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Effects of Medications on Cognitive Function and Falls in Older African Americans with Diabetes

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Introduction: Potentially-inappropriate medications (PIMs) are medications that have increased rates of adverse drug events in older adults. Medications with anticholinergic activity are classified as PIMs since they can lead to cognitive dysfunction and increased fall risk. PIM use is higher among African Americans (AA) than Whites.

Methods: This study explored relationships among cognitive function, falls, and PIMs in AAs with diabetes. This study recruited AAs with diabetes (n=99, age ≥60yrs) who were seen in the Emergency Department (ED), and were enrolled in a trial of a behavioral intervention to improve diabetes management. PIMs were based on the Beer's criteria and the Anticholinergic Cognitive Burden scale (ACB) score. The Montreal Cognitive Assessment (MOCA) was used to characterize cognitive impairment. Falls were recorded via EMR and a questionnaire.

Results: MOCA scores were not significantly correlated with PIMs use or ACB scores (PIMs: r=-.101, p=0.318; ACB: r=-.110, p=0.283). MOCA scores were, however, negatively correlated with the duration of diabetes, and this was upheld in a regression in which age was controlled (r=-0.274, p=0.005). Of 47 subjects who were questioned about falls, 20 subjects had at least one fall in the past 12 months, females having more falls than males (F=19, M=1). Although the relationship between falls and PIMs and falls

and ACB score (p=0.925; p=0.122) was insignificant, greater worry about falling was related to higher ACB scores (p=0.013).

Discussion: In sum, results suggests that diabetes duration is related to cognitive function, even when age is controlled. Females were more likely to have fallen, perhaps due to increased age or diabetes duration.