Homestead Hospital
BAPTIST HEALTH SOUTH FLORIDA

# SCALE – Skin Changes At Life's End: An Educational Intervention for Intensive Care, Progressive Care, and Medical Surgical Unit Nurses

Rosa Filomeno MSN, RN, CMSRN[1], Sophie Boudreau MSN, RN, CCRN, WCC[1], Maria M. Ojeda ARNP, MSN, MPH, NP-C[2]

[1]Homestead Hospital, Medical Surgical Unit; [2]Baptist Health South Florida, Inc. Center for Research & Grants

## BACKGROUND

The **SCALE** Expert Panel Consensus Statement of 2009 has indicated that health care professionals including nurses, lack knowledge on the principles of **Skin Changes At Life's End** (**SCALE**) and its application in the acute care setting.[1]

The skin is the largest organ in the body and it can fail, even with appropriate preventive interventions. The goal of care for the dying patient and their family should be comfort.[2]

## PURPOSE

The purpose of the study is to evaluate if the **SCALE** PowerPoint presentation is effective at increasing the staff's knowledge on the concepts associated with skin failure prior to death.

## METHODS

IRB approval was obtained in February of 2012 to conduct a research study.

**Design:** A non-randomized, Quasi experimental repeated measures interventional using a convenience sample of direct care registered nurses (DCRN) from ICU/PCU and MS units.

**Data collection:** Data was collected at four separate intervals: pre-intervention, immediate post-intervention, 4-weeks and 8-weeks.

The **SCALE** knowledge assessment tool was developed based on recommendations from the Homestead Hospital Wound Care Committee experts utilizing 9 multiple-choice questions.

**SCALE Knowledge Assessment Tool**

1. The definition of SCALE is:
   a. Skin Care At Life's End.
   b. Skin Changes Associated with Liver Enzymes
   c. Skin Changes At Life's End
   d. Skin Changes Associated with Lower Extremities
2. The correct term to describe breakdown in skin integrity as the organ function declines at the end of life is:
   a. Pressure ulcers
   b. Skin failure
   c. Skin changes
   d. Decubitus
3. Kennedy Terminal Ulcers (KTUs) are most often :
   a. Present on sacral/coccyx areas of hospice patients
   b. Associated with severe peripheral vascular disease (PVD)
   c. Treated aggressively with antibiotics
   d. Commonly found on wheelchair bound patients
4. Physiological changes associated with the dying process include:
   a. Severe pain and dyspnea
   b. Multiple organ failure
   c. Dermatitis secondary to incontinence
   d. Depression and increased response to stimuli
5. The most appropriate care plan for the dying patient with pressure ulcers includes:
   a. Turning the patient Q2 hours per hospital protocol
   b. Sharp debridement and placement of wound vac
   c. Allowing the patient to maintain a position of comfort
   d. Optimizing nutrition via enteral feeding
6. Patients/Families should be counseled that pressure ulcers present in the dying patient are:
   a. Always preventable with optimal nursing management
   b. A cause for legal action
   c. Unavoidable in many circumstances
   d. Not considered a cause for distress
7. The most significant factor for SCALE is:
   a. Loss of soft tissue from shearing and friction
   b. Decreased tissue perfusion
   c. Increased pressure associated with immobility
   d. Sub-optimal nutrition and fluid status
8. Skin Assessment and reporting of any skin changes should be:
   a. Discontinued when a patient is admitted to hospice care
   b. Continued on a weekly basis until discharge
   c. Completed only if the patient or family requests
   d. Continued per hospital policy unless contraindicated
9. Patient/Family teaching related to SCALE should be provided by:
   a. The primary care physician
   b. The palliative care team
   c. All patient care providers
   d. A member of the wound care committee

*Figure 1.* **The SCALE knowledge assessment tool.**

## INTERVENTION

An educational intervention was delivered as a one-time PowerPoint presentation during staff meetings. The presentation was developed based upon the following objectives:

**a.** To define **SCALE** and its relevancy to the healthcare setting.

**b.** To increase healthcare provider's knowledge of the clinical practice principles associated with **SCALE**.

**c.** To measure the retention of the concepts of **SCALE** by nursing staff over-time.

## RESULTS

**1.** Repeated measures ANOVA produced the following results:

**a.** There was a significant difference in knowledge scores between administrations.

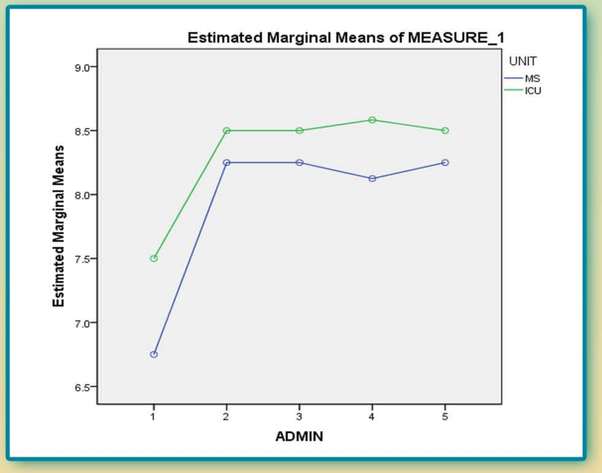
**b.** No significant difference between units on knowledge scores over time.

| Effect | Value | F | df | Sig |
|---|---|---|---|---|
| Admin Pillai's Trace | 0.368 | 6.224 | 3.000 | .002 |
| Admin Unit Pillai's Trace | .026 | .289 | 3.000 | .833 |

**c.** Knowledge scores increased significantly over time in both groups.

| Source | ADMIN | Type III Sum | df | F | Sig |
|---|---|---|---|---|---|
| Admin | Linear | 19.668 | 1 | 17.167 | .000 |

**d.** Post-hoc tests adjusted for multiple comparisons found that the immediate post-intervention period was responsible for most of the knowledge gained, persisting throughout the 8-week study (p=.003).




## CONCLUSIONS & IMPLICATIONS

The study was effective at increasing nurse's knowledge of **SCALE** in both units with retention over time. Some pressure ulcers may be unavoidable at life's end; an educated staff is the key to effective family education. Best practices on the management of **SCALE**, including staff education, should be adopted.

**References**

[1]Sibbad, R.G., Krasner, D.L., & Lutz, J. (2010). SCALE: Skin Changes at Life's End: Final Consensus Statement: October 1, 2009. *Advances in Skin and Wound Care*, 23(225-236).

[2]Chrisman, C.A. (2010). Care of chronic wounds in palliative care and end-of-life patients. *International Wound Journal*, 7(214-235), retrieved August 14th, 2011 from EBSCOhost database.