

Background

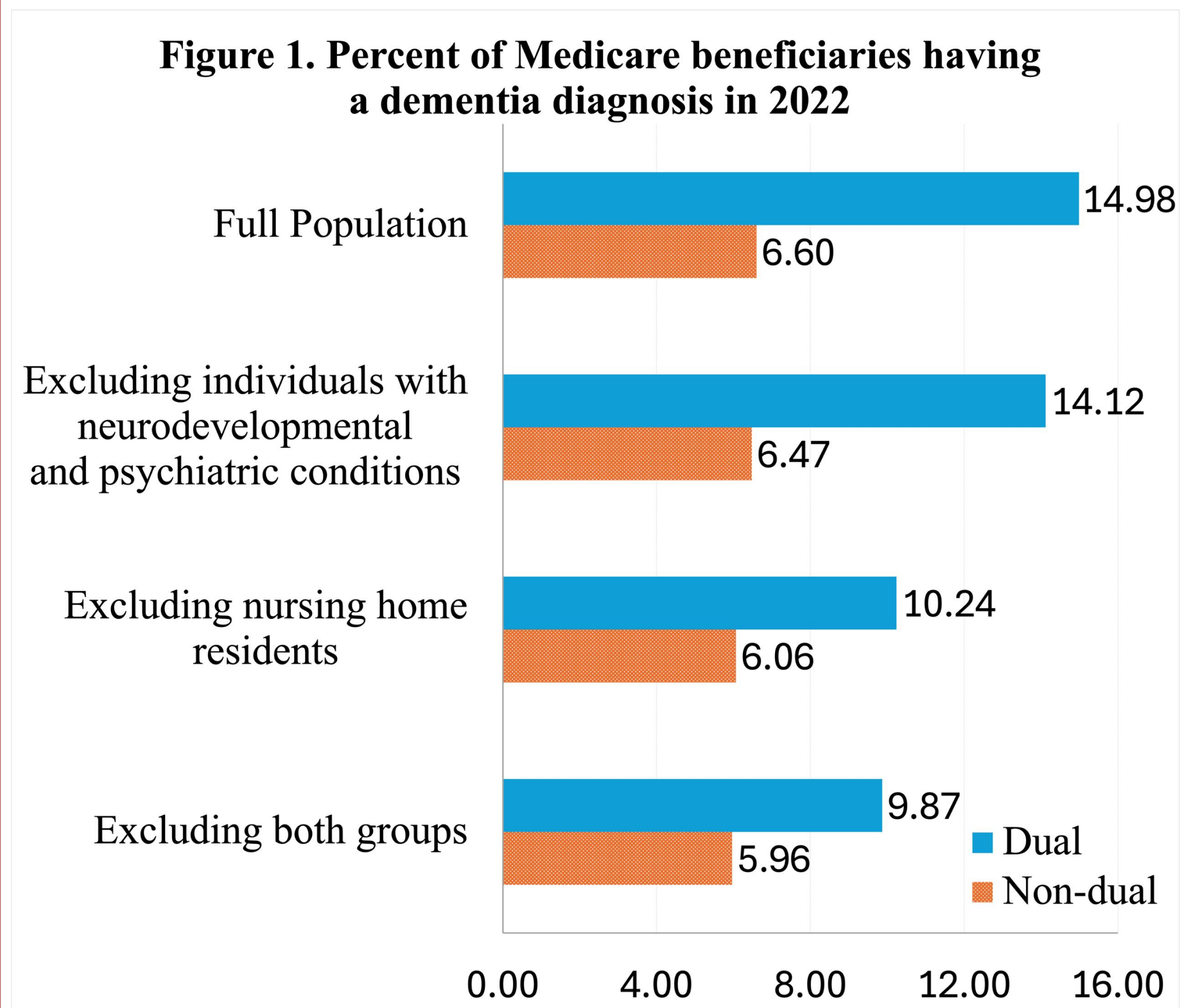
- Beneficiaries dually eligible for Medicare and Medicaid (duals) in the U.S. are known to have higher dementia rates than their Medicare-only counterparts.^{1,2}
- Since Medicaid eligibility is income-based, duals tend to have lower education, as well as higher rates and worse management of cardiometabolic conditions, all of which contribute to their elevated risk of dementia.
- As Medicare data do not contain information on social determinants of health, dual eligibility is considered a proxy for lower educational attainment.
- However, two groups – both more likely to become dually eligible – may create a methodological challenge in the context of dementia research.
 - Individuals with neurodevelopmental disorders, intellectual disability, and severe mental disorders have both a higher dementia risk^{3,4} and are less like to work in the regular labor market and more likely to become Medicaid eligible.
 - Nursing home admission can also result in Medicaid eligibility after the high cost of long-term care depletes their assets. Additionally, residents undergo regular cognitive assessments,⁵ which increases dementia detection.
 - Some states allow expanded Medicaid eligibility for people with disabilities or requiring institutional level of care. Their concentration in the dual population could further complicate the challenge.
- The current study quantified the contribution of these factors to dementia diagnosis rates.

Methods

- The study used the 100% 2022 Medicare claims and encounter data for people of age 65+ to identify:
 - Dementia diagnosis; Dual eligibility status; Nursing home residency; Neurodevelopmental or psychiatric conditions with an elevated risk of cognitive impairment (Down syndrome, intellectual disability, autism, attention-deficit/hyperactivity disorder, schizophrenia, bipolar disorder, and obsessive-compulsive disorder).
- Analysis
 - Descriptives: % having dementia diagnoses with or without nursing home residency and neurodevelopmental or psychiatric conditions.
 - Chi-square test to infer group difference.

Results

- Among 49,224,688 beneficiaries with continuous enrollment and medical claims in 2022:
 - 13.63% (6,708,271) were dually eligible;
 - 2.52% (1,242,202) resided in nursing homes;
 - 1.92% (947,382) had neurodevelopmental/psychiatric conditions.
- Duals were more likely to have nursing home residency (8.76% vs. 1.54%, p<0.0001) and neurodevelopmental/psychiatric disorders (5.91% vs. 1.30%, p<0.0001) than non-duals.
- **Figure 1** describes percent of Medicare beneficiaries having a dementia diagnosis.
 - Duals were 8.39 percentage points more likely (14.98% vs. 6.60%, p<0.0001) to have a dementia diagnosis than non-duals in the full population.
 - This gap was reduced by:
 - 0.74 percentage point (pp) after excluding individuals with neurodevelopmental and psychiatric conditions;
 - 4.21 pp after excluding nursing home residents;
 - 4.48 pp after excluding both groups, with a residual difference of only 3.90 pp (9.87% vs. 5.96%, p<0.0001).
- The reduction in gap was mostly due to the decreased dementia diagnosis rate in duals, while the rate in non-duals remained stable.



Discussion

- Part of the higher rate of dementia diagnoses in duals than non-duals can be attributed to individuals residing in nursing homes, and, to a lesser extent, those having non-geriatric etiologies of dementia.
- Disregarding these factors could lead to biased or erroneous conclusions in dementia research, for instance, about the association of cardiometabolic risk factors and cognitive impairment.
- Researchers should consider such factors when analyzing differences in dementia rates between duals and non-duals.
- These findings also have implications for dementia care as individuals who resides in nursing homes and have non-geriatric etiologies may have different care needs from those of other duals.

Limitation

- Nursing home residency was inferred from claims and encounter data based on an established algorithm, instead of actual nursing home registration, but our estimate was close to an estimate of 1.2 million by Centers for Disease Control and Prevention.

References

1. Mattke S, Jun H, Chen E, Liu Y, Becker A, Wallick C. Expected and diagnosed rates of mild cognitive impairment and dementia in the U.S. Medicare population: observational analysis. *Alzheimer's Research & Therapy*. 2023;15(1)doi:10.1186/s13195-023-01272-z

2. Gianattasio KZ, Wachsmuth J, Murphy R, et al. Case Definition for Diagnosed Alzheimer Disease and Related Dementias in Medicare. *JAMA Netw Open*. Sep 3 2024;7(9):e2427610. doi:10.1001/jamanetworkopen.2024.27610

3. Pathak US, Mehralizade A, Goldberg TE, Zoghbi AW. Dementia in Severe Schizophrenia. *JAMA Psychiatry*. Apr 1 2026;doi:10.1001/jamapsychiatry.2026.0171

4. Richmond-Rakerd LS, D'Souza S, Milne BJ, Caspi A, Moffitt TE. Longitudinal Associations of Mental Disorders With Dementia: 30-Year Analysis of 1.7 Million New Zealand Citizens. *JAMA Psychiatry*. Apr 1 2022;79(4):333–340. doi:10.1001/jamapsychiatry.2021.4377

5. Kaskie B, Xu L, Smith L, Bounds D, Carder P, Thomas KS. Pathways into Assisted Living Communities: Admission Limitations and Assessment Requirements Across the United States. *J Am Med Dir Assoc*. Jun 2023;24(6):821–826. doi:10.1016/j.jamda.2023.01.027

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