Health-Adjusted Value of Health Care Spending on Older Americans, 1992-2002

Liming Cai

CDC/NCHS

REVES 2009

Disclaimer: The findings and conclusions in this paper are those of the authors and do not necessarily represent the views of the National Center for Health Statistics, Centers for Disease Control and Prevention.

SAFER • HEALTHIER • PEOPLE™

Motivation

U.S. health care spending is the highest in the world

Medicare is in fiscal crisis – funds depleted by 2016

Two distinct trends in the health and health care of older Americans

- Various health measures have improved over time
- Health care spending continues to rise rapidly relative to younger generations

The value of spending

Objectives

The health-adjusted value of spending on older Americans - measure health gains using HALE

The gender and racial/ethnic disparity of health-adjusted value

The Analytic Sample

Two panels (1992 and 2002) of Medicare beneficiaries of age 65+ in the MCBS (Medicare Current Beneficiary Survey)

Health measure – limitations in ADL and/or IADL

Health spending – all service types

Outcome measure: health-adj. value of spending

- Numerator: changes in avg. lifetime spending at ages 65-85
- Denominator: changes in average DFLE at ages 65-85

Methods

Use the SPACE program to simulate individual health trajectory

Use a generalized linear mixed model to estimate the relation between annual spending and annual health changes

Associate health changes with spending to estimate DFLE at age t and lifetime spending from age t to death, t=65…85

Standard errors estimated via the bootstrap method

HE and Lifetime Spending on the Elderly

		HE		Per Capita Lifetime Spending					
		1992	2002	1992 (in 000s)			2002 (in 000s)		
				Total	Accute	Long-Term	Total	Accute	Long-Term
All	TLE	10.9	10.9	$143	$82	$32	$175	$101	$28
	$DFLE_{ADL}$	6.8	7.3						
White Male	TLE	10.4	10.4	$135	$84	$24	$165	$103	$19
	$DFLE_{ADL}$	7.3	7.7						
Black Male	TLE	9.2	9.5	$116	$73	$20	$176	$93	$37
	$DFLE_{ADL}$	6.2	6.9						
Hisp. Male	TLE	12.2	12.7	$167	$108	$30	$223	$137	$28
	$DFLE_{ADL}$	7.9	8.9						
White Female	TLE	11.2	11.0	$147	$78	$38	$171	$93	$33
	$DFLE_{ADL}$	6.5	6.9						
Black Female	TLE	10.8	10.7	$148	$83	$34	$205	$112	$41
	$DFLE_{ADL}$	5.5	6.0						
Hisp. Female	TLE	13.9	13.2	$185	$119	$33	$225	$147	$22
	$DFLE_{ADL}$	7.7	8.1						

Note: $DFLE_{ADL}$ is defined as expected years spent without having any difficulty or inability to perform at least one activity of daily living (ADL). HE and cumulative spending are not discounted.

Health-Adj. Value of Spending (1)

	Discounted at 3 percent (in 000s)		
	75%	50%	25%
All	$87	$130	$260
White Male	$80	$120	$240
Black Male	$109	$163	$327
Hisp. Male	$72	$108	$215
White Female	$93	$140	$280
Black Female	$153	$230	$460
Hisp. Female	$147	$220	$440

Note: The value is calculated by dividing average changes in cumulative total spending on the elderly of ages 65-85 by average changes in $DFLE_{ADL}$ during 1992-2002. $DFLE_{ADL}$ is defined as expected years spent without having any difficulty or inability to perform at least one activity of daily living (ADL).

Health-Adj. Value of Spending (2)

	Discounted at 3 percent (in 000s)		
	75%	50%	25%
All	$69	$104	$208
White Male	$64	$96	$192
Black Male	$93	$140	$280
Hisp. Male	$64	$96	$191
White Female	$93	$140	$280
Black Female	$123	$184	$368
Hisp. Female	$88	$132	$264

Note: The value is calculated by dividing average changes in cumulative total spending on the elderly of ages 65-85 by average changes in $DFLE_{IADL+ADL}$ during 1992-2002. $DFLE_{IADL+ADL}$ is defined as expected years spent without having any difficulty or inability to perform at least one instrumental activity of daily living (IADL) or activity of daily living (ADL).

Limitations

The exact contribution of spending to health gains is unclear

Functional limitations are not comprehensive measure of old-age health

The 1990s may be a unique decade

Conclusions

Whether health-adjusted value is good depends on the price of DFLE

Large gender and racial/ethnic differences in the values indicate the gaps in health and health care use

What are the estimates for other countries?

Demographers should talk to economists

Thank You!