



## Service Priorities and Programmes Electronic Presentations

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**Application of “low shear sacral protective dressing” for medical patients with stage 1 pressure ulcer or high risk for fragile skin - an effective management to prevent further skin damage and promote healing**

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### **Keywords:**

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### **Introduction**

Pressure ulcers in critically ill, chronic bed or chair bounded patients are often described as unavoidable. The use of prophylactic dressings to bony prominences in anatomical areas that are frequently subjected to friction and shear becomes a new direction of prevention strategy for pressure ulcer.

### **Objectives**

Apply “low shear sacral protective dressing” on stage 1 pressure ulcer or fragile skin to prevent further skin damage from shearing force and balance microclimate at skin surface as one of the key interventions of pressure ulcer prevention in high risk patients in order to explore the benefits of:

- 1) Reduce the incidence of stage 2 pressure ulcer and prevent lengthy hospital stay;
- 2) Explore the cost and time effectiveness of pressure ulcer management during acute care

### **Methodology**

1. Provide briefing to ward nurses on proper application of “low shear sacral protective dressing”
2. Ward nurses identify patients with stage 1 pressure ulcer over sacrum and high risk of fragile skin (generalized odema, DM with fragile skin, BiPAP with sitting up on the bed, malnutrition with limb contracture or kyphosis, past history of pressure ulcer, bed ridden with urinary incontinence).
3. Two brands of protective dressings are used (one brand consists of 3 layers daily cost HK\$7.8 and the other brand consists of 5 layers daily cost HK\$11.3) Each brand is used in 2 inpatient wards (total 4 highest incident areas) for 15 patients per ward. Each protective dressing is applied to each selected patient for 5 consecutive days.
4. Review the effectiveness after 5th day of application or upon discharge.

## **Result**

Total 60 patients were applied with protective dressing that was 30 patients for each brand from October to December 2016:

1. 60 % each group patients with Norton score less than 12.
2. Brand of 3 layers protective dressing had 53% patients with  $\geq 2$  comorbid conditions, brand of 5 layers protective dressing had 13% patients with  $\geq 2$  comorbid conditions.

Each group had 56 - 63% patients completed 5 days protective dressing application. Improvement or no deterioration on pressure ulcer was reported. There was no report of deterioration on pressure ulcer for patients not completed 5 days application due to dead or early discharge.

The total number of pressure ulcer (Stage 2) from 4 trial wards had dropped from 17 in July-Sept 2016 to 4 in Oct-Dec 2016. The overall incident rate of pressure ulcer for the department had dropped from average 0.81 to 0.29 in those 2 periods.

All 12 nurses participated in the trial agreed protective dressing application was effective in pressure ulcer prevention and could decrease nursing care time and costs on Stage 2 (basic daily cost HK\$8.5) or above pressure ulcer wound management. The brand of protective dressing with 3 layers (with 2/3 cost price of brand with 5 layers) had already shown its efficacy in pressure ulcer prevention.