

**FRIDAY, MAY 18**  
**SESSION 6: HEALTH SERVICES**  
**RESEARCH**

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**Deterioration of Sensory Perception or Friction & Shear in Low Risk Braden Scores is Associated with Accelerated Development of Hospital Acquired Pressure Ulcers**

***Raysa Cabrejo, BA, Sifon Ndon, BA, Ean Saberski, MD, Carolyn Chuang, MD, Henry C. Hsia, MD***

***Yale School of Medicine, New Haven, CT, USA***

**PURPOSE:** The Braden Scale is a risk stratification tool currently used by nurses to identify patients at risk of developing hospital acquired pressure ulcers (HAPUs). The tool operates on a 23-point system comprised of 6 components (Sensory Perception, Moisture, Activity, Mobility, Nutrition, Friction & Shear) where a threshold value of 18 distinguishes those with “low risk” (19–23 points) from those considered “high risk” ( $\leq 18$  points). A Braden score is calculated on day of admission and updated throughout the hospital stay. Only patients deemed “high risk” are placed under special nursing protocols aimed at preventing pressure ulcer formation. Using linear regressions analysis, this study sought to better understand factors affecting the timing of HAPU development between high and low risk patients.

**METHODS:** A retrospective cohort study was performed looking at patients with HAPUs over a 2-year period at Yale New Haven Hospital (YNHH). Patients were stratified into two HAPU risk groups based on day of admission Braden score: low risk ( $>18$ ) or high risk ( $\leq 18$ ). A linear regression model analyzed the impact of multiple factors, including Braden Scale components, using the day of pressure ulcer formation during the hospital admission as the dependent variable.

**RESULTS:** On a sample of 1,308 HAPU admissions, the average length of stay was 30.8 days (Standard Deviation  $\pm 45.3$ ), and HAPU development occurred on average after 12.7 days (SD  $\pm 16.2$ ). “High risk” patients developed ulcers after 11.2 days (SD  $\pm 18.5$ ) and “low risk” patients developed ulcers after 13.0 days (SD  $\pm 15.8$ ). Among “low risk”

patients (Braden score  $>18$ ), 13.2% still developed HAPUs. Among these patients, a one point decrease in the Sensory Perception component score or Friction & Shear component score was associated with the hastening of pressure ulcer formation by 10 days ( $p < 0.001$ , Confidence Interval: -15.3- -5.87) or 5 days ( $p < 0.04$ , CI: -9.98- -0.24), respectively.

**CONCLUSION:** Patients deemed to be “low risk” for HAPU development by Braden score evaluation still carry potentially significant risk for HAPU development and should be monitored closely. Based on our analysis, emphasis should be placed on monitoring closely the Sensory Perception and Friction & Shear components of Braden scores. Decreases in these components, even when the overall Braden score remains higher than 18, should lead to the implementation of special nursing protocols conventionally used for “high risk” patients. Such measures should further decrease the incidence of HAPU formation and improve the quality of hospital care for patients.

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**Opioid Prescribing Consumption Trends in Outpatient Plastic Surgery**

***Katherine Rose, MD***

***University of Wisconsin, Madison, WI, USA***

**PURPOSE:** Opioid over-prescription is a nationwide problem contributing to the current opioid epidemic. Methods to reduce the frequency with which opioids are prescribed are being investigated across multiple disciplines. Currently, there are no data detailing the prescribing habits and need for post-operative narcotics for patients undergoing Plastic Surgery procedures. The goal of this study was to evaluate opioid consumption, physician prescribing practices, and patient satisfaction with post-operative pain control following Plastic Surgery procedures.

**METHODS:** Patients who underwent inpatient and outpatient Plastic Surgery procedures were given a post-operative questionnaire inquiring about pain control and medication use. We queried about procedure type, quantity of opioids prescribed and used, day of opioid cessation, opioid refill status, subjective pain scores, concurrent use of non-opioid analgesics, and overall satisfaction with their pain control.

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