Introduction: Opioid medications have been shown to be associated with cognitive decline, especially at higher doses, but studies so far have had mixed results. We assessed if opioid use in a population of older African Americans with diabetes was associated with lower cognitive function or impairment in activities of daily living (ADLs).

Methods: This was a secondary analysis of data from a randomized controlled trial of older African Americans with diabetes enrolled at two urban Emergency Departments. We collected patient-reported baseline data which included all active medications, assessment of ADLs, and measurement of cognitive function. Our primary outcome was the association between opioid use, cognitive function, and ability to perform ADLs. Opioid use was defined as having a prescription and patient reported usage. Reported medications were converted to Morphine Milligram Equivalents (MME). Cognitive function was measured by the 16-point short form Montreal Cognitive Assessment (s-MoCA). ADLs were measured by a 45-point survey rating patients’ ability to perform given activities, with higher scores indicating better function. One-way ANOVAs were used to assess mean differences in patients who were and were not taking opioids, and Pearson correlations were performed to assess relationships of MME and cognitive function and ADLs.

Results: Data was collected for 214 patients. The median age was 66 (IQR 66-72) with 25% male and 20% (n = 43) with active opioid prescriptions. The median s-MoCA score was 9 (IQR 7-11), the median MME was 7.5mg (IQR 5-20), and the median ADLs score was 38 (IQR 32-42). There was no statistically significant correlation between MME and s-MoCA (r = 0.073, p = 0.289) or ADL scores (r = 0.021, p = 0.767). There was no significant difference between s-MoCA (p = 0.522) or ADL scores (p = 0.207) when comparing patients taking vs. not taking opioid medications. No correlation was found within the group of patients taking opioids between MME and s-MoCA scores (r=0.000, p=0.123) or ADL scores (r=0.123, p=0.430).

Conclusion: In older African American patients with diabetes, cognitive function and ability to perform ADLs can affect patients’ ability to care for themselves and their medical conditions. In our study, we found that opioid medication use, even at high doses, was not a risk factor for worsened cognitive function or impaired ADLs in this population.