

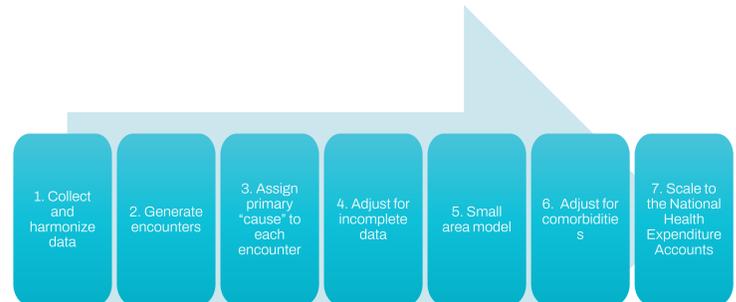
# Tracking US Health Care Spending By Health Condition and County: 2010-2019

Joseph Dieleman, PhD<sup>1</sup>, Meera Beauchamp<sup>1</sup>, Sawyer Crosby<sup>1</sup>, Drew DeJarnatt<sup>1</sup>, Haley Lescinsky<sup>1</sup>, Maitreyi Sahu<sup>1</sup>, John Scott, MD<sup>1,2</sup>, Kayla Taylor<sup>1</sup>, Azalea Thomson<sup>1</sup>, Max Weil<sup>1</sup>

<sup>1</sup>Institute for Health Metrics and Evaluation, University of Washington, USA <sup>2</sup>Department of Surgery, University of Washington, Seattle, WA, USA

## OBJECTIVE AND METHODS

- Understanding variation in US health care spending across geography and over time is important for identifying trends, highlighting inefficiencies, and developing strategies for lowering health spending and improving health outcomes.
- Little is known about health care utilization and spending by disease at the local level.
- To fill this gap, we estimated US health care spending and utilization of services for each of 3,110 US counties, across four payers and according to 148 health conditions, 38 age/sex groups, and seven types of care from 2010 to 2019.



40 billion insurance claims and nearly 1 billion facility records

## IMPLICATIONS AND CONCLUSIONS

- We observed broad variation in health care spending levels and rates, by US county, type of care, payer, and health condition.
- Variation in health care spending among US counties was largely related to variation in service utilization.
- Understanding variation health care utilization and spending at a local level, by cause, sex, age, type of care, and payer is valuable for identifying outliers and growth patterns, highlighting inefficiencies, and assessing health care gaps and issues with access and equity.

Explore the interactive viz!



- Between 2010 and 2019, 76.6% of personal health care spending was captured by this study.
- Across counties, the greatest variation was in age-standardized out-of-pocket spending, followed by private insurance spending. Cross-county variation was driven more by variation in utilization rates than variation in price and intensity of care, although both types of variation were substantial for all payers but Medicare.

Type of Care	2019 spending (billions)	Fraction of Spending	2010-2019 unadjusted annual growth rate	2010-2019 inflation adjusted annual growth rate	2010-2019 inflation adjusted per capita or per beneficiary annual growth rate	2010-2019 inflation adjusted, age- or standardized per capita or per beneficiary annual growth rate
Ambulatory	\$1,027.92	42.2%	5.3%	3.0%	2.8%	2.3%
Inpatient	\$578.43	23.8%	3.3%	1.6%	0.9%	0.0%
Pharmaceutical	\$235.26	9.8%	-2.3%	-1.9%	-1.9%	-0.3%
Nursing Facility	\$179.24	7.4%	2.5%	0.7%	-0.1%	-1.4%
Dental	\$130.92	5.6%	3.4%	1.6%	0.9%	0.9%
Home Health	\$124.75	5.3%	5.2%	3.4%	2.7%	1.8%
Emergency Department	\$55.70	2.3%	6.1%	4.3%	3.5%	3.1%
Private Insurance	\$994.30	40.9%	4.0%	2.2%	1.0%	1.1%
Medicare	\$720.99	29.6%	5.0%	3.2%	0.2%	0.1%
Medicaid	\$450.46	17.7%	4.5%	2.7%	0.2%	-0.3%
Out-of-Pocket	\$286.92	11.8%	2.7%	0.9%	0.2%	-0.5%

Aggregated health condition	Total 2019 spending (US\$ billions)	Annual growth rate (2010-2019), % (95% CI)	% of total spending	Age, y	Type of care	Coverage
Cardiovascular diseases	285.4 (262.9-308.6)	4.1 (3.2-5.0)	11.2%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Neoplasms	258.78 (232.5-284.3)	6.5 (5.4-7.6)	10.3%	55-64	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Musculoskeletal disorders	245.25 (224.5-264.9)	4.6 (3.4-5.8)	9.8%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Other noncommunicable diseases	237.12 (214.1-260.9)	3.5 (2.3-4.7)	9.5%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Diabetes and kidney diseases	226.18 (222.2-229.3)	6.5 (6.4-6.7)	9.0%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Mental disorders	166.42 (162.5-171)	5.4 (5.3-5.5)	6.5%	15-24	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Digestive diseases	134.8 (132.1-138.3)	3.3 (3.1-3.4)	5.2%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Neurologic disorders	129.11 (126.8-131.1)	4.1 (4.0-4.2)	5.1%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Well-care	107.31 (105.8-108.5)	1.2 (1.2-1.2)	4.3%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Ear diseases	93.01 (92.3-93.3)	3.7 (3.5-3.9)	3.7%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Injuries	91.16 (89.5-92.7)	2.4 (2.1-2.6)	3.6%	15-24	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Chronic respiratory diseases	78.12 (77.5-78.9)	3.1 (3.1-3.1)	3.1%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Respiratory infections and tuberculosis	75.36 (73.7-77.1)	1.9 (1.6-2.1)	3.0%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Skin and subcutaneous diseases	69.93 (68.5-71.1)	3.6 (3.4-3.8)	2.8%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Other infectious diseases	66.41 (64.6-68.8)	6.2 (5.5-6.8)	2.7%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Risk factors	63.01 (62.4-64.4)	2.6 (2.1-3.0)	2.5%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Sense organ diseases	46.42 (45.3-47.4)	4.4 (4.1-4.8)	1.8%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Substance use disorders	30.22 (29.2-31.2)	9.2 (8.7-9.6)	1.2%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Mental and behavioral disorders	28.27 (25.1-27.9)	3.0 (3.1-3.8)	0.9%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Intoxication and externally influenced conditions	15.41 (15.1-16.2)	1.4 (1.2-1.7)	0.5%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket
Enzyme deficiencies	6.34 (6.2-6.5)	2.1 (1.8-2.3)	0.1%	65-74	Emergency department, Ambulatory, Drug*	Medicare, Medicaid, Private insurance, Out-of-pocket

Table 2. Health conditions with the most spending

## PRINCIPAL FINDINGS

Figure 1. Health spending by age and sex, 2019

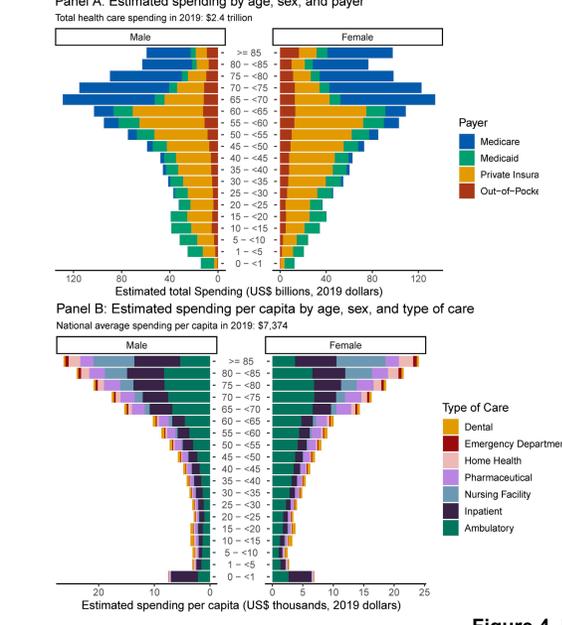


Figure 2. Healthcare spending across US counties, 2019

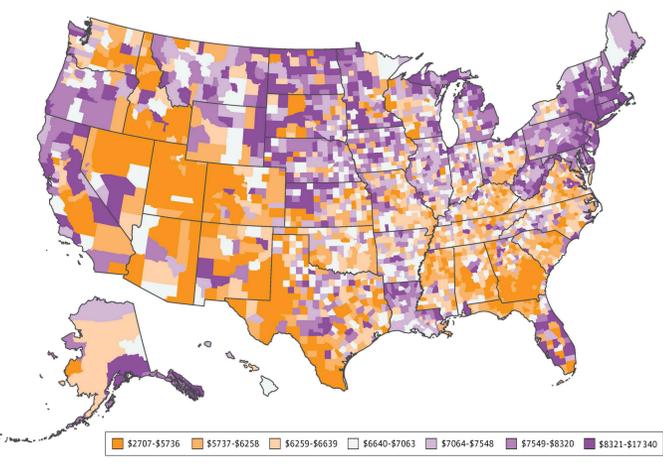


Figure 4. Factors explaining state-specific spending per capita relative to national spending per capita for highest and lowest spending states

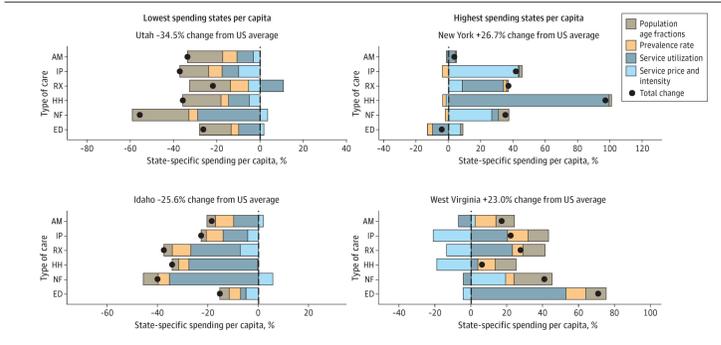
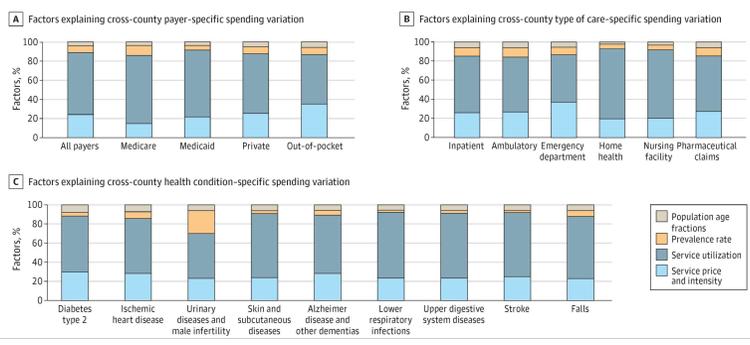


Figure 3. Exploring variation across US counties, 2019 (Panels A-C)



## REFERENCES

- Dieleman JL, Beauchamp M, Crosby SW, et al. Tracking US Health Care Spending by Health Condition and County. JAMA 2025
- Dieleman JL, Weil M, Beauchamp M, et al. Drivers of Variation in Health Care Spending Across US Counties. JAMA Health Forum 2025

## ACKNOWLEDGMENTS

We acknowledge support and work from the Disease Expenditure team at IHME. Funding for this research came from the Peterson Health Center and Gates Ventures.