

Disability And Adherence To GLP-1 Receptor Agonists And SGLT2 Inhibitors Among U.S Adults With Diabetes: Evidence From The Medical Expenditure Panel Survey

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OBJECTIVE

- GLP-1 receptor agonists and SGLT2 inhibitors reduce cardiometabolic complications in type 2 diabetes, conditions that disproportionately affect adults with disability.
- For patients with diabetes and disabilities, sustained adherence to these therapies is important to prevent downstream morbidity.
- We examined the association between disability status and adherence to GLP-1 RAs and SGLT2i among adults with diabetes.

METHODS

Data Source and Study Design: This is a longitudinal observational cohort study using data from the Medical Expenditure Panel Survey (2017-2023). MEPS is a nationally representative survey of the U.S. civilian noninstitutionalized population, their medical providers, and employers.

Eligibility Criteria:

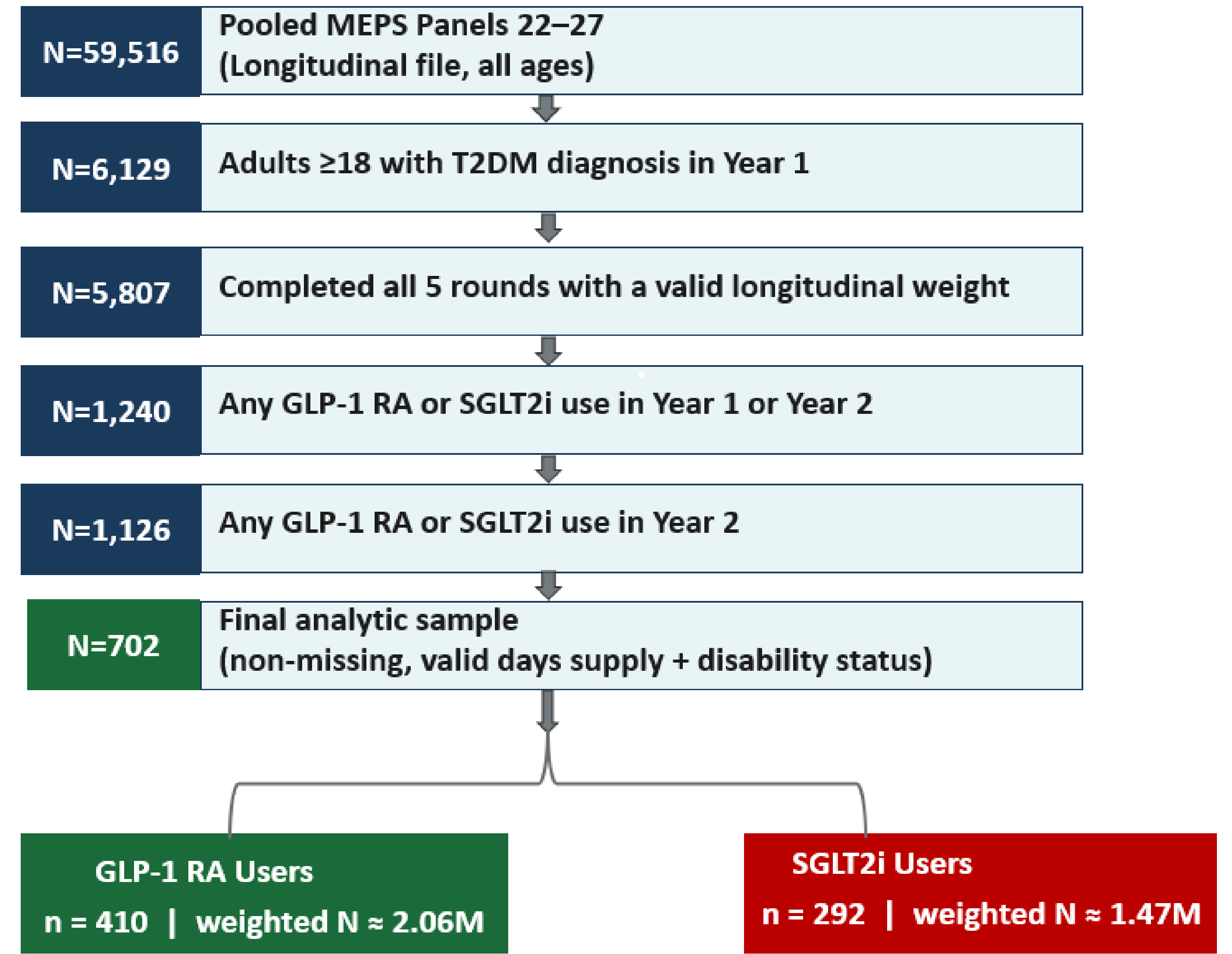


Figure 1: Flow chart of cohort construction

Exposure Definition: Disability Status (Yes/No)

- ≥1 positive response across 6 CDC functional domains, measured in Year 1.



Figure 2: CDC 6 Domains of Disability Status

Outcome Definition: Medication Refill Adherence (MRA)

$$MRA = \frac{\text{Total Days Supplied (Year 2)}}{365 \text{ days}}$$

Adherence Threshold MRA ≥ 80%

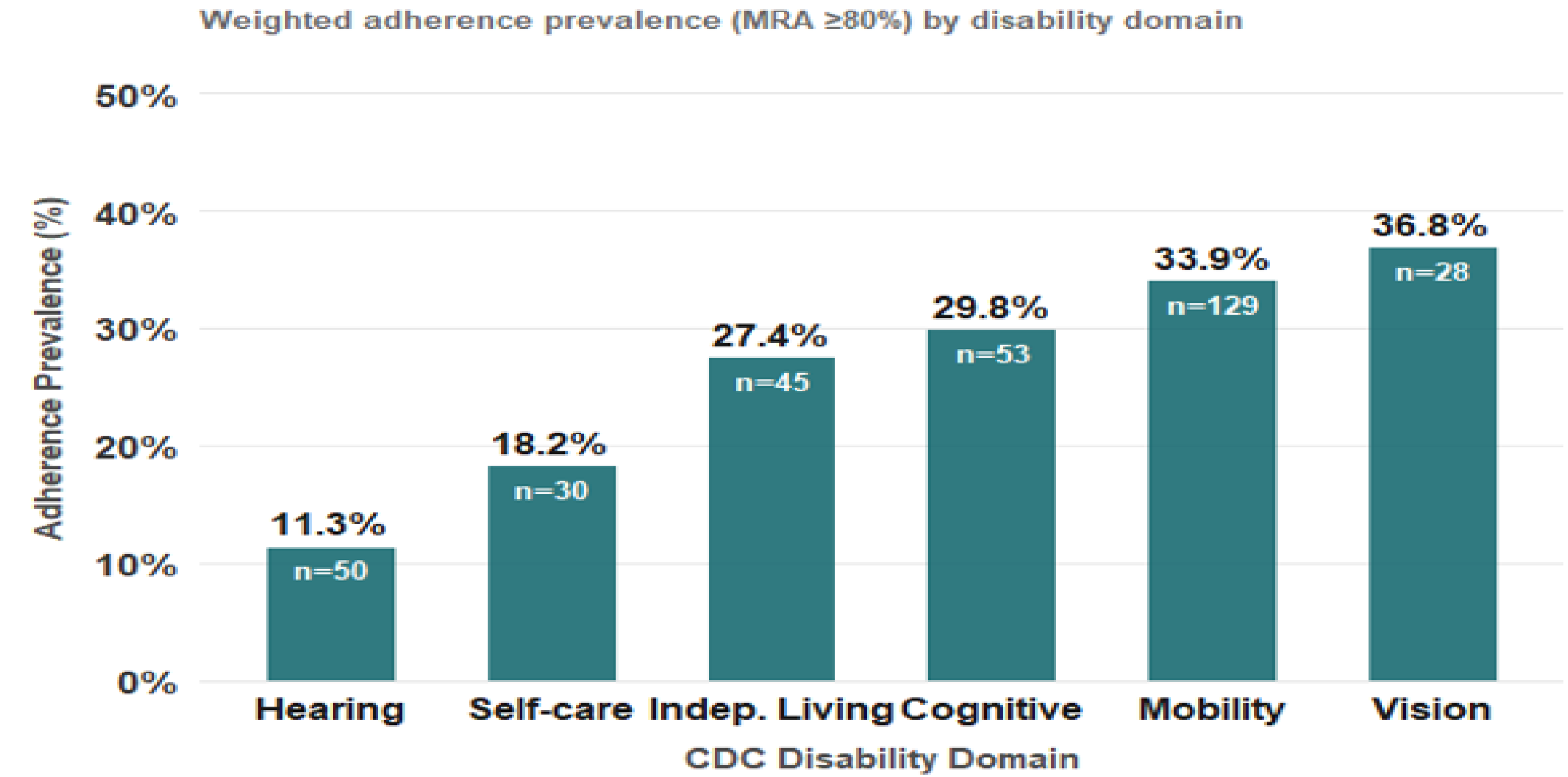
Statistical Analysis:

- Identified a minimal adjustment set using a directed acyclic graph (DAG) for confounding control.
- Survey-weighted adherence prevalence by disability domain
- Survey-weighted multivariable logistic regression

RESULTS

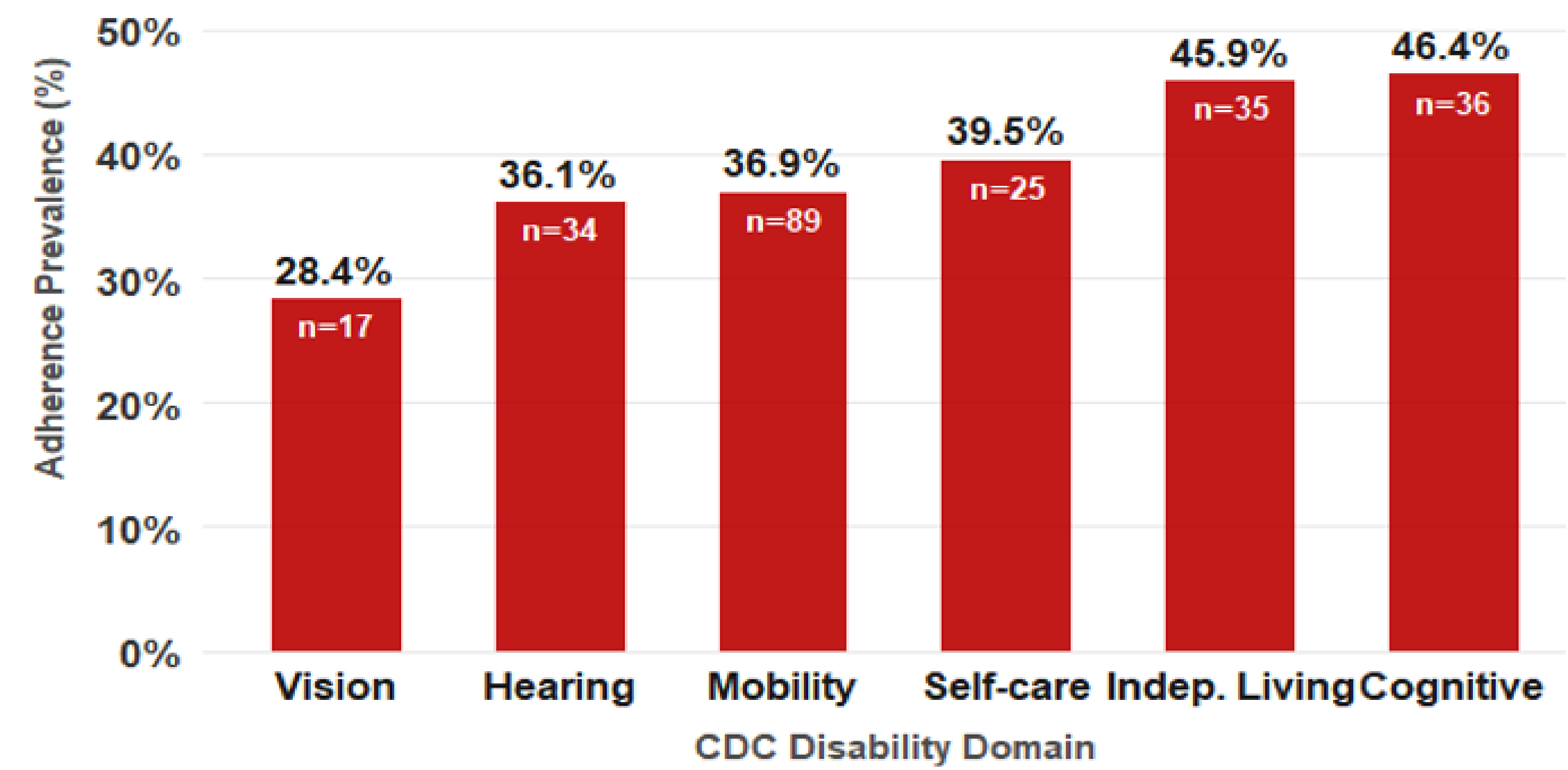
- Overall, 38.1% (n=294) of participants had a disability; among GLP-1 users, those with disability were older (61.9±12.0 vs 58.9±11.4 years) and more likely to be female (60.1% vs 56.8%), with similar patterns observed among SGLT2i users (64.1±10.9 vs 59.9±12.1 years; 43.3% vs 36.2%). Adherence was low overall (<30%).
- Disability status was not significantly associated with adherence to GLP-1 RAs (OR 1.57: 0.86-2.84) or SGLT2i (OR 1.40: 0.69-2.84).

GLP-1 Receptor Agonists

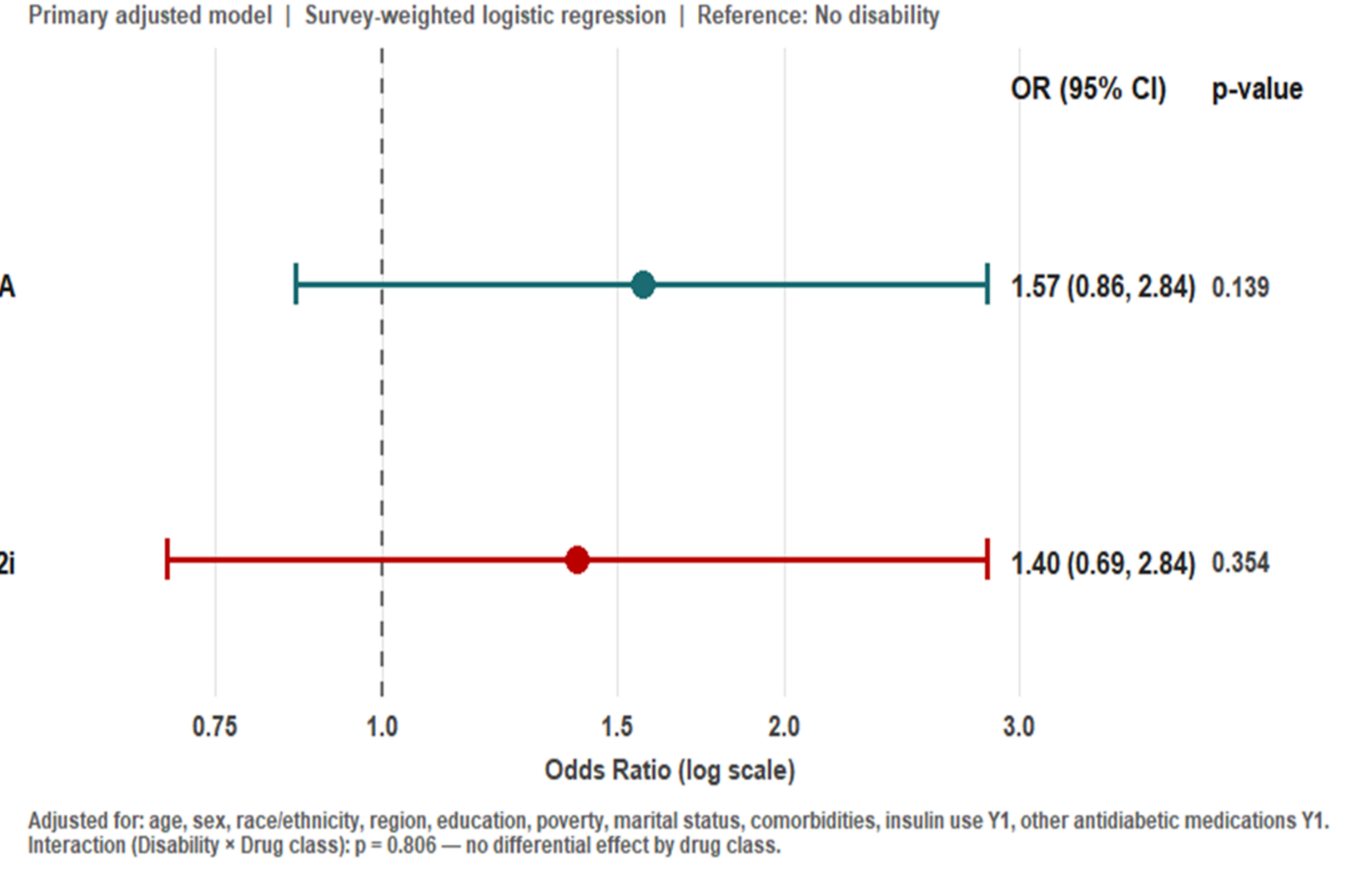


SGLT2 Inhibitors

Weighted adherence prevalence (MRA ≥80%) by disability domain



Association Between Disability Status and Medication Adherence



CONCLUSION

Disability status was not significantly associated with adherence to GLP-1 RAs or SGLT2 inhibitors, although point estimates suggested higher odds. Future work should leverage larger data sources to address sample-size constraints and identify who is at risk and why.

ACKNOWLEDGMENTS

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