



Low Profile Dynamic Pressure Relieving Surface

Dr. Arthur Stone,

DPM, President, MedNexus, member NPUAP advisory board

This is a novel technology for pressure injury prevention across the continuum of care

“Patients suffer enough.

Don’t let a pressure injury add to the pain.”

Worldwide Pressure Injury Prevention Day was Nov 17, 2016

Ambrose Pare – 16th century – founder of wound care surgery in France

“we should put him in another bed, very soft, and give him a clean shirt and sheets”

“we should make him a little pillow of down to keep his buttock in the air, without his being supported on it” – he’s RIGHT! – relieving and reducing pressure

Latest version of a pressure injury definition from NPUAP:

A pressure ulcer/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. A silky, easy to put on liner goes on first



Important Stats (US):

- National average: 3% (2.5 million patients)
- 2007 average individual cost is \$43,000
- 2007 yearly cost \$9.1 – \$11.6 BILLION
- About 60,000 people die as direct result
- May be associated with severe pain
- More than 17,000 lawsuits directly related each year

Common areas for PIs:

- Occiput (back of head)
- Elbow
- Hip
- Sacrum
- Buttocks
- Ankle
- Heel

ASPECTS of Pressure Injury Prevention:

A: assess pressure ulcer risk

S: skin assessment

P: pain and patient concerns

E: eating and drinking

C: continence and moisture management

T: teaching

S: support surfaces



WCICT2017

20-21 June | Manchester, UK

Risk factors: intrinsic

- Immobility
- Sensory Loss
- Disease
- Age
- Body Type
- Poor nutrition
- Incontinence
- Infection

Risk factors: extrinsic

- Impact injury
- Friction and shear forces
- Posture
- Heat
- Excessive uniaxial pressure
- Moisture

What it comes down to in long-term care:

DID YOU TURN THE PATIENT?

He's a specialist in long-term care

Emerging therapies for prevention:

- Microclimate
- Prophylactic dressings – many companies are advocating their use prior to surgery – creates a barrier between operating room table and patient or bed and patient
- Fabrics and textiles
- Electrical stimulation
- Smart support surfaces



Pressure redistribution technologies – support surfaces are trying to innovate, find ways to lower pressure on one area of the body

Advent of smart beds – bed can tell us if the patient turns – it's emerging, and its changing the way we look at beds

Smart bed vision:

1. Data Collection - Sensors measure degree of pressure
2. Profiling - Building a personalized profile including posture and pressure map
3. Learning - harnessing computational capabilities to assess risk help make decisions
4. Acting - Redistributing pressure when necessary

“Device related” contributors to PIs:

- Pressure
- Skin shear/friction
- Moisture and heat

Support surface technology provides pressure redistribution and prevention

The Dabir System uses:

- Alternating micro-pressure support and tissue off-loading
- Two types of skin shear relief (inflation and immersion)
- Enhanced infection control (re-posable surface)
- Improved ergonomics for caregiver (less than an inch in thickness)

Surface features:

- Multi-patient with cleaning (micropressure only)
- Product life: Surgical: 200 hours; Gurney: 720 hours; Medsburg bed: 2160 hours
- Weight limit: 50-600 pounds
- Radio translucent
- FDA 510K exempt



No one thing is going to prevent PIs. We need a toolbox. Early detection, sacral dressings, the Dabir surface – they all need to work together synergistically. Partnerships are key to the patient's best interest.

Where is the Dabir surface applicable?

- Operation room tables for any procedure more than 3 hours in duration
- ICU and recovery beds
- Emergency departments
- Long term acute care
- Skilled nursing facilities
- Rehab, dialysis, oncology
- Home health

In the middle of pilot clinical studies

The content of these notes is proprietary and confidential information of EHP Inc., dba IPIP. It is not intended to be distributed to any third party by the recipient for commercial purposes without the expressed written consent of EHP Inc. Furthermore, the recipient may only use these notes for personal and not commercial use. In addition, if the recipient does distribute these notes to a third party for personal use, the recipient agrees to not alter or in any way modify this statement of proprietary rights. All recipients of these notes agree to hold EHP Inc., dba IPIP, its subsidiaries, agents, servants, and employees harmless for any liability arising from the use of said notes.