Pressure ulcer recognition and prevention

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PRESSURE ULCER RECOGNITION AND PREVENTION..
Pressure Ulcers:
Current terminology?

- Bedsore
- Pressure Sore
- Decubitus Ulcer
- Pressure Ulcer

What term do you use/prefer?
What is a Pressure Ulcer?

‘A pressure ulcer is a localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated. (EPUAP 2009)
What is a Pressure Ulcer?

‘Ulceration of the skin due to the effects of prolonged pressure, in association with a number of other variables’ (Collier 1995)

‘an area of localised damage to the skin which can extend to underlying structures such as muscle and bone. The damage is caused by a combination of pressure, shearing and friction forces and moisture’ (NICE, 2005)
Pressure

External pressure will be transmitted from the skin to the underlying bone, compressing the tissues, including the smaller blood vessels, between these two structures.

When prolonged this pressure can lead to inadequate blood supply and cause tissue death.
Shear

A parallel force, shear damage occurs when deeper skin layers and skeleton move away from the upper skin layers. This causes stretching of the small blood vessels which, if unrelieved, will lead to inadequate blood supply leading to tissue death.

For example when a patient slides down the bed - the skin over the sacral area adheres to the bed sheets and remains in the sitting position as gravity forces the deeper underlying tissues and bone to slip down the bed.
Friction

Friction results from the skin rubbing against another surface. Friction forces can contribute to the development of pressure ulcers by causing the skin layers to separate forming a blister, or by compromising the intact nature of the skin.

For example ill-fitting shoes or during poor moving and handling techniques, such as moving patients up the bed on a sheet.
Can you measure Pressure?.. 

‘a perpendicular load or force exerted on a unit of area’

*Bennett and Lee (1985)*

\[
\text{Force} \\quad \text{Pressure} = \frac{\text{Force}}{\text{Surface Area}}
\]
Potential Sites for Pressure Ulcers

- Bony prominences

- Consider
  - Oxygen masks
  - Catheters and tubing
  - Surgical appliances
  - Prosthesis
Factors that increase the risk of developing a pressure ulcer
Variables - ‘evidence based’

- Age
- Medical Condition
- Peripheral Vascular Disease (PVD)
- Drug Therapy
- Nutrition
- Medical Interventions
- Patient Support Surfaces
- Care being Given
Age

- Extremes of age
- The skin of elderly patients is thinner, drier and less elastic increasing the risk of damage.
- Neonates and young children are also at increased risk of skin damage because their skin is still maturing.
Nutritional Status

• Dehydration and malnutrition lead to poorly nourished, inelastic tissues that are more prone to damage.

• Consider
  – Likes and dislikes
  – Appetite
  – Chewing and swallowing difficulties – dentures, sore throat/mouth
  – Physical ability to feed themselves?
BMI

- Very thin patients have less fatty tissue over the bony prominences to protect from pressure.

- Obese patients may have difficulty moving and therefore repositioning to relieve pressure.
MAJOR POINTS OF PRESSURE OVER 'BONY' PROMINENCES.

- with Permission from PHARMACIA.
Medical History

• Conditions causing reduced mobility & sensation.
• Terminal illness due to multi-organ failure, poor nutritional status & immobility.
• Conditions affecting the circulation and oxygenation of the blood.
• Consider
  – Heart disease
  – COPD and lung diseases
  – Peripheral vascular disease
  – Diabetes
  – Anaemia
Medication

- Anti-inflammatory drugs (including aspirin) and steroids may prevent healing.
- Chemotherapy drugs may damage healthy tissues.
- Sedative drugs may affect mobility and sensation.
Reduced Mobility

- Inability to move self in order to relieve the pressure.
- Consider immobility/reduced mobility due to:
  - #’s
  - Surgery
  - Epidurals
  - Traction
  - Pain
  - Paralysis
  - CVA
  - MS
  - Arthritis
  - Drains & tubing
Sensory Impairment/Reduced Consciousness

• Unaware of the need to relieve pressure.
• Consider
  – Unconsciousness
  – Sedation
  – Spinal Cord Injury
  – Diabetic neuropathy
  – Neurological Conditions egg MS, CVA
Moisture Lesions

• A combination of moisture and friction may cause moisture lesions in skin folds.

• A lesion that is limited to the natal cleft only and has a linear shape is likely to be a moisture lesion.

• Peri-anal discolouration / skin irritation is most likely to be a moisture lesion due to faeces.
Incontinence

- Urinary and faecal incontinence cause excoriation of the skin.
- Moisture causes maceration of the skin.
- Consider
  - Barrier creams/films
Skin Hygiene

- Excessive use of soaps will remove the skin’s natural protective oils and dehydrate it.
- Consider
  - Skin cleansers
A PHILOSOPHY FOR CARE!

'Prevention is better than cure'
TO BE COST EFFECTIVE!

WHY?
Cost of Pressure Ulcers?

Additional treatment / management costs associated with an Orthopaedic patient with one Grade 4 Pressure Ulcer equals….

£40,000 Sterling


from £1,214 (cat 1) to £14,108 (cat IV)

ESSENTIALS OF A PREVENTION PROGRAMME

Professional Discipline - Research based practice
Education
Quality Care
SSKIN - what does it stand for?

- **S** = Surface
- **S** = Skin Inspection
- **K** = Keep moving
- **I** = Incontinence
- **N** = Nutrition
Patient Support Surfaces available?

PRESSURE REDUCING?

PRESSURE RELIEVING?
Prevention and Management Support Surfaces

- Static foam mattresses
- Huntleigh Rentals Contract
  - Resource pack on intranet
- Nimbus III – alternating airflow, has heel guard
- Breeze – low air loss, light weight patients
- Aura cushion
- Consider when to step down!
TOOLS FOR ASSESSMENT
Observation / Skin Assessment
Prevention and Management
Skin Inspection

• At least daily, frequency will depend on vulnerability and condition of patient
• Pay particular attention to:
  – Areas of healed ulceration
  – Bony prominences
• Look for
  – Discolouration
  – Redness that doesn’t blanche with light pressure
  – Blisters
  – Localised heat
  – Localised oedema
Risk Assessment Tools

NICE Guideline No.7 Pressure Ulcer Prevention

‘Whilst there is little evidence to support one tool over another, there is evidence to suggest that an assessment process that incorporates a risk assessment tool improves the patients outcomes’

Which one do we use?

WATERLOW (2005)
Prevention and Management

Positioning

- Regular repositioning to avoid pressure on bony prominences and existing pressure ulcers
- Turning/30 degree tilt
- Avoid direct contact between bony prominences to avoid friction and shear – consider use of pillows

Consider
- Seating
- Spinal injuries
- Bariatric patients
Prevention and Management

- Use of appropriate patient support surfaces
- Skin assessment and good hygiene
- Evidence based moving and handling practice
- Nutrition
- Hydration
- Incontinence
Categories (Grading) of Pressure Ulcers:

GRADE 1

GRADE 2

GRADE 3

GRADE 4
Pressure Ulcer Categories

Category 1

- Non-blanchable hyperaemia (of intact skin)
- Discolouration of the skin
- Warmth
- Oedema
- Hardening
Pressure Ulcer Categories
Category 2

- Partial thickness skin loss or damage involving the epidermis and/or the dermis.

- The ulcer is superficial and presents clinically as an abrasion or a blister.
Pressure Ulcer Categories
Category 3

- Full thickness skin loss involving damage to or necrosis of subcutaneous tissue.
- This may extend down to but not through the underlying fascia.
Pressure Ulcer Categories
Category 4

- Extensive destruction and tissue necrosis or damage to bone, muscle or supporting structures with or without full thickness skin loss
Deep Tissue Injury

- May appear as a purple, deep bruise, often mistaken for a Grade 1 pressure ulcer
- Skin is intact
- Occur over bony prominences
- Tissue damage that occurs from the inside out
- May quickly progress to Grade 3 / 4 pressure ulcers
Guidelines within ULHT for:

- Pressure Ulcer Prevention
- Equipment Provision (Support Surfaces)
- Pressure Ulcer reporting (PUNT)
- Pressure Ulcer Management
Current ULHT Documentation

- Patient assessment/admission documentation that incorporates all of the principles of SSKIN
- Waterlow Assessment Tool
- Tissue Viability Care Pathway
- PUNT (e-reporting tool on intranet)
- Wound Assessment and Management Chart
ANY QUESTIONS?