The Value of Delaying Onset of Alzheimer's Disease for Individuals, Caregivers, Society

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Innovations to Treat or Prevent Alzheimer's Disease will be Expensive but Likely Valuable

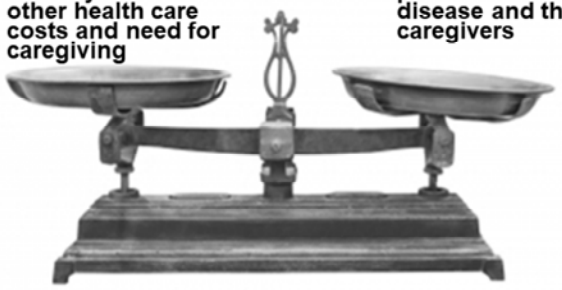
VALUE

SPENDING

New treatments will be expensive, but may reduce other health care costs and need for caregiving

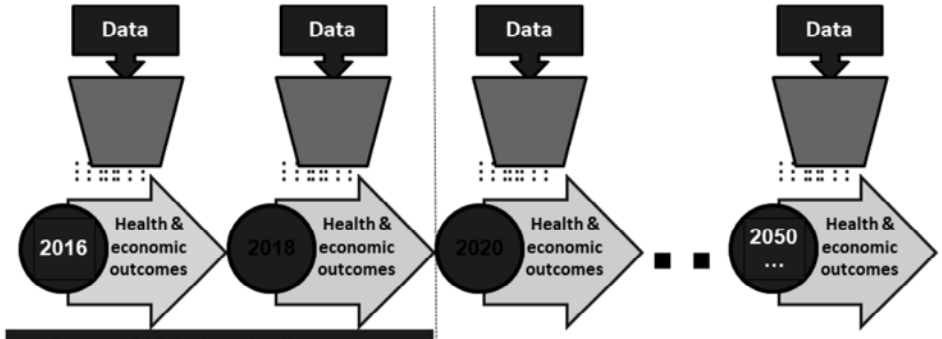
HEALTH

Longer, better, healthier lives for persons with the disease and their caregivers



We Built the AD-FEM to Aid in Quantifying Burden and Impact of Treatment, Interventions, Policies

The Future Elderly Model for Understanding Alzheimer's Disease (AD-FEM)



- Onset of Alzheimer's disease
- Medical spending (by payer type)
- Caregiving hours X rate ($21.00)

Projected

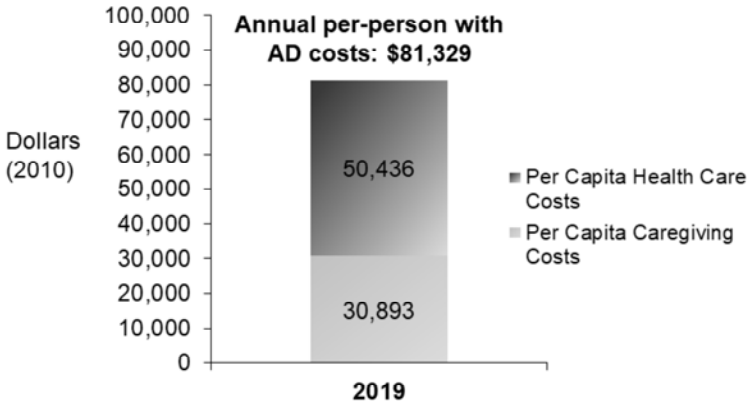
Aggregate individual outcomes for population prevalence and costs

We Estimate the Value of Innovation in Treatment and Prevention of Alzheimer's Disease

Two different scenarios

Baseline	**Medical technology remains as it is today (treat symptoms of AD)**
Delay Onset	**Americans develop Alzheimer's disease 5 years later than they would have without innovation**

Value of Unpaid Caregiving is $31,000 and 40% of Combined Health and Caregiving Costs

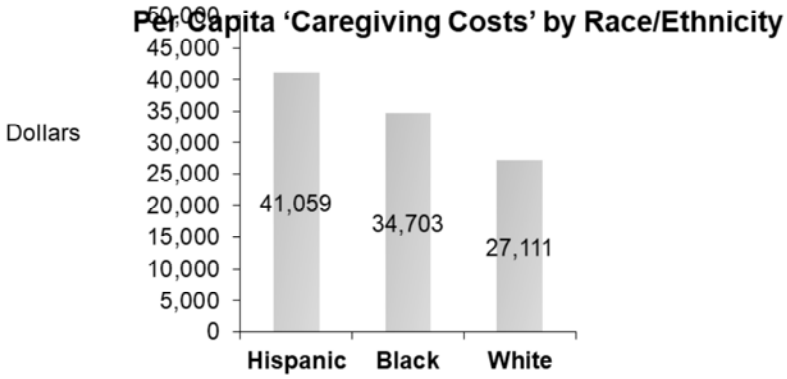


Per Capita Health Care Cost and Dollar Value of Unpaid Family Caregiving

USC Schaeffer

SOURCE: FEM simulation results using data from HRS, ADAMS, MCBS

Costs Are Higher for Non-White Caregivers than White Caregivers



Per Capita Dollar Value of Unpaid Family Caregiving in 2019

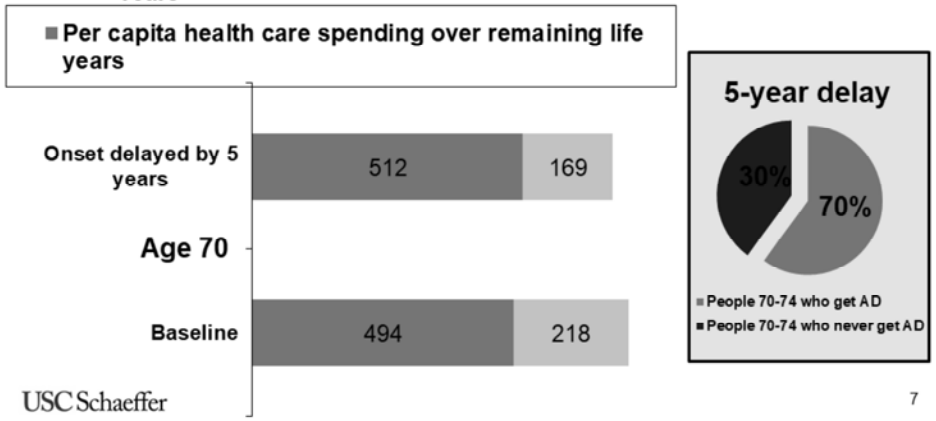
USC Schaeffer

SOURCE: FEM simulation results using data from HRS, ADAMS, MCBS

Average Economic Value of Onset Delay to a 70 Year-Old Who Would Have Acquired AD is $511,000

Value calculated as $ value of additional AD-free life years ($100,000 per year) plus/minus changes in health care and caregiving costs

2.5 More Life Years, 4.8 More AD-free Life Years



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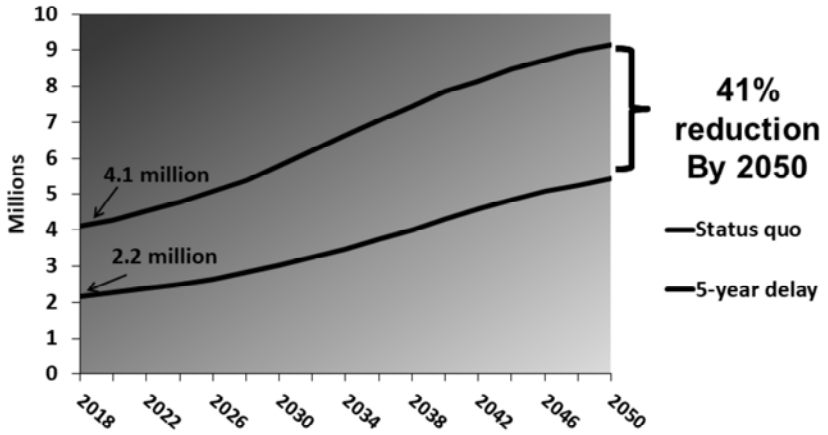
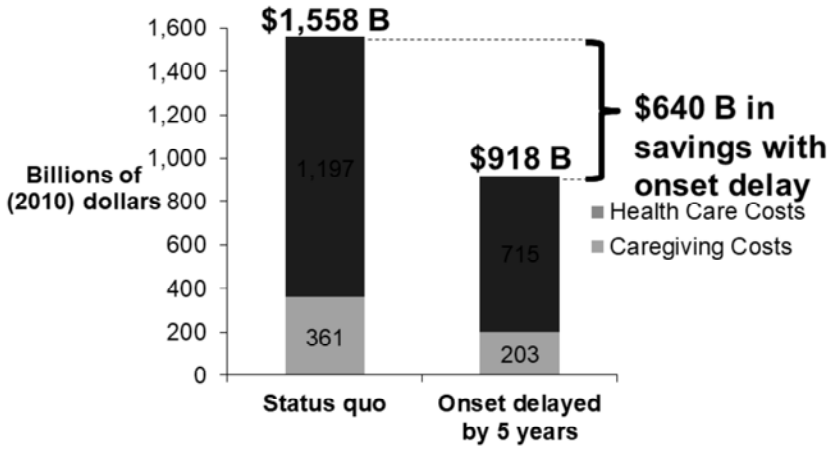
A 5-Year Delay Reduces Number of Americans 70+ Years Old with Alzheimer's Disease by 41%



Number of Americans Age 70+ with AD, 2018-2050, Two Scenarios

USC Schaeffer SOURCE: FEM simulation results using data from HRS, ADAMS, MCBS

Aggregate Costs in 2050 are $1.5 Trillion and Innovation Saves $640 Billion



Cost to Society from AD in 2050, Two Scenarios

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SOURCE: FEM simulation results using data from HRS, ADAMS, MCBS

No New Treatments but Policy Changes May Reduce Burden Now

N = Numbers with AD
D = Duration of AD
C = Cost of AD

Treatment reduces N X D

Burden = N x D x C

What policies reduce costs? Shift costs? For whom?

Paying family caregivers may reduce burden but may also shift costs to others if financed through taxes;

Reimbursement incentives to reduce post-acute institutional care reduce costs to Medicare but shift costs to families;

Better coordination of dementia care may reduce hospitalizations, delay nursing home entry

Health care and caregivers' time ($) **but other 'costs' to caregivers: physical, mental health, productivity, wealth loss….**

Using Dynamic Simulation Modeling to Evaluate Benefit of Policies, Interventions and Treatments