

Reducing Variation in Care: Implementing a pressure injury prevention standard of care in ICU

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Background

- In mid 2015 it was identified that a large number of pressure injuries (PIs) that had developed in ICU at Monash Medical Centre (MMC) were being identified on the wards rather than being diagnosed in ICU
- Investigation by the Pressure Injury Taskforce identified that there was reduced accuracy of PI reporting and considerable variation in how Pressure Injury Prevention (PIP) was delivered within the unit
- Education and quality improvement activities were initiated towards the end of 2015. A further increase in PI prevalence in the winter months of 2016 prompted further action

Aims

- To reduce hospital acquired PIs in ICU by 50% over 12 months.
- To reduce the severity of PIs and the impact to patients post discharge from ICU

Methods

- A literature review was conducted to identify current evidence and recommendations. ^{1,2,3,4}
- A multidisciplinary team of Nursing, Stomal therapy and Podiatry met to develop a Standard of Care (SOC) to reduce variation in pressure injury prevention throughout the unit (Figure 1.)
- Nursing staff received education prior to the launch of the PIP SOC
- Twice weekly PIP ward rounds were continued to support the floor staff and provide expert advice with clinically difficult patients. This also raised the profile of PIP across the ICU
- Regular audits were completed to measure the compliance with the PIP SOC
- PI prevalence and staging was recorded and validated by trained staff inline with the Monash Health PI reporting protocol. This process was unchanged prior to and during the study period.

Results

- Audits show documentation of PIs in the patient record as per Monash Health protocol has significantly improved from 66% compliance in Jan/Feb to 91% in July/Sept
- Audits show that compliance with skin integrity checks at the start of each shift increased from 77% in January to 87% in September 2017
- Spot audits recording compliance with the PIP SOC showed an increase in compliance from Dec 2016 to April 2017 (Figure 2)
- A significant clinical outcome following a review of the literature ⁵ was a transition away from antiembolic stockings (TEDS) in favour of Sequential Compressor Devices to prevent PIs.
- There were key areas of the PI SOC that were followed more diligently than others. In particular lower limb prevention strategies remain a focus within the unit to further reduce PIs

Picture guide for new standard of care for PI prevention in ICU at MMC

Item	Picture (if applicable)
1. All patients will be repositioned every 2 hrs – during this repositioning all equipment is to be checked to ensure positioning is correct and not at risk of causing a PI	
2. All patients will be supplied with Cairwave air mattress	
3. All patients will be fitted with heel wedge elevating heels off the mattress	
4. All patients will have the bed leg break activated to provide knee flexion, improve comfort and reduce pressure on sacrum and heels	
5. All patients will receive Mepilex heel applied to both heels	
6. All patients will receive Mepilex sacrum to sacral area	
7. All patients to have comfy ears product applied to tubing around the ears and face	
8. Silicone padding to be applied under facial masks for protection	
9. Complete skin integrity assessments will be conducted (including peeling back protective dressings) at the start and end of each shift	
10. If Anti-embolic socks are required they must be removed, skin checked and reapplied every 4 hrs	

Figure 1 : Picture guide to the PIP SOC

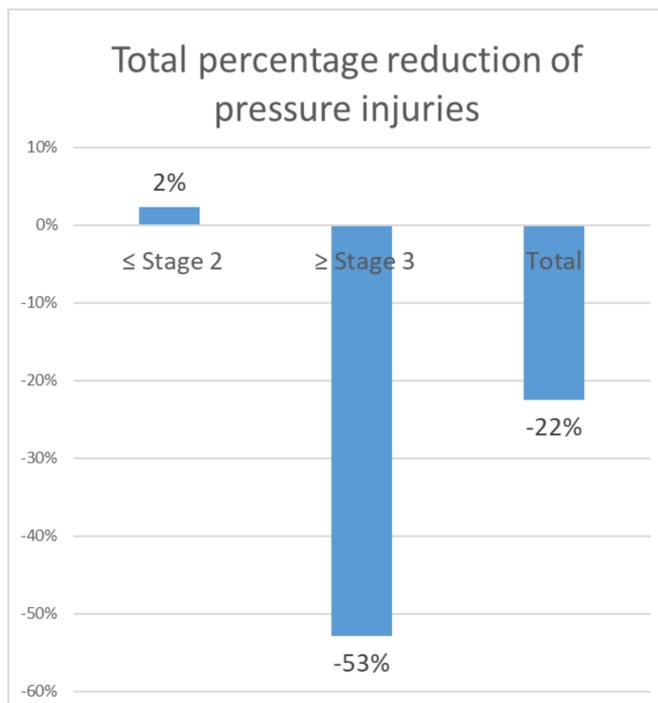


Figure 3 : Percentage reduction of PI's in 2016/17 vs the previous year

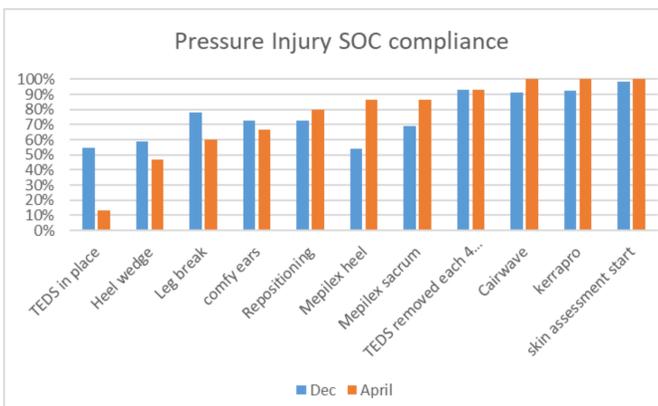


Figure 2 : Standard of care compliance Dec 2016 vs April 2017

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Results continued

- Over the 12 month auditing period total PIs reduced by 22%
- While there was an increase by 2% of minor PIs (≤ stage 2), more severe PIs (≥ Stage 3) reduced by 53% over the 12 month period (Figure 3)
- The increase in minor PIs may suggest these injuries are being identified earlier and preventing progression to more severe PIs
- In May-Aug (Pressure injury season) the total PIs reduced by 40% from 2016 compared with 2017 and severe PIs reduced by 84% (Figure 4)

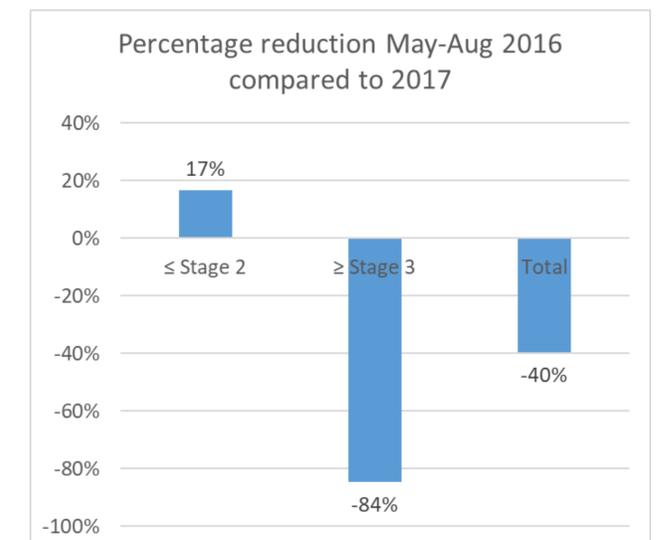


Figure 4: Pressure injury reduction during May-Aug 2016 vs 2017

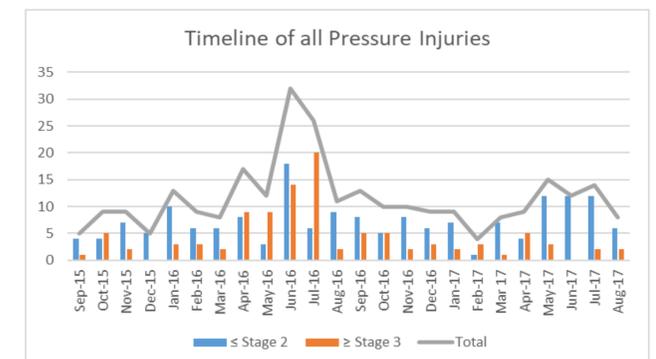


Figure 5: Timeline of recorded PI's

Conclusions and Limitations

- This 12 month project has shown that implementing a SOC for PIP within an ICU has been successful at reducing the severity of PIs found on patients
- Additional improvements in compliance with the PIP SOC may lead to further reductions in preventable PIs
- Initially there was limited reporting of PIs from Sept – Dec 2015. This led to a comparative increase in PIs in Nov-Dec 2016 when the SOC was first launched.
- Greater staff awareness and an increase in reporting skill has seen an increase in reporting of minor PIs but a significant decrease in severe PIs comparing the winter of 2016 prior to the launch of the SOC to the same time in 2017

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