



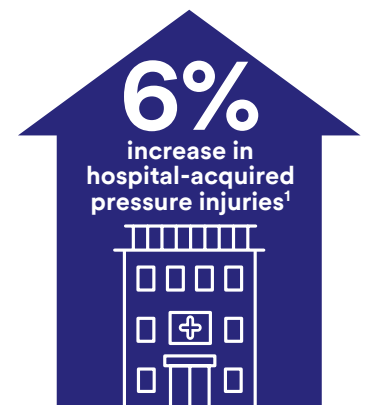
3M Science.
Applied to Life.™

Reducing Pressure Injuries



The impact of pressure injuries

In 2019, the Centers for Medicare & Medicaid Services (CMS) reported that pressure injuries were the only hospital-acquired condition that increased in incidence rates (+ 6%) from 2014-2017, while other hospital-acquired conditions saw a decrease.¹ Pressure injuries (PI) continue to be a growing healthcare concern² – leading to longer hospital stays and higher rates of readmission³.



Patient safety begins with skin safety

Now more than ever, patient safety continues to drive the design and delivery of care. To reduce incidence rates, and ultimately improve patient outcomes, it helps to understand where, how and why pressure injuries occur so the appropriate preventative measures can be put in place.

Pressure injury prevalence and impact



\$694 million

In New Zealand, a total cost of a pressure injury treatment is estimated \$694 million annually (NZD, at 2015)⁵



\$983 million (AUD)

Estimated annual cost of pressure injury care in Australia⁴

Pressure injury facts

- Most PIs are developed within the first week of admission⁷
- The most common stage reported was Deep Tissue Injury (DTI)⁷
- 75% of medical device-related pressure injuries (MDRPis) are facility-acquired vs. present on admission (POA)⁷

Sites most susceptible to PI

While pressure injuries can occur at nearly any site, some areas are more vulnerable than others. The most at-risk areas include:



Sacroccocygeal area

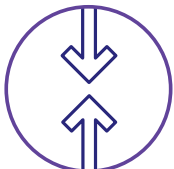


Heels



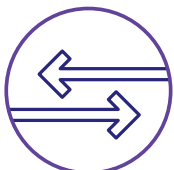
Medical device areas

The forces at play



Pressure

While ischemia plays a role, we now know that the primary driver for pressure injury is deformation of soft tissue. Direct damage from sustained deformation can result in cell damage in a matter of minutes,⁶ and an eventual cascade of cell death.



Friction



Shear

Shear strain occurs when skin is exposed to friction and gravity. Friction pins the skin to the underlying surface as gravity pulls downward. These forces compress, twist, and stretch cells and blood vessels and can lead to tissue necrosis.

 **41%** of ICU patients

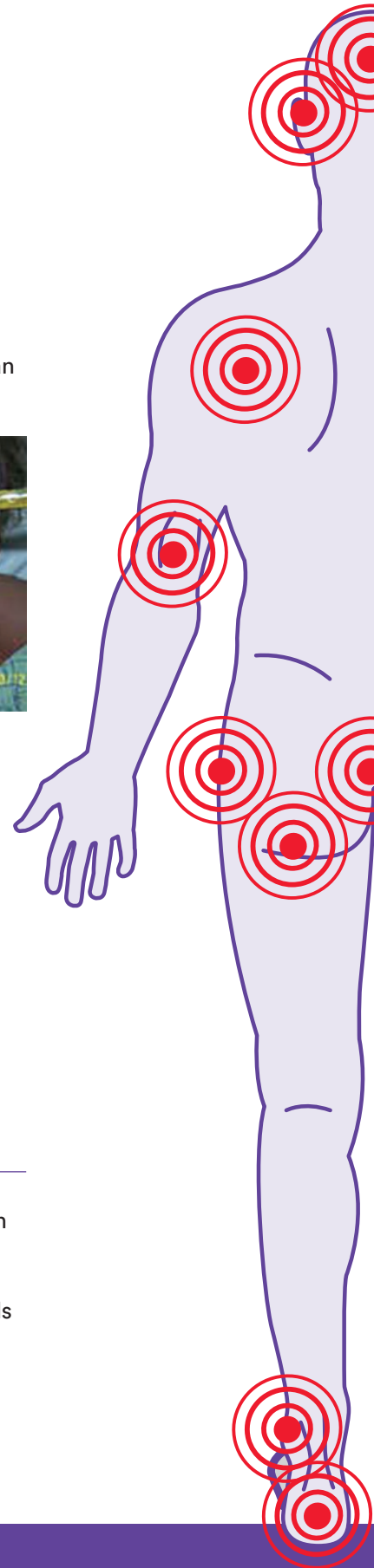
Up to 41% of ICU patients may develop a pressure injury⁷

 **3-7** additional days

Pressure injuries add 3-7 days to patient stays⁸

 **60K** deaths occur

It's estimated that 60,000 die as a direct result of PU/I-related complications⁶





Reduce pressure injury with 3M™ Tegaderm™ Silicone Foam Dressings

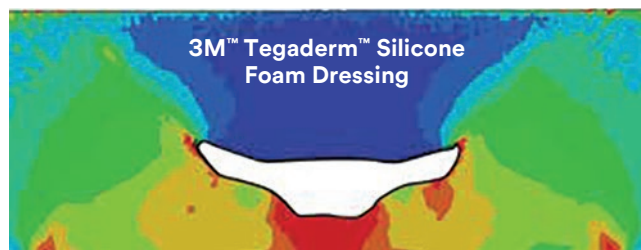
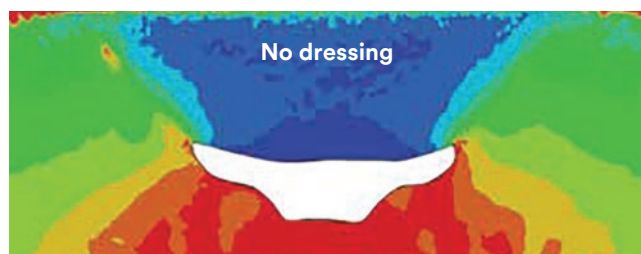
To protect against friction and shear, the National Pressure Ulcer Advisory Panel (NPUAP) recommends using a polyurethane foam dressing to protect bony prominences like the sacrum and heels.¹⁴ To align with these standards, Tegaderm Silicone Foam Dressings provide protection and gentle adhesion at these high-risk locations by:



- 1 Reducing exposure to high levels of tissue strains
- 2 Helping to reduce the potential for skin maceration¹⁰
- 3 Providing significantly long wear time¹⁴

Redistributing pressure

Recent clinical research, imaging studies and mathematical modeling have led to new understanding of how pressure injuries, and especially serious pressure injuries, form. Tegaderm Silicone Foam Dressings have been shown to reduce tissue deformation, minimising the effects of pressure, friction and shear.¹³



Managing moisture to support skin microclimate

Warm, moist skin is more vulnerable to the damaging effects of pressure and shear, which are recognised risk factors for pressure injury formation.¹⁰ Tegaderm Silicone Foam Dressings are designed to reduce the amount of moisture trapped at the skin's surface, helping support the ideal microclimate to help reduce the potential for skin maceration.¹⁶



Patient side



Back side

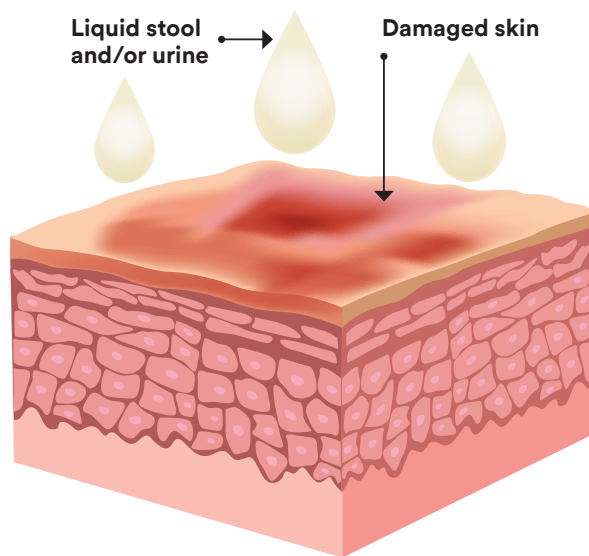
Positioned for prevention

Tegaderm Silicone Foam Dressings provide significant wear time¹³ and their design keeps the dressing where it's needed to help keep the skin protected.

The complex connection between PI and IAD

In addition to the factors mentioned previously, research suggests that incontinence-associated dermatitis (IAD) is a risk factor for developing pressure injuries in the sacral area.¹²

Given this connection between IAD and PIs, interventions for prevention and management should be integrated and complementary.

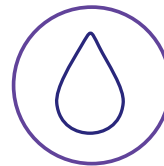


Pressure injury



Incontinence-associated dermatitis

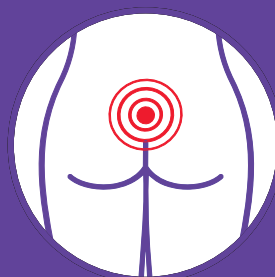
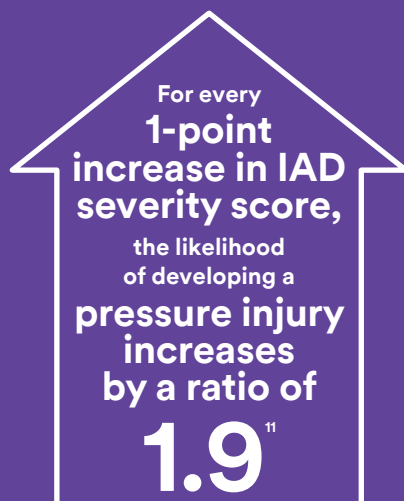
The role of moisture



Moisture

Exposure to wetness decreases skin strength, compromises barrier function, and makes skin more susceptible to damage from friction. Diarrhea can expose the skin to caustic irritants that can rapidly damage skin.⁸

The impact and prevalence of IAD



IAD increases the likelihood of developing a full-thickness sacral PI by **2.65X¹⁰**



3X increased risk for sacral PI

Patients with IAD are at an increased risk of superficial sacral pressure injuries with an odds ratio of 2.99¹²



4X more likely to experience PI

Patients with IAD are 4X more likely to experience a facility-acquired sacral PI than patients without IAD¹⁰



Help prevent IAD with 3M™ Cavilon™ Advanced Skin Protectant

To aid in moisture management, the NPUAP recommends using a high-quality skin protectant.¹⁵ The revolutionary technology in 3M's Cavilon Advanced Skin Protectant helps skin by:

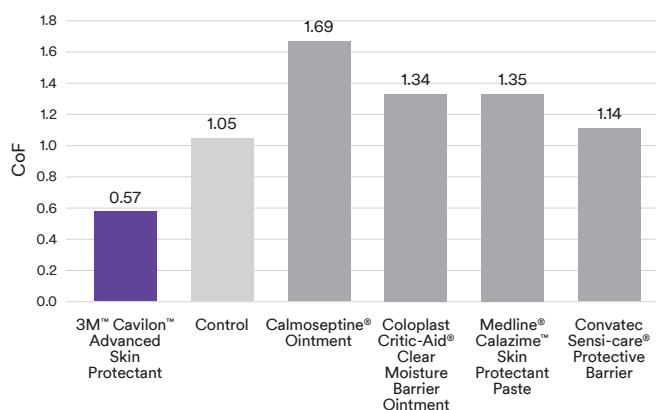
- 1 Protecting against stool, urine and other bodily fluids
- 2 Forming a protective barrier, which helps manage friction and shear

Reducing friction

Use of traditional moisture barriers such as ointments and pastes, are common practice to prevent and treat IAD. But recent research suggests that these products may actually increase friction.⁹

Cavilon Advanced Skin Protectant's unique formula creates a highly durable, ultra-thin, transparent, breathable and flexible barrier that protects skin from caustic, corrosive bodily fluids. Unlike traditional moisture barrier pastes and ointments, Cavilon Advanced Skin Protectant does not increase friction and can help reduce risks that contribute to pressure injuries.⁹

Impact on friction: A comparison of moisture barriers



Note: Data was generated in a laboratory setting using a slide sled apparatus.

Patient photos using Cavilon Advanced Skin Protectant



Patient with skin damage on Day 2











Patient with improvement noted on Day 4

Changing the standard of care

Addressing complex, challenging conditions such as PI and IAD require advanced solutions and innovative technologies. 3M's industry-leading expertise in foam dressings, adhesives, and polymer-based skin protectants is changing the standard of care – empowering clinicians to care for patient skin like never before.

When choosing an approach to help reduce the risk of PI and IAD, there are several ideal properties to consider as part of your overall PI prevention program, including protection against pressure, friction, shear and moisture. See how Tegaderm Silicone Foam Dressings and Cavilon Advanced Skin Protectant stand up against these challenges.

Impact on	 3M™ Tegaderm™ Silicone Foam Dressings	 3M™ Cavilon™ Advanced Skin Protectant
 Pressure	<ul style="list-style-type: none"> • May greatly reduce exposure to high levels of tissue strains near the sacrum 	
 Friction	<ul style="list-style-type: none"> • Low friction backing minimises local shear forces¹⁸ 	<ul style="list-style-type: none"> • Forms a protective barrier, which helps manage friction and shear
 Shear	<ul style="list-style-type: none"> • Highly conformable • Has a thin, low-profile edge, helping to minimise the rolling and lifting that can impact adhesion and wear time 	
 Moisture	<ul style="list-style-type: none"> • A superabsorbent layer further pulls moisture away and locks it in place • A moisture control layer helps maintain optimal balance by facilitating evaporation through the film backing 	<ul style="list-style-type: none"> • Provides waterproof protection for skin • Attaches to wet, weepy damaged skin¹⁹ • Protects against urine, stool and other bodily fluids

Benefits for		
 Clinicians and patients	<ul style="list-style-type: none"> • Ability to access and assess the skin whilst minimising damaging the skin • Easy one-handed application¹⁵ • Up to 7 days wear time¹⁵ • Gentle adhesion with Silicone adhesive • Unique multi-layer design, helping to reduce the potential for skin maceration 	<ul style="list-style-type: none"> • Durability eliminates the need for frequent application • Allows easy gentle cleansing • Provides a protective barrier. Protective barriers have been shown to reduce pain associated with IAD/IAD care¹⁷ • Creates a protective environment that supports healing • Single-use applicator reduces the potential for cross-contamination
 Economics	<ul style="list-style-type: none"> • Longer wear time plus gentle adhesion may help save time and money on unscheduled dressings changes 	<ul style="list-style-type: none"> • Durability eliminates the need for frequent reapplication¹⁶

† Refers to 90641 and 90646.

‡ Cavilon Advanced Skin Protectant is not an analgesic.

Product		Size	Units/Box	Boxes/Case
3M™ Tegaderm™ Silicone Foam Dressings				
Non-Bordered Dressing	90631	10 cm x 10.8 cm	10	4
Non-Bordered Dressing	90632	15 cm x 15 cm	10	4
Bordered Dressing	90643	5 cm x 5 cm	10	6
Bordered Dressing	90640	7.5 cm x 7.5 cm	10	6
Bordered Dressing	90641	10 cm x 10 cm	10	6
Bordered Dressing	90642	15 cm x 15 cm	10	4
Heel & Contour	90646	16.5 cm x 16.5 cm	5	4
Small Sacral	90647	15 cm x 17 cm	10	4
Large Sacral	90648	18.5 cm x 22 cm	5	4
3M™ Cavilon™ Advanced Skin Protectant	5050G	2.7 mL / applicator	20	1
3M™ Cavilon™ Advanced Skin Protectant	5051G	0.7 mL / applicator	20	1

Contact your 3M representative to discover why 3M™ Tegaderm™ Silicone Foam Dressings are an excellent choice for your wound management and pressure injury prevention programs.

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