

Use of friction-reduction products (socks, shorts/underwear, pillow cases, and custom products)

For six sites, Augustana purchased strategic friction-reduction products in different sizes to have available if a need was identified for a resident at risk. This allowed the prompt delivery as needed. When items were used from the on-site kits, replacement items are ordered to be sure needed products are available.



GlideWear® is a dual-layer fabric that glides smoothly against itself, absorbing friction and shear and protecting skin. It is washed in the facility washer and dryer.

Heel and Ankle Protection Socks are indicated for individuals at-risk for or experiencing skin breakdown and ulceration of the heel and ankle due to extended time in bed. May be used independently or in conjunction with a pressure offloading boot. Strategic low-friction socks use an ultra-low friction textile to protect at-risk areas from the forces that cause diabetic foot ulcers, calluses, blisters, pain & skin breakdown. This technology is available in four sock models, including forefoot, partial foot, midfoot, and heel/ankle. Each model features a non-binding sock technology.

Skin Protection Shorts/Underwear are indicated to provide lasting protection from friction and shear that cause pressure injuries on the sacrum, coccyx, and IT's for people who use wheelchairs or spend a lot of time in bed. There are men's (underwear) and women's (shorts) versions available. They can be worn over incontinence products.

Hair and Skin Protection Pillow Cases are indicated to absorb harmful friction and shear that cause hair matting and sores on the scalp and ears. They are indicated for extended time in bed, or skin trauma in this area.

Prototype draw sheets, cooperative team approach at Augustana Minneapolis to seek a solution

Augustana Care, seeking innovative ways to prevent pressure injuries is working with Tamarack Habilitation Technologies, Inc. to prototype bed surfaces for patients with limited mobility who are high risk for pressure injuries. A team of wound nurses and nursing assistants at Augustana, Minneapolis, is evaluating one version where a GlideWear patch is sewn to a draw sheet, and another version where GlideWear is sewn to draw sheet that's sewn to a draw sheet - soaker pad combination. Once an ideal prototype is developed, Augustana Care may establish a unit with strategic low-friction draw sheets for all patients there.



How do you assess applications for strategic friction reduction for skin protection?

Educate yourself and your team!

- The National Pressure Ulcer Advisory Panel (NPUAP) has great resources, <http://www.npuap.org/resources/educational-and-clinical-resources/>
- Read International Review; Pressure Ulcer Prevention: Pressure, Shear, Friction, and Microclimate in Context, a Consensus Document; http://www.woundsinternational.com/media/issues/300/files/content_8925.pdf
- Contact Tamarack Habilitation Technologies, Inc. to inquire about options for complimentary in-services 763-795-0057 or info@glidewear.com

Minnesota Gerontological Society Annual Conference, April 2018

Protecting Skin / Tissue by Integrating Low-Friction Technology at Augustana Care



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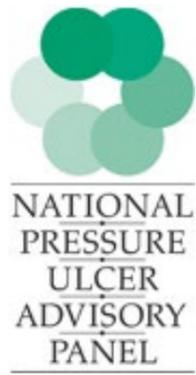
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Abstract

Augustana Care is implementing a multi-site focus on strategic friction reduction to maximize skin/tissue protection. Friction and shear forces are known extrinsic risk factors of pressure injuries, but they are often overlooked. It is not uncommon for people to address pressure only, missing an opportunity for improving skin integrity, improving quality metrics, and reducing the cost of providing care. This process has included staff education, providing on-site kits to address friction and shear concerns promptly, providing specialty garments to individuals, and work on new prototypes. Strategic friction reduction can play a key part in skin / tissue protection across different settings.

Objectives:

- The reader will describe how friction and shear forces increase risk of pressure injury
- The reader will examine strategies for implementation of a strategic friction reduction process for skin protection within a multi-facility system
- The reader will assess applications for strategic friction reduction for skin protection in their own setting



2016 New NPUAP Pressure Injury Definition

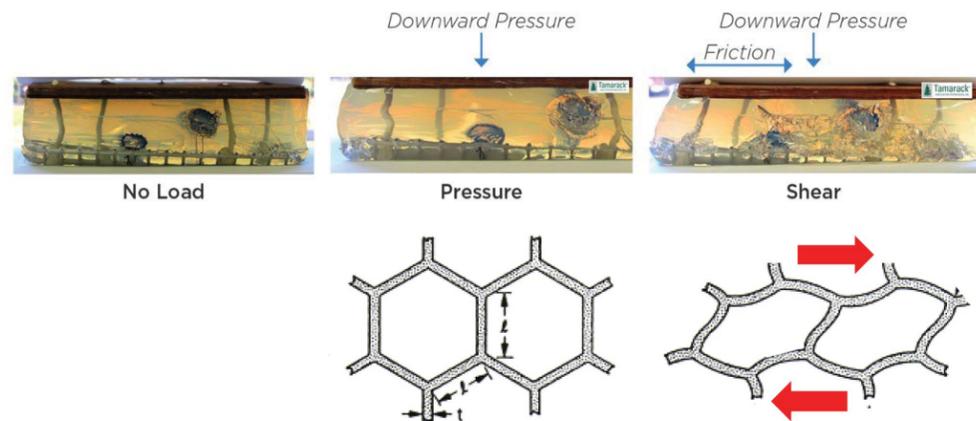
A **pressure injury** is localized damage to the skin and underlying soft tissue usually over a bony prominence or related to a medical or other device.

The injury can present as **intact skin or an open ulcer** and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear.

The **tolerance of soft tissue for pressure and shear** may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue.

Shear

- A distortion, pulling or stretching of the tissue which may cause damage to internal structures of tissue
- Shear stress will peak during *static friction*
- It can lead to shear strain resulting in cell death in the deeper tissues
- A person does not need to be sliding or moving to have injury from shear
- Although injury from pressure can take hours to develop, injury from shear can occur more quickly, in under an hour (Linder-Ganz, Gefen, 2007)



Why Care About Shear? Some Statistics:

- Prevalence: more than 7 million pressure injuries (formerly called pressure ulcers/sores) world-wide* (3 million in the USA*)
- Mainly affected are the elderly during care at home, in nursing homes, and periods of hospital admission*
- Existing para- and quadriplegic population: 50% of re-admissions and 8% of all deaths in SCI patients are caused by pressure injuries***
- 25% of individuals with spinal cord injuries develop pressure injuries**
- 36% of pressure injuries occur in the sacral-coccyx region, 30% on the heels, 34 % other ***

* MediMarket Diligence
 ** Thomas 2005
 *** www.ulceras.net

Friction Has Several Faces:



Extrinsic Risk Factors Affect Each Other

- Increased skin temperature increases metabolic rate which affects the need for oxygen and nutrients, as well as need for cellular waste removal (Kosiac 1991)
- Increased humidity and increased temperature weaken the skin (Rieger, Dehm, 1973)
- At high levels of shear stresses, only half as much pressure is required to occlude blood flow (Bennett, Trainor, 1979)
- If shear stresses are reduced, tissues can tolerate higher pressure without blood flow occlusion (Linder-Ganz, Gefen, 2007)

Strategies for implementation of a strategic friction reduction process for skin protection within a multi-facility system

Focused education on strategic friction reduction and skin protection and why it is important in a SNF (Skilled Nursing Facility) setting.

Strategic friction reduction education was provided on-site for six Augustana Care sites. The wound nurses and Corporate Director of SNF Clinical Practice were involved with the planning. The educational sessions were tailored to each site's needs. At Augustana Minneapolis, RNs and NAs from all shifts were included. They all included the science of shear, and why strategic shear reduction is important in the healing and prevention of pressure injuries. Education regarding use and care, and clinical implications for different products was also provided. Augustana's electronic medical record was also modified to facilitate the documentation and tracking the use of strategic friction reduction products.