



Measuring health care spending and changes in health care spending

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Draw from two already published pieces of research

JAMA | Original Investigation

US Spending on Personal Health Care and Public Health, 1996-2013

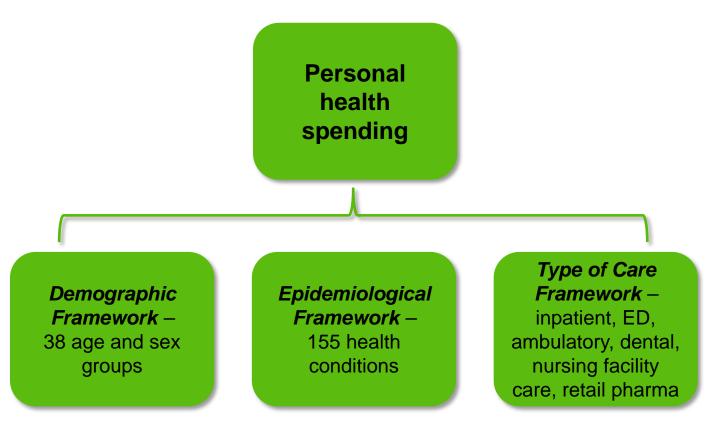
Joseph L. Dieleman, PhD; Ranju Baral, PhD; Maxwell Birger, BS; Anthony L. Bui, MPH; Anne Bulchis, MPH; Abigail Chapin, BA; Hannah Hamavid, BA; Cody Horst, BS; Elizabeth K. Johnson, BA; Jonathan Joseph, BS; Rouselle Lavado, PhD; Liya Lomsadze, BS; Alex Reynolds, BA; Ellen Squires, BA; Madeline Campbell, BS; Brendan DeCenso, MPH; Daniel Dicker, BS; Abraham D. Flaxman, PhD; Rose Gabert, MPH; Tina Highfill, MA; Mohsen Naghavi, MD, MPH, PhD; Noelle Nightingale, MLIS; Tara Templin, BA; Martin I. Tobias, MBBCh; Theo Vos, MD; Christopher J. L. Murray, MD, DPhil

JAMA | Original Investigation

Factors Associated With Increases in US Health Care Spending, 1996-2013

Joseph L. Dieleman, PhD; Ellen Squires, MPH; Anthony L. Bui, MPH; Madeline Campbell, BS; Abigail Chapin, BA; Hannah Hamavid, BA; Cody Horst, MPH; Zhiyin Li, MPS; Taylor Matyasz, MS; Alex Reynolds, BA; Nafis Sadat, MA; Matthew T. Schneider, MPH; Christopher J. L. Murray, PhD, DPhil

1. Descriptive financial accounting



2. Measuring drivers of changes in spending

Measure effect of 5 drivers: (i) *population size,* (ii) *population age structure,* (iii) *disease prevalence,* (iv) *service utilization,* and (v) *service price and intensity.*

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Spending \equiv Population * Pop Age Fractions * Prevalence Rate * Util Rate * Price Rate

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Spending \equiv Population * Pop Age Fractions * Prevalence Rate * Util Rate * Price Rate

$$Spending_{a,s,c,t,y} \equiv Pop_{y} * \frac{Pop_{a,s,y}}{Pop_{y}} * \frac{PrevCases_{a,s,c,y}}{Pop_{a,s,y}} * \frac{Encounters_{a,s,c,t,y}}{PrevCases_{a,s,c,y}} * \frac{Spending_{a,s,c,t,y}}{Encounters_{a,s,c,t,y}}$$

$$a = age$$

$$s = sex$$

$$c = condition$$

$$t = type of care$$

$$v = vear$$

Results: <u>https://vizhub.healthdata.org/dex/</u>

← → C ☆ Secure https://vizhub.healthdata.org/dex/					
IHME GHDx Viz Hub	Tracking persor	al health care spending in	the US Viz Hub	Visualizations 🔻	Share
View Treemap Flow Py Sex Both Male Fema		Health condition Type of care Y Type of care All types of	_	2	
Neoplasms	of US personal health care s Digestive diseases - Mental		f care, All Ages, 2013, Both sexes: Diar+LRI+Oth Trans I Unint I Maternal Oth Group I	nj Annua 1996	l % change ▼ to 2013 ▼
Chronic respiratory	MSK	Oth NCD	Metabolic risk factor treatment	3% - 3% - 4% - 4% - 5% - 5% - 5% - 5% - 5% -	g represents ng growth rate





Thank you.

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