

Association Between Cognitive Impairment And Clinician Prescribing At Hospital Discharge: A Nested Cohort Study

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KEY TAKEAWAY: Hospital clinicians increase deprescribing of sedative and anticholinergic medication in response to cognitive impairment. Given dementia and delirium are under-recognized, increasing clinician awareness of impaired cognition could enhance de-prescribing.

INTRODUCTION

- Hospitalization is a unique opportunity to address polypharmacy
- Older adults with cognitive impairment are at high risk for adverse drug effects
- It is unclear if hospital clinicians modify prescribing behaviors based on cognitive impairment

Objective: To compare hospital clinician prescribing for patients **with** versus those **without** cognitive impairment.

METHODS

- Nested cohort study using data from 2 randomized de-prescribing trials (Shed-MEDS and VA DROP)
- Participants:
 - Hospitalized older adults (age ≥ 50)
 - Polypharmacy (>5 medications)
 - Discharging to post-acute care
- Positive cognitive impairment** = abnormal brief Confusion Assessment Method (bCAM) or Brief Interview for Mental Status (BIMS) < 13 (0-15)
- Negative cognitive impairment** = Normal bCAM or BIMS ≥ 13
- Medication outcomes at hospital discharge:
 - Primary: Drug Burden Index (BMI)
 - Anticholinergic/sedative burden
 - Secondary: Total medications, potentially inappropriate medications (PIMS)
- Analysis: Mixed-effects Poisson regression adjusted for medication measures at enrollment & other factors.

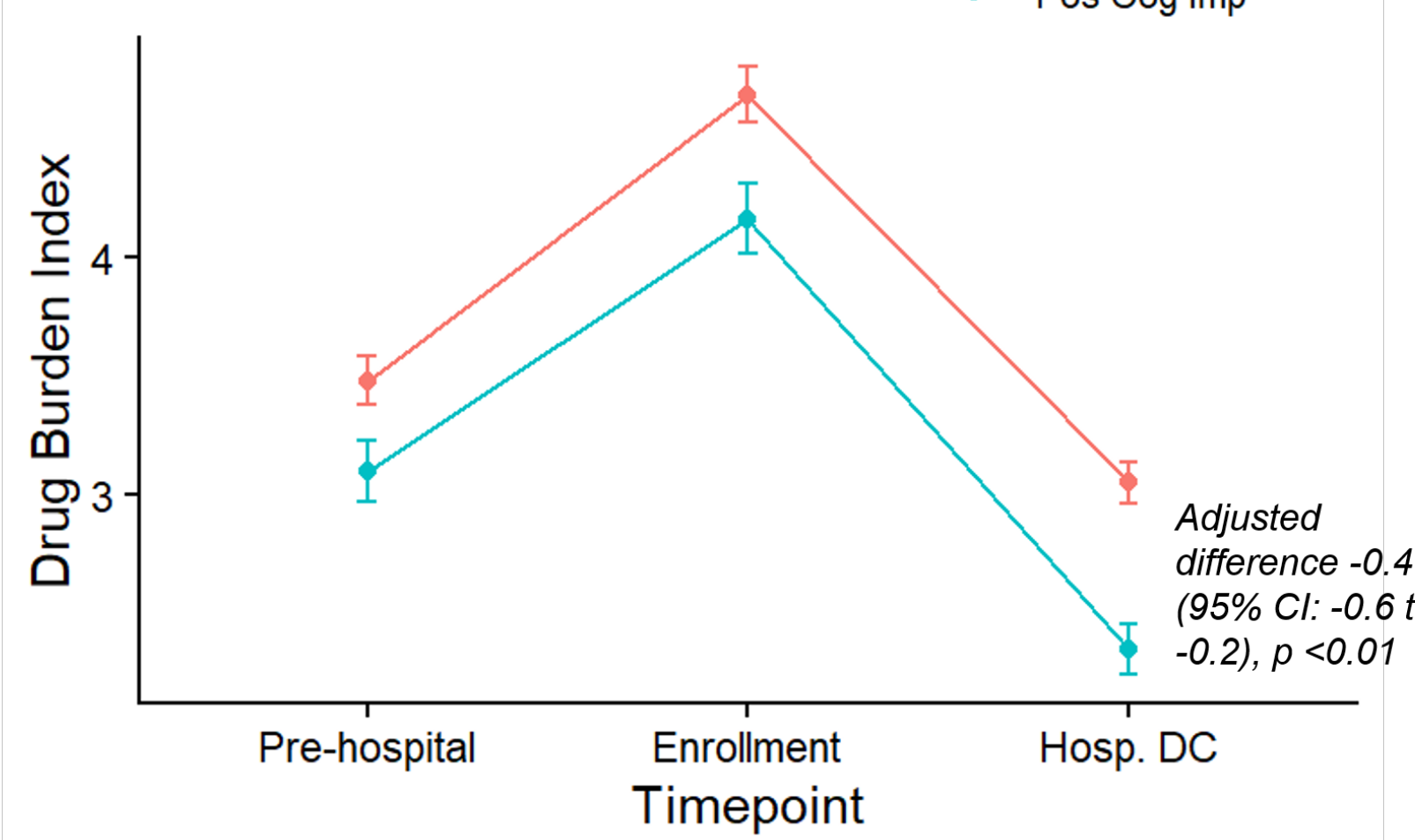
RESULTS

Table 1: Selected characteristics of patient cohort (N=614)

	Adults with cognitive impairment (N=220)	Adults without cognitive impairment (N=394)
<i>Demographic</i>		
Median age (IQR)	78 (72-86)	72 (65-79)
Female sex	81 (37)	169 (43)
White, Non-Hispanic	178 (81)	308 (78)
Lives at private home	175 (80)	352 (89)
<i>Medication Measures</i>		
Requires help with meds	153 (70)	171 (43)
2 or More Pharmacies	104 (47)	233 (59)
<i>Functional Status</i>		
Functional impairment	120 (55)	260 (66)
<i>Trial Characteristics</i>		
Assigned to intervention	107 (49)	199 (51)

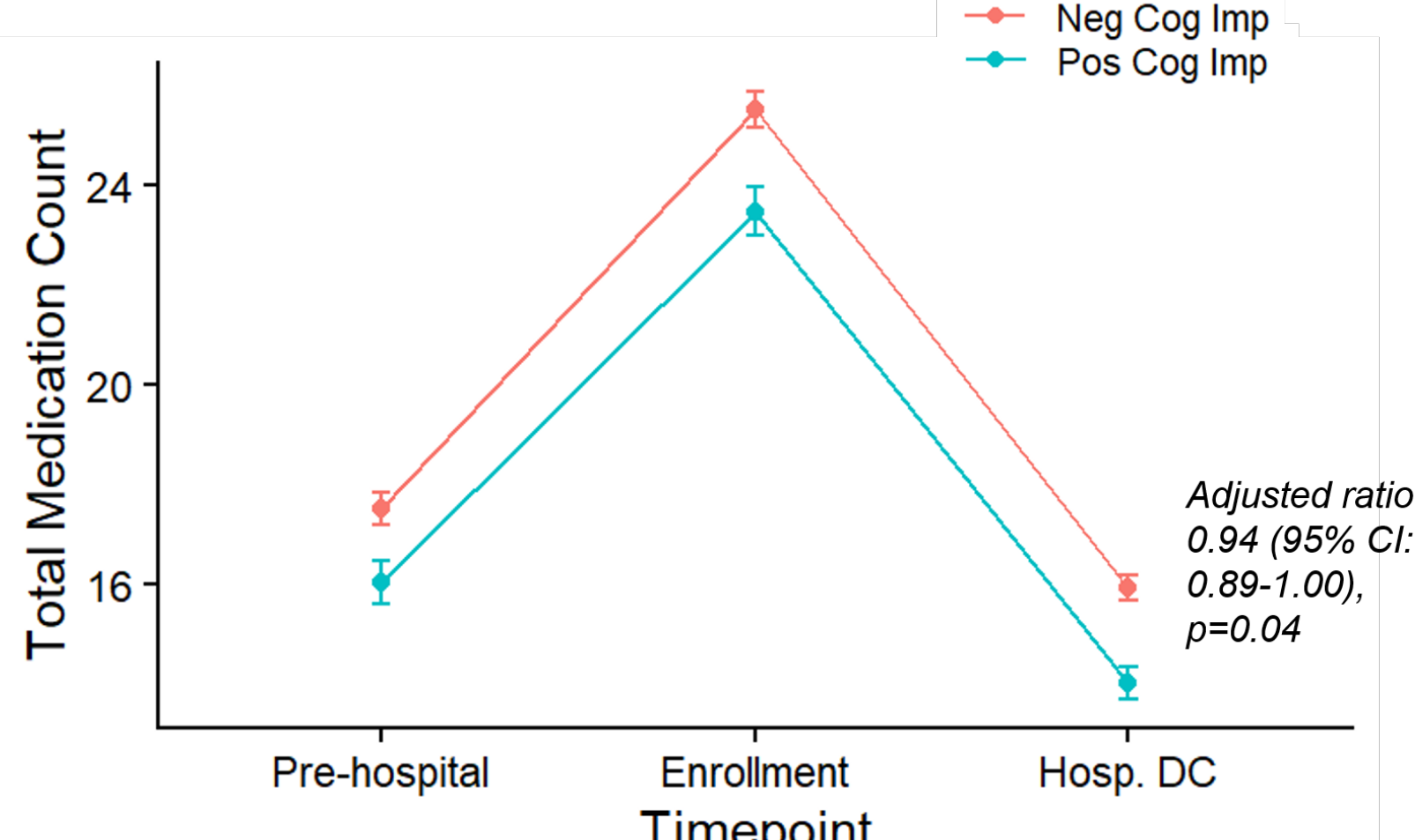
Figure 1: Adjusted medication measures during hospitalization, stratified by cognitive impairment¹

A. Drug Burden Index (DBI)



Adjusted difference -0.4 (95% CI: -0.6 to -0.2), p < 0.01

B. Total Medication Count

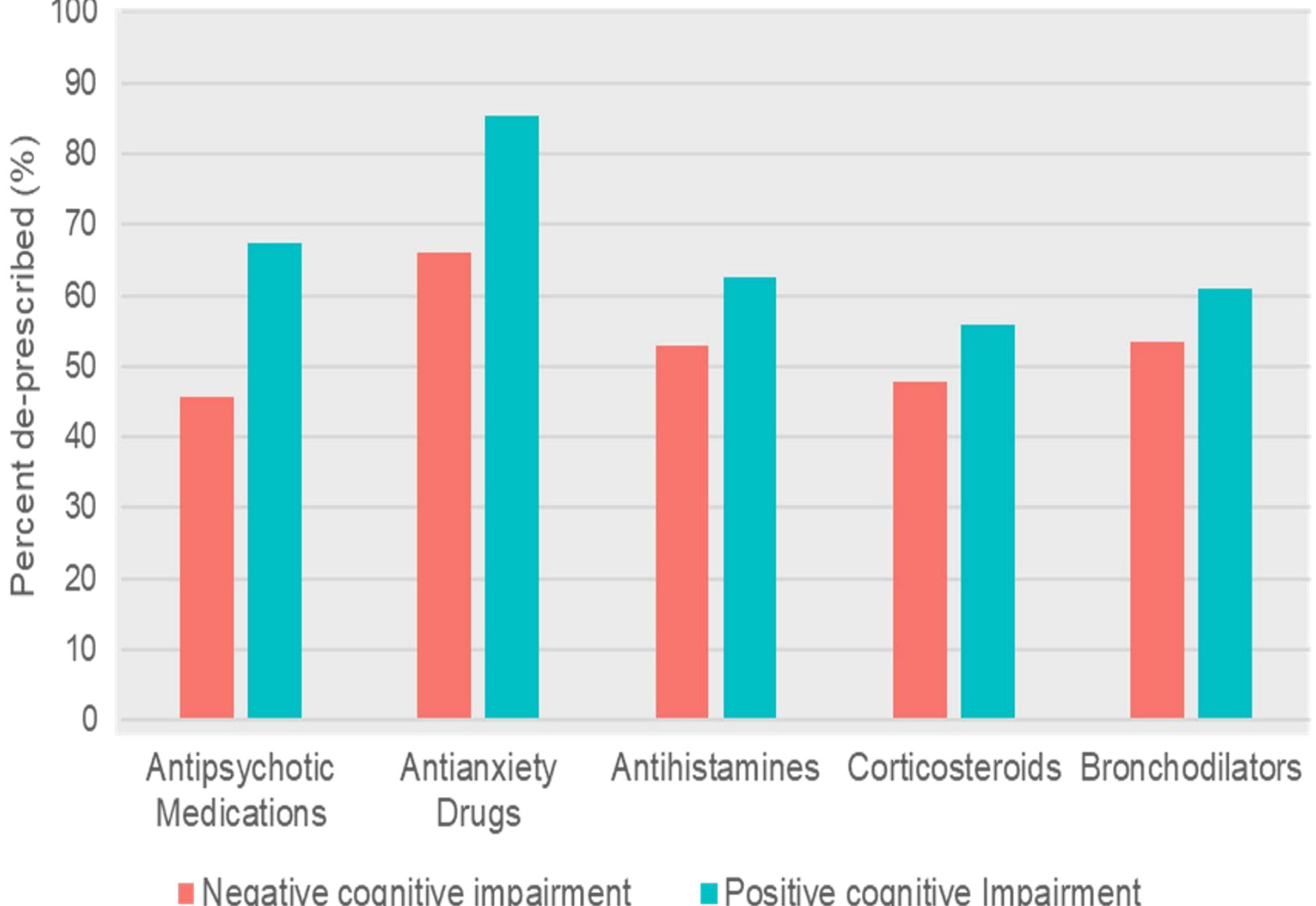


Adjusted ratio: 0.94 (95% CI: 0.89-1.00), p=0.04

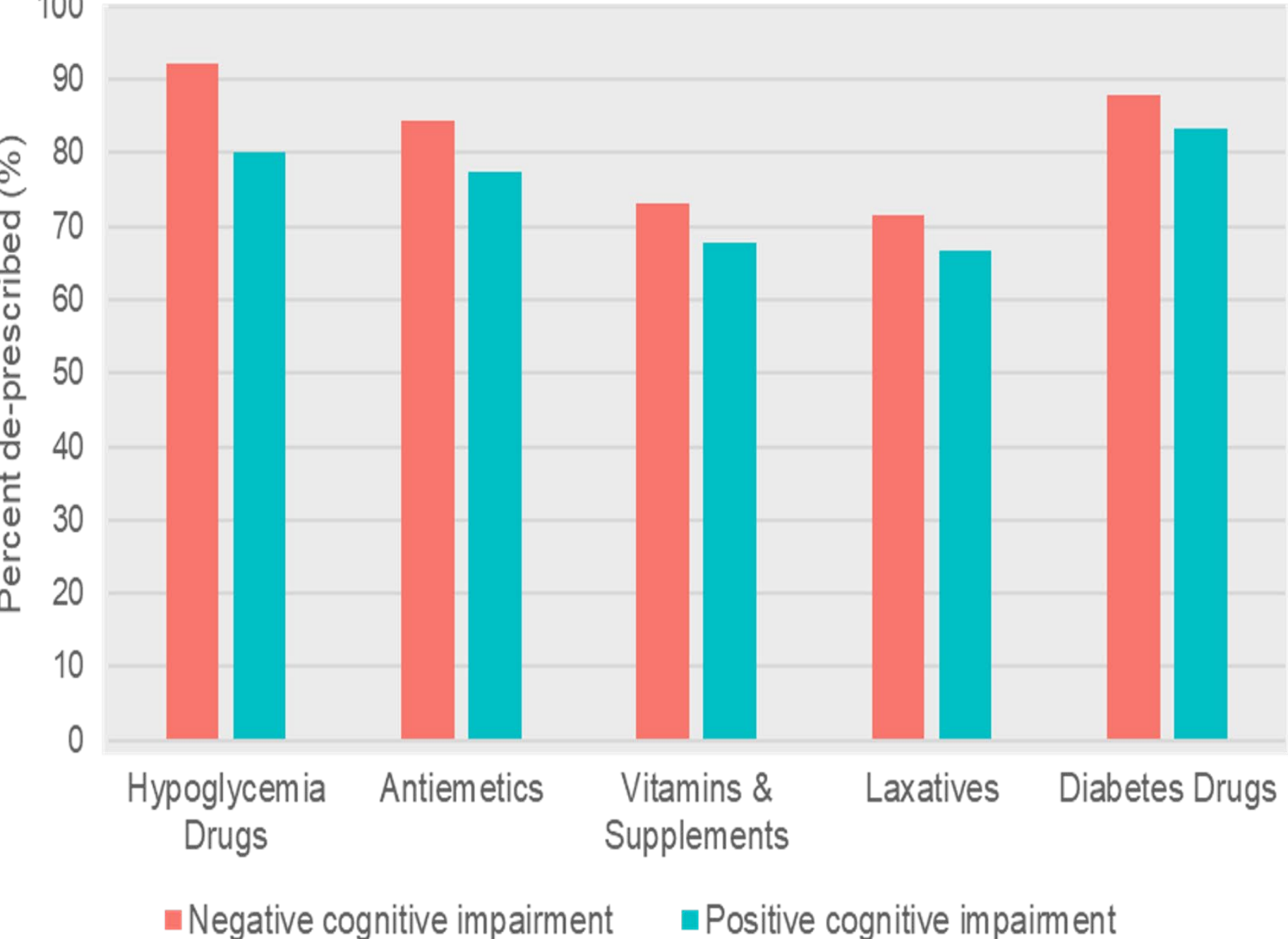
¹ Adjusting for time point, trial site, patient characteristics (age, functional impairment, medication assistance), medication measure at enrollment

Figure 2: Differences in deprescribing for patients **with** and **without** cognitive impairment by drug class

Most deprescribed¹



Least deprescribed¹



¹ Among FDA drug classes with ≥ 100 medications at study enrollment

DISCUSSION

- Adults with cognitive impairment had greater reductions in the Drug Burden Index (DBI).
- Adults with cognitive impairment had greater reductions in total medication and potentially inappropriate medications.
- Limitations:** Secondary analysis; use of screening measures to define cognitive impairment; clinicians possibly unaware of cognitive impairment.

FUNDING & CONTACT

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 - Shed-MEDS: NIA R01AG053264
 - DROP: VA Merit Award IIR17-033
 - CTSA Award: NCATS UL1TR000445
- Contact: Blair Golden (bpgolden@medicine.wisc.edu)

