Z-Flo™ Fluidized Positioner
Adult & Pediatric

Continuous head-to-heel protection for reduced Pressure Injury risk and therapeutic positioning
The human and financial cost of pressure ulcers

Pressure ulcers are painful for patients and costly for hospitals and other care facilities. It’s estimated that 2.5 million patients develop hospital-acquired pressure ulcers (HAPUs) annually, with approximately 60,000 cases resulting in death.¹

Since pressure ulcers are considered never events by CMS, patient care costs ranging from $20,900 to $151,700 per pressure ulcer are not eligible for reimbursement.¹ That doesn’t include the potential of losing 1% of CMS payments under the Hospital-Acquired Conditions (HAC) Reduction Program.² Adding to the expense are the approximately 17,000 lawsuits related to HAPUs filed each year, making it the second most common claim for wrongful death.¹

With patient safety and comfort – as well as financial and reputational repercussions – at stake, it is little wonder that a growing number of hospitals and care facilities are searching for ways to improve their pressure ulcer prevention approach and protocols.

Problems with DIY offloading methods

Positioning and repositioning patients to redistribute pressure is one of the cornerstones of pressure injury prevention. Offloading existing wounds relieves pressure and allows the wound to heal.³

Benefits of proper patient positioning⁴

- Pressure offloading and redistribution to prevent pressure injuries and support healing
- Proper spine alignment
- Airway and respiratory management
- Improved nurse and patient satisfaction

“Repositioning is undertaken to reduce the duration and magnitude of pressure over vulnerable areas of the body and to contribute to comfort, hygiene, dignity, and functional ability.”³

~ NPIAP

Caregivers seeking to offload areas at risk for pressure injuries have traditionally had limited choices. Even wedges, specifically developed for repositioning, have limitations.

Rolled blankets & towels

AORN cautions: “Rolled blankets and towels should not be used as positioning because they create pressure and do not redistribute the weight over a larger area.”⁵

Wedges⁶

- Can’t be customized because of fixed angle
- Can be hot or cause rashes
- May cause skin irritation even with pillowcase on vinyl covers
- More moisture found on skin after wedge use
- Cannot offload ear

Pillows⁶

- Non-customizable
- Non-standard sizes are too thick/thin
- Loses the turn as it flattens over time, putting patient at risk
- Doesn’t maintain head in desired position⁷
- Cannot offload ear
Z-Flo™ Fluidized Positioners

Mölnlycke’s unique, patented Z-Flo Fluidized Positioners offer significant advantages over traditional offloading/positioning methods such as pillows and foam wedges. Z-Flo Fluidized Positioners:

- Offer continuous protection
- Are easy to mold
- Conform to virtually any shape
- Maintain their shape once molded
- Adapt to multiple anatomical sites, including occiput, sacrum and extremities

Fluidized Conformational Positioning®

What differentiates Z-Flo Fluidized Positioners from other offloading and positioning approaches?
The fluidized positioners’ unique material is easily molded but can hold a position once shaped until it is molded again. These qualities of Zero Flow and Zero Memory combine to create Fluidized Conformational Positioning, which is therapeutic for patients.

✔ Zero Flow
The material in the positioner does not lose its shape, unlike gels and bean bags that will continue to shift as the contents react to gravity and pressure.

✔ Zero Memory
The positioner will stay in the position created by the clinician. Items like pillows and foam wedges seek to return to their original shape, which can cause friction and migration while under the patient.
Maintaining a turn

Guidelines for pressure injury prevention call for turning the patient based on an individualized schedule and maintaining that position. Because the Z-Flo™ Fluidized Positioner has Zero Flow with Zero Memory, it will maintain its shape – and the patient’s position – during that time period, resulting in increased compliance with positioning guidelines.

Additionally, the fluidized positioner lets the clinician dictate the degree of turn, ranging from a small microturn all the way up to large-degree turns. If needed, areas in the positioner can be depressed, or hollowed out, for medical lines, tubes or existing wounds.

A recent real-world study found a significant difference between how well a standard care pillow and Z-Flo positioner maintained a side-lying lateral tilt position.

Can you maintain a Q2 turn for two hours with your current repositioning approach? With the Z-Flo Fluidized Positioner, you can!
Instituting a perioperative prevention bundle at Einstein Medical Center Montgomery resulted in:

- **75%** decrease in surgery-related pressure injuries
- **34%** reduction in estimated PI treatment costs
- **65%** reduction in occipital stress

Getting ahead of occipital pressure injuries

Traditional protocols and products may seek to relieve pressure, but don’t focus on pressure redistribution. When the head rests on a flat surface, it places the full weight of the head onto a very small area. However, a Z-Flo™ Fluidized Positioner cradles the head, spreading and redistributing the weight over a much greater surface area. As the Z-Flo Positioner redistributes pressure over an increased surface, it also maximizes support and surface area coverage. It will also maintain the desired head position until remolded.

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- **34%** reduction in estimated PI treatment costs
- **65%** reduction in occipital stress

Using finite element modeling, Z-Flo Fluidized Positioners were shown to reduce the exposure to occipital stress by 65% or more at the skin level compared to standard medical foam and gel rings.

“Our last pressure injury was in January of 2017, and when we did the root cause analysis we found that the pressure injury was the exact same size as the donut that they had put under the patient’s head and it was a reportable pressure injury. So we went back to the drawing board and that was when we found out about the fluidized positioner... And since we instituted that we have not had a pressure injury.”

– Diane Kimsey, RN, MSN, MHA, CNOR, Einstein Medical Center Montgomery
Versatile protection across the care continuum

The range of sizes of Z-Flo™ Fluidized Positioners make them suitable for use in multiple departments and for various uses. For example, the small size can be used to help prevent medical device-related pressure injuries, allowing the patient and/or medical device to be repositioned to reduce the volume of tissue under stress and decrease shear forces created by the medical device.

Fluidized positioners can be cleaned using hospital-approved disinfectant wipes. While fluidized positioners are designed for single patient use in order to guarantee best performance and avoid cross contamination, they can travel with a patient to the next hospital department, care setting or even home.

Pressure injuries in the OR

All perioperative patients are at risk for pressure injuries because they are immobile and unable to feel pain during a surgical procedure. Studies report that the risk of pressure injury increases up to 48% for every hour after the initial 60 minutes of a procedure.¹²

Perioperative pressure injuries can increase the cost of surgery-related hospital stays by an estimated 44% and may add approximately $1.3 billion annually to healthcare costs in the U.S.¹²

Real-world success

At North Shore University Hospital, the use of Z-Flo Fluidized Positioners resulted in: 

- **45%** overall reduction of pressure injuries
- **Zero** incidence (buttocks)

The use of Z-Flo Fluidized Positioners in an Australian 54-bed ICU delivered an:

- **87.7%** reduction in occipital pressure ulcers
Fluidized positioners in the NICU

Z-Flo Fluidized Positioners for neonatal care are specially designed to comfort, support and help premature/ill infants continue normal development with containment in an individually molded nest. The infinitely adjustable neonatal positioners allow the caregiver to custom-mold a shape to fit the infant’s body for optimal comfort and protection while also accommodating a wide variety of medical conditions and equipment.

Evidence

In a proof of concept trial on the use of a conformational fluidized positioner vs. standard positioning, infants calmed more easily, showed reduced wakefulness, and were observed to sleep better. Even neonates with surgical and gastrointestinal complications showed higher sleep efficiency.¹³

A recent quality improvement project in a Midwest NICU suggested that babies’ flexor tone, symmetrical movement, head shape and range of motion improved over standard of care with use of Z-Flo Fluidized Positioners.¹⁴

Preventing pediatric pressure injuries

Pressure injuries can affect anyone with limited mobility, including children. Researchers have documented incidence rates as high as 27% in pediatric critical care settings that are not taking preventative measures. Hospital-acquired pressure injuries can negatively affect the child, family and hospital system, with children and their families suffering from an often-painful healing process and possible disfigurement.¹⁵

Patient positioning and device rotation are two of the five nursing interventions for pediatric pressure injuries identified by the Children’s Hospital Alliance [the other three are moisture management, skin assessment and support surface].¹⁶ The wide range of sizes for the Z-Flo Fluidized Positioner make it a versatile tool for patient positioning as well as offloading medical devices.

Notes: Do not send the Z-Flo Fluidized Positioner home with babies under one year. Z-Flo Fluidized Positioners are shown in this brochure without covers for illustrative purposes.
Z-Flo™ Fluidized Positioners

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<th>Dimensions</th>
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Pediatric/NICU Positioners

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<td>1400239</td>
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Pediatric/NICU Positioning Kits

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References:

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