Abstract:

**Background:** Acute pain care for geriatric patients in the emergency department (ED) may be inadequate and with disparities when compared to pain care received by their younger counterparts in the same setting. Recent studies indicate that older adults receive less analgesics.

**Objectives:** The objective of this study was to compare, contrast, and determine patient-related factors associated with the quality of ED pain care received by older adults.

**Methods:** This was a multi-center, retrospective observational cohort study of 5 US EDs with geographic and visit-volume diversity. All adults (≥ 18 years age) presenting to the ED with fractures or abdominal pain during the months of January, April, July, and October of 2009 were included. Primary outcomes were whether pain assessment and follow-up were documented, analgesic use (opioids, NSAIDs, others), and reduction in overall pain scores during the ED visit. Predictors include age (young [18-64 years], older [65-84 years], oldest [≥ 85 years]), comorbidity, and number of current medications. Covariates include gender, race/ethnicity, triage severity, and degree of initial reported pain.

**Results:** A total of 7004 visits were reviewed; 85% were younger (18-64 yo), 12% were older (65-84 yo), and 3% were oldest (85+ yo) in age. Compared to younger
adults, oldest adults were 89% less likely to receive an initial pain assessment (p=0.03), and older and oldest adults were, respectively, 24% (p<0.05) and 48% (p<0.01) less likely to receive analgesics. The differences in pain care, however, were dependent upon type of pain. Older and oldest adults with fracture pain (parameter estimates 0.15 (95% CI -0.22, 0.53, p=0.56), -0.14 (95% CI -0.61, 0.35, p=0.44) respectively) versus older and oldest adults with abdominal pain (parameter estimates -0.34 (95% CI -0.53, -0.14, p<0.01), -0.98 (95% CI -1.34, -0.61, p<0.0001) respectively) when compared to younger adults (ref). Nonetheless, older and oldest adults had a greater reduction in pain scores for all types of pain, with -3.40 and -3.54, respectively, vs. -3.15 for younger adults (p=0.03). These associations remained when adjusted for covariates.

**Conclusion:** Disparities in pain care for older adults exist, but these may be based on type of pain condition and age category. These differences, however, did not appear to impact the reduction in pain scores.