RESEARCH LETTER

Declines in Wealth Among US Older Adults at Risk of Dementia

Dementia is a set of neurocognitive conditions marked by a gradual deterioration of cognitive capacity that interferes with daily life, with Alzheimer disease being the most common.[1] This process may adversely affect household wealth, a key social determinant of health, due to negative outcomes of financial decision capacity[2] and need for expensive medical and long-term care services.[3,4] We compared trajectories in household wealth for older adults (aged ≥65 years) who developed probable dementia with those of a control cohort without dementia.

Supplemental content

Methods | This case-control study used data from the 1998-2018 waves of the Health and Retirement Study (HRS), a nationally representative biennial survey of US adults aged 50 years or older and their spouses. The Mount Sinai institutional review board approved the study and waived informed consent because only secondary data were used. We followed the STROBE reporting guideline.

We included individuals participating in at least 2 waves of the HRS, with continuous Medicare enrollment, and for whom dementia status in each wave could be ascertained using the Hurd classification, a validated algorithm for classifying probable dementia.[3] We required persons with probable dementia (PWPD) to have at least 1 wave without dementia before being classified as having probable dementia and controls to be dementia free in all waves and never have a spouse with dementia. For PWPD in each year relative to probable dementia onset, we applied propensity score reweighting to controls to match on age, sex, education, and marital status (eAppendix in Supplement 1) to compare long-term trends in 3 measures of household wealth: net worth (all assets minus all debts), financial wealth (liquid assets), and home ownership. Self-reported race and ethnicity, as classified in the HRS, were examined as a nonmatched characteristic. Data were analyzed between October 29, 2021, and March 31, 2023, using weighted bivariate median regressions (median wealth) and

Table. Characteristics of People With Probable Dementia (PWPD) and Matched Control Participants 2 Years Prior to Dementia Onset[a]

	Weighted No. (%)	
	No probable dementia	With probable dementia
No. of unweighted people	5403	2664
No. of weighted people	2717	2664
Characteristics used in matching		
Age, mean (SD), y	82.6 (7.7)	82.2 (6.7)
Sex		
Female	1702 (62.6)	1674 (62.8)
Male	1015 (37.3)	990 (37.2)
Education		
No high school degree	1102 (40.6)	1053 (39.5)
High school degree or GED	728 (26.8)	868 (32.6)
Some college or above	887 (32.7)	743 (27.9)
Marital status		
Married or partnered	1160 (42.7)	1147 (43.1)
Divorced or separated	183 (6.7)	184 (6.9)
Widowed	1305 (48)	1264 (47.4)
Never married	70 (2.6)	69 (2.6)

(continued)

Table. Characteristics of People With Probable Dementia (PWPD) and Matched Control Participants 2 Years Prior to Dementia Onset[a] (continued)

	Weighted No. (%)	
	No probable dementia	With probable dementia
Characteristics not used in matching		
Self-identified race and ethnicity		
Hispanic	152 (5.6)	217 (8.1)
Non-Hispanic Black	259 (9.5)	410 (15.4)
Non-Hispanic White	2276 (83.8)	1999 (75.0)
Non-Hispanic other[b]	30 (1.1)	38 (1.4)
Cancer	534 (19.7)	480 (18.2)
Lung disease	314 (11.7)	304 (11.5)
Heart condition	979 (37.2)	1002 (38.3)
Stroke or TIA	298 (11.0)	479 (18.0)
Hypertension	1808 (66.7)	1776 (66.7)
Diabetes	563 (20.7)	662 (24.9)
Psychiatric condition	323 (11.9)	506 (19.1)
Arthritis	1927 (71.1)	1887 (71.1)
Wealth variables		
Net worth, thousands of $[c]		
Mean (SD)	515 (1172.9)	393.2 (988.9)
Median (IQR)	202.3 (50.0-569.2)	128.9 (24.8-384.5)
Financial wealth, thousands of $[c]		
Mean (SD)	214.2 (778.4)	147.9 (486.7)
Median (IQR)	30.1 (1.2-163.1)	9.0 (0.0-96.2)
Own home	1764 (65.0)	1626 (61.2)

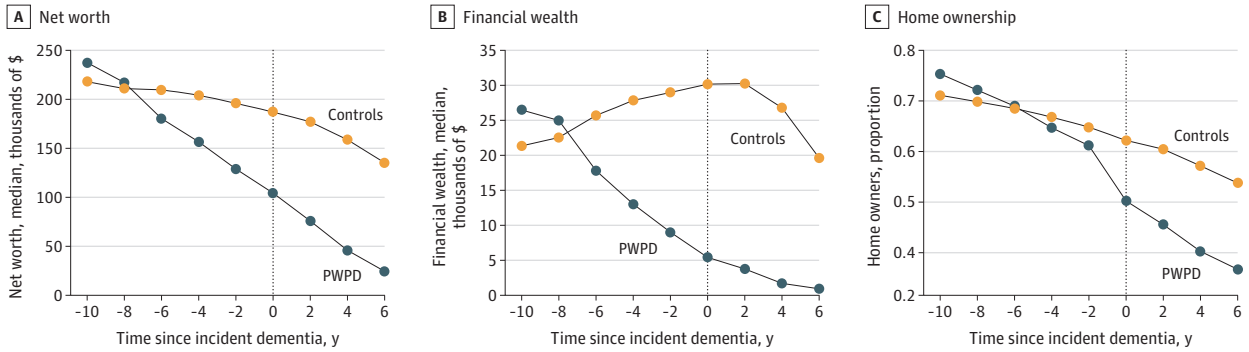
Abbreviations: GED, General Educational Development test; TIA, transient ischemic attack.

[a] Summary statistics of characteristics among PWPD 2 years prior to dementia onset are shown, with each PWPD receiving a weight of 1. Summary statistics of characteristics among weighted controls without dementia person-waves (across all waves) are shown, with each person-wave observation receiving a weight that equals the ratio of estimated probability of having probable dementia over 1 minus the probability, where the estimated probability was obtained using a logistic regression with the dependent variable being an indicator of being in the PWPD group and independent variables (including age, sex, education, and marital status) estimated on all PWPD observations 2 years prior to dementia onset and control observations across all waves.

[b] The Non-Hispanic other category includes American Indian, Alaska Native, Asian, Native Hawaiian, and Pacific Islander. The specific subcategory is masked in the publicly available Health and Retirement Study core data.

[c] In 2012 dollars.

Figure. Trajectories of Household Wealth Among People With Probable Dementia (PWPD) and Matched Controls Without Dementia



Weighted analogous values for controls across all person-waves are shown, with the set of weights applied to each year relative to incident dementia analogous to those in the table such that the control observations were similar to PWPD for that year in terms of age, sex, education, and marital status. Net worth includes all assets minus all debts. Financial wealth includes stocks, checking and saving accounts, money market accounts, certificates of deposit, bonds, and other financial assets minus debt. All PWPD (n = 2664) were present for the year of incident dementia and 2 years before incident dementia, and 1434 were present 2 years after incident dementia (669 died and 561 dropped out of the Health and Retirement Study within 2 years of developing incident dementia).

linear regressions (all other variables), with $P < .05$ (2-sided) considered significant. Statistical analyses were performed using Stata/MP, version 16 (StataCorp LLC).

Results | The final sample included 45 715 observations from 8067 individuals, with 2664 PWPD and 5403 controls. After reweighting, women comprised 62.6% (vs 37.3% men) and 62.8% (vs 37.2% men) of the PWPD and control cohorts, respectively (**Table**). Two years before probable dementia onset, mean (SD) age was 82.2 (6.7) years for PWPD and 82.6 (7.7) years for controls ($P = .02$). On nonmatched characteristics, PWPD vs controls were less likely to be non-Hispanic White (75.0% vs 83.8%; $P < .001$) and more likely to have stroke (11.0% vs 18.0%), diabetes (20.7% vs 24.9%), and psychiatric conditions (11.9% vs 19.1%; all $P < .001$) (Table).

Median household net worth was similar between PWPD ($217 154) and controls ($210 984) 8 years before probable dementia onset ($P = .61$) (**Figure**), with more accelerated decline among PWPD leading up to dementia onset ($104 360 vs $187 123; $P < .001$). Similarly, median financial wealth was $24 978 for PWPD and $22 551 for controls ($P = .39$) 8 years before dementia onset, whereas it was $5418 for PWPD at probable dementia onset vs $30 172 for controls ($P < .001$). The divergence for home ownership occurred primarily at dementia onset (PWPD, 50.2%; controls, 62.2%; $P < .001$). Results were similar if PWPD and controls were additionally matched on race and ethnicity.

Discussion | We found that household wealth, especially financial wealth, declined much faster among PWPD than controls during the decade before dementia onset, despite similar levels at baseline. This may reflect deteriorating financial capacity associated with cognitive decline (including susceptibility to fraud)[2,5] or the need to draw down assets to pay for increasing medical and long-term care expenses[4] or qualify for Medicaid coverage of nursing home care.[6] Limitations of the study data included self-reported wealth measures and lack of clinical ascertainment of dementia. Specific mechanisms driving the accelerated wealth decline among PWPD and its association with their well-being are important topics for future research.

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Acquisition, analysis, or interpretation of data: Li, McGarry, Nicholas, Wang, Bollens-Lund, Kelley.
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COMMENT & RESPONSE

The SeLECT 2.0 Score—Significance of Treatment With Antiseizure Medication

To the Editor Congratulations to Sinka et al[1] on their recent article introducing the SeLECT 2.0 score. We have been using the original SeLECT score[2] in the past and are pleased that there is an update incorporating acute symptomatic status epilepticus. Although by definition[3] the diagnosis of epilepsy requires at least 1 unprovoked seizure, patients with ischemic stroke and a very high SeLECT 2.0 score due to an acute symptomatic status epilepticus may be counseled and treated as if they already had poststroke epilepsy.

Following current guidelines,[4] we are hesitant to treat most acute symptomatic seizures with antiseizure medication (ASM) beyond the acute phase of stroke. Therefore, we were intrigued by the finding that ASM therapy after acute symptomatic seizures was independently associated with a reduced mortality (adjusted hazard ratio, 0.3; 95% CI, 0.1-0.6),[1] and we wonder what the reason for this association might be. Despite the retrospective study design, can the authors tell at what time and for how long patients were treated with ASMs? Is it possible that in the SeLECT 2.0 derivation cohort, ASMs were preferentially used in patients with a presumably favorable prognosis? We found that in intensive care, ASMs are frequently discontinued in patients transitioning to palliative care[5]; therefore, ASM treatment may be a surrogate marker for physicians' optimistic expectations. To better understand the association between ASM therapy and reduced mortality, we encourage the authors to perform a sensitivity analysis restricted to 1-month survivors. We are curious to see if this affects their results.

We strongly support the authors' conclusion that prospective studies are needed to explore the usefulness of ASM treatment after acute symptomatic seizures and status epilepticus. Randomized clinical trials are highly desirable, and the SeLECT 2.0 score promises to be a very useful tool to identify patients with a significant-enough seizure recurrence risk to be included in such studies.

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In Reply We read with keen interest the intriguing commentary by Doerrfuss and colleagues[1] on our article entitled, "Association of Mortality and Risk of Epilepsy With Type of Acute Symptomatic Seizure After Ischemic Stroke and an Updated Prognostic Model." The authors highlighted the finding of decreased mortality in those receiving early treatment with antiseizure medications (ASMs) following acute symptomatic seizures after ischemic stroke.

As suggested by the authors, we addressed this observation in more detail. There was an association of early ASM treatment with reduced mortality after restricting the analyses to those who had acute symptomatic seizures (n = 226; adjusted hazard ratio