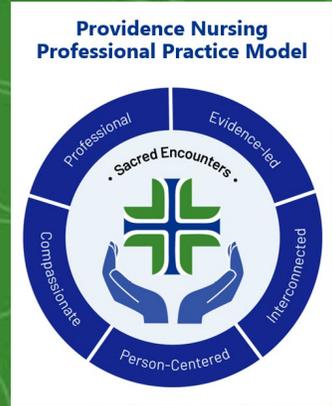




Providence System Nurse Research and Clinical  
Scholarship Symposium 2024



# An Educational Intervention Differentiating Pressure Injuries from End-of-Life Wounds

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# Background and Problem Statement

- End-of-life (EOL) wounds are identified in the literature as Kennedy Terminal Ulcers (KTU), Skin Failure (SF), Trombley-Brennan Terminal Tissue Injury (TB-TTI), and SCALE (Skin Changes at Life's End).
- EOL wounds have a similar appearance to pressure injuries (PIs) with a fundamentally different etiology.
- The misclassification of EOL wounds as PIs results in increased Hospital Acquired Pressure Injuries (HAPIs), hospital fines, and less-than-optimal EOL wound management.

Ayello et al., (2019), Delmore et al., (2015), Levine (2018), Kennedy (1989), Trombley et al., (2012)



# Project Aim and Research Questions

## PROJECT AIM

To examine the effectiveness of an educational intervention on EOL wounds in increasing nurse confidence in providing end-of-life care (EOLC) and differentiating pressure injuries (PIs) from EOL wounds.

## RESEARCH QUESTIONS

1. Is there a difference in nurse confidence level related to EOLC delivery after an educational intervention on EOL wounds.
2. What is the confidence level of nurses in staging PIs and differentiating PIs from EOL wounds and is there a difference in confidence in staging PIs and differentiating PIs from EOL wounds after an educational intervention?
3. Describe Participant demographics. Is there a relationship between nurse confidence in:  
(a) EOLC delivery and select nurse demographics and (b) nurse confidence in differentiating EOL wounds from PIs and select nurse demographics.



# Methods

Quantitative quasi-experimental design. Power Analysis determined minimum sample size of 41 needed for adequate effect size.

- A participant letter inviting nurses to participate was distributed via blind email.
- Participants were informed that their participation in the study served as their consent.
- Participants were administered a pretest survey and post-test via email with a link to the intervention (eLearning PowerPoint video) during June and July 2023. The pre and post-test instrument was The End-of-Life Professional Caregiver Survey (EPCS) with 28 items on a 5-point Likert scale (0=not at all, 1=little bit, 2=somewhat, 3=quite a bit, 4=very much) and Demographic questionnaire (10 items). Maximum EPCS score was 112.
- 2 supplemental items were added: (Item 29) I feel confident staging PIs, and (Item 30) I feel confident differentiating PI from EOL wounds.



# Inclusion and Exclusion Criteria

## Inclusion Criteria

- Registered Nurses (RNs) with at least one year experience
- Providing direct care
- Currently employed

## Exclusion Criteria

- None

## Institutional Review Board

- IRB Approval obtained by Providence SJMC and Vanguard University



# Analysis of Data

- Q1 Paired samples t-test used to determine differences in nurse confidence related to EOLC delivery before and after the educational intervention.
- Q2 Paired samples t-tests were used to determine differences in nurse confidence in staging EOL wounds and differentiating EOL wounds from PIs before and after the educational intervention.
- Q3 Descriptive statistics were used to analyze demographic data. Pearson  $r$  Correlation was used to determine: (a) relationships between nurse confidence related to EOLC delivery and select nurse demographics and (b) relationships between nurse confidence staging PIs and differentiating EOL wounds from PIs and select nurse demographics.
- Data was analyzed using SPSS (Software Package for the Social Sciences) version 28.

# Heterogeneous Participant Sample of Nurses from Multiple sites

## Participant Demographics (N = 41)

**Age:** 20-30 (31%), 31-40 (27%), 41-50 (19%), 51-60 (17%), > 60 (7%)

**Gender:** Female (81%), Male (19%)

**Ethnicity:** Hispanic (38%), Black (2%), Asian (29%), White (33%)

**Educational Level:** ADN (33%), BSN (43%), MSN (19%), Doctoral (5%)

**Years Experience:** 1-5 (55%), 6-10 (21%), 11-15 (9%), 16-20 (0%), >20 (14%)

## Participant Affiliations

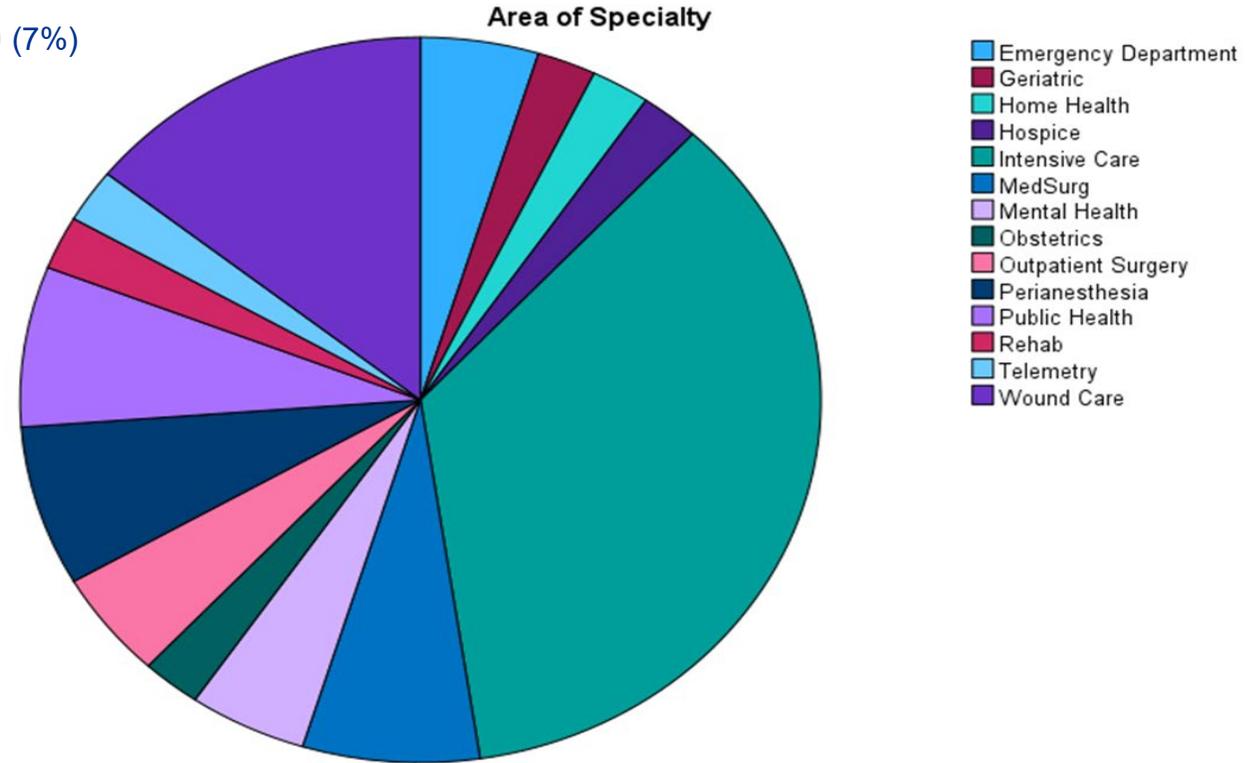
RN to BSN and MSN students

Nursing Professors

Association of Hispanic Nurses

Wound Care Team Nurses

RNs at a Magnet-designated CA Medical Center



Note. Areas of Specialty: ED= 2, Geriatrics=1, Home Health=1, Hospice=1, ICU=15, MedSurg=3, Mental health=2, Obstetrics=1, Outpatient Surgery=2, Peri-anesthesia=3, Public Health=3, Rehab=1, Telemetry=1, Wound Care 6



# Findings

- Q1 There was a significant improvement ( $t=5.62, p<.001$ ) from pre-intervention total EPCS scores ( $M=71.3, SD=14.9$ ) to post-intervention total scores ( $M=80, SD=14.9$ ). Lower scores = greater educational needs.
- Q2 (a) There was significant increase ( $t=-7.32, p<.001$ ) on Item 29 (Staging PIs) from pretest ( $M=1.68, SD=1.22$ ) to post-test ( $M=2.5, SD=.85$ ).

(b) Pre-intervention participants were “not at all” confident differentiating PIs from EOL wounds ( $M=.85, SD= 1.35$ ) on item 30. Post-intervention there a significant increase ( $t=-11.9, p<.001$ ) in scores on item 30 ( $M=2.43, SD=.98$ ).
- Q3 Descriptive statistics were used to analyze nurse demographics. Pre-intervention, most participants were unfamiliar with EOL wounds (71.4%,  $n=30$ ). Older participants reported more confidence in staging PIs ( $r=.326, p=.043$ ). Participants who were more confident in staging PIs were more confident in differentiating PIs from EOL wounds ( $r=.442, p=.005$ ). Those with prior wound training had higher overall scores ( $t=2.814, p=0.009$ ).



# Clinical Implications

- The educational intervention on EOL wounds effectively increased nurses' confidence in providing EOLC and differentiating EOL wounds from PIs.
- Ensuring nurses have the confidence to identify and assess EOL wounds is essential in providing optimal care at EOL.
- Educating and equipping nurses to differentiate between PIs and EOL wounds may have significant outcomes related to nursing practice, patient care, and hospital expenditures.

Questions? Thank you  
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