Introduction: Patients with hip fractures have better outcomes when surgery is performed within 24-48hrs. In general, patients with non-English language preference (NELP) experience reduced access to care and outcomes compared to patients with English language preference (ELP). As 26 million people in the US have a NELP, this study investigates the association between patient language preference and hip fracture outcomes.

Methods: A retrospective cohort study was conducted using a database spanning six academic medical centers to identify adult patients who received hip fracture surgery between January 2012 to December 2024. Patients were stratified by ELP or NELP status. The primary outcome was time to surgery. Secondary outcomes included length of stay, 30-day complications, and discharge disposition. A regression analysis was conducted to analyze differences in primary and secondary outcomes between ELP and NELP groups. A multivariate regression analysis was used to calculate adjusted odds ratios (aOR) controlling for language, sex/gender, age, body mass index, area deprivation index, insurance type, ethnicity, and race.

Results: A total of 6832 patients were included (19.1% NELP, 79.3% ≥65 years, 61.4% female). Average time to surgery was 31 hours. Patients with NELP experienced a shorter time to surgery (29.7hrs) than patients with ELP (31.3hrs), with a difference of 1.66 [±0.67]hrs (p-value=0.013). Patients with NELP experienced a longer length of stay, with a difference of 6.0 [±3.05]hrs (p-value=0.049). Patients with NELP experienced higher odds of having at least one 30-day complication (aOR=1.13, p-value=0.009). Patients with NELP had higher odds of discharge to home with home health services (aOR = 1.35, p-value <0.001).

Conclusion: Patients with NELP experience a shorter time to surgery and longer hospitalization, though these differences may not be clinically significant. Patients with NELP are more likely to experience 30-day complications and discharge with home health, necessitating solutions to address drivers of such inequities.