### **SEM Scanner Prevention Algorithm**



A Quality Improvement Initiative in the Acute Setting

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## **Objectives**

Lothian Health Board conducted a Pressure Ulcer Reduction Program (PURP) in 2 clinical settings: Western General Hospital (WGH) & Royal Infirmary of Edinburgh (RIE) in 2019/2020

#### Primary Aim:

- RIE to determine if the addition of the SEM Scanner in the Pressure Injury/Ulcer (PI/PU) care pathway could reduce the incidence of Hospital Acquired Pressure Injuries/Ulcers (HAPI/U) where other initiatives had not achieved the Health Board goals
- WGH to determine if their low HAPI/U rates were linked to high use of equipment or if decision making could be improved without affecting outcomes.

#### Secondary Aim:

• To assess if this project could impact on potentially inappropriate and excessive use of high cost intervention products, specifically dynamic mattress surfaces.



## Results

Pre PURP information for the prior year 2018-2019 recorded a (HAPI/U) incidence rate in the SEM assessment wards:

• WGH - 0%, 259 admissions • RIE - 2.4%, 792 admissions

WGH - 48 patients scanned - total 1212 readings

- 0% HAPI/U maintained
- 33% reduction in the use of dynamic system usage achieved
- 75% of patients, healthcare practitioners reported that the SEM Delta had changed their clinical decision making
- 75% patients received additional interventions on the basis of SEM delta readings.

RIE - 78 patients scanned - total 1999 readings

- 100% HAPI/U reduction
- 11% reduction in the use of dynamic system usage achieved
- 79% of patients, nurses reported that the SEM Delta had changed their clinical decision making
- 79% patients received additional interventions on the basis of SEM delta readings.



# Method

This project was split into 2 parallel paths:

1. PURP path to evaluate the use of SEM Scanning in the reduction of PI/PUs

2. Parallel path to test a decision pathway

for equipment selection in clinical areas where there was high reporting of HAPI/U or high use of equipment.



## **Discussion**

- Addition of the SEM Scanner into the care pathway impacted positively on both the HAPI/U incidence rates and resource usage
- In contrast the parallel path whilst a reduction in HAPI/Us was achieved, dynamic system usage increased
- Given the outcomes achieved the economic value has been fully reviewed compared to the reported cost of treatment of HAPI/U within the Health Board

The introduction of SEM Scanner technology has been recommended to the Health Board for implementation to relevant wards within acute hospitals

• initially, with a view to widening the remit to the post-acute setting in the future.



