Masimo
Patient SafetyNet™
Remote Monitoring and Clinician Notification System

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

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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.

Patient SafetyNet in Action

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

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

**Customizable 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.
- 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 hemoglobin, and other clinically-valuable measurements.

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.
- Patient SafetyNet enables the customization 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.

Alarm Management

- 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 clinicians

Radical-7

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.
- Root’s built-in Iris™ ports act as a connectivity hub for 3rd party standalone devices.
- Patient SafetyNet converts all Masimo and 3rd party standalone device data into HL7.
- Patient SafetyNet automates data transfer from multiple devices to the EMR.

Simplifying Workflows with Connectivity Solutions

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 Orthopedics Unit**

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

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

**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
> Researchers found 0 preventable deaths or brain damage due to respiratory depression from opioids, over a five year period

**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:

- 50% Reduction in unplanned transfers
- 60% Reduction in rescue events
- An average of 4 alarms per patient per day

*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)

Choose Your Patient Monitors

- Root with Radius-7
- Root with Radical-7
- 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

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

<table>
<thead>
<tr>
<th>PATIENT SAFETYNET APPLIANCE</th>
<th>PATIENT SAFETYNET VIEW</th>
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<tbody>
<tr>
<td>Operating System................ Proprietary Linux 2.0 Kernel</td>
<td>Operating System................. Windows 7 Professional, 32/64 bit</td>
</tr>
<tr>
<td>Communications.................... Redundant Gigabit 10/100/1000 BaseT Ethernet NICs</td>
<td>Display.............................. 23-inch</td>
</tr>
<tr>
<td>AC Power............................ Redundant Power Supplies (110 - 240 VAC, 50/60 Hz)</td>
<td>Anti-Virus.......................... User Provided</td>
</tr>
<tr>
<td>Anti-Virus.......................... Not Applicable; Appliance Hardened</td>
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<tr>
<th>DEVICE SPECIFICATION</th>
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<tbody>
<tr>
<td>Refer to Root, Radius-7, and Radical-7 Operator’s Manuals</td>
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Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.