



# CENTRELLA® SMART+ BED

Because life-altering moments  
deserve elevated care



Hillrom™

# The Evolving State of Med-Surg



INCREASING PATIENTS, ACUITY AND COMPLEXITY

STAGNANT TECHNOLOGY & INNOVATIONS

COST CONSTRAINTS

HIGH PATIENT-TO-NURSE RATIOS

STAFF TURNOVER, RETENTION AND TRAINING



Hillrom™



# CONSTANT CHANGE AND INCREASED COMPLEXITY IN MED-SURG REQUIRE A COMPREHENSIVE SOLUTION

Optimized Patient Safety

Enhanced Patient Satisfaction

Advanced Caregiver-Focused  
Technology



Hillrom™



# Optimized Patient Safety



Fall Prevention



Pressure Injury  
Prevention



Early Recognition  
of Patient  
Deterioration



Real-Time  
Incontinence  
Detection

Enhanced Patient Satisfaction

Advanced Caregiver-Focused Technology



Hillrom™

# Help Prevent the ‘Never Event’<sup>1</sup> That Happens Daily to Canadian Patients



**1.3 – 11.5**

rate of falls per 1000 patient days<sup>2,3</sup>



**\$30,000+**

average additional cost of hospitalization after a serious fall injury<sup>4</sup>

**\$2 billion**

Estimated annual direct healthcare costs for falls in Canada<sup>5</sup>



**Falls affect patients’ physical and psychological health**

through pain, injuries, decreased function, immobility, loss of independence and reduced quality of life<sup>2,6</sup>



**Falls also affect caregivers**

through risk of injury, mental and emotional impact, workflow impact, calls from family members, back injuries assisting patients during or after a fall

# THE IMPACT OF FALLS

FALLS ARE PREVALENT AND AFFECT MORTALITY RATES

**29%** OF HOSPITAL PATIENT FALLS RESULT IN PHYSICAL INJURY <sup>6</sup>

**3.4%** OF ALL FALL-RELATED HOSPITALIZATIONS (FRHs) IN CANADA RESULTED FROM IN-HOSPITAL FALLS <sup>7</sup>

**19.5%** OF THESE FRHs EPISODES, CAUSED BY AN IN-HOSPITAL FALL, LED TO AN IN-HOSPITAL MORTALITY <sup>7</sup>



**34 DAYS**  
OF INCREASED LENGTH  
OF STAY <sup>6</sup>

# Elevate Care: Optimize Patient Safety with Safeview®+ System and 3-Mode Bed Exit

HILLROM™ 3-MODE BED EXIT ALARM AND FALL PREVENTION PROGRAM HELPED RESULT IN:

↓ **23%** REDUCTION IN TOTAL FALLS.

↓ **58%** REDUCTION IN FALLS WITH MODERATE/MAJOR INJURY.

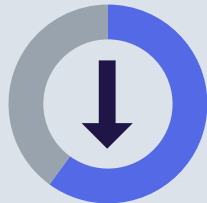
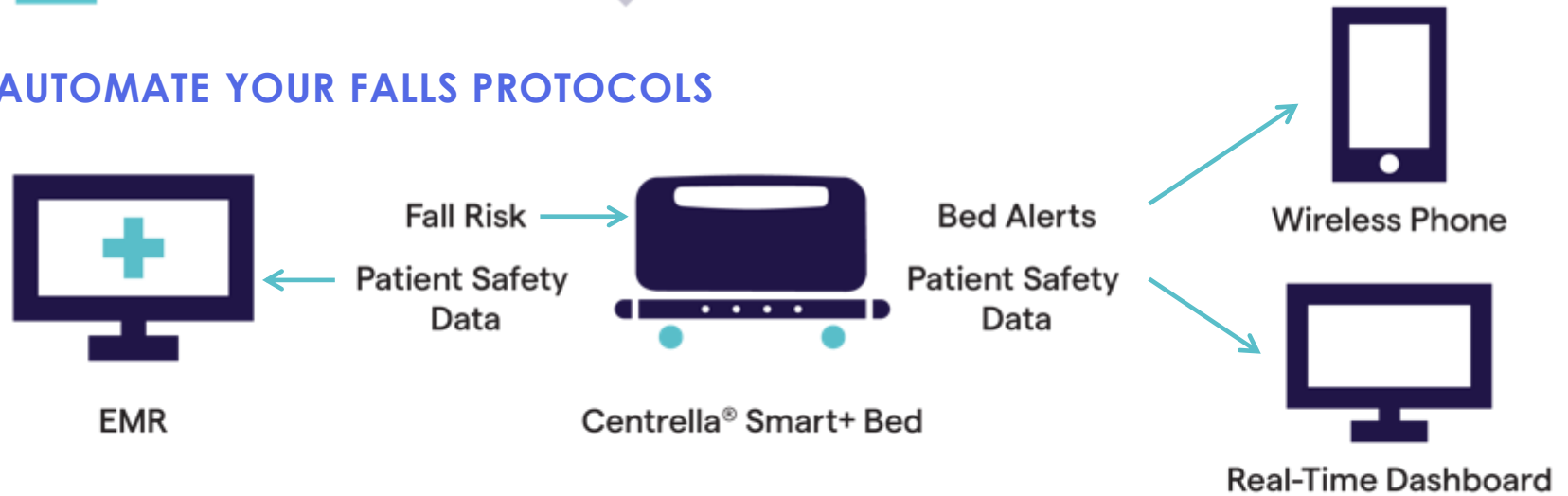
over a four-year period according to a study conducted at San Francisco General Hospital.<sup>8</sup>



# NaviCare® Patient Safety



## AUTOMATE YOUR FALLS PROTOCOLS



**PROVEN TO REDUCE THE AVERAGE RATE OF FALLS BY 62%.<sup>9</sup>**



# Reduce the Prevalence of Pressure Injuries And Overall Cost of Care

PRESSURE INJURIES ARE PREVALENT, EXTEND LENGTH OF STAY AND ADD TO OVERALL COST OF CARE

THE OVERALL PREVALENCE OF PRESSURE ULCERS ACROSS ALL HEALTHCARE SETTINGS IN CANADA IS

26%

WITH ABOUT 70% OF THESE WOUNDS CONSIDERED PREVENTABLE <sup>10</sup>

Using the IPUPTM Survey + HillromTM and WOCN® Surface Algorithm + HillromTM Surface Technologies helped a facility achieve a

↓ 33%

REDUCTION IN PRESSURE INJURY PREVALENCE.<sup>12</sup>



## COST:

The cost of treating pressure injuries can range from **\$2,450/month** to **\$12,648/month**<sup>10</sup>

Hospital Acquired PI Treatment<sup>11</sup>

**Stage 2 = \$44,000**

**Stage 4 = \$90,000**



# Pressure Injury Prevention



## Centrella® max Surface

4X↑  
7X↑

### Focused Advanced Microclimate® Technology

– Removes up to 4X more heat and 7X more moisture.<sup>13</sup>

13%↓

### Weight-Based Pressure Redistribution

– Up to 13% less peak sacral pressure.<sup>13</sup>

77%↑

### Enhanced Turn Assist

– More effective turn in 77% less time.<sup>15</sup>

## Centrella® pro Surface

↓21%

### Targeted Pressure Redistribution

– Up to 21% less peak sacral pressure.<sup>13</sup>

5X↑

### Enhanced Comfort

– Rated 5X more comfortable.<sup>14</sup>



# Enable Earlier Recognition of Patient Deterioration



## CONTACT-FREE, CONTINUOUS MONITORING, POWERED BY EARLYSENSE

The only contact-free, continuous monitoring solution integrated into a platform, designed for the med-surg patient.

Continuous monitoring in an inpatient 33-bed med-surg unit led to:<sup>16</sup>

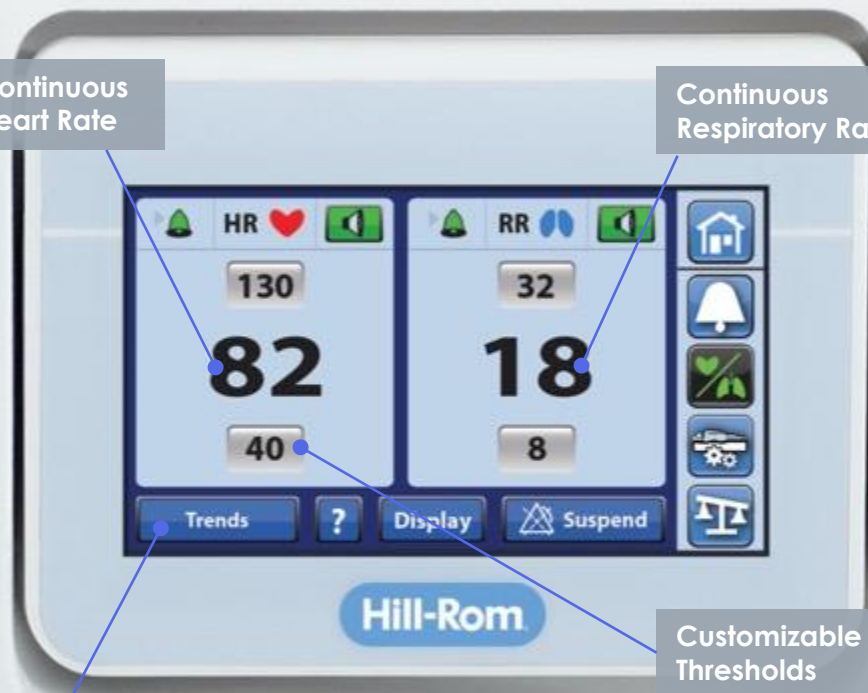
↓ **86%** Reduction in Number of Code Blue Events

↓ **45%** Reduction in Number of ICU days on patients transferred from med-surg

↓ **9%** Reduction in Length of Stay

Continuous Heart Rate

Continuous Respiratory Rate



Trend data available in intervals up to 7 days

# Earlier Recognition of Patient Deterioration



Contact-Free,  
Continuous  
Monitoring +  
Trend Indication



Early  
Recognition  
of Patient  
Deterioration



Earlier  
Intervention



Improved  
Patient Safety  
Outcomes

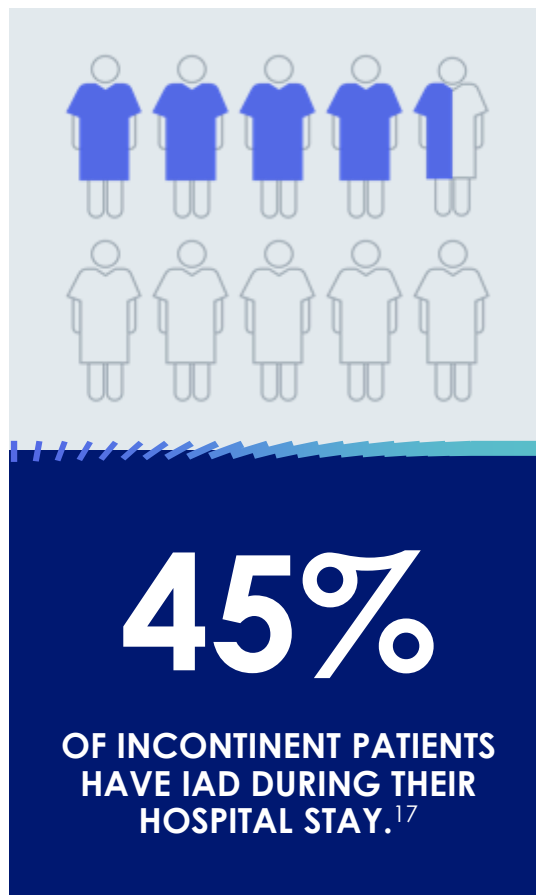
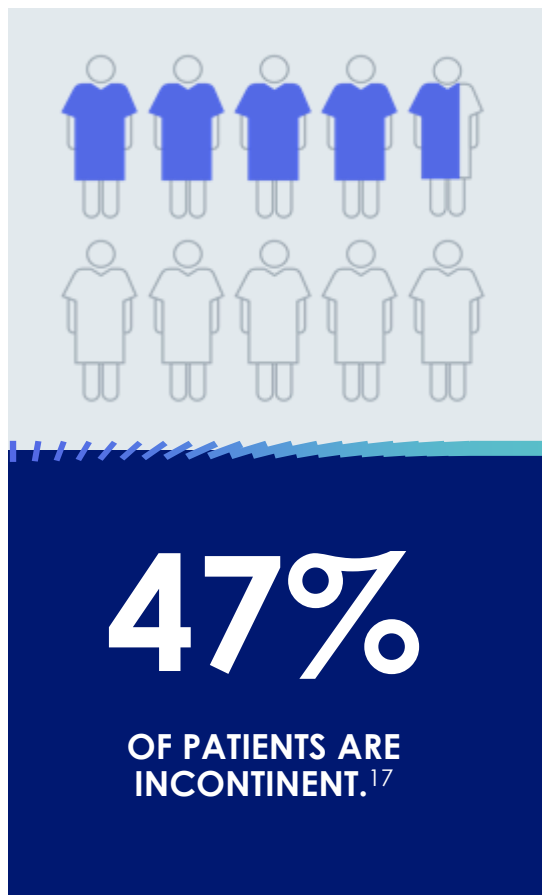


Reduced  
Financial Burden



Hillrom

# Elevate the Patient Experience and Enhance Safety Through Real-Time Incontinence Management.



# WatchCare™ Incontinence Management System



## PROTECT PATIENT'S SKIN

- Provides timely alerts to help reduce patient exposure to moisture
- May minimize the threat of painful IAD and full-thickness pressure injuries

## IMPROVE PATIENT EXPERIENCE

- Allows resting patients to be monitored without awkward incontinence checks
- Eliminates the embarrassment of self-reporting and promotes dignity

## OPTIMIZE CAREGIVER EFFECTIVENESS

- Promotes responsiveness to incontinent events
- Provides caregivers with information to prioritize the right patient, at the right time

**SKIN CAN BE COMPROMISED IN AS LITTLE AS 15 MINUTES AFTER EXPOSURE TO MOISTURE, DESPITE THE USE OF A PREMIUM UNDERPAD.<sup>19</sup>**

IN A MED SURG UNIT,  
TIME WAS REDUCED FROM:

**2+ HOURS** → **19 MINUTES**

FOR SKIN EXPOSED  
TO MOISTURE.<sup>20</sup>

# Enhanced Patient Satisfaction

Optimized Patient Safety

Advanced Caregiver-Focused Technology



# Centrella® Smart+ Bed Technology

DESIGNED WITH THE PATIENT EXPERIENCE IN MIND



“The bed is very comfortable. Easy to use, has awesome features. I like how you can adjust the firmness on your own, and that the remote for the bed controls everything.”



## COMMUNICATION

### NURSE CALL FEATURE:

Only visible when connected to nurse call and provides audible and visible confirmation of placed calls.

## COMFORT

Comment from a patient about the Centrella® Smart+ bed at a 350-bed facility in Michigan.

## CONVENIENCE

### USB PORT AND DEVICE STORAGE AREA:

Patients can conveniently charge personal devices and store personal items.



# Transforming the Patient Experience with the Experience POD™ Device

The Experience POD™ device offers a control panel, USB charging, and personal device holder to help bring home entertainment to the hospital. While in bed, patients can use their own devices to surf the internet, stay in touch with family and friends, and access entertainment such as Netflix and HBO- all hands free!

## THE EXPERIENCE POD™ DEVICE ALSO INCLUDES:

- Location to mount and charge a personal device
- Patient controls, including comfort adjust
- Active nurse call button



# Advanced Caregiver- Focused Technology

Optimized Patient Safety

Enhanced Patient Satisfaction



# The Demands on the Med-Surg Nurse Continue to Increase

**MANY MED-SURG  
NURSES MANAGE 5-7  
PATIENTS AT A TIME.<sup>21</sup>**



There are only 828 registered nurses per 100,000 people in Canada.<sup>22</sup>

# Graphical Caregiver Interface (GCI)<sup>®</sup> Touchscreen

THOUGHTFULLY DESIGNED FOR EASE-OF-USE AND EFFICIENCY



Home



3-mode Bed Exit  
Alert Setting



Contact-Free, Continuous  
Monitoring



Surface  
Menu



Scale Functions/  
Settings



Help Menu



# Technology Focused on Keeping Caregivers Safe

HELPS REDUCE THE STRESS AND STRAIN ON CAREGIVERS



## PATIENT TRANSPORT

### INTELLIDRIVE® POWERED TRANSPORT:

Reduce the stress and strain, especially during long patient transports.



## PATIENT TURNS

### ENHANCED TURN ASSIST:

Turn patients up to 30 degrees in 30 seconds –

**77% MORE EFFECTIVE** than other beds.<sup>15</sup>



## PATIENT REPOSITIONING

### BOOST® POSITIONING FEATURE:

Places bed in optimal position to boost patients towards the head of bed.

# Smart Bed Technology Enables Wired or Wireless Bed Connectivity

MAKES BED DATA VISIBLE, USEFUL AND ACTIONABLE TO AID IN YOUR PATIENT SAFETY INITIATIVES

Room	Patient	Risks	Rails	Exit	Low	Brake	HOB	Weight
1201N-A	Am...A	Falls Pulmonary					43.0°	73.1 kg
1201N-B	Ww...W	Falls Skin					32.1°	Not Taken
1202N	Sa...S	Falls					43.6°	95.2 kg
1205N	Qu...Q						35.7°	65.4 kg

**Status Board:** Visibility into rails and patient bed safety status from outside the patient room.

Organization	Bed	Event Date	Event Time	Bed Property - State	Bed Property - State Value
6703 [A]	09/20/2016	05:50:53		Foot Rails - Left Rail Down	
6703 [A]	09/20/2016	05:51:30		Bed Height - Low	
6703 [A]	09/20/2016	06:06:46		Head Rails - Left Rail Down	
6703 [A]	09/20/2016	06:10:51		Head Rails - Both Rails Up	
6703 [A]	09/20/2016	06:10:52		Foot Rails - Both Rails Up	
6703 [A]	09/20/2016	06:18:54		Bed Height - Not Low	
6703 [A]	09/20/2016	06:19:21		Foot Rails - Left Rail Down	
6703 [A]	09/20/2016	06:24:58		Foot Rails - Both Rails Up	
6703 [A]	09/20/2016	06:25:41		Bed Height - Low	
6703 [A]	09/20/2016	08:15:41		Bed Brakes - On	
6703 [A]	09/20/2016	08:15:41		Bed Exit - Off	
6703 [A]	09/20/2016	08:15:41		Bed Height - Not Low	
6703 [A]	09/20/2016	08:15:41		Connection State - Connected	
6703 [A]	09/20/2016	08:16:33		Patient Weight in Kg	63.6
6703 [A]	09/20/2016	08:33:27		HOB Angle in Degrees	21.3

**Enterprise Reporting:** Reports that provide analytics to drive continuous improvement.

**EMR Integration:** Data sent directly to the EMR to reduce manual documentation.

Frame ID	Location	Data	Possible Cause of Issue
XXU5LEW40DIO	2-North 215		Y
NWZK0878D0EU	4-North 411		Y
672NAK6YFHN	4-North 408		Y
KJBM AFC955JV	Not Located		N Asset Tag or Bed Out of Range
3CBFDKWSLISA	3-West 309		N Network or Bed Power Cable
68YPDHD0E7KH	Not Located		N Asset Tag Detached
Q8NUBMEKPFJZ	3-West 301		Y

**Device Manager:** Troubleshooting information for increased bed up-time.

# Centrella® Smart+ Bed

THE EXTENSION OF YOUR CARE TEAM

Centrella® Smart+ Bed

Therapeutic Surfaces

Patient Safety Applications



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# Therapeutic Surfaces

THE EXTENSION OF YOUR CARE TEAM

Centrella® Smart+ Bed

Therapeutic Surfaces

Patient Safety Applications





# Patient Safety Applications

## THE EXTENSION OF YOUR CARE TEAM

Centrella® Smart+ Bed

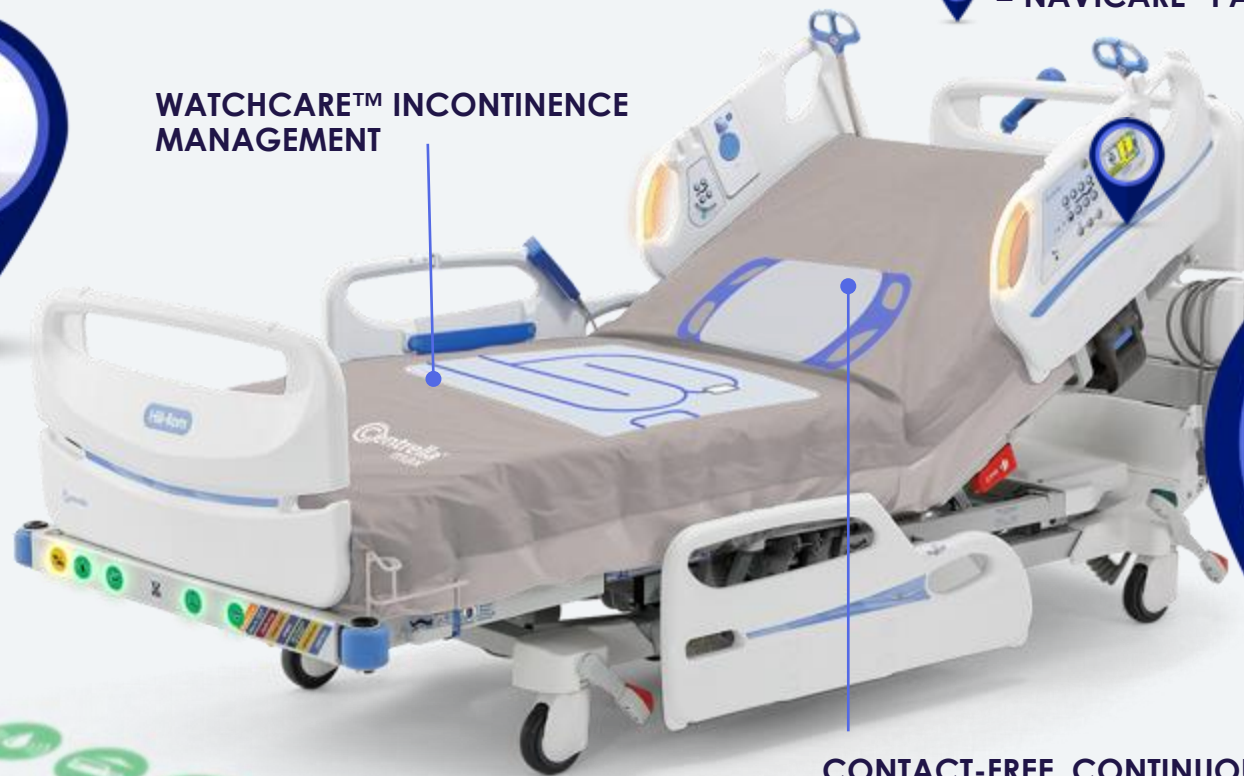
Therapeutic Surfaces

Patient Safety Applications

 = NAVICARE® PATIENT SAFETY



**WATCHCARE™ INCONTINENCE  
MANAGEMENT**



**CONTACT-FREE, CONTINUOUS  
MONITORING**  
powered by EarlySense



**Hillrom™**

# Centrella® Smart Bed Solution

THE EXTENSION OF YOUR CARE TEAM

Centrella® Smart+ Bed

Therapeutic Surfaces

Patient Safety Applications



Hillrom™

# THE BED IS JUST THE BEGINNING.

## INNOVATION THAT EVOLVES WITH YOU.

The Centrella® Smart+ bed is not just a bed. It's a future-proofed investment that evolves with your needs through a roadmap of innovations, only offered by the Centrella platform.

## AS YOUR NEEDS EVOLVE, SO DOES THE CENTRELLA® SMART+ BED:



Data and alert connectivity



Falls protocol automation



Contact-free, continuous monitoring



Incontinence detection



**COMING SOON**

Real-time analytics and algorithms



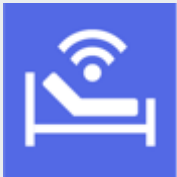
See Centrella® Smart+ Bed in action at [Centrellabed.com](https://www.centrellabed.com)



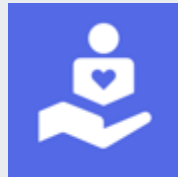
Hillrom™

Hillrom believes the complete Med-Surg environment helps accelerate patient recovery by contributing to patient safety, patient satisfaction and managing costs in a healthcare facility.

## ADVANCING CONNECTED CARE THROUGH OUR MED-SURG SOLUTIONS.



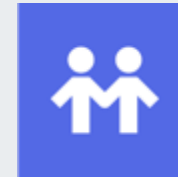
Smart Beds & Surfaces



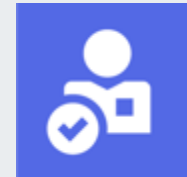
Safe Patient Handling & Mobility



Patient Monitoring



Care Communications



SmartCare™ Services

Explore the Med-Surg Solution on [hillrom.com](https://www.hillrom.com)



**Hillrom™**



# Appendix

# Centrella® Smart+ Bed



## STANDARD FEATURES AND OPTIONS

Value driven and upgradeable Centrella® Smart+ Bed solution offerings.

### STANDARD FEATURES

Enhanced 3-Mode Bed Exit	Graphical Caregiver Interface (GCI) Touchscreen
Motion Activated Nightlight	One-button chair
One-button Patient Stand Assist	Scale (KG/LBS)
Advanced SlideGuard® Technology	Battery Back-up
Foley Position Limit	Digital Angle Indicator
Trendelenburg/Reverse Trendelenburg	Four Corner Brake and Steer
Dampen Emergency CPR	Line and Cord Management
Device Storage Area	Four IV Pole Sockets
Integrated Urinal Holders	Integrated Restraint Holders
FlexAfoot™ Powered Bed Extension	Drainage Bag Holder
WiFi Module	Scalability

### PACKAGE 255

Advanced Patient Pendant
USB Charging
Verbal Safety Prompts
Patient Safety Apps: Contact-Free, Continuous Monitoring Capable

### PACKAGE 355

Includes Package 255
Centrella® max Powered Air Surface
SafeView®+ System
IllumiGuide™ Siderail Handgrip
Second Graphical Caregiver Interface (GCI) Touchscreen

### A LA CARTE OPTIONS

Centrella® core Surface	Second Advanced Patient Pendant
Centrella® pro Surface	Active Nurse Call Button
Centrella® max Powered Air Surface	Universal TV and Lighting Controls
SafeView®+ System	Second Graphical Caregiver Interface (GCI) Touchscreen
IllumiGuide™ Siderail Handgrip	Accessory Outlet
5 <sup>th</sup> Wheel Steering	Patient Safety Apps: <ul style="list-style-type: none"> <li>• NaviCare® Patient Safety</li> <li>• Contact-Free, Continuous Monitoring</li> <li>• WatchCare™ Incontinence Detection System</li> </ul>
IntelliDrive® Powered Transport	
Comfort Edition 40" Width	
Obstacle Detection® System	

# Universal Fall Prevention



- SafeView®+ System
- Enhanced 3-mode bed exit
- IllumiGuide™ Siderail Handgrip
- Motion-activated nightlight
- Verbal safety prompts



# Universal Fall Prevention



## – SAFEVIEW®+ SYSTEM

Helps caregivers monitor patient safety at-a-glance with easy-to-read visual projections.

- Enhanced 3-mode bed exit
- IllumiGuide™ Siderail Handgrip
- Motion-activated nightlight
- Verbal safety prompts





# Universal Fall Prevention



– SafeView®+ System

**Includes silence, auto reset, and visual/audible safety prompts.**

– **ENHANCED 3-MODE  
BED EXIT**

– IllumiGuide™ Siderail  
Handgrip

– Motion-activated  
nightlight

– Verbal safety prompts



# Universal Fall Prevention



– SafeView®+ System

**Enhances visibility to safely guide patients back to bed.**

– Enhanced 3-mode  
bed exit

– **ILLUMIGUIDE™ SIDERAIL  
HANDGRIP**

– Motion-activated  
nightlight

– Verbal safety prompts



# Universal Fall Prevention



– SafeView®+ System

**Illuminates the path to guide patients to and from the bed.**

– Enhanced 3-mode bed exit

– IllumiGuide™ Siderail Handgrip

– **MOTION-ACTIVATED NIGHTLIGHT**

– Verbal safety prompts



# Universal Fall Prevention



- SafeView®+ System
- Enhanced 3-mode bed exit
- IllumiGuide™ Siderail Handgrip
- Motion-activated nightlight
- **VERBAL SAFETY PROMPTS**



# Therapeutic Surfaces Overview



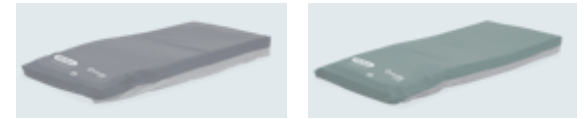
**Centrella® max  
Surface**



**Centrella® pro  
Surface**



**Centrella® core  
Surface**



# Centrella<sup>®</sup> max Surface

## ADVANCED TECHNOLOGY DELIVERING SUPERIOR PRESSURE REDISTRIBUTION AND MICROCLIMATE MANAGEMENT

### Focused Advanced Microclimate<sup>®</sup> Technology

- Removes up to 4X more heat and 7X more moisture.<sup>13</sup>

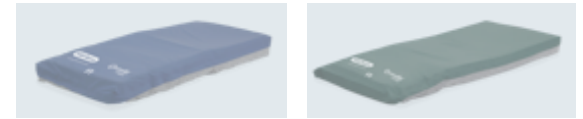
### Enhanced Turn Assist

- More effective turn in 77% less time.<sup>15</sup>

### Weight-based Pressure Redistribution

- Up to 13% less peak sacral pressure.<sup>13</sup>





# Centrella<sup>®</sup> pro Surface

**TARGETED AND CUSTOMIZED NON-POWERED PRESSURE REDISTRIBUTION FOR OPTIMAL PATIENT SUPPORT AND COMFORT**

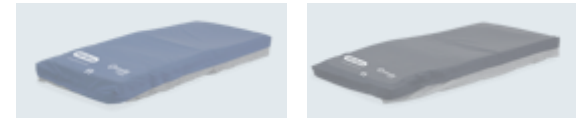
## Targeted Pressure Redistribution

- Up to 21% less peak sacral pressure.<sup>13</sup>

## Enhanced Comfort

- Rated 5X more comfortable.<sup>14</sup>





# Centrella<sup>®</sup> core Surface

**NON-POWERED PRESSURE REDISTRIBUTION DESIGNED TO ENHANCE PATIENT COMFORT**

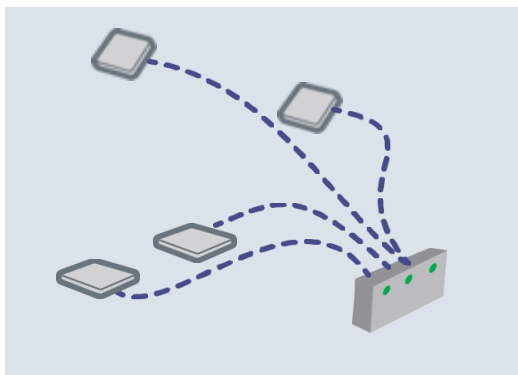
## **Multi-layer Foam Construction**

- Up to 11% less peak sacral pressure.<sup>13</sup>

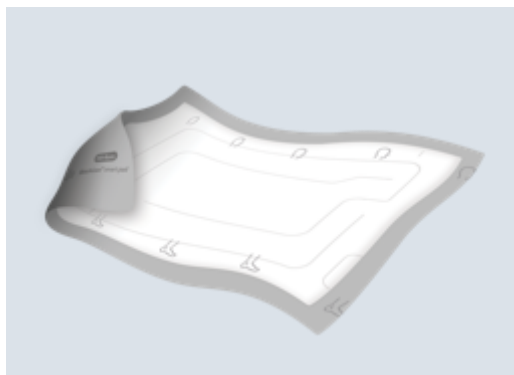




# WatchCare™ Incontinence Management System



MONITOR



DETECT



INFORM

# Graphical Caregiver Interface (GCI)<sup>®</sup> Touchscreen

THOUGHTFULLY DESIGNED FOR EASE-OF-USE AND EFFICIENCY



Home



3-mode Bed Exit  
Alert Setting



Contact-Free, Continuous  
Monitoring



Surface  
Menu



Scale Functions/  
Settings



Help Menu



# Graphical Caregiver Interface (GCI)<sup>®</sup> Touchscreen

THOUGHTFULLY DESIGNED FOR EASE-OF-USE AND EFFICIENCY



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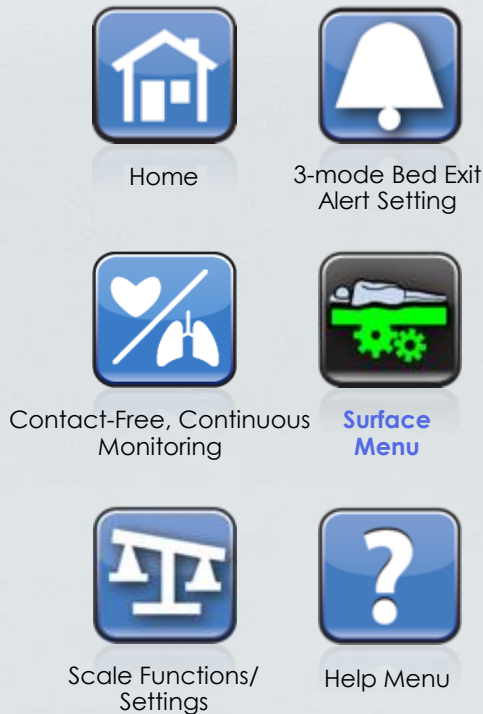


Help Menu



# Graphical Caregiver Interface (GCI)<sup>®</sup> Touchscreen

THOUGHTFULLY DESIGNED FOR EASE-OF-USE AND EFFICIENCY



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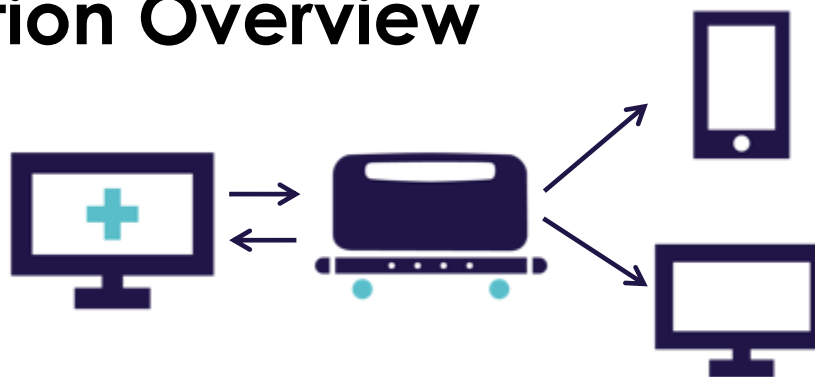
Scale Functions/  
Settings



Help Menu



# Connectivity Solution Overview



**NAVICARE®  
PATIENT SAFETY**  
+ REAL-TIME STAFF LOCATING

**Alarm Management via Caregiver Presence**  
(Real-Time Staff Locating)

**NAVICARE®  
PATIENT SAFETY**

**Bed Safety Alerts to Wireless Phones**  
(Wireless Phone & Staff Assignment Integrations)

**Automatic Arming of Bed Exit Alarm**  
(NaviCare® Patient Safety)

**BASE BED  
CONNECTIVITY\***

**Real-Time Dashboard for Bed Data** (Status Board)

**Bed Data into EMR** (Outbound EMR Integration)

**Reporting on Bed State** (Enterprise Reporting)

*\*Wired or wireless*

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