Masimo Patient SafetyNet™*

Remote Monitoring and Clinician Notification System

* The use of the trademark Patient SafetyNet is under license from University Health System Consortium

Masimo

Patient SafetyNet in Action

When You Leave the Room, You'll Still Be There

Patient SafetyNet is a remote monitoring and clinician notification system which displays near real-time information from any connected Masimo device at a central station and allows for alarms and alerts from bedside devices to be sent directly to clinicians

Bedside Device Connectivity
Continuous and noninvasive measurements from devices securely sent to Patient SafetyNet

Simplified Workflow with ADT Integration
Interfaces with hospital HL7 Admit, Discharge, and Transfer (ADT) system for simplified patient association

Customisable View Station
Monitor up to 40 patients at a glance with choice of Icon and/or Numeric Views, to quickly investigate patient alarms and review trend data from a central monitoring station

Mobile Clinician Notification
Alarm notifications are sent directly to clinicians

Seamless Data Transfer
Data from connected devices is automatically sent to EMRs

Solutions to Support Patient Safety

Continuous Monitoring

> According to the Anesthesia Patient Safety Foundation (APSF), post-operative patients should have oxygenation monitored by continuous pulse oximetry[1]

> Using industry-leading Masimo SET® and upgradeable rainbow SET™ technologies, Masimo bedside devices provide continuous and noninvasive monitoring of oxygen saturation, pulse rate, respiration rate, total haemoglobin, and other clinically-valuable measurements

Rad-97™

Root® with Radical-7®

Root with Radius-7™

Radical-7

Alarm Management

> In a study comparing three pulse oximetry technologies, **Masimo SET® demonstrated the highest sensitivity and specificity** in identifying desaturation events during conditions of motion and low perfusion[2]

> Patient SafetyNet enables the customisation of alarm and notification thresholds to meet clinical requirements, while avoiding nuisance alarms

Real-time Clinician Notification

Patient SafetyNet sends actionable patient alarms directly to qualified clinicians for immediate patient assistance

Configure alarm thresholds and delays by patient population to manage alarms

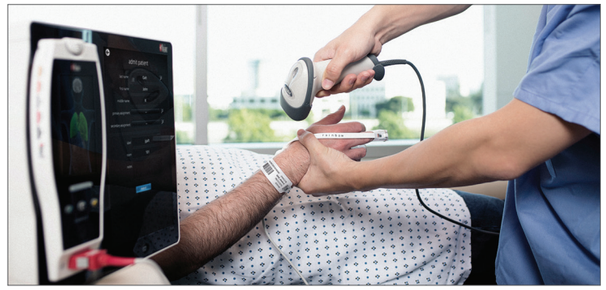
Clinician is notified remotely of alarm at the bedside

If primary clinician does not respond, the alert is escalated to additional clinicans

Simplifying Workflows with Connectivity Solutions

Bedside Patient Association via ADT

Scan patient wristband using a barcode scanner attached to the Root device (or select patient from drop-down list) to associate the patient, device, and clinician at the bedside



Direct Integration into EMR

Vital Signs Monitoring

Root with integrated, noninvasive blood pressure and temperature monitoring sends patient vital signs data directly to the EMR

Electronic Charting

Patient SafetyNet interfaces with hospital EMR system using HL7 for automated documentation of patient data

Connectivity Options

Automatic data transfer from medical devices to the EMR could improve productivity and reduce the likelihood of transcription errors[3]

Root + 3rd Party Standalone Devices

Root's built-in Iris™ ports act as a connectivity hub for 3rd party standalone devices

Patient SafetyNet

Patient SafetyNet converts all Masimo and 3rd party standalone device data into HL7

EMR

Patient SafetyNet automates data transfer from multiple devices to the EMR

A Custom-Tailored Solution

Patient SafetyNet can be configured to support your individual patient populations and alarm management strategies

Partnership

A dedicated, field-based team of experts partners with your team to configure the right solution to meet your goals

Integration

Our team creates a solution that succeeds within the framework of your existing devices, technology, and IT infrastructure

Collaboration

Our project managers liaise with other vendors, such as EMR vendors, to streamline communication between all parties and collectively meet deadlines

Risk Management

Our network engineers conduct network performance testing to ensure the system meets the minimum requirements for continuous monitoring

Performance

Our network engineers partner with your IT department and network administrators to assess performance and provide remediation, if necessary

Execution

Our clinical specialists work side-by-side with your nurses and clinicians to provide thorough, hands-on training

"The implementation of the Patient SafetyNet system was successful due to the collaborative efforts put forth by Crouse Hospital IT and Masimo. The Masimo team has a vast knowledge of systems, networking, and clinician needs. They were always supportive of our needs and their passion and dedication are second to none. By choosing Masimo, we received a great system, great people, and a great partner."

Matt Mahoney,
Project Manager – IT,
Crouse Hospital, Syracuse, NY

Long-term Implementation Results

In this example, Patient SafetyNet and Masimo bedside devices were implemented in a top research hospital to address the need for continuous monitoring and alarm management in general care areas

2007 – Pilot Implementation in 36-bed Orthopaedics Unit

In two studies reviewing the one-year pilot, researchers found:

- **48% reduction in ICU Transfers**, saving 135 ICU days per year[4]
- An average of **4 alarms** per patient per day[4]
- **65% reduction in Rapid Response Team** activations in surgical units[5]*
- **$1.48 million USD opportunity cost savings** in the post-surgical unit due to reduction in ICU transfers[5]**

2009 – Expansion into General Care Units

Following the initial implementation:

- Patient SafetyNet with Masimo bedside devices was expanded to cover more than **200 inpatient beds in all medicine and surgical units**[6]***
- Researchers found **0 preventable deaths** or brain damage due to respiratory depression from opiods, over a five year period[5]

2016 – Collective Analysis

Investigators found improvements from the pilot implementation were sustained over ten years in most units, despite increases in patient acuity and occupancy[6]:

50%
Reduction in unplanned transfers[6]

60%
Reduction in rescue events[6]

An average of
4
alarms per patient per day[6]

*The calculation of reduced rapid response activations by 65% was based on reduction of rescue events from 3.4 per 1000 discharges to 1.2 per 1000 discharges. ** Based on 36-bed unit. ***Except for Psychiatry and Labor and Delivery Units.

How to Configure Your Patient SafetyNet

Choose Your Care Areas and Components

> Number of Beds to Monitors

> Number of Views in Each
(Limit 200 instruments and 10 views per appliance)

Patient SafetyNet View

Patient SafetyNet Appliance

Choose Your Patient Monitors

Root with Radius-7

Root with Radical-7

Rad-97

Radical-7

Leverage Your Existing IT Infrastructure

Wireless Configuration Support

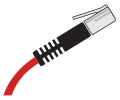
> IEEE Standard: 802.11 a, b, g

> Encryption: TKIP, AES

Wired Configuration Support

> Ethernet: Standard IEEE 802.3

Wireless



Wired

Choose Your Notification Platform

Masimo Dedicated Paging System

3rd Party Gateway
(Allows 3rd party messaging with gateways that comply to TAP1.6/1.8 over ethernet or HL7)

Masimo Paging System

3rd Party Gateway

Connect to EMR Interface *(Optional)*

Patient SafetyNet incorporates the Masimo Iris Gateway™, which enables 2-way, HL7 based connectivity to clinical/hospital information systems

Patient SafetyNet Specifications

PATIENT SAFETYNET APPLIANCE	
Operating System	Proprietary Linux 2.0 Kernel
Communications	Redundant Gigabit 10/100/1000 BaseT Ethernet NICs
AC Power	Redundant Power Supplies (110 - 240 VAC, 50/60 Hz)
Anti-Virus	Not Applicable; Appliance Hardened

PATIENT SAFETYNET VIEW	
Operating System	Windows 7 Professional, 32/64 bit
Display	23-inch
Anti-Virus	User Provided

DEVICE SPECIFICATION
Refer to Root, Radius-7, Rad-97, and Radical-7 Operator's Manuals

[1] Weinger MB, et al. *APSF Newsletter.* 2011;26(2):21-40. [2] Shah N et al. *J. Clin Anesth.* 2012 Aug; 24(5):385-91. [3] The Value of Medical Device Interoperability. West Health Institute. 2013. [4] Taenzer AH et al. *Anesthesiology.* 2010 Feb; 112(2):282-287. [5] Taenzer AH et al. *Anesthesia Patient Safety Foundation Newsletter.* 2012. [6] McGrath SP et al. *The Joint Commission Journal on Quality and Patient Safety.* 2016 Jul;42(7):293-302.

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Cerner CareAware VALIDATED PARTNER

For professional use. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.

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