# Masimo Centroid®

## Aiming for Zero Hospital-Acquired Pressure Injuries

**Centroid is designed to improve turn workflows through visibility of patients' turn status inside and outside of the room.**

> Wearable, wireless patient position and activity monitoring

> Accurate monitoring to help clinicians keep track of the quality of patient turns

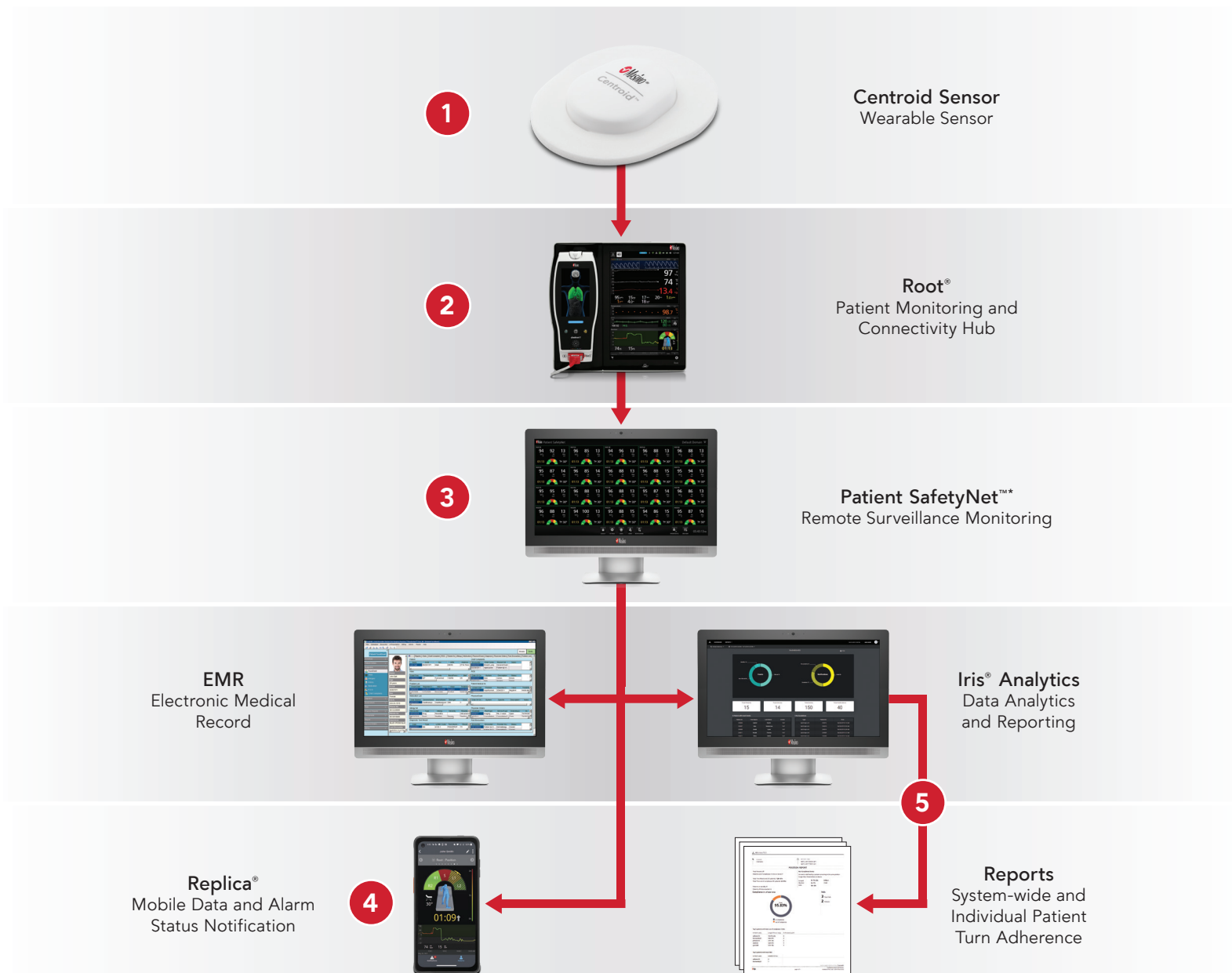> Robust analytics and reporting capabilities to support continuous improvements and compliance with patient turns

### ✔ MASIMO®

# Optimizing Turn Protocol Adherence

## A Comprehensive Workflow

Hospital-acquired pressure injuries (HAPIs) continue to challenge hospitals around the world despite widespread adoption of HAPI-prevention protocols, due in part to:

> Increasing patient-to-nurse ratios

> Lack of visibility of patient activity when nurse is not in the room

> Ineffective turns

Centroid helps clinical teams reduce workflow redundancy, providing real-time position status and the ability to confirm turn quality whether by the bedside or from afar. The solution can be configured to meet specific patient needs and offers detailed analytics.

**1** **Centroid Sensor**
Wearable Sensor

**2** **Root®**
Patient Monitoring and Connectivity Hub

**3** **Patient SafetyNet™\***
Remote Surveillance Monitoring

**EMR**
Electronic Medical Record

**Iris® Analytics**
Data Analytics and Reporting

**5**

**Replica®**
Mobile Data and Alarm Status Notification

**4**

**Reports**
System-wide and Individual Patient Turn Adherence

**1** Centroid Wearable Sensor

Designed for patient comfort, the wireless Centroid sensor features:

- Accurate measurement of patient position to the nearest degree
- 4 days of battery life, with the ability to remove and re-apply the sensor up to two times
- Latex-free, medical-grade adhesive
- Audible alarm triggered on the Root monitor in the event of a fall

**2** Root Patient Monitor and Connectivity Hub

Customizable, interactive bedside display offering multiple Centroid-enabled features:

- Color-coded patient position status and turn notifications
- Configurable restricted positions, with notifications
- Customizable patient position and posture thresholds to meet turn-angle goals based on the hospital's standard of care
- Visibility of previous changes in patient position
- Patient vital signs on a single device
- Respiration rate measurement based on chest wall movement
- Head-of-patient angle display

**3** Patient SafetyNet Remote Surveillance System

Streamlines patient turning workflows through:

- A central display of patients on turn schedules, allowing care teams to plan ahead for patient turns
- Care team notifications for multiple types of events, including upcoming turns, overdue turns, and patient falls, with the ability to designate a customized list of recipients for specific types of notifications
- Connection to the hospital's electronic medical record (EMR) system to enable automated, hassle-free, accurate documentation of patient turns

**4** Replica Mobile Notification System

Further facilitates patient turn workflows by offering:

- A near-real time view of continuous patient data, allowing care providers to move about freely without compromising awareness of patient status
- The ability to forward patient notifications to other care team members when unable to attend to a patient
- The ability to configure clear escalation paths for notifications and alerts

**5** Iris Analytics

Uses patient monitoring data to help drive HAPI prevention efforts through:

- Comprehensive reports on adherence to patient turn protocols for individual patients, care areas, and even across entire systems
- Insight into patient turn adherence and turn-related events by period, day, or shift to help guide resource implementation

# Driving Continuous Improvement

On-board → Monitor → Report → Assess → Improve
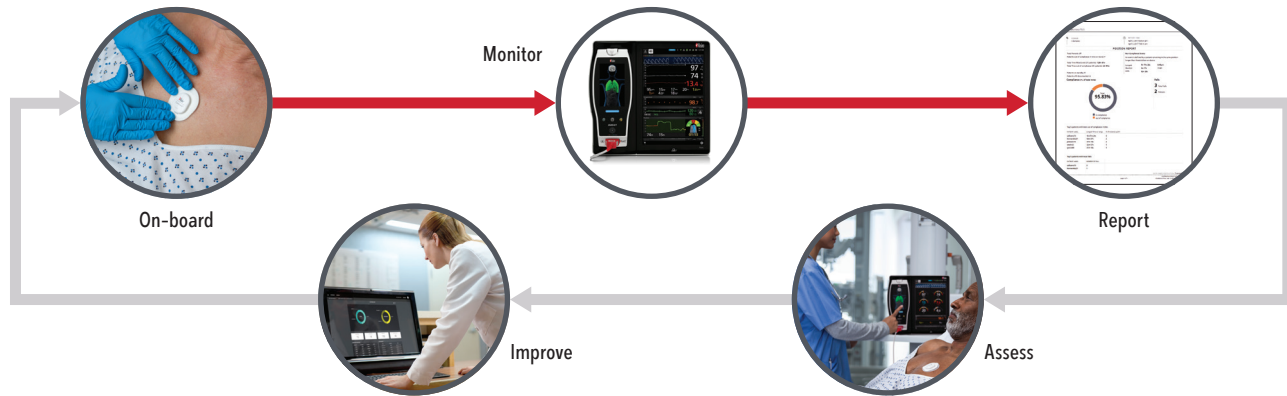
## Assessing the Risk of Tissue Stress

**Time in Position Color Chart** gives an aggregate view of the patient's time in position, identifying, by color, areas that are well perfused and those that may be at high risk for tissue stress

**Current Patient Position** is identified in blue and is displayed as a marker on the body position arch and also in a three-dimensional representation of the patient's body

**Trend Line** displays the duration of time spent in the right-side, supine, or left-side position, any movement that has occurred, and through color, tissue stress over time

**Action Menu** provides easy access to settings

**Time in Position Color Key** uses color to correlate the length of time in the current position with the potential severity of tissue stress based on hospital protocol

**Respiration Rate** is displayed as respirations per minute

**Configurable Timer** displays the amount of time the patient has been or has left in the current position; digit color indicates the potential severity of tissue stress

**Head of Bed Angle** displays the patient's angle to the nearest degree

## Centroid Specifications

### Measurement Specifications

| | |
|---|---|
| Indications for Use | Adult Patients |
| Application Site | Chest |
| Patient Activity Detection | Upright position<br>Walking movement<br>Patient fall or fall-like event |
| Respiration Rate | |
| Range | 8–45 bpm |
| Accuracy | 3 bpm A$_{RMS}$† |
| Incline Angle | −180° to 180° |

### Physical Specifications

| | |
|---|---|
| Battery | Lithium coin cell battery |
| Ingress Protection | IP24 |
| Communication | Bluetooth Low Energy |
| Material | Latex & Phthalate Free |
| Sensor Life | 4 days of continuous run time<br>Ability to remove and re-apply up to two times |
| Shelf Life | 2 years from date of manufacture |
| Dimensions | 5"(H) x 5"(W) x 0.5"(T) |
| Weight | Approximately 7.5g |

### Environmental Specifications

| | |
|---|---|
| Storage/Transport Temperature | −4° F – 122° F<br>(−20° C – 50° C) |
| Storage/Transport Temperature | 15%RH — 90%RH<br>(non-condensing) |
| Operating Humidity | 15%RH — 95%RH<br>(non-condensing) |

### Ordering Information

| | |
|---|---|
| Part number | 4302 |

† A$_{RMS}$ accuracy is a statistical calculation of the difference between device measurements and reference measurements. Approximately two-thirds of the device measurements fell within ± A$_{RMS}$ of the reference measurements in a controlled study. Respiration rate performance has been validated against manual scored capnogram respiratory measurements on 40 healthy volunteer subjects and 34 hospitalized adults. The clinical testing results may not be generalized to all patient conditions.

\* The use of the trademark PATIENT SAFETYNET is under license from University HealthSystem Consortium.

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. For professional use. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.

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