Reducing Hospital Acquired Pressure Ulcers

Prevention & Management of Pressure Damage

Spread the Learning and celebrate the successes
Prevalence & Cost

• Prevalence ranges from 10% to 18% in the UK (Clark & Cullum 1993).

• Cost to patient - pain, extended hospital stay and possible death.

• Cost of treating one grade 4 pressure ulcer is estimated at £10,551 (2004).
Pressure ulcers, pressure sores & bedsores

A pressure ulcer is 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)
Common Pressure ulcer locations

- Sacrum 49%
- Hips 11%
- Heels 9.5%
- Other 30.5%

i.e. head, spinal vertebrae, scapulae, elbows and malleoli. (Collier 1995)
Causes of pressure ulcer development - External factors

• Pressure

• Shear

• Contributing factors
  – Friction
  – Moisture
Pressure damage

• Occurs when skin and other tissues are directly compressed between bone and another surface such as a bed or a chair. Shutting off blood supply causing tissue to die.

  **Low pressure** can cause damage
  - if over several hours.

  **High pressure** can cause damage
  - within minutes.
Shear

- Skin moves at a different rate to underlying structures
- Stretches skin surface
- Stretches, Displaces and distorts blood capillaries.

Example: When a seated patient slips down in a chair or bed
Friction

• Two surfaces move laterally across one another.

• Causes ‘SCUFF’ – an break in the skin which can be influenced by shear or pressure.
Moisture

Urine, Faeces, Sweat, Exudate ………

• Increases friction and shearing forces which can lead to skin adhering to surface.

• 17.6% of acute in-pt’s are faecally incontinent (Junkin & Selekof 2007).
  - 23% (ABMUHB West 2009)

• 54% of all skin injury results from exposure to incontinence (Gray et al 2007).

• 37.5 times more likely to sustain pressure damage that continent patients

Skin becomes water logged causing it to break down, lose its protective barrier and resulting a superficial lesion.
Causes – Internal factors

- General health and age
- Mobility
- Body weight–Impaired nutritional status
- Incontinence
- Poor blood supply
- Insensitivity to pain or discomfort
- Medication
- Inadequate diet or fluid intake
Surface –

In order to identify the correct surface we must 1st identify the patients risk
Risk Assessment

• Comprise of a selection of identified intrinsic and extrinsic factors that contribute to pressure ulcer development risk.

• Each are given a numerical value which once calculated reflects the degree of risk an individual has of developing pressure damage.

• Should be completed within 2 hours of admission and reviewed as individuals condition changes (ABMULHB 2010)

ACT ON RISK IDENTIFIED
## WATERLOW PRESSURE ULCER PREVENTION/TREATMENT POLICY

Ring scores in table, add total. More than 1 score/category can be used.

### BUILD/WEIGHT FOR HEIGHT

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<thead>
<tr>
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<th>Category</th>
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<td>1</td>
<td>TISSUE PAPER DRY OEDEMATOUS CLAMMY, PYREXIA DISCOLOURED GRADE 1</td>
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<tr>
<td>2</td>
<td>TISSUE PAPER DRY OEDEMATOUS CLAMMY, PYREXIA DISCOLOURED GRADE 2-4</td>
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<tr>
<td>3</td>
<td>TISSUE PAPER DRY OEDEMATOUS CLAMMY, PYREXIA DISCOLOURED GRADE 3-5</td>
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### SKIN TYPE VISUAL RISK AREAS

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<td>A - HAS PATIENT LOST WEIGHT RECENTLY</td>
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<td>B - WEIGHT LOSS SCORE 0.5 - 5kg = 1</td>
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<tr>
<td>2</td>
<td>B - WEIGHT LOSS SCORE 5 - 10kg = 2</td>
</tr>
<tr>
<td>3</td>
<td>B - WEIGHT LOSS SCORE 10 - 15kg = 3</td>
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<tr>
<td>4</td>
<td>B - WEIGHT LOSS SCORE &gt; 15kg = 4</td>
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### MALNUTRITION SCREENING TOOL (MST)

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### CONTINENCE MOBILITY

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<td>RESTLESS/FIDGETY APATHETIC</td>
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<td>2</td>
<td>RESTRICTED BEDBOUND E.g. TRACTION CHAIRBOUND E.g. WHEELCHAIR</td>
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### SPECIAL RISKS

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<td>DIABETES, MS, CVA</td>
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<td>MOTOR/SENSORY</td>
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<tr>
<td>4-6</td>
<td>PARAPLEGIA (MAX OF 8)</td>
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<tr>
<td>5</td>
<td>MAJOR SURGERY or TRAUMA</td>
</tr>
<tr>
<td>5</td>
<td>MEDICATION - CYTOTOXICS, LONG TERM/HIGH DOSE STEROIDS, ANTI-INFLAMMATORY</td>
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© J Waterlow 1985 Revised 2005
Obtainable from the Nook, Stoke Road, Henlade TAUNTON TA3 5LX
* The 2005 revision incorporates the research undertaken by Queensland Health.

* Scores can be discounted after 48 hours provided patient is recovering normally.

www.judy-waterlow.co.uk
Skin assessment

• General medical condition.
• Including all bony prominences – every time you clean or reposition the patient or at the very least every shift.
• Is the surface assisting with protecting the patient?
• Moistness and incontinence.
• Nutrition.
What to LOOK for:

- Non-blanching redness (hyperaemia).
- Purplish/bluish patches on dark skinned people.
- Persistent red patches on light skinned people.
- Swelling, Blisters
- Shiny areas & Dry patches
- Cracks, calluses and wrinkles
Signs to FEEL for are:

- Localised hard areas.
- Localised warm areas.
- Localised induration.
- Swollen skin over bony points.
The 1st signs – Blanching Erythema (redness)

When lightly pressed the redness will turn white and then within a few seconds back to red.

Circulation still present.
Category I: Non-blanchable redness of intact skin

- Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Discoloration of the skin, warmth, edema, hardness or pain may also be present. Darkly pigmented skin may not have visible blanching.
Category II: Partial thickness skin loss or blister

- Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister.
Category III: Full Thickness (fat visible)

• Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Some slough may be present.

• May include undermining & tunneling.
Category IV: Full thickness loss (bone visible)

- Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present. Often include undermining and tunneling.
Nursing Care

General care

• Nutrition
• Patient handling
• Skin care
• Turning/repositioning
• 30 degree tilt
• Pressure relief equipment \textit{inc. cushions}
Keep moving

- Repositioning should be determined by the results of skin inspection
- Individuals at risk & are able to - should be encouraged to inspect their own skin and redistribute their own weight
- Contact between bony prominences should be avoided
Keep moving

• Shear and friction should be minimised
• Manual handling devices should be utilised correctly
• Use of the 30 degree tilt
PATIENT POSITIONING

SIMPLE...SAFE...EFFECTIVE...THE 30° TILT

SEMI-RECUMBENT POSITION

1. Supports the lumbar spine. Plump or fold the lower pillow if necessary.

2. An additional pillow is positioned under the buttock to ‘tilt’ the body, giving the ischial tuberosities and sacrum clearance.

3. Ensure that the heels are clear of the mattress.

4. The full semi-recumbent 30° ‘tilt’ position.

RECUMBENT POSITION

1. Use one or two pillows to support the head and neck.

2. Added pillows ‘tilt’ the patient onto one buttock and lifts the sacrum clear of the mattress.

3. Support the full leg on another pillow. Ensure that the heel overhangs the edge of the pillow.

4. Additional pillows may provide comfort for the legs.
Provision of equipment

Mattresses, cushions, moving & handling equipment should be allocated according to assessment.
Remember to consider Seating

Pelvic Obliquity

Anterior Pelvic Tilt

Posterior Pelvic Tilt
Correct Seating Position

Total Body Weight Distribution
- 75% Buttocks/Thighs
- 19% Feet
- 4% Trunk
- 2% Arms
Other equipment........

- Synthetic Sheepskins
- Doughnut rings
- Water filled gloves

SHOULD NOT BE USED

Allevyn Heel dressings have NO pressure relieving properties
DON’TS:

• Massage affected skin.

• Apply Rubber glove filled with water.

• Apply talc.

• Relieve pressure with pillows if on pressure RELIEVING equipment !!!!
Incontinence

• Undertake a continence assessment
• Manage with appropriate aids (pads / conveen, catheter, flexi seal etc)
• Advise patient / carers with regard skin care.
• Regularly cleanse and use of barrier products
Remember

If it is a Moisture Lesion

Patients still require pressure relief

As the presence of moisture increases the risk of pressure damage occurring (NICE 2005).
Nutrition

- **Screen** and assess nutritional status if individual at risk of/or as pressure damage.
- **Refer** individuals with a pressure ulcer to the dietitian for early assessment.
- **Assess** the total nutrient intake (food, fluid, oral supplements).
- **Provide** 30-35 kcalories/kg body weight and 1.25 to 1.5 grams protein/kg body weight daily for individuals with a pressure ulcer.
- **Provide** oral supplements between meals if needed.
- **Consider** nutritional support (enteral or parenteral nutrition) if oral intake is inadequate.
- **Assess** renal function to ensure that high levels of protein are appropriate for the individual.
- **Provide** and encourage adequate daily fluid intake for hydration.
- **Monitor** individuals for signs and symptoms of dehydration.
Prevention is Better Than Cure

- Estimated cost of treating pressure sores in the UK is estimated at as high as £750 million

- Best way to avoid pressure ulcers? **MOVE!**

- Patients position should be changed regularly
Understanding the causes of Pressure Ulcers is fundamental in preventing them.

Equipment aids patient care and plays a significant role in pressure ulcer prevention.

Remember - equipment is not a substitute for good fundamental nursing care.
Implementing the SKIN BUNDLE Model
Pressure Ulcers and the Importance of Management

- Cost to patient
- Cost is around £2.4 billion a year
- Actual Pressure Ulcer Incident % unknown
- Cost of treating one grade 4 pressure ulcer is estimated at £10,551 (2004)
- Costs around £30,000 to treat a patient along the surgical pathway

*Spread the Learning and celebrate the successes*
Understand the risk factors for acquiring pressure ulcers
Understand the local context & analyse local data to assess patients on ward/unit most at risk
Utilise patient ‘At risk’ cards to quickly identify those at increased risk

Assess pressure ulcer risk on admission for ALL patients
Re-assess skin every 8 hours where necessary
Initiate and maintain correct and suitable preventative measures

Address these areas:
- Surface
- Keep Moving/Turning
- Incontinence
- Nutrition

Initiate and maintain correct and suitable treatment measures
Utilise the local Tissue Viability nursing expertise

Educate staff regarding the assessment process, identification and classification of, and treatment of pressure ulcers
Educate Patients & family
Develop patient information pack

Spread the Learning and celebrate the successes
Progress so far

• Pilot Ward – 560 + days
• Rolled out to 3 wards, those rolled out to 3 wards, etc.
• To date: 12 wards
• Roll out complete by March 2010
What we have found out so far

**Some good Practice**

1. Right pressure relief for the patient
2. Low incidence of ward acquired PU’s

**Some poor practice**

1. Recording of risk scores
2. Documenting care given
3. No communication log
4. Written info for patients

*Spread the Learning and celebrate the successes*
How to implement....

1. Arranged open meeting with ward staff
2. Acknowledge good practice as well as areas that need improvement
3. Conduct baseline audit of risk assessments
4. Update staff’s PU knowledge
5. Introduce Skin Bundle communication tool
6. Introduce monthly audit tool (50% sample)
7. Address risk assessment documentation
8. Push management of PU’s up the agenda

Spread the Learning and celebrate the successes
Implementation of Skin Bundle

It's over to you........

Suggest:
1. Start small – familiarise staff with SB
2. Build on this – set realistic target time for 100%
Who goes on the Skin Bundle …

• Any patient who:
  – A Waterlow score of 15 or above.
  – You perceive as being at risk (clinical judgement) regardless of Waterlow score.
Surface = does the surface meet the patients risk including seating.

Keep Moving & Skin Checks = Repositioning assessed 4 hourly in chair/in bed & changes in skin assessed.

Incontinence = catheter patency, bowel action, hygiene & skin care

Nutrition = dietician referral, protein drinks x3, maintain daily fluid balance chart

Ongoing = Waterlow & Nutritional risk status
# Skin Bundle

**PATIENT NAME**

<table>
<thead>
<tr>
<th>TIME</th>
<th>6am</th>
<th>10am</th>
<th>2pm</th>
<th>6pm</th>
<th>10pm</th>
<th>6am</th>
<th>10am</th>
<th>2pm</th>
<th>6pm</th>
<th>10pm</th>
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**SURFACE**

**TYPE OF MATTRESS**

**TYPE OF CUSHION**

**KEEP MOVING**

**IN BED**

**PATIENT MOVED**

**SACRUM CHECKED**
- RED-YES
- RED-NO

**HEELS CHECKED**
- RED-YES
- RED-NO

**OTHER AREAS CHECKED**

**IN CHAIR**

**PATIENT MOVED**

**SACRUM CHECKED**

**CONTINENCE**

*Spread the Learning and celebrate our successes*
<table>
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<th>PATIENT MOVED</th>
<th>SACRUM CHECKED</th>
<th>RED-YES</th>
<th>RED-NO</th>
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<tr>
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<td>CATHETER IN SITU</td>
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<tr>
<td>INCONTINENCE</td>
<td>URINE</td>
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<tr>
<td>BOWELS</td>
<td>WASHED/DRIED</td>
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<tr>
<td>NUTRITION</td>
<td>TYPE OF DIET</td>
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<td>DIET</td>
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<td>WATERLOW SCORE</td>
<td>NUTRITION SCORE</td>
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Who completes SB?

• Anyone who is providing care and observing the skin

**HOWEVER:**

• Must be initialled NOT just ✓
• Must be initialled by RGN at least once during 12 hour period
Monthly audit tool (50% sample)

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*Spread the Learning and celebrate the successes*
Data recording

- Record on SAFETY CROSS
- Measure DAYS BETWEEN PU’s
- Measure ward acquired PU’s
- Data collected MONTHLY
- Ultimately all data recorded via Metric's
Presenting data …

Number of days since a pressure ulcer developed on ward

Spread the Learning and celebrate the successes
Aim for ....

- Full compliance with risk score targets
- Managing the risk score
- Utilisation of Skin Bundle communication tool
- Use of patient written Information/Education leaflets
- No PU Incidence since Implementation

Spread the Learning and celebrate the successes
For the Future

1. 0% tolerance to PU’s
2. 50% reduction in hospital acquired PU’s
3. 100% compliance with SB & risk assessments
4. PU’s to remain on agenda
5. Role out across entire organisation & community – *inc. nursing homes etc.*

Challenges

Time for:

- Education and Training
- Implementing/ward pressures
- Recording of data

Spread the Learning and celebrate the successes
ANY QUESTIONS?

Spread the Learning and celebrate the successes