A call to action: Elimination of pressure ulcers
What is a Pressure Ulcer?

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.

*Pressure* – Pressure is the force that is applied vertically or perpendicular to the surface of the skin.

*Shear* – Shear occurs when **one layer of tissue slides horizontally over another**, deforming adipose and muscle tissue, and disrupting blood flow (e.g., when the head of the bed is raised > 30 degrees). Both require pressure exerted by body against bed/chair surface to create the tissue injury.
What is a Pressure Ulcer?

What is a Pressure Ulcer?

Pressure ulcers: The cost of treatment & benefits of prevention

Prevalence

In the U.S., 14.8% of patients suffer from pressure ulcers. That's 2.5 million patients every year.

In Europe, 20% of patients in acute care settings will develop a pressure ulcer.

20 - 25% of beds are occupied each day by pressure ulcer patients.

60 - 80% of these are hospital acquired.

Costs of treatment

In Spain, 53,000 patients with pressure ulcers are being treated at any given point in time, costing €461 million per year.

In Australia, pressure ulcers cost the healthcare system AUS$285 million.

In the Netherlands, annual costs of pressure ulcer care is in the range of €371 to €1,695 million.

Pressure ulcers cost the NHS an estimated £1.4 - £2.1 billion annually (4% of total expenditure).

Cost to treat an individual ulcer ranges from £1,064 - £1,055,112.

2 Vangilder C. Results of nine international pressure ulcer surveys. 1989-2005. Ostomy Wound Management 2008. 54(2)
6 McIntyre L. A strategy to reduce avoidable pressure ulcers. Nursing Times. 2012:108; 29, 14-17
Benefits of Prevention

The cost of treating pressure ulcers is 2.5 times the cost of preventing them. 

Global expert panel publish recommendations on the use of dressings for prevention. 

Reducing hospital stays by just 3 days could result in savings of up to £3600.

9 Agreda JJS, et al. The burden of pressure ulcers in Spain. Wound. 2008 Sep; 7501
10 Franks P. Pressure ulcers – cost to a nation, cost to an individual. Touch Briefings. 2007.
The Pressure Ulcer Survey

Standardize Education

Standardize Data Collection

Validate Data Collection

Standardize Reporting

NDNQI
Pressure Ulcer Training

NDNQI
National Database of Nursing Quality Indicators®: NDNQI®:
Pressure Ulcer Survey Inter-Rater Reliability Part 1:
No Description
Purpose:
• Determine the rate of HAPU & UAPU
• Explore the relationship between: nursing assessments, interventions and PU development

HAPU:
• Places the patient at risk for other adverse events
• And increases resource consumption and healthcare costs.

The survey allows us
• To assess the quality of care delivered,
• Direct and evaluate quality improvement initiatives,
• Examine other structures & processes such as nurse staffing ratios, satisfaction, etc.
The Percentages: Pressure Ulcer (PU) & Restraint Pilot Survey Data by Unit

<table>
<thead>
<tr>
<th>Unit</th>
<th>% Pt's in Restraints</th>
<th>% Pt's with PU</th>
<th>% HAPU</th>
<th>% UAPU</th>
<th>% UAPU S2 or &gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>47.06</td>
<td>41.18</td>
<td>41.18</td>
<td>11.76</td>
<td>11.76</td>
</tr>
<tr>
<td>2A</td>
<td>54.55</td>
<td>45.45</td>
<td>45.45</td>
<td>45.45</td>
<td>45.45</td>
</tr>
<tr>
<td>3A</td>
<td>75.00</td>
<td>58.33</td>
<td>58.33</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1P</td>
<td>12.50</td>
<td>12.50</td>
<td>6.25</td>
<td>6.25</td>
<td>6.25</td>
</tr>
</tbody>
</table>

HA = Hospital acquired
UA = Unit acquired
Next Steps
Pressure Ulcer and Restraint Survey Roll-out

- **HGH**
  - October 1st

- **Rumailah**
  - October 9th

- **Residential**
  - October 21st

- **Al Wakrah**
  - October 27th

- **Womens**
  - November 3rd

- **HH & N3CR**
  - November 10th

- **Cuban**
  - November 17th

- **Al Khor**
  - November 24th

All areas reporting at the end of Q4 2013

**Our goal:** to have all applicable units reporting on patient pressure ulcers and restraint use by the end of the 4th quarter of 2013.
10 Essential Functions of High-Reliability Patient Care Teams

**Leadership and Governance**
Without good leadership and clarity about who is responsible to whom for what, teams are less effective.

**Team Structures and Dynamics**
Teams and unit leaders require structures for decision-making and consultation, and the roles of individuals need to be clear. They also need to directly address communication, relationships and teamwork.

**Standard Protocols and Procedures**
Standardisation of core ward or unit procedures ensures greater efficiency and effectiveness, although it is important that the right balance is struck to avoid overburdening units with regulation. Some standards will need to be imposed across organisations but others need to be determined by the team themselves, as appropriate to the nature of their clinical service.

**Patient Safety and Quality Systems**
These systems ensure that performance is reviewed and lessons are learned and acted upon.

**Education, Training and Supervision**
All members of the team need to be appropriately educated and trained for the roles that they perform. Effective supervision within the team to ensure learning opportunities are taken and individuals practice within the scope of their competence is essential.

**Care Planning, Coordination and Delivery**
An essential function of the team is to plan the individual care of each patient, beginning with setting clear objectives for care. Care then needs to be coordinated between the various team members and other providers of care.

**Patient and Family Engagement**
Teams must focus specifically on managing patient experiences and establishing procedures for doing this. This is a function that goes beyond delivering good clinical care.

**Information Management**
Good care depends on good decisions, which depends on having the right information at the right time as a foundation for these decisions.

**Support Services and Equipment**
These are essential for the delivery of good care and systems in place to manage them are required to ensure that they support clinical teams effectively.

**Workforce Management**
Effective workforce management means having the optimal balance of people with the right knowledge and skills in the right places at the right time, within the available resources. Succession planning within the team is also essential to its long term performance.

Based on a model developed by Pain C and Whitby S, 2007
## Corporate Nursing Dashboard 2014

| Hamad Medical Corporation  
Nursing & Midwifery Dashboard | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 2014 |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Jan-14</td>
<td>Feb-14</td>
<td>Mar-14</td>
<td>Apr-14</td>
<td>May-14</td>
</tr>
<tr>
<td><strong>Patient Restraints (Prevalence)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Restraint Prevalence - % of pts in physical restraints</td>
<td>4.75%</td>
<td>4.99%</td>
<td>9.38%</td>
<td>4.08%</td>
<td>5.14%</td>
</tr>
<tr>
<td><strong>Pressure Ulcers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Incidence HAPU (All Stages) per 1000 patient days</td>
<td>0.88</td>
<td>0.75</td>
<td>0.81</td>
<td>0.81</td>
<td>1.26</td>
</tr>
<tr>
<td>• Incidence HAPU (Stage 2 or greater) per 1000 patient days</td>
<td>0.74</td>
<td>0.67</td>
<td>0.68</td>
<td>0.69</td>
<td>0.54</td>
</tr>
<tr>
<td>• Prevalence - % of pts with HAPU</td>
<td>4.75%</td>
<td>5.75%</td>
<td>3.83%</td>
<td>3.91%</td>
<td>4.70%</td>
</tr>
<tr>
<td>• Prevalence - % of pts with HAPU stage 2 or greater</td>
<td>4.00%</td>
<td>4.84%</td>
<td>2.70%</td>
<td>3.76%</td>
<td>3.95%</td>
</tr>
<tr>
<td><strong>Patient Falls (Incidence)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Falls per 1000 patient days</td>
<td>0.47</td>
<td>0.42</td>
<td>0.43</td>
<td>0.44</td>
<td>0.54</td>
</tr>
<tr>
<td>• Falls with Injury per 1000 patient days</td>
<td>0.09</td>
<td>0.07</td>
<td>0.04</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Nosocomial Infections (Incidence)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• CAUTI Rate per 1000 catheter days</td>
<td>1.25</td>
<td>1.59</td>
<td>1.48</td>
<td>1.45</td>
<td>1.85</td>
</tr>
<tr>
<td>• CLABSI Rate per 1000 patient line days</td>
<td>1.90</td>
<td>0.97</td>
<td>0.90</td>
<td>1.24</td>
<td>1.82</td>
</tr>
<tr>
<td>• VAP per 1000 ventilator days</td>
<td>0.00</td>
<td>0.76</td>
<td>0.00</td>
<td>0.26</td>
<td>1.17</td>
</tr>
<tr>
<td><strong>Pediatric Pain AIR Cycle (Prevalence)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Average # of Pain Assessments per pt in 24h</td>
<td>3.34</td>
<td>5.36</td>
<td>2.93</td>
<td>3.34</td>
<td>5.36</td>
</tr>
<tr>
<td>• Percent of Complete Pain AIR Cycles</td>
<td>99.61%</td>
<td>100.00%</td>
<td>99.77%</td>
<td>99.61%</td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>Pediatric Peripheral IV Characteristics (Prevalence)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Total Patients with IVs</td>
<td>77</td>
<td>80</td>
<td>79</td>
<td>236</td>
<td>69</td>
</tr>
<tr>
<td>• % IV Sites with Infections</td>
<td>2.60%</td>
<td>1.25%</td>
<td>0.00%</td>
<td>1.27%</td>
<td>1.45%</td>
</tr>
<tr>
<td>• % Patients with &gt;1 IV</td>
<td>1.30%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.42%</td>
<td>1.45%</td>
</tr>
<tr>
<td>• % IV with Vascular Solutions infusing</td>
<td>22.08%</td>
<td>0.00%</td>
<td>8.86%</td>
<td>19.97%</td>
<td>5.80%</td>
</tr>
</tbody>
</table>
251
84%
Supporting the Change

Pressure Ulcer Guidelines

SSKIN  BUNDLE
- S - Skin Inspection
- S - Surface
- K - Keep Moving
- I - Incontinence
- N - Nutrition

BRADEN SCALE - Predicting Pressure Sore Risk

MILD RISK: Total score 15-18
HIGH RISK: Total score 10-12
MODERATE RISK: Total score 13-14
SEVERE RISK: Total score < 9

Stage (1)
In-tact skin with non-blanchable redness of a localized area usually over a bony prominence.

Stage (2)
Partial thickness loss of dermis presenting as shallow open ulcer with a red/pink wound bed.

Stage (3)
Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is not exposed.

Stage (4)
Full thickness tissue loss with exposed bone, muscle or tendon.

Deep Tissue Injury:
Purple or maroon localized area of discolored in-tact skin or blood filled blister due to damage of underlying tissue.

Unstageable:
Full thickness tissue loss in which actual depth of the ulcer is completely obscured by slough and/or eschar.
Supporting the Change

BRADEN SCALE – For Predicting Pressure Sore Risk

<table>
<thead>
<tr>
<th>SEVERE RISK</th>
<th>TOTAL SCORE</th>
<th>MODERATE RISK</th>
<th>TOTAL SCORE</th>
<th>LOW RISK</th>
<th>TOTAL SCORE</th>
<th>MILD RISK</th>
<th>TOTAL SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

TENDERNESS
1. **COMpletely Numb** - no sensation to pain, heat, or cold
2. **Partially Numb** - some sensation to pain, heat, or cold
3. **Desensitized** - some sensation to pain, heat, or cold
4. **Not Desensitized** - normal sensation to pain, heat, or cold

MOBILITY
1. **COMpletely immobile** - cannot change position
2. **Partially immobile** - changes position with assistance
3. **Incomplete** - cannot change position
4. **Complete** - can change position

ACTIVITY
1. **POOR** - requires help to sit or stand
2. **MILD** - no need for help to sit or stand
3. **MODATE** - requires help to walk
4. **GOOD** - no need for help to walk

BIOMEDICAL
1. **COMpletely normal** - no abnormal findings
2. **MILDLY** - presence of minor abnormalities
3. **MEDIATE** - presence of moderate abnormalities
4. **Severe** - absence of normal findings

DETECTION AND TREATMENT
1. **PREVENTIVE** - no risk factors identified
2. **Low Risk** - minor risk factors identified
3. **Moderate Risk** - moderate risk factors identified
4. **High Risk** - major risk factors identified

TOTAL SCORE
Total score of 12 or less indicates high risk

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>ASSESS</th>
<th>EVALUATE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1.6 PURPOSE (AIM):
The guidelines for Prevention and Management of Pressure Ulceration are adapted from the joint NPUAP/EPUAP guidelines published in 2009 – National Pressure Ulcer Advisory Panel/ European Pressure Ulcer Advisory Panel. Hamad Medical Corporation is providing a summary of these guidelines in the form of a quick reference guide and the complete set of guidelines are available at www.npuap.org

AIM
To ensure consistency of practice across HMC in the implementation of Pressure Ulcer Prevention and Management guidelines for patients with pressure ulcers. Consistency of care will be provided for patients who present with Pressure Ulcers on admission and those acquired in hospital.

Essential Implementation Criteria:
- Practitioners must become familiar with the NPUAP/EPUAP (2009) guidelines.
- Each practitioner will be able to commence a risk assessment on admission and complete the appropriate documentation so that at risk patients are identified and maintained throughout their stay in hospital.
- Initiate appropriate preventative measures as outlined under NPUAP/EPUAP (2009) guidelines.
- Practitioners must be deemed competent in their practice following a formal clinical assessment by the departmental manager.
- Practitioners must adhere to HMC guidelines related to their practice and adhere at all times.
- Each practitioner must complete and maintain an up to date record and countersigned statement of competence. Each practitioner will keep themselves updated on best practices in all aspects of wound care for prevention and treatment of pressure ulcers by ensuring appropriate and effective wound management.

2.0 DEFINITIONS:
International NPUAP/EPUAP (2009) Pressure Ulcer Definition: 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 and friction (NPUAP/EPUAP 2009).
Empirical Outcomes Across HMC

SNF & RCC
- RCC - 0% of pressure ulcer and skin break down
  SNF 1.34% prevalence of HAPU in 2014

Rumailah Hospital
- MU1 – Reduction in HAPU from 50% - 20%

NCCCR Hospital
- Ward 2 – Zero HAPU for over 300 days
- Ward 1, 2 & Palliative Care – 0% restraint use from 10/13 – 01/15

Al Khor Hospital
- Medical Unit – Zero HAPU for over 153 days

Cuban Hospital
- Zero UAPU for the over 275 days

Hamad General Hospital
- 5N3 - Steady reduction in UAPU 33.33% - 7.14 %
- 6S1 - Constant reduction in UAPU 20% - 4 %
- 3S2 - Reduction in UAPU 16.7% - 4.2 %
- 3S2 - Steady reduction in restraint use 33.3% - 0 %
- SICU - Constant reduction in restraint use 55.6% - 16.7 %
- 6N1 - Reduction in restraint use 25% - 0%

Heart Hospital
- SSD- 0 HAPU for last 120 days
- Reduction in the use of restraints across the inpatient areas by 50%
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Based on a model developed by Pain C and Whitby S, 2007
Next Steps

Establish governance
• Develop steering committee

Moving & handling
• Develop the program
• Procure, educate & utilize equipment

Products & equipment
• Revise formulary
• Establish a product evaluation committee

Tissue viability service
• Review current TVS organization
• Review the scope of practice of nurses

Information management
• Review, revise, adopt, build, pathways of information dissemination
• CIS need to reflect all relevant changes

Physical restraint
• Establish processes to reduce to zero

Education
• Propose education & training programs for all levels, across disciplines

Infection control
• Review & revise policy / practice related to TV & Wound

Patient & family engagement
• Where possible involve patients in this process

Audit
• Expand and validation

Policy & procedure
• Identify, review, revise, institute
We make the difference

Committed to delivering the safest, most effective and compassionate care to our patients