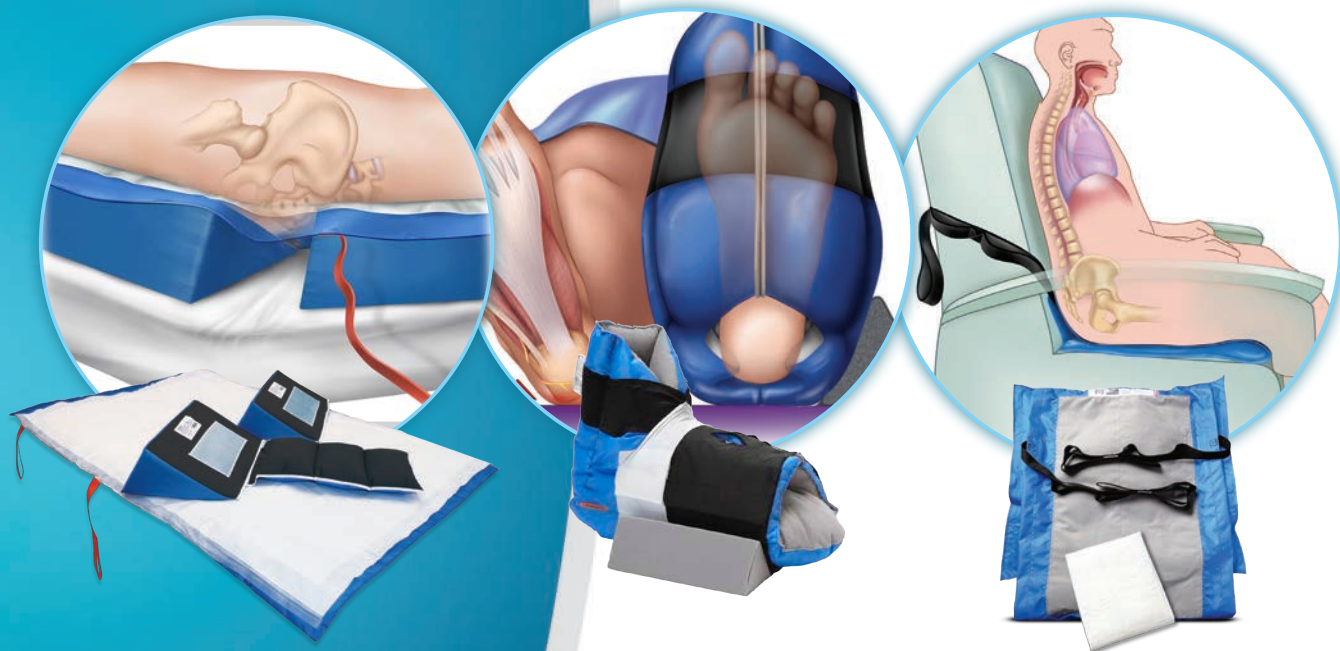


# PRESSURE ULCER PREVENTION

Prevalon™ Turn & Position System  
Prevalon® Heel Protector  
Prevalon™ Seated Positioning System

The Prevalon family of products promote safe patient handling and help improve patient outcomes by reducing the risk of skin breakdown



**SAGE**<sup>®</sup>  
PRODUCTS

Simple Interventions. Extraordinary Outcomes.

# SIMPLE INTERVENTIONS. EXTRAORDINARY OUTCOMES.



Sage Products believes that evidence-based interventions lead to improved clinical outcomes. Our market-leading, innovative products solve real problems in the healthcare industry and are backed by proven clinical evidence. They make it easier for nurses to deliver essential patient care, helping to prevent healthcare-acquired infections and skin breakdown.



## Help your patients comfortably transition from hospital to home.

The same quality Sage products you trust in your facility are available for family caregivers and patients after they leave your care.

Receive more information at:  
[www.shopsageproducts.com](http://www.shopsageproducts.com)  
or call **800.323.2220**



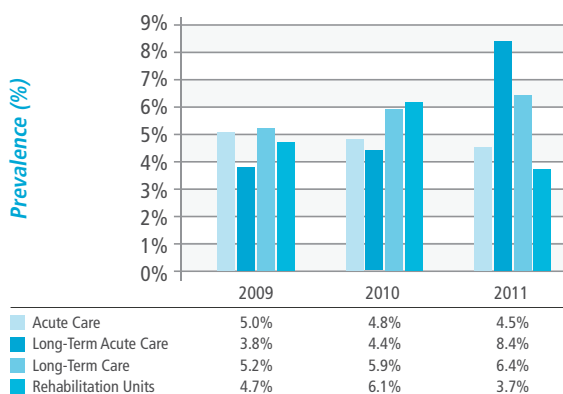
# PREVALON™ TURN & POSITION SYSTEM

Helps prevent sacral pressure ulcers and promotes safe patient handling.

## PRESSURE ULCER PREVALENCE, RISK AND COST

According to the National Pressure Ulcer Advisory Panel, hospital prevalence of pressure ulcers is 14%-17%, and incidence is 7%-9%.<sup>1</sup> Sacral pressure ulcers are the most common, accounting for about 37% of all pressure ulcers.<sup>2</sup>

### Facility-Acquired Prevalence by Care Setting<sup>3</sup>



Patients are 37.5 times more likely to develop a sacral pressure ulcer when they are **immobile** and **incontinent**.<sup>4</sup>

- A multi-site acute care study revealed that 19.7% of patients were incontinent.<sup>5</sup>
  - 21.7% of the incontinent patients had sacral pressure ulcers.<sup>5</sup>
  - 20% of the incontinent patients had Incontinence-Associated Dermatitis (IAD).<sup>5</sup>
- A study in a long-term acute care facility showed IAD prevalence at 22.8%.<sup>6</sup>
- Studies at long-term care facilities show IAD prevalence can range from 5.6% to 50%.<sup>7</sup>

The cost to treat a pressure ulcer can range from \$1,600 to \$71,503 depending on the stage of the ulcer.<sup>8,9</sup>



## GUIDELINES FOR REPOSITIONING

### EUROPEAN PRESSURE ULCER ADVISORY PANEL (EPUAP) AND NATIONAL PRESSURE ULCER ADVISORY PANEL (NPUAP)<sup>10</sup>

- 1.1 Repositioning should be undertaken to reduce the duration and magnitude of pressure over vulnerable areas of the body.
- 1.2 The use of repositioning as a prevention strategy must take into consideration the condition of the patient and the support surface in use.
- 3.2 Avoid subjecting the skin to pressure and shear forces.
- 3.6 Repositioning should be undertaken using the 30-degree tilted side-lying position (alternately, right side, back, left side) ...

### WOUND OSTOMY AND CONTINENCE NURSES SOCIETY (WOCN)<sup>11</sup>

#### III. Interventions: Prevention

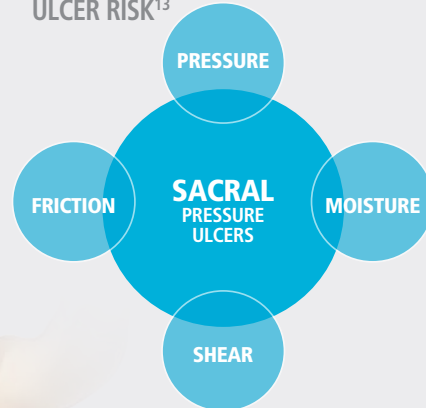
- A. Reducing Risk of Developing Pressure Ulcers
- B. Managing Incontinence

- Select underpads...that are absorbent to wick incontinence moisture away from the skin.

### RISK FACTORS<sup>12</sup>

- Reduced mobility or immobility
- Moisture
- Friction and shear
- Acute illness
- Extremes of age
- Vascular disease
- Level of consciousness

### ADDRESS PRESSURE ULCER RISK<sup>13</sup>



**REFERENCES:** 1. Whittington K, Briones R. National prevalence and incidence study: 6-year sequential acute care data. *Advances in Skin & Wound Care*, 2004;17(9):490-494. 2. Amlung S, The 1999 national pressure ulcer prevalence survey: a benchmarking approach. *Advances in Skin & Wound Care*, 2001;14:297-301. 3. VanGilder C, Overall Results From the 2011 International Pressure Ulcer Prevalence Survey. Poster Presented at WOCN 2012 Annual Conference, Charlotte, NC, June 2012. 4. Maklebust J, Magnan MA, *Adv Wound Care*. Nov 1994;7(6):25,27-8, 31-4 passim. 5. Junkin J, Selekof J, Prevalence of Incontinence and Associated Skin Injury in the Acute Care Inpatient. *J WOCN* May/June 2007;34(3):260-269. 6. Long M, et al., Incontinence-associated dermatitis in a long-term acute care facility. *J WOCN* May/June 2012;39(3):318-327. 7. Gray M, et al. *J Wound Ostomy Continence Nurs*. 2007 Jan-Feb;34(1):45-54. 8. Russo, AC, et al., Hospitalizations Related to Pressure Ulcers Among Adults 18 years and Older, 2006, *Healthcare Cost and Utilization Project*, Agency for Health Care Research and Quality Statistical Brief #64, Dec 2008. 9. Padula WV, et al. Improving the quality of pressure ulcer care with prevention: a cost-effective analysis. *Med Care*, Apr 2011;49(4):385-92. 10. National Pressure Ulcer Advisory Panel and European Pressure Ulcer Advisory Panel. *Prevention and treatment of pressure ulcers: clinical practice guideline*. Washington DC: National Pressure Ulcer Advisory Panel, 2009, pp16-18. 11. Wound Ostomy and Continence Nurses Society. *Guideline for prevention and management of pressure ulcers*, 2010, pp14-15, 21. 12. *Clinical Practice Guidelines: the use of pressure-relieving devices (beds, mattresses and overlays) for the prevention of pressure ulcers in primary and secondary care*. Royal College of Nursing, Oct 2003. 13. *Clinical Practice Guidelines: the use of pressure-relieving devices (beds, mattresses and overlays) for the prevention of pressure ulcers in primary and secondary care*. Royal College of Nursing, Oct 2003.

# STAFF INJURY PREVALENCE, RISK AND COST

While frequent turning and repositioning of patients is critical to preventing sacral pressure ulcers, it can be extremely challenging for staff. It can be physically demanding and require considerable nursing time.

Manual lifting and other tasks involving repositioning patients are associated with increased risk of pain and injury to staff, particularly to the back.<sup>1</sup> Turning and repositioning puts staff at risk for musculoskeletal disorders (MSDs), which include conditions such as low back pain, sciatica and rotator cuff injuries.<sup>1</sup>

- In 2009, nurses aides, orderlies and attendants suffered a total of 25,160 MSDs. Registered nurses suffered a total of 10,480 MSDs.<sup>2</sup>
- Of these MSDs, 59.2% were back injuries requiring an average of five days off work, while 12.2% were shoulder injuries incurring an average of eight days off work.<sup>2</sup>
- A 2013 study found that the standard of care (SOC) required 75% greater exertion to reposition a patient in bed when compared to a patient repositioning device. An easier method of repositioning may significantly enhance staff compliance.<sup>3</sup>

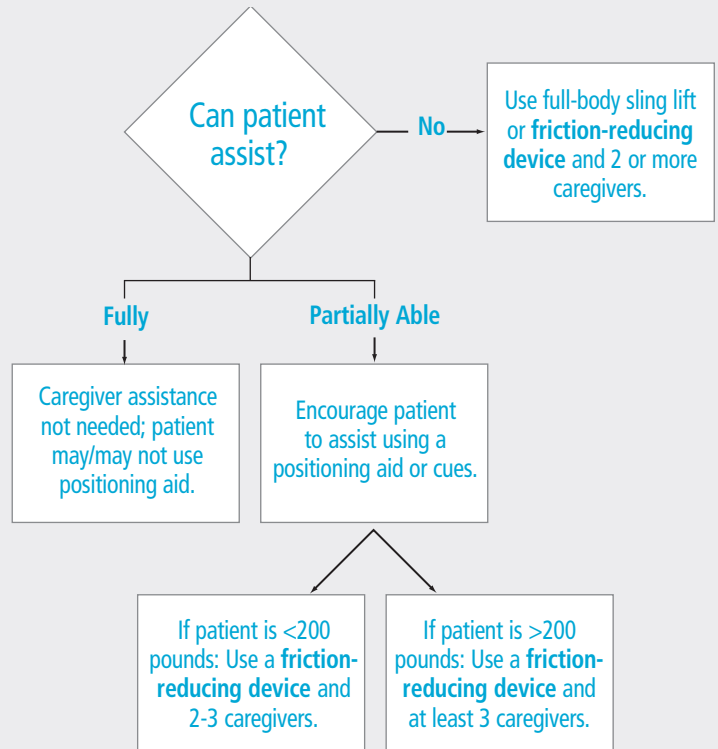
*In a survey of more than 900 clinicians, 89% said they or a co-worker have experienced a back, shoulder or wrist injury due to turning or boosting a patient. More than 80% said there is room for improvement in compliance to their facility's turning and repositioning protocol.<sup>4</sup>*



# GUIDELINES FOR SAFE PATIENT HANDLING

OSHA 2009, U.S. DEPARTMENT  
OF LABOR & STATISTICS<sup>5</sup>

## REPOSITION IN BED: SIDE-TO-SIDE, UP IN BED



**REFERENCES:** 1. Occupational Safety and Health Administration (OSHA), Guidelines for nursing homes: ergonomics for the prevention of musculoskeletal disorders, 2009. 2. United States Department of Labor, Bureau of Labor Statistics, Nonfatal occupation injuries and illnesses requiring days away from work, press release 2009, available at <http://www.bls.gov/news.release/osh2.nr0.htm>. 3. Burris D. Evaluating the Effectiveness of a Patient Repositioning System for Preventing Workplace Injury. Poster presented at the 19th Annual CAWC Conference, Nov 2013. 4. Survey conducted by Sage Products Inc., data on file. 5. OSHA 2009, U.S. Dept. of Labor and Statistics, available at [www.osha.gov/ergonomics/guidelines/nursinghome/final-nh-guidelines.html](http://www.osha.gov/ergonomics/guidelines/nursinghome/final-nh-guidelines.html)

# IMPORTANT PROTECTION FOR PATIENTS AND STAFF

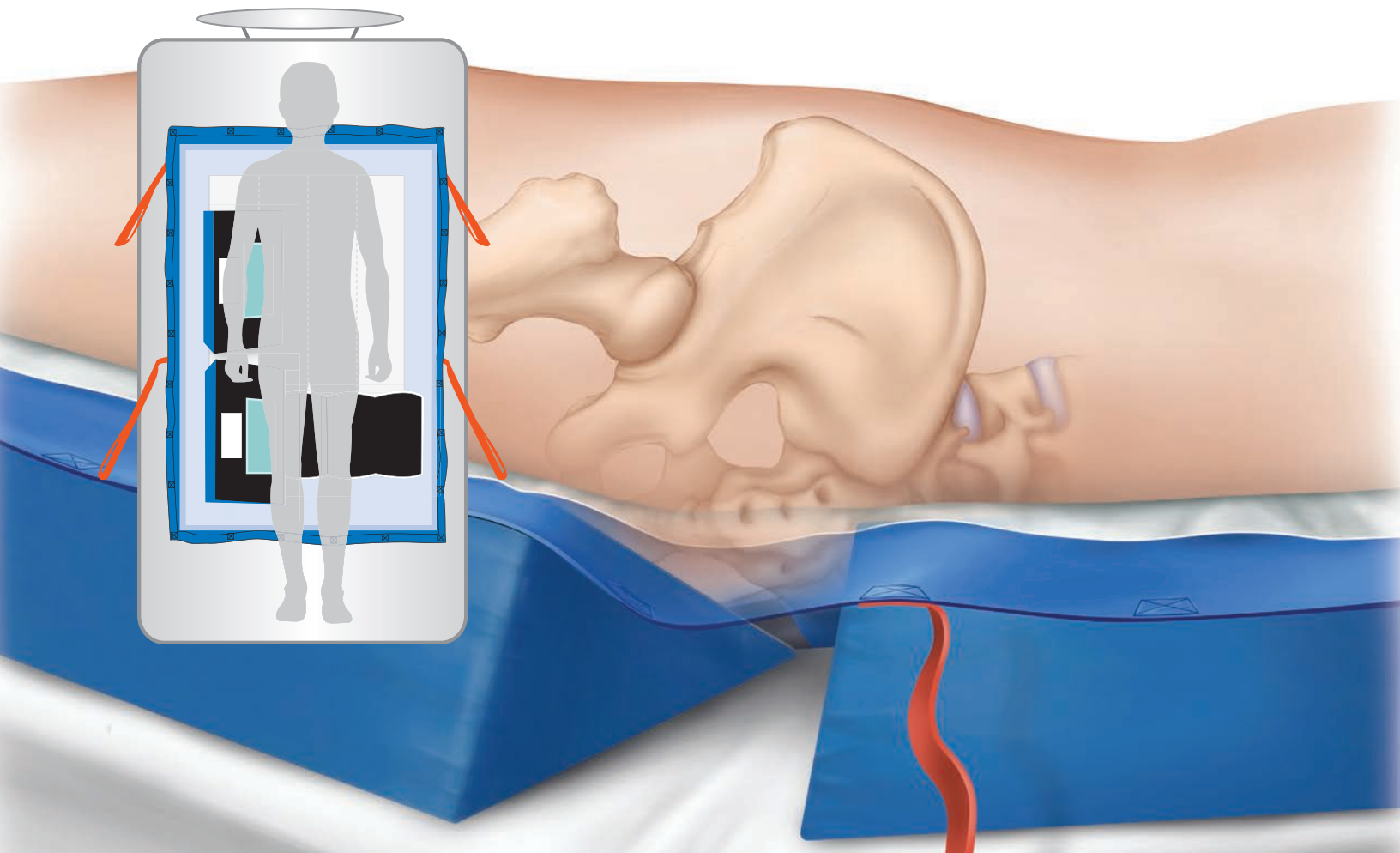
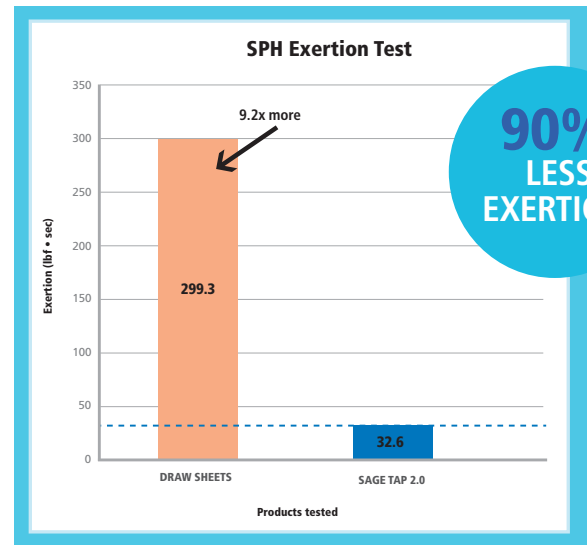
Turning and repositioning patients according to your facility's turning schedule is crucial in preventing sacral pressure ulcers. Current methods including draw sheets and pillows have multiple challenges that present risks to patients and staff.

The Prevalon™ Turn & Position System 2.0 is an evolution in turning and positioning safety. Unlike lift slings and plastic slide sheets, the Prevalon Turn & Position System 2.0 stays under the patient at all times. It's always ready to assist with turning, repositioning, and boosting the patient. This makes it possible for nurses and staff to achieve compliance to a q2° turning protocol while providing the best care and minimizing additional stress on the patient.

Now with enhanced microturn, the system makes it easy to comply with turning schedules while protecting staff from injury. All that is necessary to position the patient at the appropriate angle is a quick microturn, which requires 90% less exertion than traditional methods using draw sheets.<sup>1</sup>

The newly designed Glide Sheet and Anchor Wedge System work together, creating a high-quality turn. Once placed under the patient, the wedges help to initiate patient turning.

## THE PREVALON TURN & POSITION SYSTEM 2.0 REQUIRES 90% LESS EXERTION TO POSITION PATIENTS VS. DRAW SHEETS.<sup>1</sup>



# PROVEN RESULTS: PREVENTION AND COST SAVINGS

## PATIENT BENEFITS

- Helps prevent sacral pressure ulcers by offloading the sacrum.
- Maintains 30-degree side lying position.
- Helps prevent shear and friction forces on the patient's skin.
- Manages moisture due to incontinence and other conditions.
- Creates an optimal microclimate for the skin.

## STAFF BENEFITS

- Nurse-friendly system helps staff more easily follow best practice prevention guidelines.
- Requires fewer nurses and less time to turn.
- Reduces exertion needed to turn and boost patients. Decreases strain on staff's hands, wrists, shoulders, and backs.
- Proven compatibility with low air loss surfaces, meaning it can remain under the patient at all times, making it easier and more convenient for nurses to comply with a q2° turning protocol.
- Minimizes the frequency of boosting and other repetitive positioning tasks.

A comparative study evaluating the Prevalon™ Turn & Position System (TAP) and the standard of care (SOC) for turning and positioning patients resulted in an 84% reduction in sacral pressure ulcers. The study also revealed 87% of nurses surveyed preferred TAP and felt that it provided a more effective means for turning patients compared to the SOC.<sup>2</sup>

Another study found that use of the Prevalon Turn & Position System to turn and reposition critically ill patients resulted in a significant decrease in incidence of hospital-acquired pressure ulcers (HAPUs). No HAPUs occurred after implementing the system and staff saw a 60% decrease in time spent repositioning patients. Thirty-five percent fewer staff members were needed to reposition patients.<sup>3</sup>

**84%**  
Sacral Pressure  
Ulcer Reduction<sup>2</sup>

**90%**  
Less Exertion<sup>1</sup>

**60%**  
Less Time<sup>3</sup>

**35%**  
Less Staff<sup>3</sup>

## Reduction in Staff Injury and HAPUs<sup>4</sup>



A study demonstrated that a safe patient handling initiative including the Prevelon® Heel Protector and Prevalon™ Turn & Position System can help ensure appropriate patient repositioning for HAPU prevention, prevent caregiver injuries, and save costs associated with HAPU and healthcare worker injury.

**REFERENCES:** 1. Testing conducted by Sage Products LLC, data on file. 2. Powers J. A Comparative Study on Two Methods for Turning and Positioning and the Effect on Pressure Ulcer Development. Poster presented at the 27th Annual Symposium on Advances in Skin and Wound Care, Oct 2012. 3. Hall K, Clark R. Save the butts: preventing sacral pressure ulcers by utilizing an assistive device to turn and reposition critically ill patients. Poster presented at 25th Annual Symposium on Advanced Wound Care Spring/Wound Healing Society meeting, Apr 2012. 4. Way, H. Safe Patient Handling Initiative Results in Reduction in Injuries and Improved Patient Outcomes for Pressure Ulcer Prevention. Poster presented at 2014 Safe Patient Handling East Conference, March 27, 2014.

# Prevalon™ Turn & Position System 2.0

## FEATURES

The Low-Friction Glide Sheet works with the Anchor Wedge System to provide true friction and shear protection.

The top of the Glide Sheet has Dermasuede material, which grips the M<sup>2</sup> Microclimate Body Pad and keeps it in place.



**MINIMIZE FRICTION  
AND SHEAR**



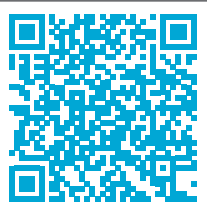
**PROTECT STAFF**

The boost straps promote proper body mechanics and reduce the reliance on grip strength.



**LESS EXERTION**

A quick, gentle microturn positions the patient at the appropriate angle.



### WATCH IT IN ACTION!

View the in-service video by scanning the QR code with your smart phone, or visit:  
[www.sageproducts.com/products/sacral-protection/video2.cfm](http://www.sageproducts.com/products/sacral-protection/video2.cfm)

REFERENCES: 1. Pedersen J, Bill B, Call E, In vitro Measurement of the Impact of Transfer and Positioning Devices on Microclimate when Left in Place Following Use. Poster presented at SAWC 2013.

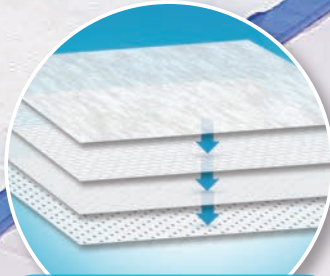


**REDUCE PRESSURE**

The Body Wedge System reduces pressure by offloading the patient's sacrum. The system significantly reduces the exertion needed to achieve proper side lying positioning.

The Anchor Wedge helps the patient maintain a natural position when the head of the bed is raised. It also reduces the need for boosting and minimizes shear and friction.

*The only*  
**device proven**  
compatible with all  
low air loss mattresses<sup>1</sup>



**MANAGE MOISTURE**

The M² Microclimate Body Pad protects the patient's skin by effectively absorbing and locking in moisture while allowing air to flow through.

**PRODUCT DETAILS:**

**PREVALON™ TURN & POSITION SYSTEM 2.0**

- 2 30° Body Wedges
- 1 Low-Friction Glide Sheet
- 1 M² Microclimate Body Pad

5 systems/case  
**Reorder #7201**

**Reorder #7201-WBS**

- 2 30° Body Wedges
- 1 Low-Friction Glide Sheet
- 6 M² Microclimate Body Pads

3 systems/case  
**Reorder #7206**

**Reorder #7206-WBS**



**M² MICROCLIMATE BODY PAD**  
30 pads/case (6 bags of 5)  
**Reorder #7250**



**STANDARD**



<40 in  
<102 cm



< 550 lbs  
< 250 kg

# Prevalon™ Turn & Position System XL/XXL

## FEATURES



### MINIMIZE FRICTION AND SHEAR

The mattress cover secures to most extra-wide hospital beds and can be used in place of a fitted/flat hospital sheet to help reduce friction.



### REDUCE PRESSURE

The larger size Glide Sheet and M<sup>2</sup> Microclimate Body Pad accommodate bariatric patients.



## WATCH IT IN ACTION!

View the in-service video by scanning the QR code with your smart phone, or visit:

[www.sageproducts.com/products/sacral-protection/video.cfm?name=Bariatric](http://www.sageproducts.com/products/sacral-protection/video.cfm?name=Bariatric)

REFERENCES: 1. Pedersen J, Bill B, Call E, In vitro Measurement of the Impact of Transfer and Positioning Devices on Microclimate when Left in Place Following Use. Poster presented at SAWC 2013.



**REDUCE PRESSURE**

The larger size wedges redistribute pressure for bariatric patients.

Includes velcro strips that attach to Low-Friction Glide Sheet, locking Body Wedges in place under the patient.

*The only*  
**device proven**  
 compatible with all  
 low air loss mattresses<sup>1</sup>





**PRODUCT DETAILS:**

**PREVALON™ XL/XXL  
 TURN & POSITION SYSTEM**

- 1 Mattress Cover
- 1 Low-Friction Glide Sheet with Anti-Shear Strap
- 6 Microclimate Body Pads
- 2 30° Body Wedges

**XL**  40-44 in  
 102-132 cm  < 800 lbs  
 < 362 kg

1 system/case **Reorder #7220**

**XXL**  > 45 in  
 > 114 cm  < 800 lbs  
 < 362 kg

1 system/case **Reorder #7230**

**M<sup>2</sup> MICROCLIMATE BODY PAD**

**XL** 20 pads/case (4 bags of 5)  
**Reorder #7255**

**XXL** 20 pads/case (4 bags of 5)  
**Reorder #7260**



**ADHESIVE STRIP REPLACEMENT**

10 strips/bag  
**Reorder #7299**



# PREVALON® HEEL PROTECTOR

Uniquely designed to prevent heel pressure ulcers while keeping the foot and leg in a neutral position.

## PREVALENCE AND COST

The heel and ankle bone are the second and fifth most common sites for pressure ulcer development.<sup>1</sup> One study found 43% of hospital-acquired pressure ulcers (HAPUs) developed on the heel.<sup>2</sup> But, HAPUs are largely preventable.<sup>3</sup>

### HUMAN COST<sup>4,5,6</sup>

- Pain
- Length of stay
- Infection risk
- Amputation

### FINANCIAL COST:

- The Centers for Medicare and Medicaid Services (CMS) will not reimburse hospitals for Stage III or IV pressure ulcers not present on admission (POA).<sup>7</sup>
- Average daily treatment costs for a Stage I/II PU is \$1,606; for Stage III/IV daily treatment cost increases to \$71,503, or an average cost of \$6,499.<sup>8</sup>

PU Stage	Treatment Cost <sup>5,8</sup>
I and II	\$1,606
III and IV	\$71,503
<b>Average</b>	<b>\$6,499</b>

## PROFESSIONAL GUIDELINES AND RECOMMENDATIONS

### HEEL ULCER PREVENTION

#### Wound Ostomy and Continence Nurses Society Guidelines

"Maintaining alignment [with a pillow] may be difficult if the patient moves. In addition, pillows do not prevent plantar flexion contracture or lateral leg and foot rotation."<sup>9</sup>

#### AHRQ/AHCPR Supported Clinical Practice Guidelines

"Individuals in bed who are completely immobile should have a care plan that includes the use of devices that totally relieve pressure on the heels, most commonly by raising the heels off the bed."<sup>10</sup>

#### NPUAP/EPUAP Prevention Guidelines

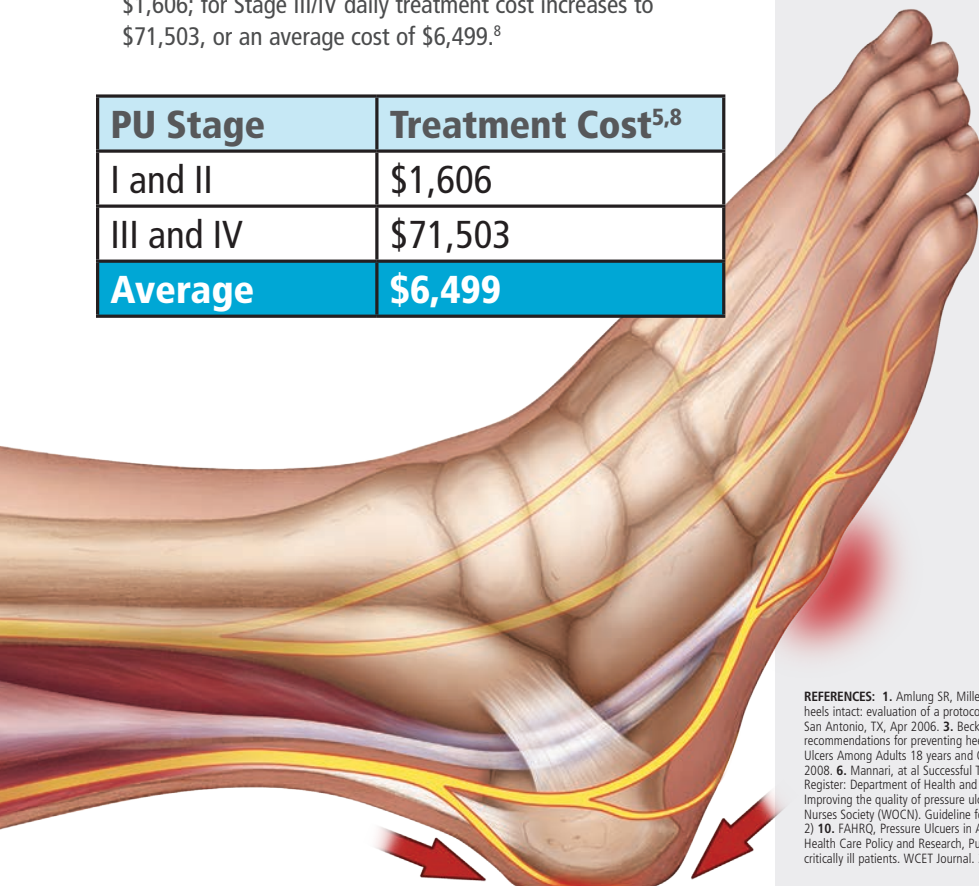
"Ensure that the heels are free of the surface of the bed... Heel-protection devices should elevate the heel completely (offload them) in such a way as to distribute the weight of the leg along the calf without putting pressure on the Achilles tendon."<sup>11</sup>

#### Association of Perioperative Registered Nurses (AORN)

##### Standards Recommended Practices and Guidelines

"Use devices that eliminate or redistribute pressure" to prevent perioperative\* heel ulcers.<sup>12</sup>

\*Perioperative defined as a pressure-related deep tissue injury under intact skin that presents within the first 5 days following surgical procedures.



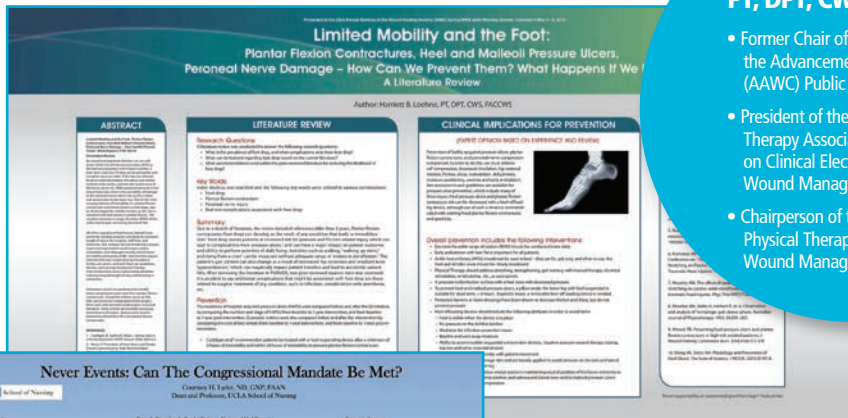
A published study recommended patients be treated with a **heel-suspending device** after a **minimum of 6 hours of immobility** and within 24 hours of immobility to prevent plantar-flexion contractures.<sup>11</sup>

**REFERENCES:** 1. Amlung SR, Miller WL, Bosley LM. Adv Skin Wound Care. Nov/Dec 2001;14(6):297-301. 2. Walsh J, DeOcampo M, Waggoner D. Keeping heels intact: evaluation of a protocol for prevention of facility-acquired heel pressure ulcers. Poster presented at the Symposium on Advanced Wound Care, San Antonio, TX, Apr 2006. 3. Beckrich K, Aronovitch SA. Nursing Economic. Sep/Oct 1999;17(5):263-71. 4. Fowler E, Scott-Williams S, McGuire J. Practice recommendations for preventing heel pressure ulcers. Ostomy Wound Management 2008;54(10):42-57. 5. Russo, AC, et al., Hospitalizations Related to Pressure Ulcers Among Adults 18 years and Older, 2006. Health Care Cost and Utilization Project, Agency for Health Care Research and Quality Statistical Brief #64, Dec 2008. 6. Mannari, et al Successful Treatment of Recalcitrant Diabetic Heel Ulcers with Topical Becaplermin (rh PDGF-BB) Gel, Wounds. 2002;14(3). 7. Federal Register: Department of Health and Human Services Centers for Medicare & Medicaid Services Part II, p. 48473 Tuesday, August 19, 2008. 8. Padula WV, et al. Improving the quality of pressure ulcer care with prevention: a cost-effective analysis. Med Care, Apr 2011;49(4):385-92. 9. Wound, Ostomy, and Continence Nurses Society (WOCN). Guideline for prevention and management of pressure ulcers. Mount Laurel (NJ): June 2010. 96 p. (WOCN clinical practice guideline; no. 2) 10. FAHRQ. Pressure Ulcers in Adults: Prediction and Prevention. Clinical Practice Guideline No.3. AHCPR Publication No.92-0047. Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, US Dept. of Health and Human Services May 1992. 11. Cuddigan JE, Ayello EA, Black J. Saving heels in critically ill patients. WCET Journal. 2008;28(2):2-8. 12. AORN Standards Recommended Practices & Guidelines 2007. Assoc. Operating Room Nurses.

# THE EXPERTS SUGGEST THE OPTIMAL HEEL PROTECTOR SHOULD:

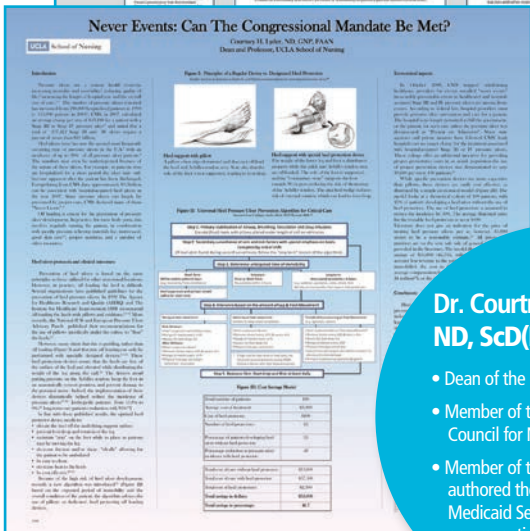
- ✓ Elevate the heel off the underlying support surface.<sup>1</sup>
- ✓ Prevent foot-drop and rotation of the leg.<sup>1</sup>
- ✓ Maintain “grip” on the foot while in place as patients may be moving the leg.<sup>1</sup>
- ✓ Decrease friction and/or shear, “ideally” allowing for the patient to be ambulated.<sup>1</sup>
- ✓ Heel is visible when the device is in place.<sup>2</sup>
- ✓ No pressure on the Achilles tendon.<sup>2</sup>
- ✓ Breathe and wick away moisture.<sup>2</sup>
- ✓ Ability to accommodate sequential compression devices, negative pressure wound therapy, tubing, traction and other essential devices.<sup>2</sup>
- ✓ Has straps that do not damage skin and are loosely applied to avoid pressure on dorsum and lateral edge of foot and the lower leg.<sup>2</sup>
- ✓ A device with an anti-rotation wedge assists in maintaining neutral position of the lower extremity in order to prevent hip external rotation and subsequent lateral knee and/or malleoli pressure ulcers and/or peroneal nerve compression.<sup>2</sup>

## HEEL PROTECTOR SYMPOSIA PRESENTATIONS



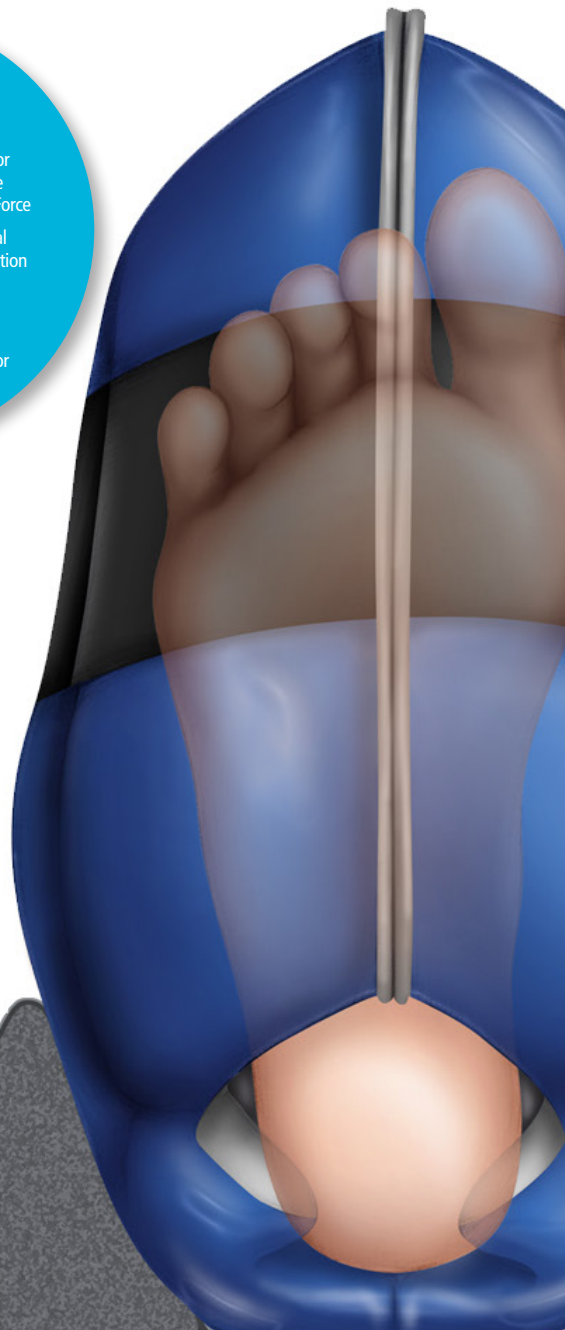
**Harriett Loehne  
PT, DPT, CWS, FACCWS**

- Former Chair of the Association for the Advancement of Wound Care (AAWC) Public Awareness Task Force
- President of the American Physical Therapy Association (APTA)'s section on Clinical Electrophysiology and Wound Management (CEWM)
- Chairperson of the task force for Physical Therapy Specialization for Wound Management



**Dr. Courtney Lyder  
ND, ScD(Hon), FAAN**

- Dean of the UCLA School of Nursing
- Member of the National Advisory Council for Nursing Research
- Member of the committee that authored the Centers for Medicare & Medicaid Services (CMS) guidelines on prevention of pressure ulcers



REFERENCES: 1. Lyder C. Never Events: Can The Congressional Mandate Be Met? Poster Presented at the Institute for Health Care Improvement (IHI), Orlando, FL December 6-8, 2010. 2. Loehne H. Limited Mobility and the Foot: Plantar Flexion Contractures, Heel and Malleoli Pressure Ulcers, Peroneal Nerve Damage How Can We Prevent Them? What Happens If We Don't? Poster presented at the 26th Annual Symposium on Advanced Wound Care (SAWC); May 1-5, 2013.

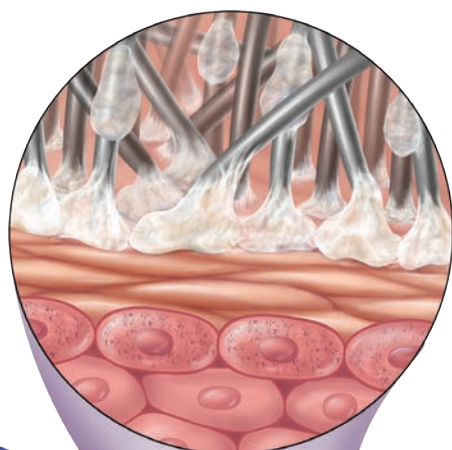
# THE FOUNDATION OF AN EFFECTIVE HEEL PROTECTOR: ITS ABILITY TO GRIP THE LIMB

## PREVALON'S UNIQUE DERMASUEDE INTERIOR GENTLY GRIPS THE FOOT

Prevalon® Heel Protector was specifically designed to address the problem of patient movement and its negative effect on heel offloading. Prevalon's unique dermasuede fabric interior gently grips the limb so it remains fully offloaded, even when the patient is moving.

Our specialized fabric and coating creates maximum grip control with the texture of fine velvet. This soft fabric contours to and cradles the leg, calf, ankle and foot to help prevent them from rotating within the boot or sliding out of the boot—maintaining effective heel offloading.

Dermasuede fabric holds the limb securely in place while preserving patient comfort. It's also a breathable material, so the limb remains cool while inside the heel protector.



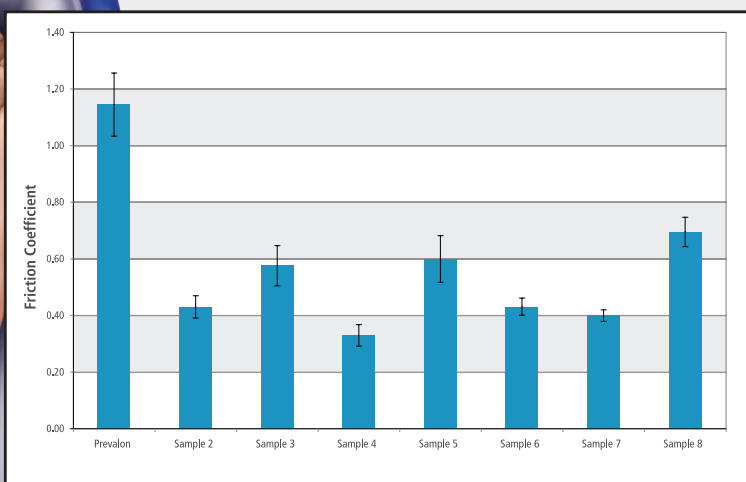
Prevalon's dermasuede fabric contours to and gently cradles the leg, calf, ankle and foot to maintain effective heel offloading.

## PUBLISHED STUDIES

Several published studies show that a heel protector must stay in place on the foot and maintain offloading for effective prevention of heel pressure ulcers.

- A recent poster presented at the Symposium on Advanced Wound Care concluded "as patients shift, the ability of a heel protecting boot to grip the limb and retain optimal off-loading positioning is vital to the function of the device." Furthermore, the study found evaluation of the heel protector's grip is necessary for determining effectiveness in reducing risk of heel pressure ulcers.<sup>1</sup>
- One article found that a heel protector was "more effective in reducing heel PrU incidence if it did not dislodge during patient movement."<sup>2</sup>
- According to another article, clinical considerations in selecting an optimal heel protector should include the device's ability to remain in place while the patient is moving the leg.<sup>3</sup>

## PREVALON HEEL PROTECTORS' ENHANCED ABILITY TO GRIP THE LIMB<sup>3</sup>



Testing shows significantly more force is required to dislodge the Prevalon® Heel Protector from the limb than with other heel protectors.<sup>3</sup>

**REFERENCES:** 1. Bill B, Pedersen J, Call E, Human cadaver testing to determine the reliability of heel boot positioning or "grip" of eight commercially available pressure relieving heel protector boots. Poster presented at SAWC, April 2012, Atlanta, GA. 2. Salcido R, Lee A, Ahn C, Heel pressure ulcers: purple heel and deep tissue injury. *Advances in Skin & Wound Care*, Aug 2011;24(8):374-80. 3. Lyder C, Getting serious about preventing heel pressure ulcers in hospitals. *WCET Journal*, Oct/Dec 2011;31(4):6-13.

# THREE HEEL PROTECTORS THAT EFFECTIVELY GRIP THE LIMB



## PREVALON® HEEL PROTECTOR



- Offloads the heel.



## PREVALON® HEEL PROTECTOR



- Offloads the heel.
- Reduces plantar flexion contracture risk.



## PREVALON® HEEL PROTECTOR



- Offloads the heel.
- Reduces plantar flexion contracture risk.
- Helps prevent lateral rotation, reducing risk of peroneal nerve damage.

# PREVALON® HEEL PROTECTOR



## FEATURES



### DERMASUEDE FABRIC INTERIOR

- Gently grips limb so it remains fully offloaded even when patient is moving.

### LOW-FRICTION OUTER SHELL

- Slides easily over bed sheets.
- Helps maintain patients' freedom of movement.

### CLOSURE STRAPS

- Secures Heel Protector I.

VISIBLY FLOATS HEEL FOR EASY MONITORING

SCD COMPATIBLE

## PRODUCT DETAILS:



### PREVALON® HEEL PROTECTOR I

Recommended for patients with calf circumference of:  
**10in-18in (25cm-46cm)**

8 packages/case **Reorder #7305**

# PREVALON® HEEL PROTECTOR



## FEATURES



### DERMASUEDE FABRIC INTERIOR

- Gently grips limb so it remains fully offloaded even when patient is moving.

### RIP-STOP NYLON

- Slides easily over bed sheets.
- Helps maintain patients' freedom of movement.

### EXPANDABLE STRAPS

- Stretches to accommodate lower limb edema.
- No sharp edges or irritating surfaces.

### CONTRACTURE STRAP

- Helps prevent plantar flexion contracture.

VISIBLY FLOATS HEEL FOR EASY MONITORING

SCD COMPATIBLE

## PRODUCT DETAILS:



### PREVALON® HEEL PROTECTOR II

Recommended for patients with calf circumference of:  
**10in-18in (25cm-46cm)**

8 packages/case **Reorder #7300**  
2 packages/case **Reorder #7302**



### FOOT AND LEG STABILIZER WEDGE

For use with reorder #7300 and #7302  
**10 packages/case Reorder #7350**

# PREVALON® HEEL PROTECTOR



## FEATURES



**VISIBLY FLOATS HEEL FOR EASY MONITORING**

### DERMASUEDE FABRIC INTERIOR

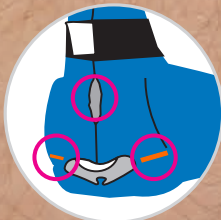
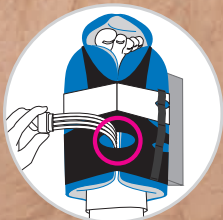
- Gently grips limb so it remains fully offloaded even when patient is moving.

### EXPANDABLE STRAPS

- Stretches to accommodate lower limb edema.
- No sharp edges or irritating surfaces.

## SIZING CHART:

Calf Circumference (in.)																				
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Prevalon® Heel Protector Petite						Prevalon® Heel Protector						Prevalon® Heel Protector XL								
13	15	18	20	23	25	28	30	33	36	38	41	43	46	48	51	53	56	58	61	63
Calf Circumference (cm.)																				



**SCD COMPATIBLE**

## CLINICALLY VALIDATED

Supported by more peer-reviewed studies than all other brands combined.<sup>1</sup>

### RIP-STOP NYLON

- Slides easily over bed sheets.
- Helps maintain patients' freedom of movement.

### CONTRACTURE STRAP

- Helps prevent plantar flexion contracture.

### INTEGRATED ANTI-ROTATION WEDGE

- Helps prevent lateral foot and leg rotation, reducing the risk of peroneal nerve damage.



## PRODUCT DETAILS:



### PREVALON® HEEL PROTECTOR III

WITH INTEGRATED WEDGE

Recommended for patients with calf circumference of: **10in-18in (25cm-46cm)**

8 packages/case Reorder #7355



### PREVALON® HEEL PROTECTOR III XL

WITH INTEGRATED WEDGE

Recommended for patients with calf circumference of: **18in-24in (46cm-61cm)**

2 packages/case Reorder #7382



### PREVALON® HEEL PROTECTOR III PETITE

WITH INTEGRATED WEDGE

Recommended for patients with calf circumference of: **6in-10in (15cm-25cm)**

8 packages/case Reorder #7310  
2 packages/case Reorder #7312

REFERENCES: 1. Data on file.

# PROVEN RESULTS: PREVENTION AND TREATMENT FROM THE #1 BRAND OF HEEL PROTECTION<sup>1</sup>

Prevalon® brings you more proven clinical studies and financial outcomes than any other brand.

## HEEL ULCER REDUCTION

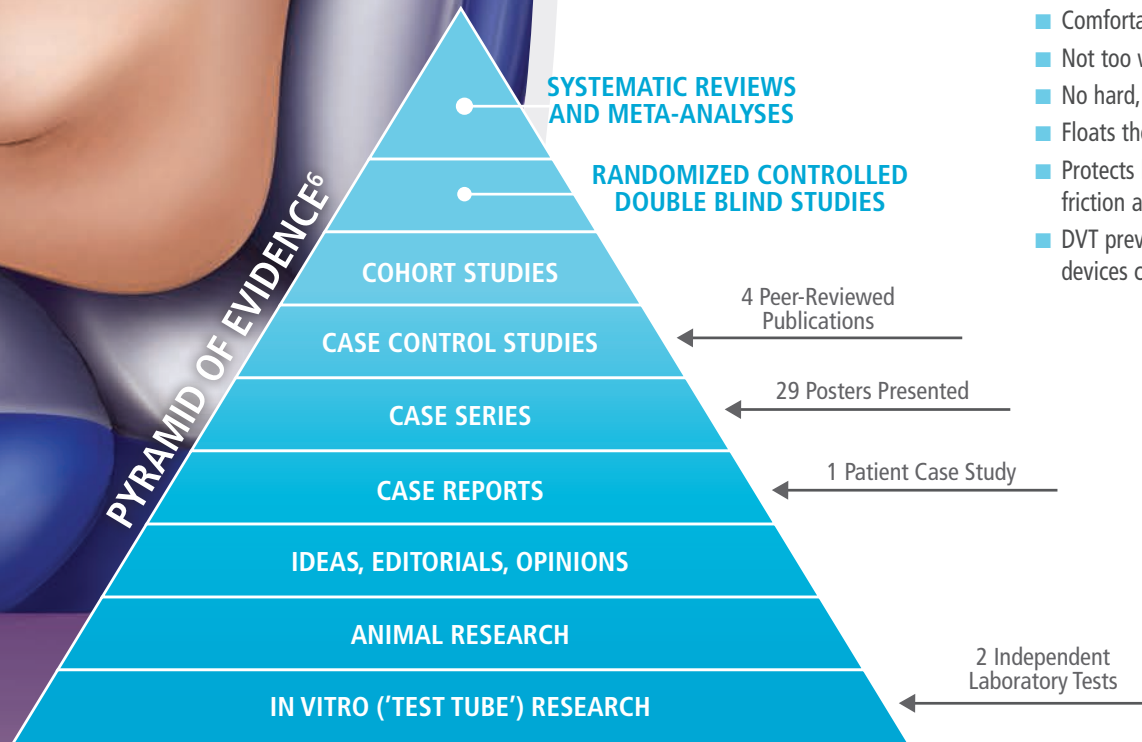
- A study published in JWOCN found the use of Prevalon and a heel ulcer prevention protocol led to a **95% decrease in heel pressure ulcers**.<sup>2</sup>
- Another study published in JWOCN demonstrated a **100% prevention of both heel pressure ulcers and plantar flexion contracture over a seven month period when using the heel protector device**.<sup>3</sup>
- In one study, implementation of a heel pressure ulcer prevention protocol that included Prevalon Heel Protector resulted in a 28% decrease in facility-acquired heel pressure ulcers over a one-year period. Continued use of the Prevalon Heel Protector over four years coupled with **in-depth education, continuous monitoring of compliance, and continual reporting of outcomes to ensure accountability**, resulted in a cumulative 72% decrease in heel pressure ulcers.<sup>4</sup>

## PREFERRED BY NURSES

A study comparing Prevalon to a waffle-style competitor found, in addition to achieving zero pressure ulcers, **nurses ranked Prevalon at a statistically significant higher level of preference**.<sup>5</sup>

This was due to:

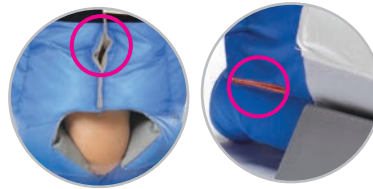
- Comfortable interior
- Not too warm
- No hard, sharp or rough edges
- Floats the heel
- Protects heels from pressure, friction and shear
- DVT prevention compression devices compatibility



REFERENCES: 1. GHX Trend Report (Dollars), 4th Quarter, 2011 Hospital; Annualized markets based on last 4 quarters data. 2. Lyman V, Successful Heel Pressure Ulcer Prevention Program in a Long-Term Care Setting. J Wound Ostomy Continence Nurs. 2009 Nov-Dec;36(6):616-21. 3. Meyers T, Preventing Heel Pressure Ulcers and Plantar Flexion Contractures in High Risk Sedated Patients. J Wound Ostomy Continence Nurs. 2010 Jul-Aug;37(4):372-8. 4. Hanna-Bull D, Four Years of Heel Pressure Ulcer Prevention. Poster presented at the 19th Annual CAWC Conference; November 7-10, 2013, Vancouver, Canada. 5. Walsh JS, Plonczynski DJ. Evaluation of a protocol for prevention of facility-acquired heel pressure ulcers. J Wound Ostomy Continence Nurs. 2007 Mar-Apr;34(2):178-83. 6. Adapted from Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS. Evidence-based medicine what it is and what it isn't. BMJ. 1996;312(7023):71-2

# A HISTORY OF INNOVATION

Sage Products has constantly improved and refined our line of Prevalon Heel Protector. From a simple engineered pillow, to the innovative and effective heel protector it is today, Prevalon has helped prevent and treat against heel pressure ulcers and plantar flexion contracture as well as increase protocol compliance.



**2010** Sage adds additional access ports to the Standard Size Prevalon to accommodate more Intermittent Compression Devices.

**2014** Sage diversifies the product line with Prevalon Heel Protector I to accommodate a variety of patient needs.

**2009** NPUAP/EPUAP releases updated Pressure Ulcer Prevention & Treatment Clinical Practice Guideline.

**2009** Sage launches Prevalon with Integrated Foot and Leg Stabilizer Wedge.



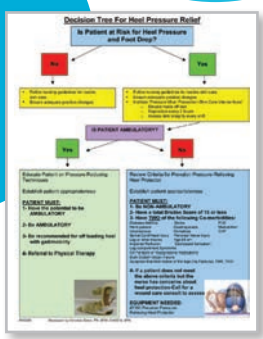
**2008** Sage launches Prevalon Petite for smaller patients.



**2008** Tina Meyers poster Successful Prevention of Heel Ulcers and Foot Drop in the High Risk Ventilation Patient Population presented at World Union of Wound Healing Societies in Toronto. Shows zero pressure ulcers and a \$1.9 million revenue preservation.

Prevalon takes over as the market leader in heel protection.<sup>1</sup>

**2008** Decision Tree presented at 2008 SAWC Conference, clarifying when to use a heel protector.



**2007** Jill Walsh publishes Evaluation of a Protocol for Prevention of Facility-Acquired Heel Pressure Ulcers in JWOCN.



**2006** Sage launches second generation Prevalon featuring ripstop nylon outer surface, tag to help visualize proper fit, bag with printed instructions, integrated stretch panels and the Foot and Leg Stabilizer Wedge to help prevent lateral rotation.



**2004** Sage's field-based research finds pillows and other products don't float the heel properly and don't effectively protect against heel pressure ulcers.



REFERENCES: 1. GHX Market Intelligence Trend Report (Dollars), 3rd Quarter, 2009 Hospital Market; Annual market represents last 4 quarters of data.

# PREVALON™ SEATED POSITIONING SYSTEM

Designed to improve compliance to the seated position and promote patient and clinician safety.

## BEDSIDE CHAIR CHALLENGES

The health benefits of sitting in a bedside chair are well documented. However, there are several challenges that make it difficult to achieve this goal. Positioning patients in the bedside chair can put clinicians and patients at risk for injury. Boosting and repositioning can put clinicians at risk for musculoskeletal disorders (MSDs) which include back pain, sciatica and rotator cuff injuries.<sup>1</sup> Once patients are in the chair, they may become uncomfortable and lack the confidence to stay seated.

### BENEFITS OF MOBILITY<sup>2-4</sup>

- Improved muscle strength
- Reduced oxidative stress
- Reduced inflammation
- Positive mood changes
- Less fatigue

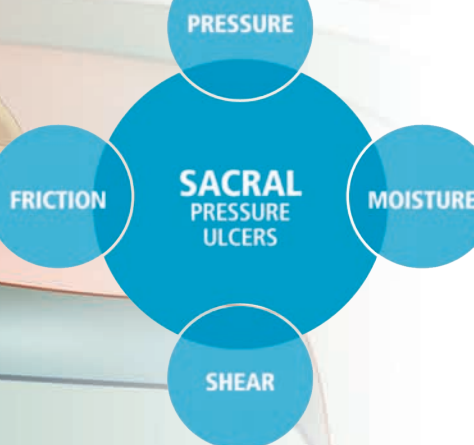
### SAFE & SECURE SITTING

Slouching can lead to discomfort and falls. The Prevalon™ Seated Positioning System helps patients maintain a secure, seated posture. This provides stability and helps minimize the risks associated with slouched sitting.

Approximately  
**1 million patients**  
fall in hospitals  
each year<sup>5</sup>

Fall-related injuries  
increase hospital costs  
by an average of  
**\$13,000+**<sup>5</sup>

### ADDRESS PRESSURE ULCER RISK<sup>6</sup>



**REFERENCES:** 1. Occupational Safety and Health Administration (OSHA), Guidelines for nursing homes: ergonomics for the prevention of musculoskeletal disorders, 2009. 2. Gomez-Cabrera MC, Domenech E, Viña J. Moderate exercise is an antioxidant: upregulation of antioxidant genes by training. *Free Radic Biol Med.* 2008;44:126-131. 3. Winkelman C, Higgins PA, Chen YJK, et al. Cytokines in chronically critically ill patients after activity and rest. *Biol Res Nurs.* 2007;8:261-271. 4. Herridge MS, Batt J, Hopkins RO. The pathophysiology of long-term outcomes following critical illness. *Crit Care Clin.* 2008;24:179-199. 5. Butcher L, The No-Fall Zone, *Hospitals & Health Networks Magazine*, June 2013. 6. Clinical Practice Guidelines: the use of pressure-relieving devices (beds, mattresses and overlays) for the prevention of pressure ulcers in primary and secondary care. *Royal College of Nursing*, Oct 2003.

# SAFELY GLIDE PATIENTS TO THE UPRIGHT POSITION

The Prevalon™ Seated Positioning System makes it easier for clinicians to safely glide patients to an optimal upright-seated position without lifting. It is uniquely engineered to keep the seated patient in place, minimizing the need for repetitive boosting and repositioning. It is also comfortable for patients, which may improve their confidence and compliance to chair sitting.

## HELP IMPROVE SAFETY

- **FORCE**—Patient is glided into position, not lifted
- **REPETITION**—Secures patient to minimize repetitive boosting and repositioning
- **POSTURE**—Promotes proper ergonomics and body mechanics while making it easy for nurses to reposition patient

## PROMOTE COMFORT AND CONFIDENCE

A recently published study found that nurses were more likely to use the Seated Positioning System over traditional efforts of pulling patients upright in chairs. The use of the Seated Positioning System:<sup>1</sup>

- Enhanced nurses' confidence in not hurting themselves
- Promoted greater compliance in following their facility's repositioning and mobilizing patient protocols
- Provided a bundled approach that focused on preventing patient falls and pressure ulcers and reduced employee injuries



GLIDE PATIENTS WITHOUT LIFTING

## STAFF BENEFITS

- **Reduces Boosting**  
Innovative one-way glide resists forward movement, ensuring patients remain in the optimal position.
- **Promotes Proper Ergonomics**  
Multi-grip handles improve healthcare worker posture and body mechanics.

## PATIENT BENEFITS

- **Redistributes Pressure**  
Multi-chamber air cushion provides comfort and security while allowing patient to shift in chair.
- **Manages Moisture**  
Microclimate Management Pad is effectively absorbant to protect patients' skin while allowing air to flow through.

REFERENCES: 1. Kowal C, Enhancing Compliance to the Seated Position of a Hospital Mobility Bundle: A Mixed Method Case Study, Am J SPHM, 2014;4(1):8-14.

# RECOMMENDATIONS & GUIDELINES

## SAFE PATIENT HANDLING

### Occupational Safety and Health Administration:<sup>1</sup>

Turning and positioning patients puts staff at risk of musculoskeletal disorders (MSDs), including conditions such as low back pain, sciatica, rotator cuff injuries, epicondylitis and carpal tunnel syndrome.

### The American Nurses Association (ANA) Safe Patient Handling and Mobility (SPHM): Interprofessional National Standards<sup>2</sup>

Safe patient handling and mobility (SPHM) programs, if properly implemented, can drastically reduce healthcare worker injuries.

Universal SPHM standards are needed to protect healthcare workers from injuries and MSDs. Addressing healthcare worker safety through SPHM will also improve the safety of healthcare patients.

## PRESSURE ULCER PREVENTION

### European Pressure Ulcer Advisory Panel (EPUAP) National Pressure Ulcer Advisory Panel (NPUAP)<sup>3</sup>

- 1.1 Repositioning should be undertaken to reduce the duration and magnitude of pressure over vulnerable areas of the body.

High pressure over bony prominences, for a short period of time, and low pressure over bony prominences, for a long period of time, are equally damaging. In order to lessen the individual's risk of pressure ulcer development, it is important to reduce the time and the amount of pressure she/he is exposed to.

- 4.1 Select a posture that is acceptable for the individual and minimizes the pressures and shear exerted on the skin and soft tissues.
- 4.3 Limit the time an individual spends seated in a chair without pressure relief.

### WOCN Guideline for Prevention and Management of Pressure Ulcers<sup>4</sup>

4. Position sitting patients with special attention to the individual's anatomy, postural alignment, distribution of weight, and support of the feet.
6. Utilize support surfaces (on beds and chairs) to redistribute pressure. Pressure redistribution devices should serve as adjuncts and not replacements for repositioning protocols.
7. Individuals at risk should be placed on a pressure redistribution surface.

**REFERENCES:** 1. Occupational Safety and Health Administration (OSHA). Guidelines for nursing homes: ergonomics for the prevention of musculoskeletal disorders, 2009:4,5. 2. American Nurses Association (ANA). Safe Patient Handling and Mobility: Interprofessional National Standards. Published by nursesbooks.org, Silver Spring Maryland, 2013. 3. National Pressure Ulcer Advisory Panel and European Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: clinical practice guideline. Washington DC: National Pressure Ulcer Advisory Panel, 2009:16-18. 4. Wound Ostomy and Continence Nurses Society, Guideline for prevention and management of pressure ulcers, 2010:96.

## PRODUCT DETAILS:



### PREVALON™ SEATED POSITIONING SYSTEM

- 1 Seated Positioning Cushion with Fastener strips
- 1 Microclimate Management Pad

5 systems/case  
**Reorder #7350**

HIGH ELEVATION  
(Above 3000 ft)  
**Reorder #7531**



### PREVALON™ SEATED POSITIONING SYSTEM

- 1 Seated Positioning Cushion with Fastener strips
- 5 Microclimate Management Pad

3 systems/case  
**Reorder #7535**

HIGH ELEVATION  
(Above 3000 ft)  
**Reorder #7536**



### MICROCLIMATE MANAGEMENT PAD

30 pads/case (6 bags of 5)  
**Reorder #7550**



# CustomerOne™

value analysis program

## VALIDATE AND CELEBRATE YOUR SUCCESS

Changing practice in healthcare involves significant effort and above all else—data. Evaluation is critical, but as a busy clinician or supply chain professional, you may not have resources to gather, analyze and report on your own.

We can help. **CustomerOne** is your expert resource for customized measurement and data analysis. Our exclusive team of professionals will generate comprehensive reports tailored to your specific requirements. Reports include:

- **Executive Outcome Summary**

A true success story—it highlights a clinical intervention with a Sage product, including pre- and post-intervention data, clinical outcomes and return on investment.

- **Return on Investment Report**

Measures the financial impact of positive clinical outcomes and the financial value in partnering with Sage.

- **Cost Analysis**

Compares current process cost to a proposed Sage intervention while taking into account the cost of a hospital-acquired infection/wound. Includes a break even point or projected return on investment.

- **Clinical Outcome Report**

Measures correlations of compliance to specific clinical protocols and the clinical outcomes achieved.

- **Protocol Compliance Report**

Measures compliance to a specific clinical protocol.

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