An Improvement Journey to Reduce Hospital Acquired Pressure Ulcers (HAPU) in High Reporting Wards

Ruth Ropper, Lead Nurse Tissue Viability; Shona Baird, Tissue Viability Nurse; Carolyn Swift, Quality and Safety Improvement Lead.

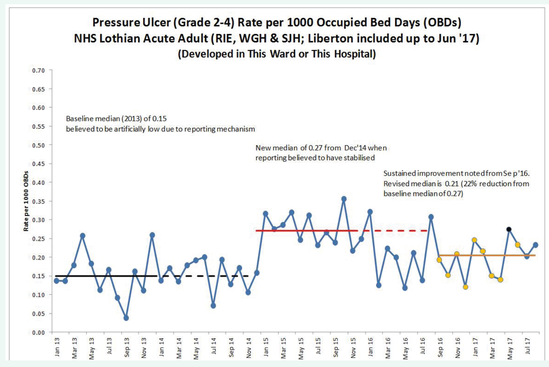
NHS Lothian

Background to current work

NHS Lothian has undertaken improvement work to reduce Hospital Acquired Pressure Ulcers (HAPU) since 2013.

The run chart shows sustained improvement from September 2016. New solutions were required to address remaining wards with high levels of HAPU. One option was a handheld device to detect early signs of skin damage. There was evidence to support its use, however the capital outlay was considered too high for the already low incidence rates.

Senior management funded a part time Tissue Viability Nurse (TVN) to support staff to reduce HAPU using improvement methodology. Quality Improvement (QI) supported the work with three phases planned over 6 months plus follow up 6-8 months post-project to assess sustainability of the work.

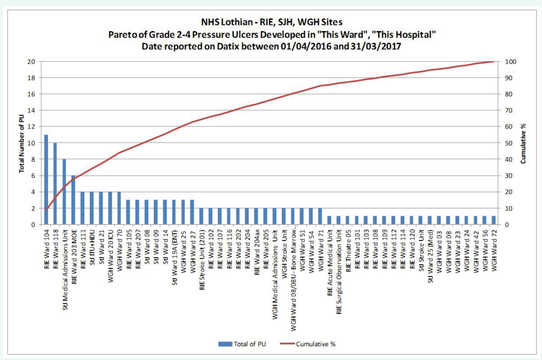


Planning

Drivers were identified by TVN and QI to provide the focus for the work and develop an action plan

DRIVERS	
Reliable care processes	• Risk assessment • Skin assessment • Care planning • Care Rounding • Transfer of information
Availability of equipment	• Standardised and reliable booking process • Timely delivery to the patient
Patient & staff involvement	• Opinions are sought from patients that lead to improvements • Patient Information
Learning for improvement	• Reliable use of the Red Day Review Tool • Robust learning from an event (and expert support) • Rapid feedback from an event on ward

Phase 1 - Identify Clinical Areas



Datix incidents for past year were used to identify 4 focus wards. Clinical areas included Medicine of Elderly, Medical Admission Unit and Critical care/High dependency unit.

Phase 1 – Establish baseline for each area

- Review of HAPU incidents on Datix to identify themes
- Process mapping of Patient journey and Equipment
- Documentation audit
- Staff conversations around learning from incidents
- Patient/carer conversations around care provided and communication
- Educational needs analysis for staff around PU, SSKIN, grading etc.
- Ward Observations of current practice

Outcomes for Phase 1 included a 'Fishbone' diagram of themes identified and 'Process Mapping' for a patient journey.

Phase 1
Aug - Sept 2017

Phase 1 – Outcomes analysis

The key findings identified the areas for the improvement work over the next 4 months:

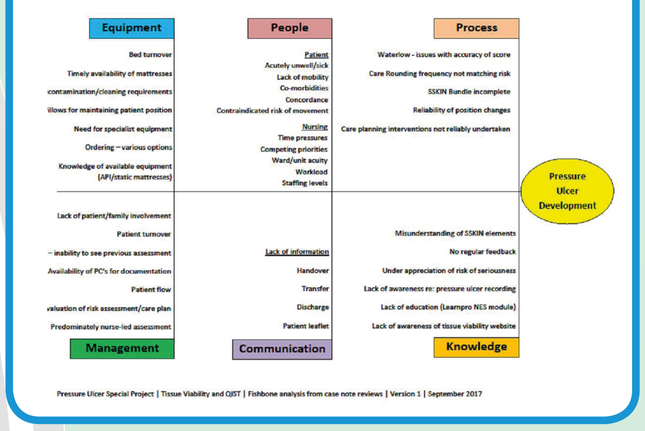
- Communication – between staff and with patients/ carers
- Waterlow Risk Assessment – including technical issues with Trak
- Equipment access – mattresses and heel protectors
- Staff knowledge – prevention, grading, and review of PU

My heels are sore, I have an ulcer

Nurses have been checking my skin

Very uncomfortable and in the chair too long

Outcome for Phase 1- Fishbone diagram



Phase 2 – Educational Support

Educational needs analysis questionnaires and themes from Datix incidents informed the education programme. The TVN provided training to clinical staff available at each visit. Topics include:

- Waterlow risk assessment using a mock patient on the TRAK EPR (electronic patient record) system
- Skin assessment and grading existing pressure damage
- SSKIN bundle and aide memoires

Percentage of staff who received education during Phase 2

Ward	% of staff who received education
A	82%
B	96%
C	74%
D	79%

If a HAPU developed, the TVN supported staff to complete a 'Red Day Review Tool' to assess if it was avoidable and identify learning to prevent future incidents.

Phase 2
Oct 2017 - Jan 2018

Phase 2 – Testing Improvement ideas

Tests of change took place using the PDSA (Plan, Do, Study, Act) process in each areas using a variety of tools to identify which might make an improvement to patient outcomes:

- Safety brief to highlight those at risk
- 'Think Pink' stickers for skin assessment on admission
- 'Think Skin' visual aids/ magnets for patient bedside
- 'Bye-Bye Blue' stickers for skin assessment on discharge
- Feedback from Datix reports
- Patient/carer leaflet in admission packs
- Waterlow top tips
- Education using Trak trainer
- Equipment Access including change of process between ITU and Theatre
- Ward Focus Boards on PU and education.

Phase 2 and 3 – Challenges

- High numbers of patients with cognitive impairment increased the challenge of obtaining meaningful patient conversations.
- The "Beast from the East" caused periods of significant adverse weather.
- Episodes of flu affected both patients and staff.
- Due to unforeseen circumstances the Project Manager was absent for 3 months, impacting on support for the TVN and delay in collating and analysing outcomes.

Phase 3 - Review of data

Repeat of baseline data collection took place excluding observations of care and process mapping.

1. HAPU Incidents reported:
- 92% reduction in HAPU
- 2 HAPU reported (4 months) compared to 25 (6 months prior)
- One was identified as being avoidable

2. Compliance with documentation increased in the following areas:

Item audited	Total % for all wards	
	Pre%	Post%
Waterlow score correct.	16	81
Patient / carer / family involved in the care plan development	16	72
Documented evidence of advice/support given	37	81
Repositioning carried out as per care plan	53	100
Was specialist equipment available within locally agreed time frame	47	94
Pressure ulcer prevention leaflet provided to patient	0	56
Evidence of discussion with patient / relatives / carers in progress notes	5	83

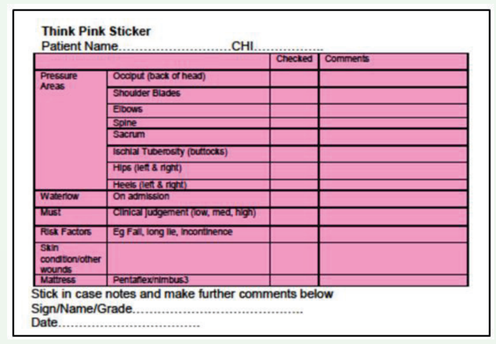
3. Staff knowledge levels increased related to SSKIN bundle/risk assessment.

4. Equipment access/use improved with new pathway in ITU.

Phase 3
Feb 2018

SSKIN Aide Memoire

Skin assessment	Changes to the skin need to be picked up early. Check skin: for redness, pain, bruising, or any other changes at regular times during the day
Surface	Lying and sitting on the correct mattress or cushion can help spread the pressure and reduce the risk. Consider: mattress, cushion, heel protectors
Keep moving	Change position regularly: ask patient to stand up, walk about, change position in bed. Consider: frequency of care rounding for those who require assistance
Incontinence/increased moisture	Skin that is wet or has urine or faeces on it will be more at risk from damage. Consider: continence status, increased moisture from wounds, drains or sweating
Nutrition	It is important to drink enough to keep skin from becoming dry. Consider: does patient require assistance, if wounds present think increased calorie/protein requirements, supplements, dietetics referral



Post project Review – Positive Outcomes

1. Pressure Ulcer Incidents (6 months data) - PU reporting increased following removal of support but was lower than pre-project levels.

56% reduction across all wards; Range 25% to 100%

11 HAPU developed, all Grade 2 compared to all grades previously (5 avoidable, 6 unavoidable)

Top Patient Factors affecting development of HAPU
- Reduced mobility
- Extremes of age
- Co-morbidities
- Increased moisture on the skin

2. Documentation Audit (5 sets per ward) - General decrease in documentation compliance following removal of support but overall increase noted for following:

SSKIN Bundle completed on Care Rounding tool	68% to 80%
Care rounding completed as pre agreed timeframe	63% to 86%
Skin assessed as per care plan	74% to 88%
Equipment availability within timeframe	47% to 75%
Nutrition input/ support provided as required	37% to 89%
Transfer info noted re skin and existing PU	21% to 100%

Post project review – further improvement required

Not all positive outcomes were sustained following the end of the focused support by TVN and QI. Areas that remained below 80% compliance were:

	Pre	During	Post
Patients/carer engagement			
• PU Prevention leaflets distributed	0%	56%	0%
• Documented evidence of advice	37%	81%	57%
• Discussions with patients/carers	5%	83%	11%
Risk assessment			
• Waterlow completion 6 hours	79%	86%	77%
• Waterlow score correct	16%	81%	50%
Care Planning/Rounding			
• Daily repeat assessment	68%	100%	65%

Post Project Review
May - Sept 2018

My bottom was sore so the nurse gave me a cushion

Special mattress has really helped

Nurses are always very busy, rushed off their feet

Nurses are very good/helpful

Conclusions

1. Overall, the supported project showed an improvement in outcomes for patients in the four clinical areas with less HAPU and lower grades developing.

2. Increased use of the Red Day review tool to analyse incidents gave a clearer indication of when a HAPU could have been avoided and learning from the process.

3. Tools and processes developed during the project can be shared with other clinical areas to support improvements.

Next Steps
2019 onwards

Next Steps

There is still work to improve in the following areas:
1. Communication with patient and carers including documented evidence in records
2. Accurate completion of Waterlow risk assessment in a timely manner
3. Daily review of patient, frequency of care rounding and associated care plan.

It is interesting to note that although there were issues with lack of documentation around some areas, the number and grade of PU in these areas still decreased. This raises the question '***Is care being delivered but not fully documented?***' and if so '***how can this be improved?***'

Medical Photography Service, NHS Lothian - MD - April 2019.