Emerging Therapies

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Microclimate

- Role in pressure ulcer etiology
- Local temperature and moisture at body/support surface interface
Evidence of Role of Microclimate

- Position may influence microclimate
  - Skin temperature alterations in superficial blood flow and changes in positioning
  - Contact with skin
    - Sleep positions

- Age
  - Elderly reduced ability to dissipate heat
  - Increased temperature and skin moisture

Control Microclimate

- Specialized surfaces
  - Low air loss
    - No evidence for optimal levels of skin temp and moisture
    - Clinical Judgment

- Surface material
- Vapor Permeable surface cover
- Synthetic silk-like sheets
- Do not apply heat directly
Prophylactic Dressings

- **Bony prominences**
  - Foam dressing
  - Silicone

- **How to select?**
  - Manage microclimate
  - Ease of removal
  - Ability to assess skin
  - Location where it will be applied
    - Damaged, displaced

When to Use Sacral Dressing

- **IF THE PATIENT IS EXPECTED TO HAVE (ONE OR MORE OF THE FOLLOWING):**

  - A surgical procedure lasting longer than 3 hours—both inpatient or outpatient surgical procedures
  - More than 2 trips to the OR
  - Multiple procedures (ex. CT, MRI, IR)
  - Has a diagnosis of: Shock, SIRS, Hypovolemia, Trauma, Multisystem Organ Failure
IF PATIENT HAS 3 OR MORE OF THE FOLLOWING: (both surgical patients and non-surgical patients)

- Weeping Edema/Anasarca
- Traction
- Anticoagulation Therapy
- Morbid Obesity
- Malnutrition (Albumin <2.5; Prealbumin <20)
- NPO > 3 days
- Age >65 years old
- Diabetes Mellitus
- Orders for Bed-Rest
- Liver Failure
- **APPLY THE SACRAL DRESSING**
- Sedation/Paralytics > 48 hours
- Mechanical Ventilation > 48 hours
- Quadriplegia or Spinal Cord Injury
- Restraints
- Past History of Sacral Pressure Ulcer
- CVVHD
- Urinary or fecal incontinence not controlled by a catheter, pouch, or bowel management system

**Fabrics and Textiles**

- Silk-like fabrics rather than cotton or cotton-blend
- Shear and friction
Current Bedding

- Hospital, nursing home, hotel, or at home
  - usually sleeping on poly/cotton or 100% cotton bedding

- Health care linens have changed very little in the last half century

- Typically these are cotton fabrics and have no special properties, despite our increasing healthcare needs

Table cloth image here

- Smooth not slippery
Can Linens Impact Patient Microclimate?

- **Basis of modern sports apparel**

**Moisture & Heat**

- silk-like fabrics maximized moisture wicking and drying of bed linens. Water loss from fabric is facilitated through rapid wicking and evaporation.

- Action removes heat from the body through the latent heat of vaporization, reducing perspiration.

- Helps to maintain the physiologic water balance to more effectively control skin temperature and moisture.

**Cost Benefits**

- **NC Data**
Electrical Stimulation for Muscles

- Strength of Evidence = C Strength of Recommendation hand signal

- Benefits

- Contractions result in improved pressure distribution
Emerging Therapies

• Starting at the linens
QUESTIONS?