

# Pressure Ulcer to Zero for the Spinal Cord Injury Population

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# Introduction



Pressure ulcer to Zero is a large scale improvement healthcare collaborative, which began in 2014

## **Primary aim:**

- To reduce the incidence of avoidable pressure ulcers
- To increase the capacity and capability of frontline clinical teams to improve the care they deliver

***‘The Spinal Cord System of Care Programme’ was chosen for the pilot project in our hospital***

# Why Pressure Ulcers?



The collaborative placed an intentional focus on pressure ulcer prevention as pressure ulcers are an increasing problem affecting 1000's people annually.

Patients with SCI its chronic comorbidities and lack of sensory perception are a particularly vulnerable population.

In the Spinal Cord Injury population pressure ulcers may be :

- Debilitating
- Costly
- Painful
- Life threatening / Sepsis
- Lead to Osteomyelitis
- Affect quality of life

# Prepare to be shocked...

- The estimated cost to successfully treat one patient with a grade 4 pressure ulcer is ..... **€119,000**
- Based on this figure, it is estimated that it could cost €250 million per annum to manage pressure ulcers across all care settings in Ireland (Gethin et al.2005)

# Guidelines for Spinal Cord Injury population

“A pressure ulcer is a localised injury to the skin and / or underlying tissue usually over a bony prominence, as a result of pressure or pressure in combination with shear....”

Spinal  
Cord  
Injury  
Section

***This guideline provides a specific section of particular relevance for individuals with a spinal cord injury***



## Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline



National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP) and Pan Pacific Pressure Injury Alliance (PPPIA). Prevention and Treatment of Pressure ulcers: Quick Reference Guide 2014

# What causes pressure ulcers?



# Remember.....



**PRESSURE**

A large, red, starburst-shaped graphic with a blue outline, containing the word 'PRESSURE' in white, bold, serif capital letters.

**SHEAR**

A large, yellow, starburst-shaped graphic with a blue outline, containing the word 'SHEAR' in white, bold, serif capital letters.

# Ultimate Goal ....Outcomes



A goal was set to reduce the incidence of avoidable pressure ulcers in the participating settings by 50% over six months with an ultimate goal of reaching 0%



# Interdisciplinary team work



The pilot study involved working together to achieve improvements and to reach our goal

- **Steering group:** Key role to support the project
- **Participating team:** Clinical facilitator, Nurses, Ward Manager, Physiotherapist, Occupational therapist, Dietitian,

*Overall the teams that participated are part of an active community, learning from each other and from recognised experts*

# How we did it?



- A pre- workshop pack was distributed to all teams
- Attended 4 one day learning sessions: December 2015 to June 2016
- Each team presented their monthly data on line
- For completion of project specific timelines were identified

# Real time instant data was collected...



- Safety cross
- Snapshot risk assessment
- Measured patients engagement
- Reflection of practice
- Story board
- Education poster

# Snapshot risk assessment.....



National Quality Improvement Programme

HC Information Governance Unit NHS Digital

Snapshot of Risk Assessments

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
State YES or NO if the Risk Assessment was 100% completed (document fully filled out correctly)	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes
If there were any elements missing or incorrect, record what they were here:					



## NATIONAL REHABILITATION HOSPITAL WATERLOW PRESSURE ULCER PREVENTION/ PREVENTION TREATMENT POLICY

RING SCORES IN TABLE, ADD TOTAL. MORE THAN 1 SCORE/CATEGORY CAN BE USED

BUILD WEIGHT for HEIGHT	SKIN TYPE VISUAL RISK AREAS	Sex Age	Continence	MOBILITY
Average BMI = 20-24.9	0 Healthy	0 Male	1 Complete/ Catheterised	0 Fully
Above average BMI 25-29.9	1 Tissue Paper, Dry, Oedematous	1 Female	2 Urine Incon.	1 Restless/ Fidgety
Obese BMI >30	2 Discoloured Grade 1	2 14-49	1 Faecal Incont	2 Apathetic
Below average BMI < 20	3 Broken/ Spots Grade 2-4	3 50-64	2 Urinary and Faecal Incont	3 Restricted
BMI = Wt(Kg) X Ht(m) <sup>2</sup>		65-74		4 Bed bound e.g. Traction
		75-80		5 Chair bound e.g. Wheelchair
		81+		

SPECIAL RISKS	Neurological Deficit
Tissue Malnutrition	8
Terminal Cachexia	8
Multiple Organ Failure	5
Single Organ Failure (Resp, Renal, Cardiac)	5
Peripheral Vascular Disease	2
Anaemia (Hb<8)	1
Smoking	1
Medication - Cytotoxics, Long term/High Dose Steroids, Anti - Inflammatory	Max of 4





MALNUTRITION SCREENING TOOL (MST)	NUTRITION SCORE - If >2 refer for nutrition assessment/ intervention
A. Has patient lost weight recently	
Yes - go to B	
No - go to C	
Unsure - go to C and score 2	
B Weight Loss Score	
Yes - go to B	
No - go to C	
Unsure - go to C and score 2	
C Patient eating poorly or lack of appetite	
Yes - go to B	
No - go to C	
Unsure - go to C and score 2	

10 + AT RISK
15 + HIGH RISK
20 + VERY HIGH RISK
SCORE:
Date:
Signed:

# Safety Cross







Is a tool used to collect data for improvement

-  = No new Pressure Ulcer identified
-  = New pressure ulcer ward acquired
-  = Admitted with Pressure ulcer from other organisation
-  = Transferred with pressure ulcer from same organisation

Month	April	
Year	2016	
Ward/Unit Name	St Josephs	
Organisation/CHO Area	NRM.	


  

	No new pressure ulcer found
	New pressure ulcer found (ward acquired)
	Admitted with pressure ulcer from other organisation (e.g. own home, care home, another hospital)
	Transferred with pressure ulcer from same setting/organisation (e.g. within hospital ward 1 - ward 2 in same hospital)

Date	PU	PU Location
5/4/16	Grade 1	Sacrum
6/4/16	Grade 1	Left hip

					
1	2				
3	4				
5	6				
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
		25	26		
		27	28		
		29	30	31	

# Measured patient engagement:



Patients at risk of acquiring a pressure sore were asked 5 questions...

**SSKIN**

**S**urface  
**S**kin  
**K**eeP moving  
**I**ncontinence  
**N**utrition



Measure of Patient Engagement

Month					
Year	2016				
Ward/Unit Name					
Organisation/CHO Area	NRH				
	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Are you aware you have been identified as 'being at risk of getting a pressure ulcer'? ANSWER YES/NO	Yes				
If YES, can you explain what being identified as being at risk of getting a pressure ulcer means to you? DETAIL THEIR RESPONSE HERE	Being turned				
Did the patient mention any of the phrases below? TICK THE BOXES BELOW THAT THEY MENTIONED					
Surface Mattress Cushions Sheets	Cushion				
Skin Red areas Soreness	Red Area				
Keep moving Getting out of bed Walking Moving side to side	Wheelchair				
Incontinence Keeping dry Avoiding lying on wet sheets	No				
Nutrition Eating well Drinking fluids regularly	NO				

# Also included.....



## Reflective practice

Involves the observation of the process of care delivered within our care setting

## Story board

Completed the 'Pressure Ulcer to Zero' poster for the ward and therapy departments. Educational session for SCSC (Spinal Cord System of Care) interdisciplinary team on progress to date and discussion with team on....

A detailed form titled 'Pressure Ulcer to Zero' with various sections for patient information, assessment, and care planning. It includes fields for name, date, and specific clinical observations.A form titled 'Measure of Patient Engagement' with a table for tracking patient engagement across five patients. The table has columns for Patient 1 through Patient 5 and rows for various engagement metrics.



# SSKIN..... Care Bundle

The **SSKIN Care Bundle** is a powerful tool as it defines and ties best practices together.

The **bundle** also makes the actual process of preventing pressure ulcers visible to all.

 **SSKIN Care Bundle (DRAFT 3: 15/01/2016)**

Patient Identity label

Frequency of SSKIN bundle <input type="checkbox"/> hourly	
Date:	
Time – record using 24 hr clock:	
<b>Skin Inspection</b>	
All pressure areas checked	
Pressure ulcer present (please record on pressure ulcer wound assessment chart)	
<b>Surface</b>	
Mattress Type (please record)	Mattress Changed to : Date:
Cushion Type (please record)	Cushion Changed to : Date:
Equipment checked daily	
<b>Keep moving</b>	
Bed rest (turning regime as prescribed)	
Wheelchair pressure relief (please record dependency)	
Dependent <input type="checkbox"/> Independent <input type="checkbox"/>	
Sitting Tolerance	Up to _____ Hours Up to _____ Hours Up to _____ Hours
Date:	Date:
<b>Incontinence</b>	
Dry and Clean	
<b>Nutrition</b>	
Nutritional Screening:	Risk : Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Repeat Nutritional Screening Date:
Receiving the appropriate diet	
Drinking adequate fluids	
Oral nutritional supplement(s):	
Taken as prescribed <input type="checkbox"/> Not applicable <input type="checkbox"/>	
<b>Initials</b>	
Discipline (RGN/HCA/OT/PT)	

Patient Education  
SSKIN Care Bundle



<b>S</b>	<b>Skin inspection</b>	Do you check your skin at least twice a day? How do you do this? Do you know the term blanching? What would you do if there was a red mark especially over a bony area?
<b>S</b>	<b>Support surface</b>	What time of cushion do you use? How do you maintain your cushion? Does it have a cover? What mattress do you use? How do you maintain your mattress? What shower equipment do you use?
<b>K</b>	<b>Keep moving</b>	How do you pressure relieve in your chair? How often should this be done? How do you pressure relieve in bed? How often should this be done?
<b>I</b>	<b>Incontinence</b>	How are your bowel and bladder managed? Do you have problems with incontinence?
<b>N</b>	<b>Nutrition</b>	How many glasses of fluid (tea, water milk etc.) do you drink a day? Have you recently gained or lost weight? Are you under or over weight? Are you aware of the healthy options on the menu? If you have been advised to take a nutritional supplement (s) do you take them?





**STOP**



**LOOK**



**LISTEN**



**REDUCE**  
the pressure

**INSPECT**  
the skin

**USE**  
the skin care  
bundle

Use the **SSKIN**  
Care Bundle

**SSKIN**

**S**kin Inspection

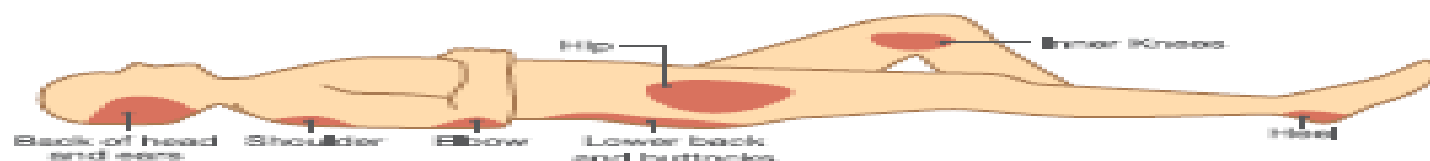
**S**upport Surface

**K**eeP Moving

**I**ncontinence

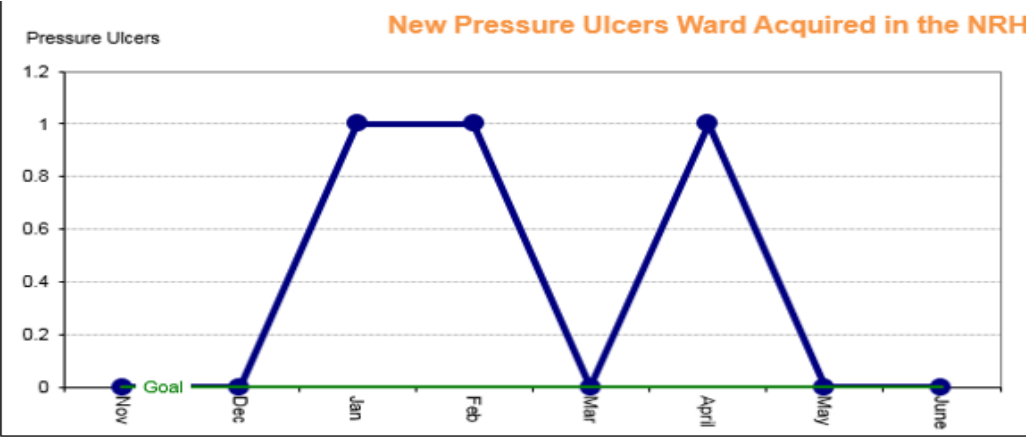
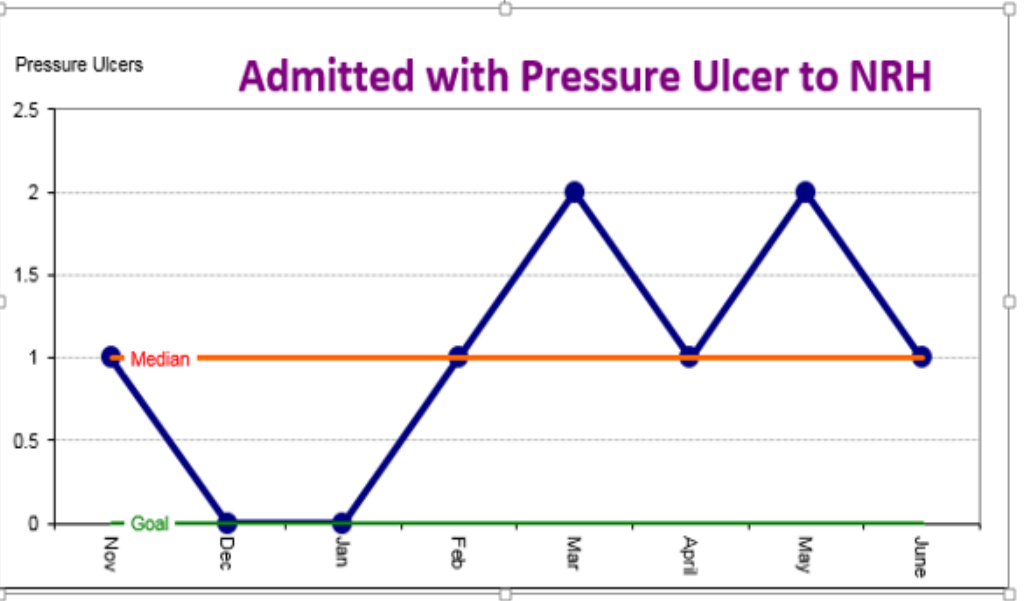
**N**utrition

## Pressure Areas



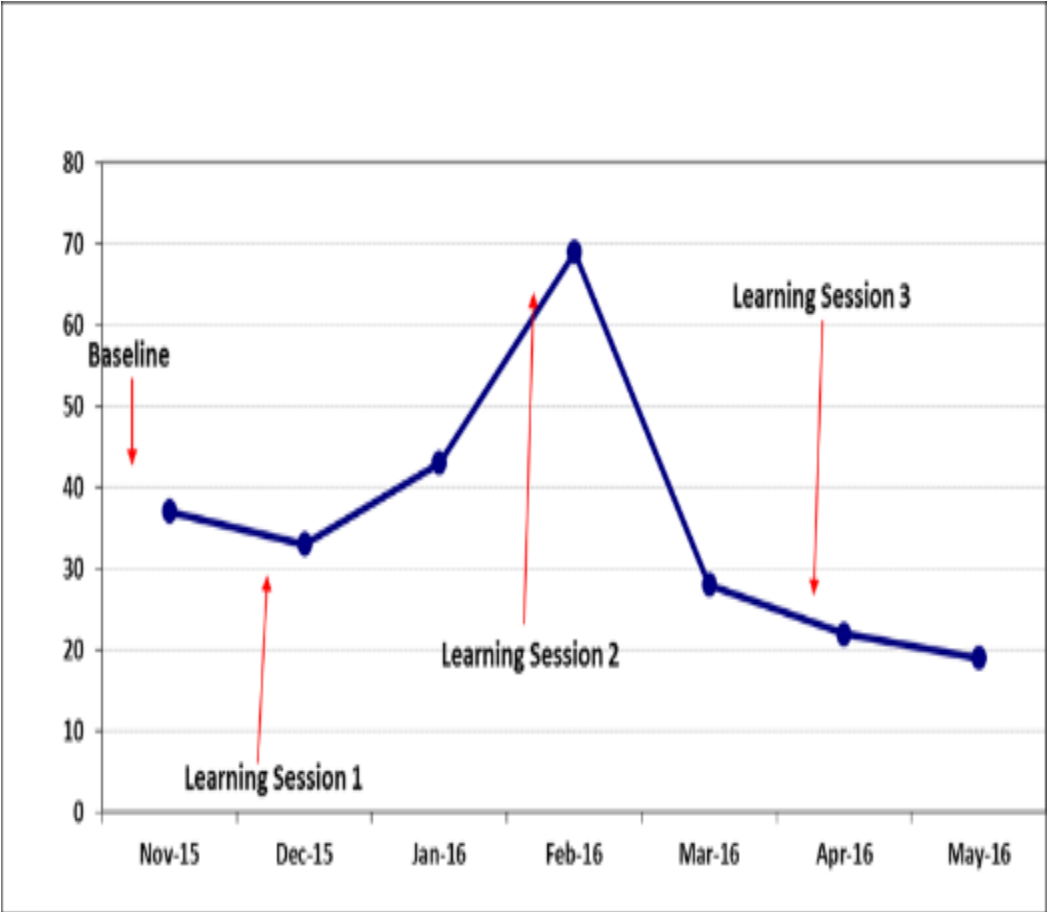
The key to success is the collaboration of the patient, family and the interdisciplinary team in order to achieve 'Pressure Ulcers To Zero'

Data to date:  
St Joseph's Ward November 2015 – June 2016 inclusive



<b>Pressure Ulcer acquired pre admission to NRH</b> <b>Nov – June 2016</b>	<b>Pressure Ulcer acquired post admission to NRH</b> <b>Nov – June 2016</b>
7 pressure ulcers acquired Grade .....	3 pressure ulcers acquired Grade .....

**Overall project results:**  
**49% reduction in pressure ulcers**



# Our Achievements.....



The participating teams achieved a 49% reduction in avoidable pressure ulcers.

- Increased awareness of pressure ulcers – **not just the nurse's job** but the team's job
- Increased capability in using quality improvement tools and methodologies
- Forging of stronger team working
- Supporting integration – greater networking across the region
- Creativity and innovation within the teams in supporting their colleagues to implement the changes for improvement.

# Focus for the future.....



To empower the patient through education, promoted by the entire inter-disciplinary team

Provide a toolkit of knowledge for lifelong learning for both staff and patients combining visual, auditory and kinaesthetic methods

***The key to success is the collaboration of the patient, family and the interdisciplinary team in order to achieve “Pressure Ulcers to Zero”.***

## References:

Regan MA, Teasell RW, Wolfe DL, Keast D, Mortenson WB, Aubut JA. . "Comprehensive management of pressure ulcers in spinal cord injury: Current concepts and future trends." *J Spinal Cord Med* (6).36 (2013): 572–585.

Regan MA, Teasell RW, Wolfe DL, Keast D, Mortenson WB, Aubut JA. A systematic review of therapeutic interventions for pressure ulcers after spinal cord injury. *Arch Phys Med Rehabil* 2009;90(2):213–31]

## Web sites

[Prevention and Treatment of Pressure Ulcers: Quick Reference Guide](#)

[www.npuap.org/.../2014/.../Updated-10-16-14-Quick-Reference-Guide-DIGITAL-NP..](http://www.npuap.org/.../2014/.../Updated-10-16-14-Quick-Reference-Guide-DIGITAL-NP..)

[Pressure Ulcers - Ireland's Health Service - Health Service Executive](#)

[www.hse.ie/eng/about/Who/qualityandpatientsafety/safepatientcare/Pressure\\_Ulcers](http://www.hse.ie/eng/about/Who/qualityandpatientsafety/safepatientcare/Pressure_Ulcers)

<https://www.youtube.com/watch?v=zn-77R8QFhg&feature=youtu.be> Pressure Ulcers to Zero - Peachy SSKIN