Potentially Inappropriate Medication Use among Dual-Eligible Beneficiaries with Dementia by Medicare Enrollment Type

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BACKGROUND

- Dementia increases
 susceptibility to potentially
 inappropriate medications (i.e.,
 risks > benefits)
- Medicare enrollment types
 - Traditional Medicare (TM) fee-for-service
 - Medicare Advantage (MA) capitated payments
 - Dual-eligible special needs plans (**D-SNP**) – coordinate Medicare and Medicaid benefits

OBJECTIVE

Examine associations between Medicare enrollment types and potentially inappropriate medication use among Medicare-Medicaid dual-eligible beneficiaries with dementia

METHOD

DATA & POPULATION

- 2016-2019 Medicare claims and encounter data
- 65+ years old
- Alzheimer's disease and related dementias
- Medicare-Medicaid dual-eligible
- Community dwelling

OUTCOMES

- Potentially harmful drug-disease interaction
- High-risk medication use

EXPOSURE

Medicare enrollment type – TM v. MA v. D-SNP

ANALYSIS

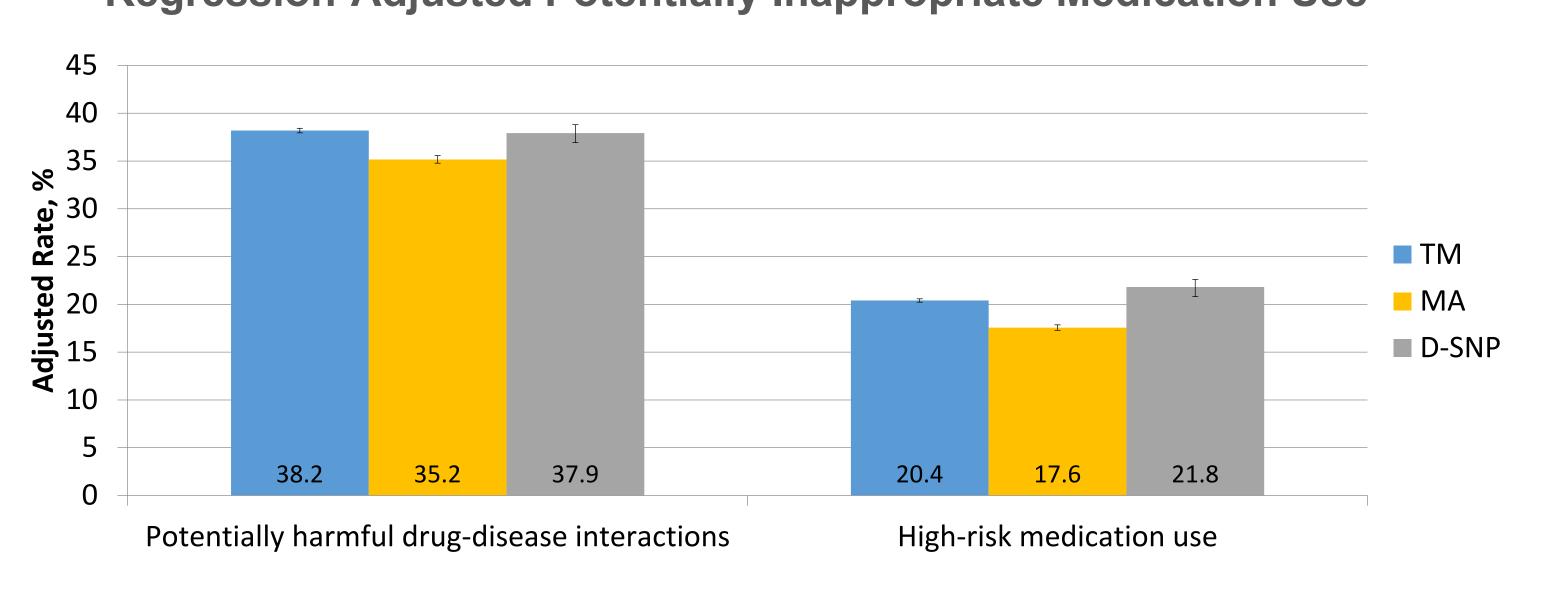
- Linear probability models
- Groups balanced by inverse probability of treatment weighting
- Controls age, sex, race, rurality, other chronic conditions, frailty, local health care resources, county fixed effects, year fixed effects

RESULTS

Sample Characteristics

	TM	MA	D-SNP
Age, mean (SD)	81.8 (8.2)	81.8 (7.7)	80.2 (7.8)
Female, %	72.3	71.4	71.7
White, %	55.4	54.3	28.3
Black, %	17.4	19.8	26.8
Asian, %	9.0	3.6	8.8
Hispanic, %	18.3	22.4	36.1
Rural residence, %	22.3	14.3	12.0
HCC risk score, mean (SD)	2.29 (1.65)	2.06 (1.46)	2.20 (1.51)
Kim frailty score, mean (SD)	0.24 (0.09)	0.23 (0.08)	0.22 (0.08)
Observations, n	599,406	156,933	113,721

Regression-Adjusted Potentially Inappropriate Medication Use



Differences in Potentially Inappropriate Medicare Use between Medicare Enrollment Types

Outcome	Average Marginal Effects, percentage points (95% CI)	
	MA vs. TM	D-SNP vs. TM
Potentially harmful drug-disease interaction	-3.0 (-3.5, -2.6)	-0.2 (-1.1, 0.6)
High-risk medication use	-2.8 (-3.1, -2.5)	1.4 (0.6, 2.2)

Differences between MA and D-SNP are statistically significant (p<0.001).

CONCLUSIONS

Special needs plans for Medicare-Medicaid dual-eligible beneficiaries did not perform better than Traditional Medicare or than other Medicare Advantage plans to reduce potentially inappropriate medication use among individuals with dementia.

REFERENCES

Nothelle SK, Sharma R, Oakes A, et al. Factors associated with potentially inappropriate medication use in community-dwelling older adults in the United States: a systematic review. Int J Pharm Pract. 2019 Oct;27(5):408–23.

Medication Management in Older Adults (DDE/DAE). National Committee for Quality Assurance. Available from: https://www.ncqa.org/hedis/measures/medication-management-in-older-adults/

Kim DH, Schneeweiss S, Glynn RJ, et al. Measuring Frailty in Medicare Data: Development and Validation of a Claims-Based Frailty Index. J Gerontol A Biol Sci Med Sci. 2018 Jun 14;73(7):980–7

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