to defend themselves. While Masimo made its revolutionary Masimo SET pulse oximetry available to every company some chose to mimic Masimo technology instead. Masimo was forced to defend its intellectual property from Nellcor, and in 2005 the court ruled that Nellcor infringed on Masimo's patents and ordered that Nellcor's infringing products should be enjoined. The decision for Masimo served as a larger victory for stimulating innovation that is critical to advancing patient care in the future.

"Masimo's victory against Nellcor buttresses the importance of patenting in guarding the innovations of the emerging companies against established market participants."

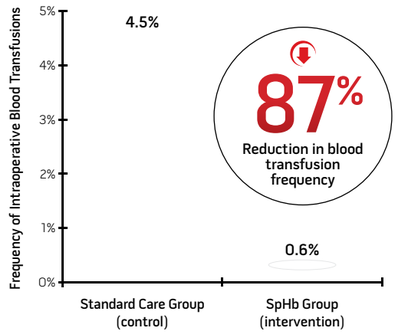
FROST & SULLIVAN
2006

Supporting Clinicians in Reducing Blood Transfusions and Detecting Bleeding Earlier with SpHb®

With the rainbow® measurement platform including noninvasive total hemoglobin (SpHb), Masimo technologies aid some of the most common, costly, and critical decisions made in healthcare.

REDUCING UNNECESSARY BLOOD TRANSFUSIONS

While blood transfusions are critical to avoid organ damage and sustain life when hemoglobin levels are unstable or very low, mounting evidence shows that transfusions increase 30-day mortality by up to 38% and 30-day morbidity by up to 40%.[1, 2, 3] Blood transfusions are also costly, with blood being one of the highest cost items in a hospital. Each unit of blood is estimated to cost between $522 and $1,183,[4] without including the additional cost of treatment associated with blood transfusion-related complications.[6] In a randomized controlled trial at Massachusetts General Hospital in orthopedic surgery, clinicians using SpHb reduced blood transfusion frequency by 87% compared to clinicians not using SpHb.[5] Based on the lower blood utilization per patient shown in the study, SpHb could reduce hospital costs by $47 to $106 per patient monitored. It is possible that SpHb monitoring may have even greater benefit in populations with greater transfusion frequency and a greater number of average units transfused.



Randomized controlled trial in 327 orthopedic surgery patients at Massachusetts General Hospital[5]

To support hospitals in their efforts to reduce costs while improving quality of care, Masimo offers a hospital-wide risk-share program for Blood Transfusion Related Cost Reduction (BTR-CR, pronounced "Better Care"). The BTR-CR Program guarantees blood transfusion related cost reductions will exceed the incremental price of SpHb sensors.

EARLIER INDICATION OF POTENTIAL BLEEDING

Total hemoglobin is among the most common invasive laboratory measurements performed in and out of the hospital and directly aids the assessment of blood loss. However, intermittent hemoglobin measurements often detect bleeding late, sometimes even hours or days after it has begun. For the first time, Masimo continuous and noninvasive total hemoglobin (SpHb) allows real-time hemoglobin assessment, which clinicians indicate has helped them to more quickly identify blood loss. In these situations, earlier identification allows clinicians to act sooner to treat the patient, which can make an enormous difference in recovery and the ICU.[7, 8, 9]

"Masimo SpHb helped prevent a potentially life-threatening event. I am now using it for all my major craniofacial procedures and can't see doing a surgery without it."

JEFFREY FEARON, MD
›hysician for 8 year-old girl who had just completed craniofacial surgery in which SpHb signaled undetected bleeding through a dramatic drop in hemoglobin over a 5-minute period.

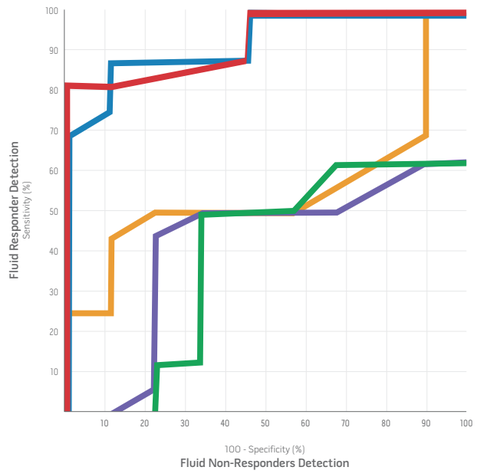
[1] Taylor RW et al. . 2006;34(9):2302-8. [2] Bernard AC et al. . 2009;208:931-937. [3] Surgenor SD et al. . 2009;108:1741-1746. [4] A New Look at Blood Transfusion. Joint Commission Perspectives on Patient Safety. 2007;1:1-12. [5] Ehrenfeld JM et al. . 2010;LB05. (abstract) [6] Hill SR et al. Cochrane Database of Systematic Reviews 2000, Issue 1. [7] Causey MW et al. . 2011;201:590-596. [8] Butwick AJ et al. . 2011;20(3):240-5. [9] Colquhoun DA et al. › . 2012 Apr;26(2):69-73.

"In cases of severe hemorrhaging during and after childbirth, SpHb has enabled us to immediately identify and continuously assess blood loss severity to better manage internal bleeding, prevent overloading of fluid, and decrease maternal death."

MADHAVA KARUNARATHNA, MD
OB/GYN, Balangoda Hospital, Sri Lanka

Aiding Clinician Assessment of Fluid Responsiveness and Fluid Management with PVI®

Fluid administration is one of the most common hospital interventions. Although it is critical to improving patient status and enabling end organ preservation, unnecessary fluid administration is associated with increased morbidity and mortality.[1]



MASIMO PVI HAS BEEN SHOWN TO HELP CLINICIANS ASSESS FLUID RESPONSIVENESS AS RELIABLY AS NEW INVASIVE PARAMETERS AND BETTER THAN TRADITIONAL INVASIVE PARAMETERS.[2]

Pleth Variability Index (PVI)

Arterial Pulse Pressure (APP)

Cardiac Index (CI)

Pulmonary Capillary Wedge Pressure (PCWP)

Central Venous Pressure (CVP)

This observational study evaluated 25 surgical patients before and after volume expansion, with fluid responders (sensitivity) defined as a cardiac index increase of >15% and fluid non-responders (specificity) defined as a cardiac index increase of <15%.

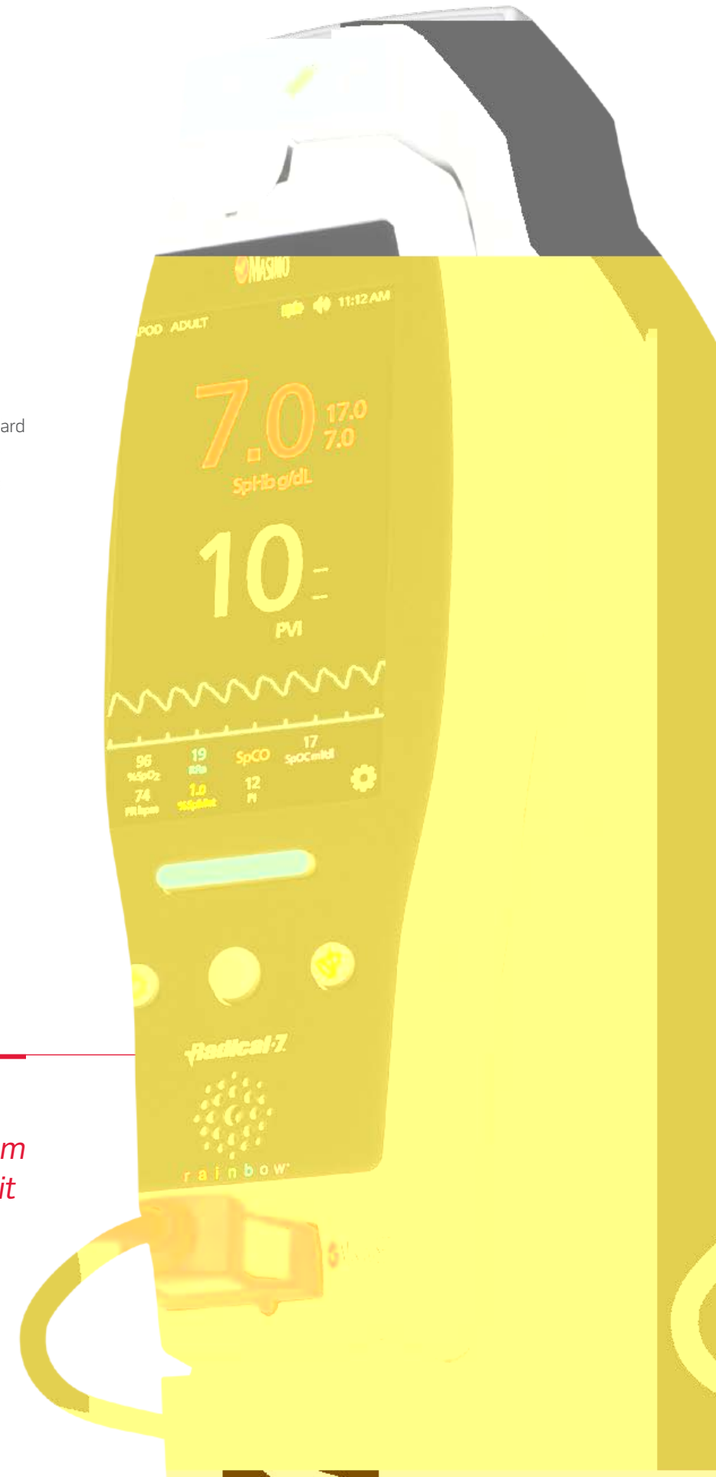
ASSESSING FLUID RESPONSIVENESS

Masimo continuous and noninvasive Pleth Variability Index (PVI) has been shown in multiple studies to help clinicians assess fluid responsiveness in adult surgical and intensive care patients under mechanical ventilation.[2-5] PVI has also been shown to help assess which patients will become hemodynamically unstable with the addition of Positive End Expiratory Pressure (PEEP), which may allow clinicians to more carefully select ventilator settings and monitor effects more closely.[6]

[1] Bundgaard-Nielsen M et al. . 2007; 51(3):331-40 [2] Cannesson M et al. . 2008;101(2):200-6. [3] Loupec T et al. . 2011;39(2). [4] Zimmermann M et al. . 2010 Jun;27(6):555-61. [5] Fu Q et al. . 2012 Feb;6(1):38-43. [6] Desebbe O et al. . 2010;110:792–798. [7] Forget P et al. . 2010;111(4):910-4.

AIDING CLINICIANS IN PATIENT RISK REDUCTION

A recent randomized trial showed that compared to standard care without PVI, clinicians using PVI were able to improve fluid management and as a result, reduce patient risk – as evidenced by lower lactate levels.[7] By helping clinicians maintain appropriate fluid and oxygen levels in the blood, important organs may be protected.



"With Masimo PVI, I can predict when my patients will benefit from fluid administration – and when it might harm them."

MAXIME CANNESSON, MD
University of California, Irvine

Protect More Patients by Monitoring Every Breath with RRa™

To expand the rainbow® platform's promise of breakthrough noninvasive measurements, Masimo has grown our optically based technologies to include clinical measurements derived from sound with rainbow® Acoustic Monitoring.

PROTECTING MORE PATIENTS BY MONITORING EVERY BREATH

Continuous monitoring of respiration rate is especially important for post-surgical patients receiving patient-controlled analgesia for pain management. Conscious sedation can induce respiratory depression and place patients at considerable risk of serious injury or death. The Anesthesia Patient Safety Foundation recommends continuous oxygenation and ventilation monitoring in all patients receiving opioid-based pain medications.[1] However, current methods for respiration rate monitoring are limited by accuracy and patient tolerance.

Masimo's rainbow® Acoustic Monitoring now provides noninvasive and continuous respiration rate (RRa) that is accurate, easy-to-use, and enhances patient compliance.[2] Masimo's rainbow® Acoustic Monitoring may help clinicians reliably and continuously assess breathing – facilitating earlier detection of respiratory compromise and patient distress – offering a breakthrough in patient safety for post-surgical patients on the general floor and for procedures requiring conscious sedation.

ALLOWING MORE PATIENTS TO BE MONITORED, MORE SAFELY THAN EVER BEFORE

When rainbow® Acoustic Monitoring is used in conjunction with rainbow® SET Pulse CO-Oximetry and the Patient SafetyNet system, clinicians can follow key indicators of **oxygenation** with industry-leading Masimo SpO_2; **ventilation** with breakthrough RRa; **circulation** with Masimo Measure-through Motion pulse rate (PR); and potential **bleeding** with Masimo's continuous and noninvasive hemoglobin (SpHb) – enabling clinicians to monitor more patients, more safely than ever before.

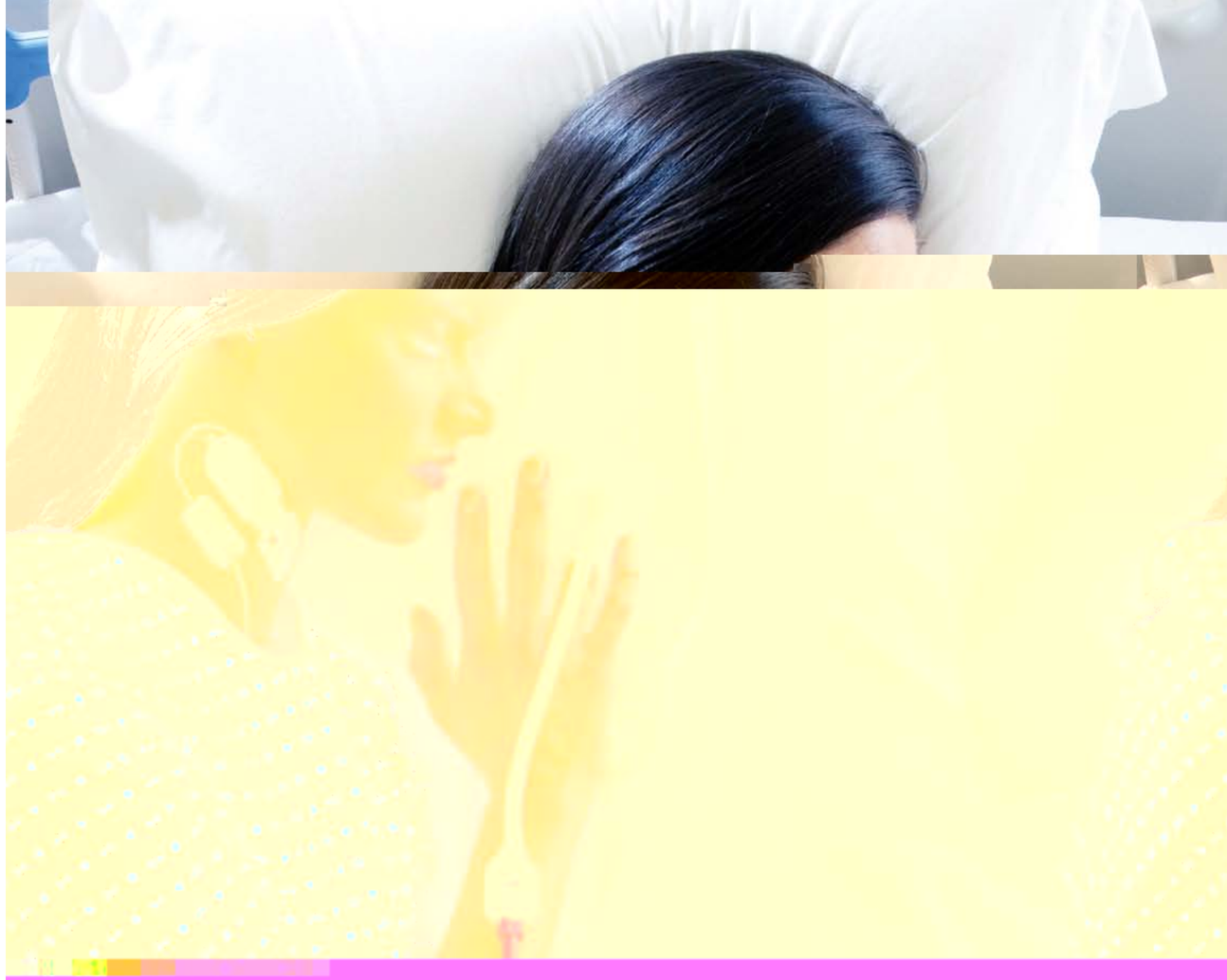
ABILITY TO DETECT RESPIRATORY PAUSE[3]

	RESPIRATION RATE METHOD	
	Oridion Capnostream SARA v4.5	Masimo rainbow® Acoustic Monitoring v7804
Sensitivity *(respiratory pause detected when actual respiratory pause occurs)*	62%	81%
Specificity *(no respiratory pause indicated when no actual respiratory pause exists)*	99%	99%

Retrospective analysis of 34 PACU subjects. Reference respiration rate determined by expert observer. A total of 21 episodes of respiratory pause were identified, defined as 30 seconds with no breathing activity.

rainbow® Acoustic Monitoring noninvasively and continuously measures respiration rate using an innovative adhesive sensor with an integrated acoustic transducer that is easily and comfortably applied to the patient's neck.

[1] Stoelting RK et al. . 2011. (www.apsf.org) [2] Macknet MR et al. . 2007;107:A84. (abstract) [3] Ramsay M et al. . 2011. P9137. (abstract)



"Breathing adequately is what matters most. Masimo Acoustic Respiration Rate automatically and continuously monitors the breathing status of post-surgical patients – alerting clinicians to the first sign of an abnormal or compromised breathing pattern."

MICHAEL RAMSAY, MD
Chief of the Department of Anesthesiology and >ain Management,
Baylor University Medical Center, Dallas, TX

Protecting the Most Vulnerable by Helping Clinicians Screen for CCHD and Reduce ROP

From the very beginning, we have kept infants and children closest to our hearts and focused on how our technologies can improve their care. As a result, Masimo leads the industry in solutions designed exclusively for these patients with the brightest future.

ENABLING CONGENITAL HEART DISEASE SCREENING

The breakthrough performance of Masimo SET is often most appreciated by the clinicians caring for fragile newborns. Up to 30% of all congenital heart disease (CHD) deaths occurring in the first year of life are unrecognized at the time of hospital discharge after birth. Masimo SET pulse oximetry has been shown to reliably assist clinicians in the detection of critical congenital heart disease (CCHD),[1,2] leading the U.S. Secretary of Health and Human Services to add pulse oximetry to the recommended Uniform Screening Panel for newborns.[3]

REAL-TIME NEWBORN MONITORING AND ASSESSMENT

When each second matters during newborn resuscitation, the Masimo Newborn Sensor ensures the fastest response time at the highest sensitivity – allowing clinicians to focus on real-time patient management instead of the device. In addition, Masimo SET is increasingly being used to supplement the standard APGAR score to more reliably assess general newborn health.

"Screening should be conducted by using motion-tolerant pulse oximeters that report functional oxygen saturation and have been cleared by the FDA for use in newborns."

NEWBORN SCREENING RECOMMENDATIONS
Kemper et al, 2011.

INCREMENTAL BENEFIT OF MASIMO SET SCREENING FOR CCHD DETECTION[2]

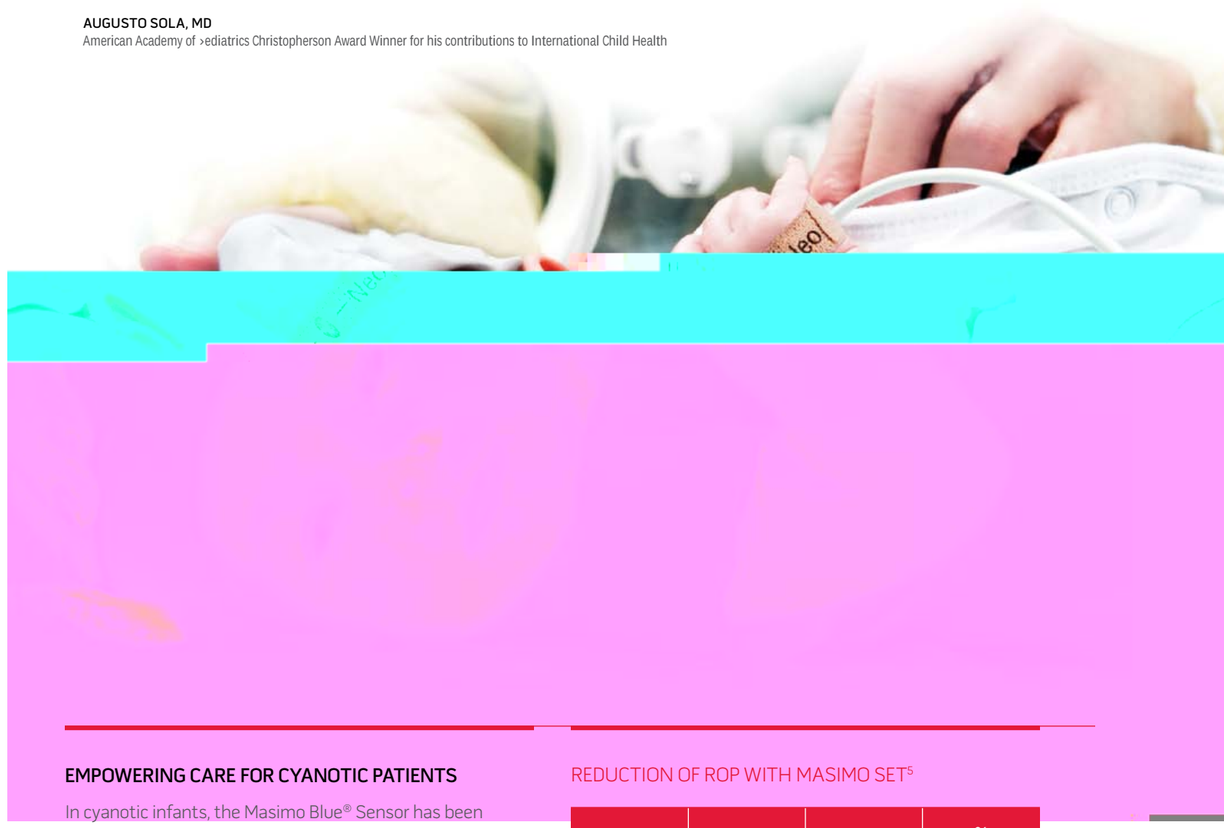
N= 39,821 babies	Physical Exam Alone	Physical Exam + Masimo SET Pulse Oximetry Screening[2]
Sensitivity for CCHD Detection	63%	83%
Specificity for CCHD Detection	98%	99.8%

SpO_2 screening was conducted on 39,821 newborn babies, preductally (palm of right hand) and postductally (either foot) before routine physical examination. The baby was considered to be screening positive if: 1) either preductal or postductal SpO_2 measurement was ≤90%; 2) if in three repeat measurements, both preductal and postductal SpO_2 were <95%, or the difference between the two measurements was >3%.

[1] Ewer AK et al. . 2011 Aug 27;378(9793):785-94. [2] Granelli AD et al. . 2009;338:A3037.
[3] Secretary of Health & Human Services letter to the Secretary's Advisory Committee on Heritable Disorders in Newborns and Children (SACHDNC); dated September 21, 2011.

"Masimo has helped save countless babies' lives and plays a critical role in helping to virtually eliminate severe infant eye damage."

AUGUSTO SOLA, MD
American Academy of ›ediatrics Christopherson Award Winner for his contributions to International Child Health



EMPOWERING CARE FOR CYANOTIC PATIENTS

In cyanotic infants, the Masimo Blue® Sensor has been proven accurate in oxygen saturations as low as 60% – enabling accurate maintenance of targeted low saturation levels.[4] And for very low birth weight babies, only the Masimo NeoPt-500™ Sensors are designed for both size and performance in infants as small as 500 grams.

HELPING CLINICIANS REDUCE RETINOPATHY OF PREMATURITY

Premature infants requiring neonatal intensive care need enough oxygen to preserve vital organ function, but too much oxygen can cause severe eye damage from retinopathy of prematurity (ROP). Using Masimo SET to help more tightly control oxygen therapy has been shown to help clinicians dramatically reduce ROP.[5]

REDUCTION OF ROP WITH MASIMO SET[5]

Center	Severe ROP *(pre-policy change)*	Severe ROP *(post-policy change)*	% Reduction in ROP
A	12% with Nellcor	5% with Masimo	58%
B	13% with Nellcor	13% with Nellcor	0%

The oxygen targeting policies, caregivers, and patient characteristics were the same at both centers, but only Center A switched to Masimo SET. At Center A, 138 infants pre-policy change and 113 infants post-policy change were evaluated. At Center B, 83 infants pre-policy change and 115 infants post-policy change were evaluated. Pre-policy change, SpO_2 target was >93%. Post-policy change, SpO_2 target was 88-93%.

[4] Cox PN et al. . 2007;107:A1540. (abstract)
[5] Castillo A et al. . 2011 Feb;100(2):188-92.

Helping Clinicians Protect Patients from Hidden Dangers with SpMet®

Monitoring for unintended consequences of drugs commonly given in hospitals and during certain procedures.

Medications Known to Cause Methemoglobinemia: *Benzocaine, Cetacaine, Chloroquine, Dapsone, EMLA topical, Flutamide, Lidocaine, Metoclopramide, Nitrates, Nitric oxide, Nitroglycerin, Nitroprusside, Nitrous oxide, Phenazopyridine (Pyridium), Prilocaine, Primaquine, Riluzole, Silver nitrate, Sodium nitrate, Sulfonamides*

ADDRESSING THE RISK OF DANGEROUS DRUG REACTIONS

Many drugs commonly used in hospitals – such as lidocaine, benzocaine, dapsone, and nitrates – cause a dangerous reaction known as acquired methemoglobinemia that reduces the delivery of oxygen to the tissues. While methemoglobinemia can occur in all care areas and patients, it is often unrecognized and undiagnosed. If not detected and treated immediately, it can result in avoidable injury or death.

"Acquired methemoglobinemia is fairly common and causes morbidity and mortality in both the inpatient and outpatient settings. Acquired methemoglobinemia is often unrecognized and thus untreated."[30]

RACHEL ASH-BERNAL, MD

ENABLING QUICK TREATMENT WITH SpMet

Masimo noninvasive methemoglobin (SpMet) helps clinicians assess for methemoglobinemia, facilitating earlier detection and immediate treatment to reduce patient risk – especially in care areas where drugs that cause methemoglobinemia are used most often, such as procedure labs and the operating room. This enables them to quickly adjust exposure to the dangerous drug and initiate potentially life-saving treatment.

# of Methemoglobinemia Cases	Patient Age	Care Areas	Fatalities
138	4 days to 86 years	Surgery, intensive care, outpatient clinics, pediatrics, emergency department, cardiac cath lab	1 fatality 3 near fatalities

Results from a retrospective study at two Johns Hopkins Hospitals over a 28-month period, using laboratory CO-oximeter results, and patient electronic medical records.[1]

"Masimo SpMet helps detect methemoglobinemia, allowing clinicians to accurately diagnose and treat this life-threatening condition."

MARK MACKNET, MD
Assistant ›rofessor of Anesthesiology, Loma Linda University

[1] Ash-Bernal RA et al. . 2004;83:265-273.

Quick and Painless Hemoglobin Assessment

The Pronto-7® is designed specifically for faster noninvasive total hemoglobin (SpHb) spot-check testing, along with SpO_2, pulse rate, and perfusion index.

A REVOLUTIONARY DEVICE FOR A VARIETY OF CLINICAL SETTINGS

Hemoglobin is one of the most commonly ordered tests in both hospital and non-hospital settings because it is critical to assessing anemia. However, traditional lab testing requires a painful needle stick for the patient, and typically provides delayed results.

The Pronto-7 represents a breakthrough solution for measuring hemoglobin quickly in under a minute – without needles, time-consuming laboratory analysis, or the risk of blood contamination or hazardous medical waste.

The palm-sized Pronto-7 – with dimensions at approximately 5" x 3" x 1" and weight of 11 ounces – puts the power of noninvasive hemoglobin spot-check testing into any clinician's hands in almost any environment, including hospitals, clinics, blood donation centers,* and emergency medical services. Operation is easy and intuitive with the Pronto-7's touchscreen interface. And because of the device's embedded 802.11 b/g and Bluetooth communication capability, wireless printing or emailing of test results is available today – with future upgrades to allow for wireless transmission to EHR systems.

Expanding Impact Outside of the Hospital

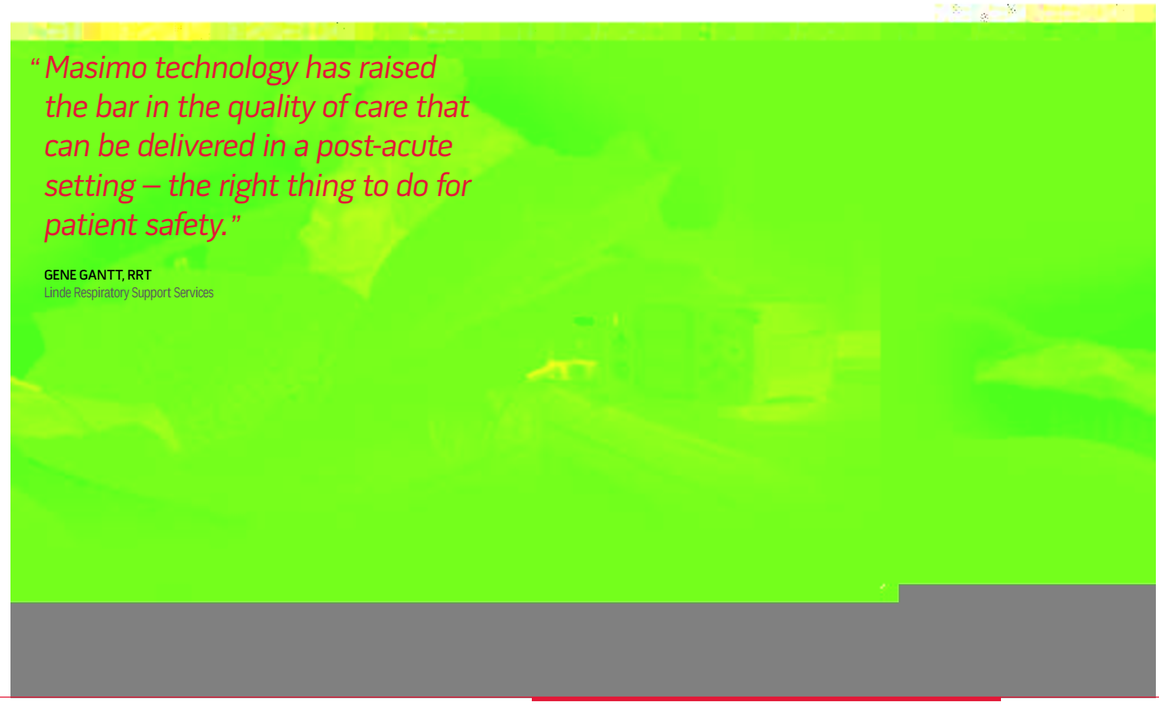
Industry-leading Masimo SET is increasingly being used to enhance the quality of patient care outside of the hospital.

A NEW LEVEL OF CARE IN THE HOME

For pediatric patients requiring continuous pulse oximetry monitoring at home, Masimo SET offers the best pulse oximetry monitoring for parents caring for special needs children – dramatically reducing false alarms during motion and low perfusion that can complicate an already difficult situation.

"I'm convinced that the Masimo Rad-8® saved my baby's life."

TIFFANY KELLOGG
Mother of Grayson, a child with severe medical problems requiring home monitoring



ADDING A SAFETY NET IN POST-ACUTE CARE

As hospital costs rise, more patients are receiving care in long-term acute care and skilled nursing facilities. A major challenge in these facilities is weaning patients off ventilator care, which can put patients at increased risk of adverse events. Post-acute care facilities integrating Masimo SET bedside pulse oximeters and Patient SafetyNet remote monitoring and notification systems have experienced considerable reduction in rapid response activations as well as emergency "transfer outs."

RELIABLE SLEEP LAB MONITORING

During sleep lab monitoring, conventional pulse oximetry fails to provide the fidelity and accuracy required to help clinicians detect clinically relevant physiologic events. Masimo SET technology is integrated in leading sleep lab monitoring systems, enabling clinicians and patients to benefit from its unmatched reliability in this challenging environment.

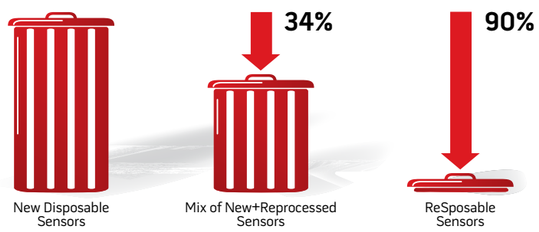
"The sensitivity and motion artifact rejection characteristics of the non-Masimo SET pulse oximeters we tested were not adequate for a pediatric sleep laboratory setting."

BOB BROUILLETTE, MD
Montreal Children's Hospital

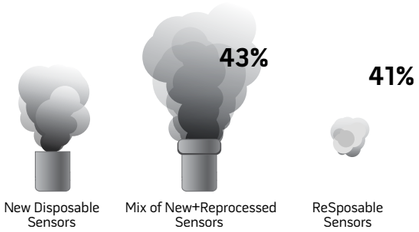
Industry-leading Green Solutions

Masimo offers products to help hospitals meet environmental objectives while reducing costs.

Up to 90% less waste*



Up to 41% lower carbon footprint*



MULTIPLE OPTIONS TO REDUCE WASTE AND COST

Masimo LNOP Sensors were the first green single-use sensors to work accurately through motion and low perfusion. In addition, our reprocessed sensors are the only reprocessed sensors guaranteed to provide new sensor performance because we replace every emitter and detector.

For hospitals seeking the best in performance, convenience, waste reduction, and cost-effectiveness, our new ReSposable Sensor line offers a revolutionary combination of benefits – equivalent to 100% recycling at the point of care with a real reduction in the carbon footprint of pulse oximetry sensors.

GREEN DESIGNED IN™ WITH RESPOSABLE™ (REUSABLE + DISPOSABLE)

The Masimo ReSposable Sensor System is based on more than ten years of research and development stemming from the feedback of hundreds of clinicians who told us what they wanted most in a sensor – less waste and more value with superior performance. The ReSposable system combines the best features of our LNOP,® LNCS,® M-LNCS,™ and rainbow® sensors into an innovative design that features a reusable optical sensor (ROS™) for use over multiple patients and a disposable optical sensor (DOS™) for single-patient use.

Innovations for Increased Patient Comfort and Expanded Applications

ENHANCING COMFORT DURING LONG-TERM MONITORING WITH CABLED SENSORS

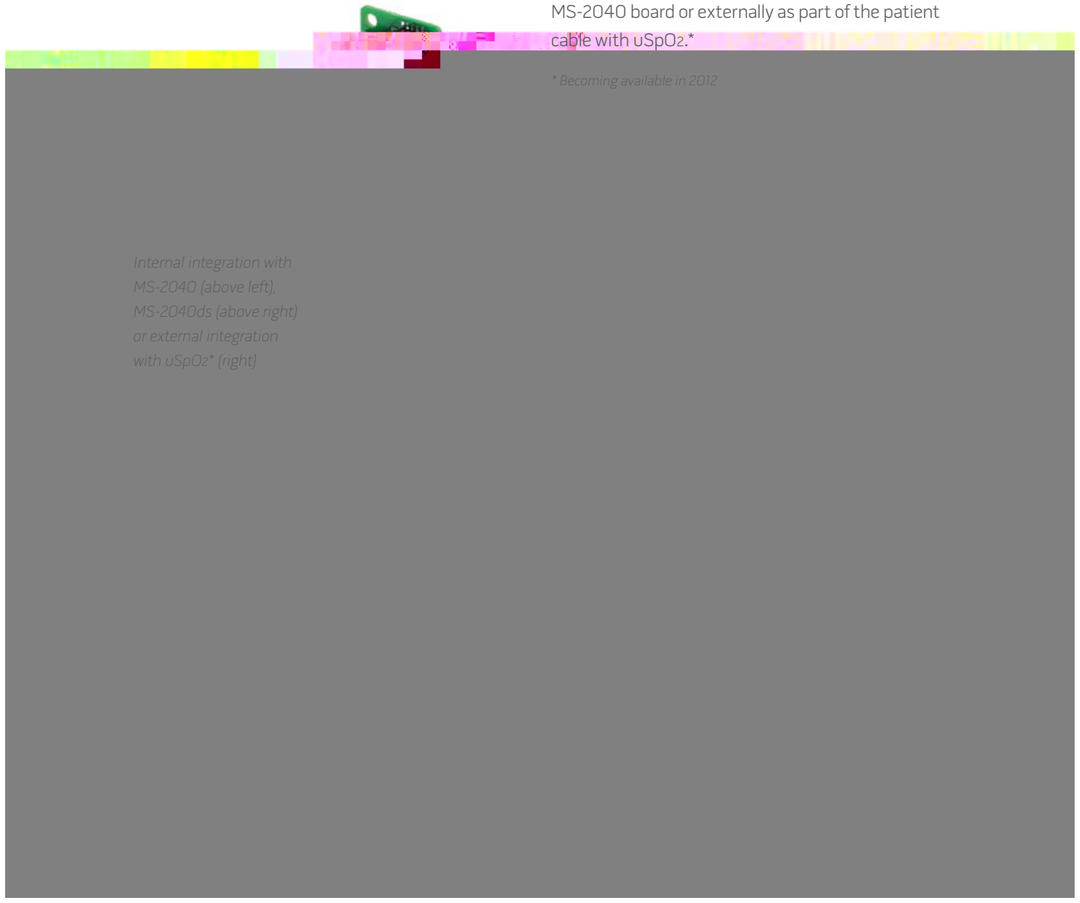
In the past, single-use pulse oximeter sensors with integrated wiring have been limited in their comfort and flexibility by the size of the emitter and detector. After an intense development effort, Masimo's new SpO_2 sensor components are much thinner than ever before – increasing patient comfort by increasing sensor flexibility and reducing bulk while maintaining the Masimo SET performance that clinicians expect.

Relative size of new detector (left) and emitter (right)

SMALLER BOARDS THAT CONSUME LESS POWER FOR EXPANDED APPLICATIONS

Masimo's technology board innovation has continued with reduced size (as small as 1.8" x 1.2" x 0.5") and power consumption (less than 45 mW), allowing Masimo SET performance to be integrated where it was not previously feasible, inside multiple new OEM products with the MS-2040 board or externally as part of the patient cable with $uSpO_2$.*

** Becoming available in 2012*



Internal integration with MS-2040 (above left), MS-2040ds (above right) or external integration with $uSpO_2$ (right)*

SEDLine® Brain Function Monitoring

Advancing neuromonitoring to improve the care of patients under anesthesia or sedation.

A MORE COMPLETE PICTURE STARTS WITH MORE COMPLETE DATA

Patients respond differently to anesthetics, which can mean over- or under-administration during surgery and conscious sedation procedures. SEDLine technology measures brain function on a continuous basis and provides information about a patient's response to anesthesia. SEDLine enables monitoring of both sides of the brain simultaneously and provides Density Spectral Array for immediate detection of asymmetrical activity.

FACILITATING INDIVIDUALIZED TITRATION

SEDLine enables individualized titration of sedation and faster emergence, while offering reliable monitoring during challenging conditions such as electrocautery. Use of SEDLine and its Patient State Index™ (PSI) has been shown to help clinicians manage patients to significantly faster emergence from anesthesia and faster recovery.[1]

"SEDLine gives me a better idea of where I stand at each phase of anesthesia. The brain number helps guide me to make subtle changes in my anesthetic appropriate for the patient's heart rate and blood pressure, and thus arrive at the end where I want to be."

DAVID DROVER, MD
Stanford University Hospital

[1] Drover DR et al. . 2002;97:82-89.

Masimo Products and Technologies

TECHNOLOGIES

Masimo SET

Measure-through Motion and Low Perfusion pulse oximetry

> Oxygen Saturation (SpO2)
> Pulse Rate (PR)
> Perfusion Index (PI)
> Pleth Variability Index (PVI®)

rainbow® Pulse CO-Oximetry

Noninvasive blood constituent and fluid responsiveness monitoring

> Carboxyhemoglobin (SpCO®)
> Methemoglobin (SpMet®)
> Total Hemoglobin (SpHb®)
> Oxygen Content (SpOC™)
> Plus all Masimo SET measurements

rainbow® Acoustic Monitoring (RAM)

Noninvasive respiratory monitoring

> Respiration Rate (RRa™)

SEDLine® Brain Function Monitoring

Noninvasive depth of sedation monitoring

> Patient State Index (PSI)

MONITORS

Rad-5v™
Masimo SET

Rad-57™
rainbow® SET Pulse CO-Oximetry

Pronto®
rainbow® SET with SpHb spot-check

Pronto-7®
rainbow® 4D with SpHb spot-check

SEDLine®
EEG-based brain function monitor

Rad-8®
Masimo SET, LED display

Rad-87®
Complete rainbow® SET Pulse CO-Oximetry and rainbow® Acoustic Monitoring, upgradable, LED display, optional wireless radio

Radical-7™
Complete rainbow® SET Pulse CO-Oximetry and rainbow® Acoustic Monitoring, upgradable, color touchscreen display, standard wireless radio, My View*

MASIMO PATIENT SAFETYNET™ SYSTEM

Remote monitoring and notification system

> Direct alarms to nurse via pager
> Leverages hospital's existing wireless network
> Central monitoring option
> Open-architecture with HL7 interface to hospital EHR
> My View for clinician-centric monitoring

Select Masimo Sensors

Below are just some of the over 100 different sensors that Masimo offers.

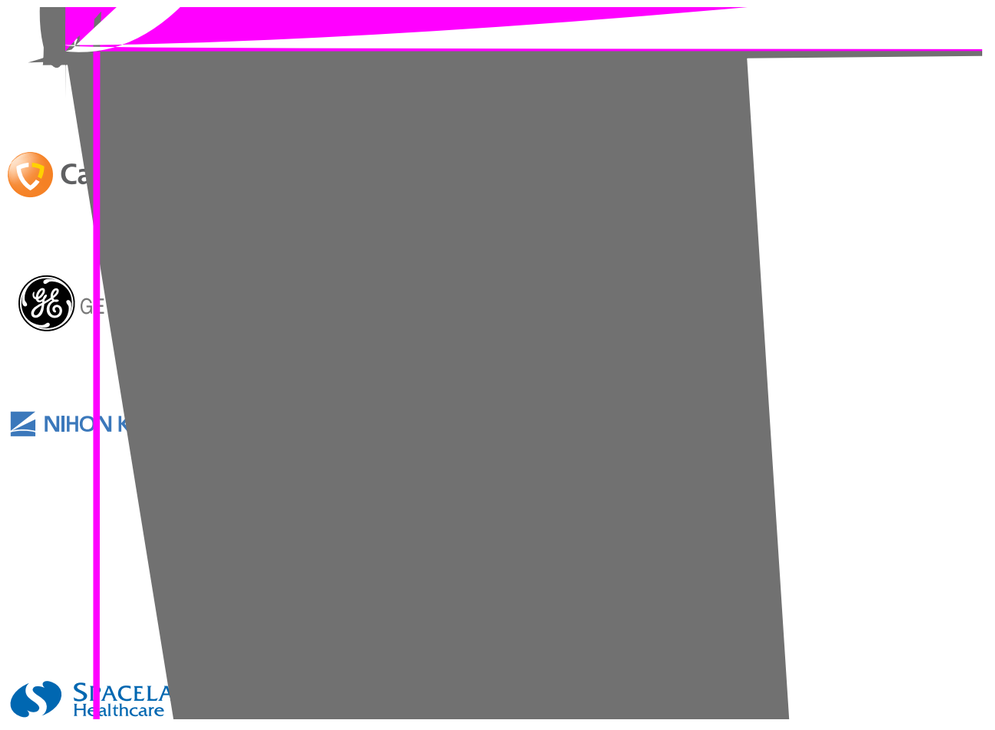
Masimo SET Sensors
SpO2, PR, PI, PVI®

rainbow® SET Sensors
SpHb® SpOC™ SpCO® SpMet® SpO2, PR, PI, PVI®

rainbow® Acoustic Sensors
RRa™

SEDLine® Sensors
PSI

SELECT OEM PARTNERS



Masimo's National and International Awards for Excellence

1995 STA Excellence in Technology Innovation

2000 SCCM Technology Excellence

2000 Outstanding Medical Device Company

2001 Innovative Product and Technology

2001 Distinguished Leadership

2001 Excellence in Leadership

2001 Medical Design Excellence

2003 New Standard of Care

2003 Technology of the Year in Patient Monitoring

2003 Platform ABBY for Innovations in Healthcare

2005 Innovative Product and Technology

2006 Application of Technology

2006 Medical Design Excellence

2007 STA Excellence in Technology Innovation

2007 Groundbreaking Innovation of rainbow® SET Technology

2007 Patient Monitoring Technology Leadership of the Year

2007 Brand Development Strategy Leadership

2008 Excellence in Medical Technology

2008 Outstanding Growth

2008 Outstanding Medical Device Company

2008 Best in Class

2008 AARC Zenith Award

2009 Best in Class

2009 AARC Zenith Award

2009 Patient Monitoring CEO of the Year

2009 Masimo SET and the Patient SafetyNet System help Dartmouth-Hitchcock Medical Center win the 4th Annual Health Devices Achievement Award

Financial Performance

CONSOLIDATED BALANCE SHEETS

	Year ended December 31, 2011	Year ended January 1, 2011
ASSETS		
Current assets		
Cash and cash equivalents	$129,882	$88,305
Accounts receivable, net of allowance for doubtful accounts	57,013	49,694
Royalties receivable	7,102	12,000
Inventories	45,944	45,028
Prepaid expenses	6,424	4,535
Prepaid income taxes	2,986	3,352
Deferred tax assets	11,576	12,555
Other current assets	2,008	2,136
Total current assets	262,935	217,605
Deferred cost of goods sold	51,679	47,184
Property and equipment, net	15,239	15,951
Intangible assets, net	11,393	10,497
Goodwill	448	448
Deferred tax assets	16,766	12,560
Other assets	7,644	5,990
Total assets	$366,104	$310,235
LIABILITIES AND EQUITY		
Current liabilities		
Accounts payable	$27,302	$22,150
Accrued compensation	19,717	21,074
Accrued liabilities	12,297	9,832
Income taxes payable	570	722
Deferred revenue	16,019	16,369
Current portion of capital lease obligation	48	50
Total current liabilities	75,953	70,197
Deferred revenue	984	1,554

CONSOLIDATED STATEMENTS OF INCOME

	Year ended December 31, 2011	Year ended January 1, 2011
Revenue:		
Product	$406,487	$356,422
Royalty	32,501	48,985
Total revenue	438,988	405,407
Cost of goods sold	144,854	119,825
Gross profit	294,134	285,582
Operating expenses:		
Selling, general and administrative	169,205	174,089
Research and development	38,412	36,000
Antitrust litigation proceeds	—	(30,728)
Total operating expenses	207,617	179,361
Operating income	86,517	106,221
Non-operating income (expense)	14	1,348
Income before provision for income taxes	86,531	107,569
Provision for income taxes	22,478	34,164
Net income including noncontrolling interests	64,053	73,405
Net (income) loss attributable to noncontrolling interests	(353)	125
Net income attributable to Masimo Corporation stockholders	$63,700	$73,530
Net income per share attributable to Masimo Corporation stockholders:		
Basic	$1.07	$1.25
Diluted	$1.05	$1.21
Weighted average shares used in per share calculations:		
Basic	59,659	58,769
Diluted	60,845	60,609
Cash dividend declared per share	—	$2.75

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31, 2011	Year ended January 1, 2011
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income including noncontrolling interests	$64,053	$73,405
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:		
Depreciation and amortization	7,342	6,584
Share-based compensation	13,676	12,303
Provision for doubtful accounts	231	108
Provision for obsolete inventory	2,130	619
Provision for warranty costs	2,592	2,355
Benefit from deferred income taxes	(3,217)	(2,231)
Income tax benefit from exercise of stock options granted prior to January 1, 2006	1,650	4,851
Excess tax benefits from share-based compensation arrangements	(67)	(707)
Changes in operating assets and liabilities:		
Increase in accounts receivable	(7,549)	(10,905)
(Increase) decrease in royalties receivable	4,898	(500)
Increase in inventories	(3,046)	(14,088)
Increase in deferred cost of goods sold	(4,526)	(19,080)
Increase in prepaid expenses	(1,874)	(743)
(Increase) decrease in prepaid income taxes	366	(1,648)
Increase in other assets	(1,502)	(1,396)
Increase in accounts payable	5,159	5,474
Increase (decrease) in accrued compensation	(1,333)	3,219
Decrease in accrued liabilities	(77)	(2,281)
Increase (decrease) in income taxes payable	(89)	940
Increase (decrease) in deferred revenue	(921)	3,012
Increase in other liabilities	1,061	1,729
Net cash provided by operating activities	78,957	61,020
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of short-term investments	—	(75,986)
Proceeds from sale and maturities of short-term investments	—	132,975
Purchases of property and equipment	(5,057)	(9,561)
Increase in intangible assets	(2,451)	(1,937)

FORWARD-LOOKING STATEMENTS

All statements other than statements of historical facts included in this document that address activities, events or developments that we expect, believe or anticipate will or may occur in the future are forward-looking statements. These statements include but are not limited to statements about: our business generally; expectations regarding our ability to design and deliver innovative new noninvasive technologies; demand for our technologies; estimates regarding potential cost savings through using our technologies; and expectations regarding the growth of our installed base of drivers. These forward-looking statements are based on management's current expectations and beliefs and are subject to uncertainties and factors, all of which are difficult to predict and many of which are beyond our control and could cause actual results to differ materially and adversely from those described in the forward-looking statements. These risks include, but are not limited to, those related to: our dependence on Masimo SET and Masimo rainbow SET products and technologies for substantially all of our revenue; any failure in protecting our intellectual property exposure to competitors' assertions of intellectual property claims; the highly competitive nature of the markets in which we sell our products and technologies; any failure to continue developing innovative products and technologies; the lack of acceptance of any of our current or future products and technologies; obtaining regulatory approval of our current and future products and technologies; the risk that the implementation of our international realignment will not continue to produce anticipated operational and financial benefits, including a continued lower effective tax rate; the loss of our customers; the failure to retain and recruit senior management; product liability claims exposure; a failure to obtain expected returns from the amount of intangible assets we have recorded; the maintenance of our brand; the impact of the decline in the worldwide credit markets on us and our customers; the amount and type of equity awards that we may grant to employees and service providers in the future; and other factors discussed in the "Risk Factors" section of our most recent periodic reports filed with the Securities and Exchange Commission ("SEC"), including our most recent Annual Report on Form 10-K and Quarterly Report Form 10-Q, all of which you may obtain for free on the SEC's website at www.sec.gov. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we do not know whether our expectations will prove correct. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, even if subsequently made available by us on our website or otherwise. We do not undertake any obligation to update, amend or clarify these forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

NOTE REGARDING THIS ANNUAL REPORT: Please note that this annual report does not constitute the Company's "annual report to security holders" for purposes of the requirements of the SEC. For a copy of the Company's annual report to security holders required under Rule 14a-3 of Regulation 14A of the Securities Exchange Act of 1934, as amended, please refer to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011, which you may obtain for free on the SEC's website at www.sec.gov.

REGULATORY NOTICE

Some of the products featured in this Annual Report are currently or planned to be marketed worldwide by Masimo. Not all products or features profiled in this report have US FDA 510k or other regulatory agencies' clearances (such as EU, Canada, Japan, etc.) at the time of printing. As of April 23, 2012, the following products/features have not been FDA cleared for sales and marketing in the US: Adaptive Threshold Alarm (page 34), Halo Index (page 4, 5, 18, 21), My View (page 21), uSpO2 (page 6, 39), and Masimo SET pulse oximetry for CCHD screening indication (page 25). My View for Radical-7 is currently under development. Submissions for these products or features either have been filed or plan to be filed for all regulated markets.

SENIOR MANAGEMENT TEAM

Joe Kiani
Chief Executive Officer

Tony Allan
Chief Operating Officer

Jon Coleman
President, Worldwide Sales, Marketing, & Clinical Research

Mark de Raad
Executive Vice President & Chief Financial Officer

Rick Fishel
President, Worldwide OEM Business & Corporate Development

Paul Jansen
Executive Vice President, Marketing & Clinical Development

Yongsam Lee
Executive Vice President, Regulatory Affairs & Chief Information Officer

Tetsuro Maniwa
President, Masimo Japan

Michael O'Reilly, MD, MS
Executive Vice President, Chief Medical Officer

Stephen Paul
Executive Vice President, Acute Care Sales

Anand Sampath
Executive Vice President, Engineering

Stacey Taggart
President, Europe, Middle East, & Africa

BOARD OF DIRECTORS

Joe Kiani
Chairman of the Board of Directors

Steven Barker, MD, PhD
Director

Edward Cahill
Director

Robert Coleman, PhD
Director

Sanford Fitch
Director

Jack Lasersohn
Director

Masimo