

Cost Driver Spot Analysis: Regional Price Variation for High Volume Services

January 2017

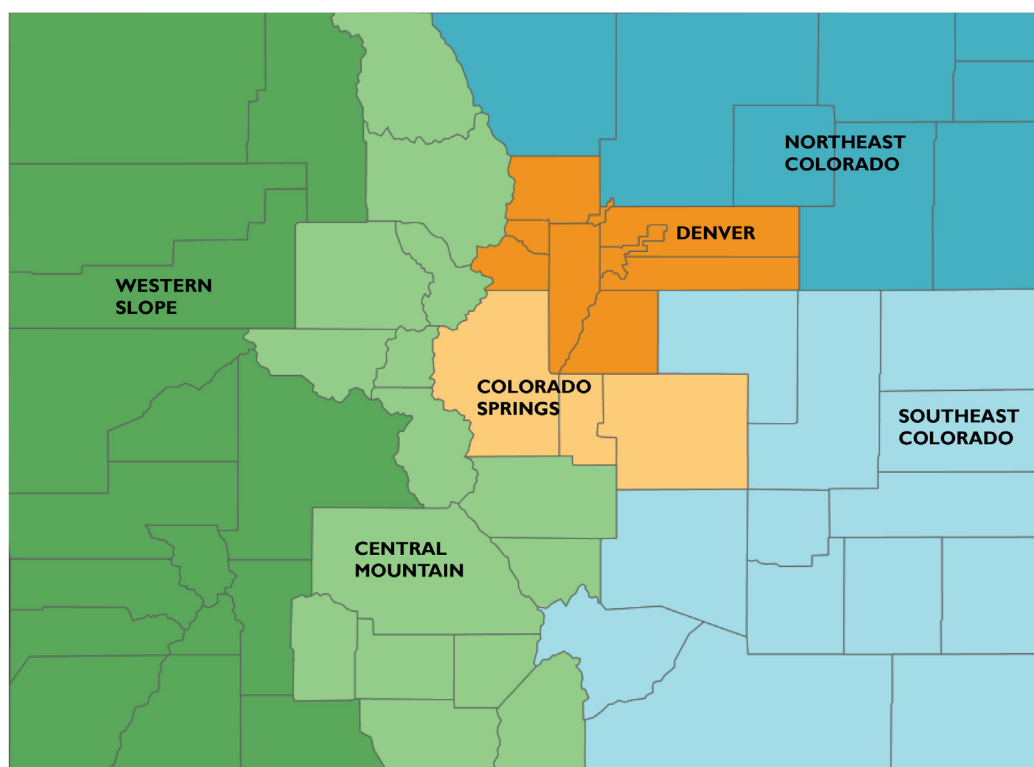


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VALUE IN HEALTH CARE

Health care spending in the United States is projected to equal over 20 percent of the Gross Domestic Product by 2020.ⁱ As health care costs rise, experts work to pinpoint the reasons and rationales behind the increases. Recent studies have shown that residents in certain areas of Colorado pay more for certain procedures and based on this information, it is tempting to conclude that all health care costs in those regions are higher than the rest of the state.ⁱⁱ

On the contrary, a recent analysis provided to the Colorado Commission on Affordable Health Care utilizing data from the Colorado All Payer Claims Database (CO APCD) suggested that it is impossible to draw general conclusions about health care prices based on geography or volume of services performed. Median payments made by commercial health insurance companies and their members indicate that while one health care service may be particularly high cost for one region in the state, other services may be right in line with or actually lower than the state average.

Figure I. Colorado Counties Represented in Geographic Groupings



All Over the Map

The analysis focused on 2014 commercial claims for high volume procedures and services in six regions across Colorado: Western Slope, Central Mountain, Denver, Colorado Springs, Northeast Colorado, and Southeast Colorado (see Figure I). Median paid amounts (by both the health insurance payer and member) indicate that cost variation between regions was inconsistent and varied by procedure.

For example, in 2014, the Western Slope had the highest median paid amount for brain MRIs, yet they were not the highest cost region for any other service analyzed (see Figure II).

While Coloradans living in the Northeast region of the state paid over \$15,000 more than the statewide median for dorsal/lumbar spinal surgery, and over \$36,200 and \$25,000 more than the statewide average for hip and knee replacement respectively, they were not the highest cost region for colonoscopies or head CTs.

The Colorado Springs region had the lowest costs for colonoscopies and dorsal/lumber spine fusion, yet they were the highest cost region for abdominal echo exams, further demonstrating that relative prices are not determined solely based on geography.

Figure II. Highest and Lowest Median Paid Amount Regions Compared to CO Statewide Median, CO APCD 2014

Category	Procedure	Highest Paid Region	Amount Above State Median	State Median Paid Amount	Amount Below State Median	Lowest Paid Region
Orthopedic Surgery	Hip Joint Replacement	Northeast	\$36,200	\$24,800	-\$1,700	**Denver (HV)
	Knee Joint Replacement	Northeast	\$25,100	\$26,800	-\$3,700	**Denver (HV)
	Dorsal/Lumbar Surgery	*Northeast (LV)	\$15,100	\$63,200	-\$5,900	CO Springs
Colonoscopy	Diagnostic Colonoscopy	*Central Mountain (LV)	\$1,200	\$700	-\$200	CO Springs
	Colonoscopy/Biopsy	*Central Mountain (LV)	\$1,400	\$1,100	-\$500	CO Springs
	Colonoscopy w/Lesion	*Central Mountain (LV)	\$2,300	\$900	-\$400	CO Springs
Imaging	CT Head/Brain	*Central Mountain (LV)	\$400	\$800	\$0	**Denver (HV)
	CT Abdomen/Pelvis	*Central Mountain (LV)	\$1,000	\$800	-\$100	Southeast CO
	MRI	Western Slope	\$1,400	\$1,100	-\$200	**Denver (HV)
	Echo Abdomen	CO Springs	\$100	\$400	-\$100	*Central Mountain (LV)

* (LV) Indicates regions with the lowest volume of procedures compared to all other regions analyzed in that time period

** (HV) Indicates regions with the highest volume of procedures compared to all other regions analyzed in that time period

Volume as a Potential Driver

Costs for CT scans of the head or brain were lowest in the Denver region, at \$800. Yet in the Mountain region, prices are the highest for CTs at \$400 more than the statewide median, or \$1,200. Some health care experts hypothesize that lower costs in large, metropolitan areas such as Denver can be explained by the relatively large number of procedures performed. However, as Figure II reflects, prices were highest in the lowest volume regions for only six of the ten services analyzed, whereas prices were lowest in the highest volume region for only five of the ten procedures. Additionally, the Central Mountain region, while lowest volume and highest price for all of the colonoscopy services and CT scans, was lowest volume but also had the lowest median paid amount for Echo of the Abdomen.

Change Over Time

Variation is not limited to geographic differences. Investigation into five-year cost trends within each region also point to annual pricing fluctuation. For some procedures in some regions, prices spike high one year only to drop markedly the following year (see Addendum). Other regions appear to be trending downward for some services while upward for others, and some regions appear to have relatively flat paid amounts over time.

Making Sense of Variation

These analyses indicate that there is more driving health care prices than simply geography and procedure volume. While it is tempting to draw simple conclusions to make sense of the significant variation that exists, the reality is that variation in health care costs is far more complex. Payments vary based on an assortment of factors in addition to geography and volume, including cost of living, demographics of the population, extent of provider networks, and degree of health plan and provider competition. The CO APCD allows Coloradans to identify pieces of the puzzle and to begin to understand where variation exists, identify trends, and generate benchmarks that allow meaningful comparisons across regions. However, understanding why prices vary widely and whether observed price variation is warranted or not requires additional information to inform local and statewide policy discussions.

The move toward greater transparency in the health care industry will allow for further insights into the drivers behind costs. Insights such as these have the potential to inform new ways to improve care, lower costs, and create a healthier Colorado.

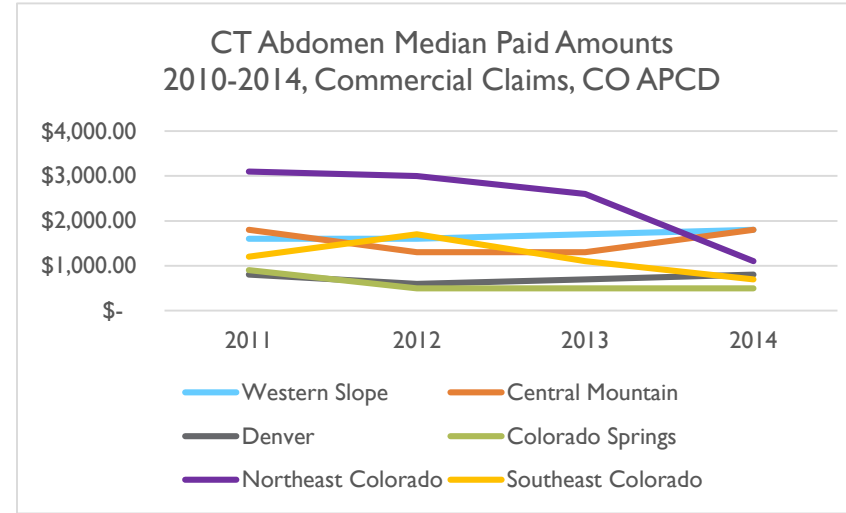
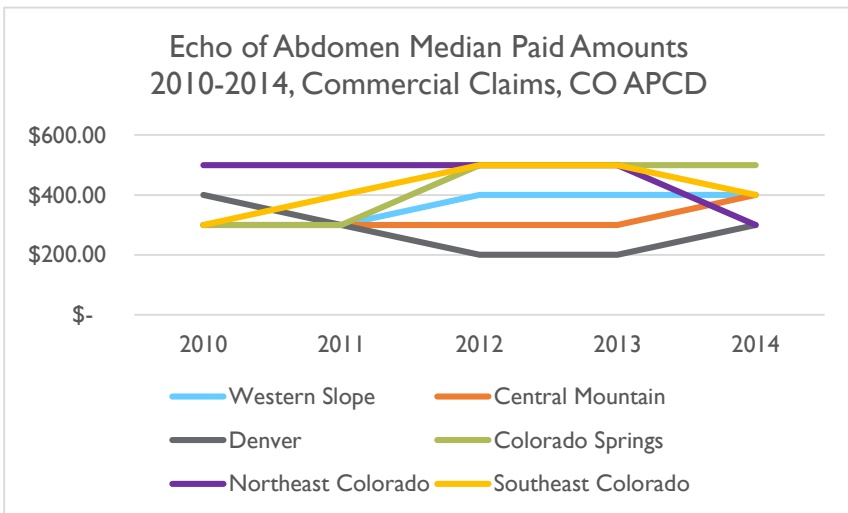
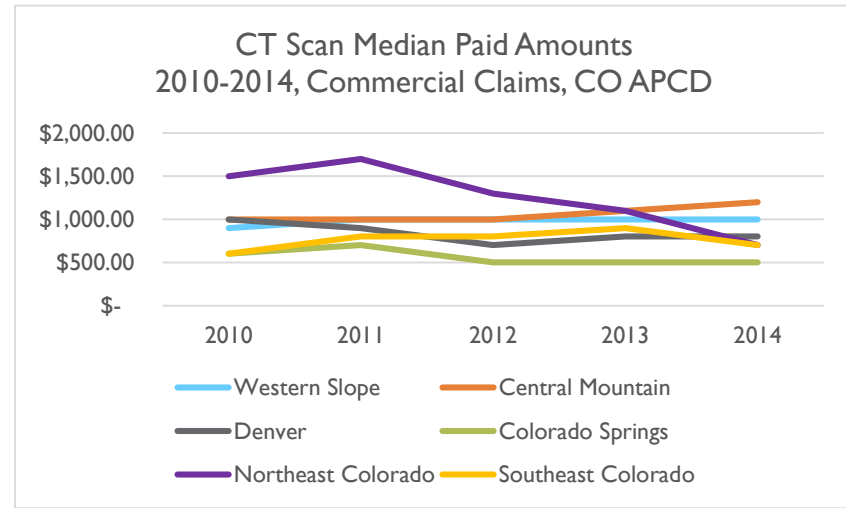
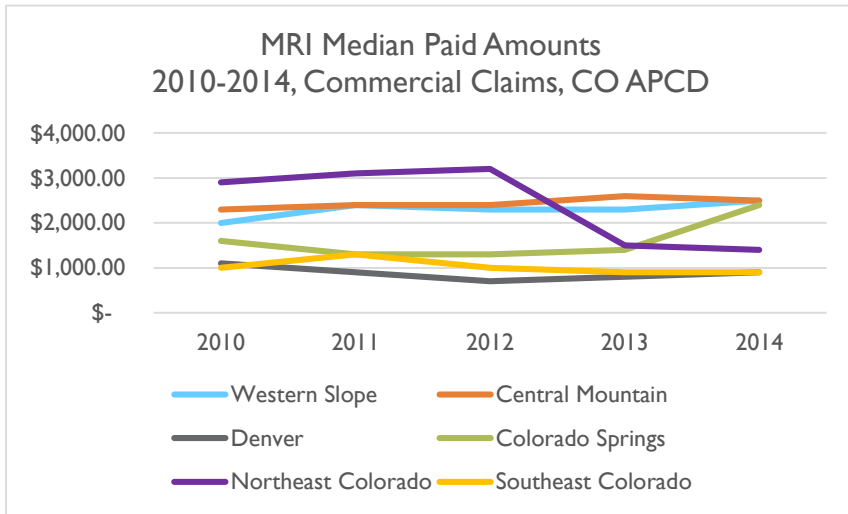
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Sources and Methodology

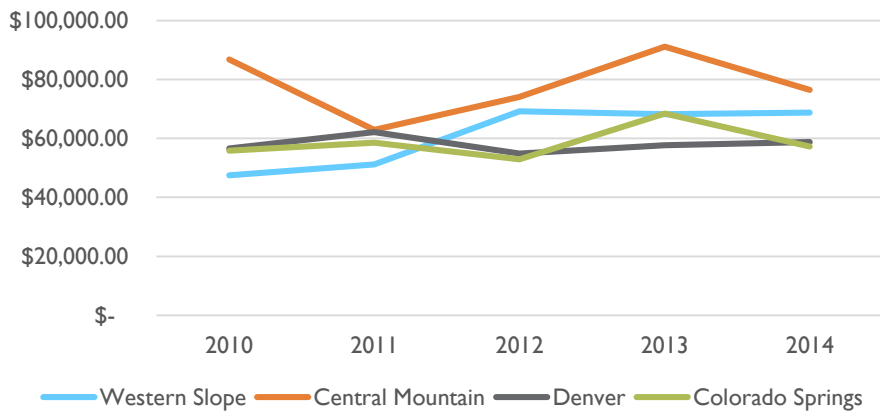
- ⁱCenters for Medicare & Medicaid Services. (2014). National Health Expenditure Projections 2015-2025. Retrieved November 2016, from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Proj2015.pdf>
- ⁱⁱQuealy, K., & Sanger-Katz, M. (2015, December 15). The Experts Were Wrong About the Best Places for Better and Cheaper Health Care. The New York Times. Retrieved November 2016, from http://www.nytimes.com/interactive/2015/12/15/upshot/the-best-places-for-better-cheaper-health-care-arent-what-experts-thought.html?_r=0

Analysis includes 2014 commercially insured claims. Median paid amounts represent both member liability and plan paid amounts for inpatient and outpatient facilities, and include professional and facility fees. Procedures represented in this analysis include APR-DRGs 301, 302, 304, and CPTs 45378, 45380, 45385, 70450, 70553, 74176, 76705.

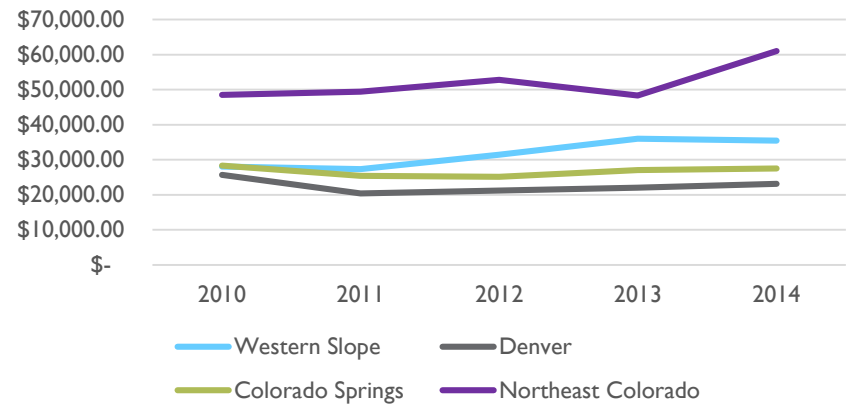
Addendum – Median Paid Amounts by Region 2010-2014



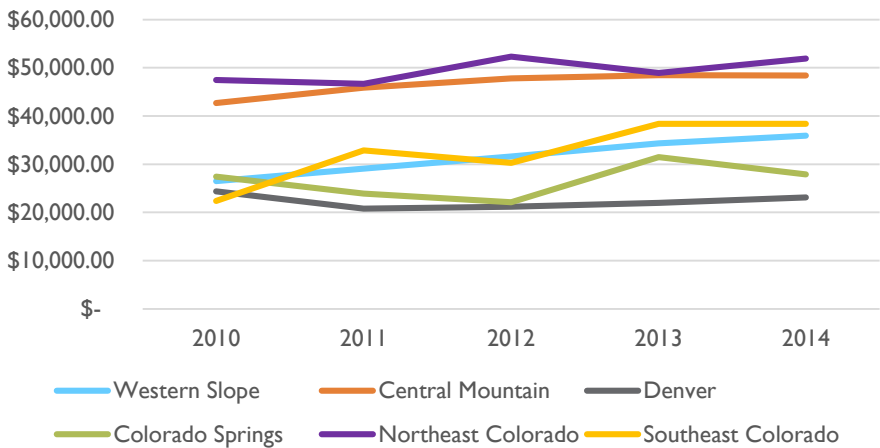
Dorsal/Lumbar Fusion Median Paid Amounts
2010-2014, Commercial Claims, CO APCD



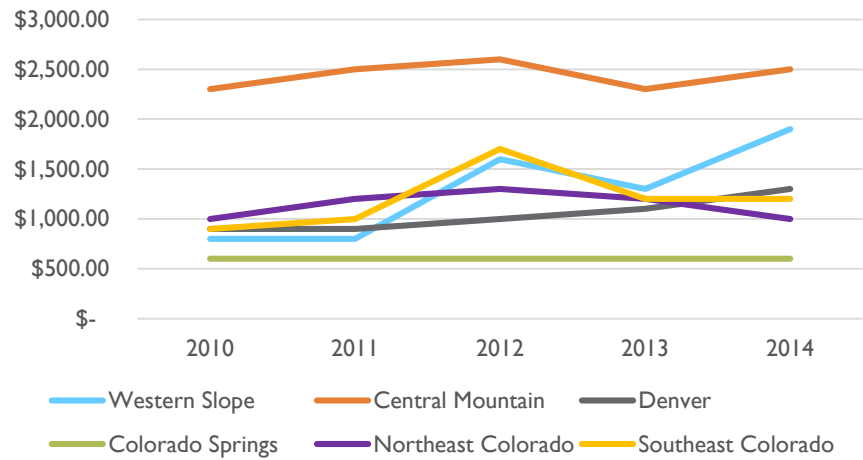
Hip Replacement Median Paid Amounts
2010-2014, Commercial Claims, CO APCD



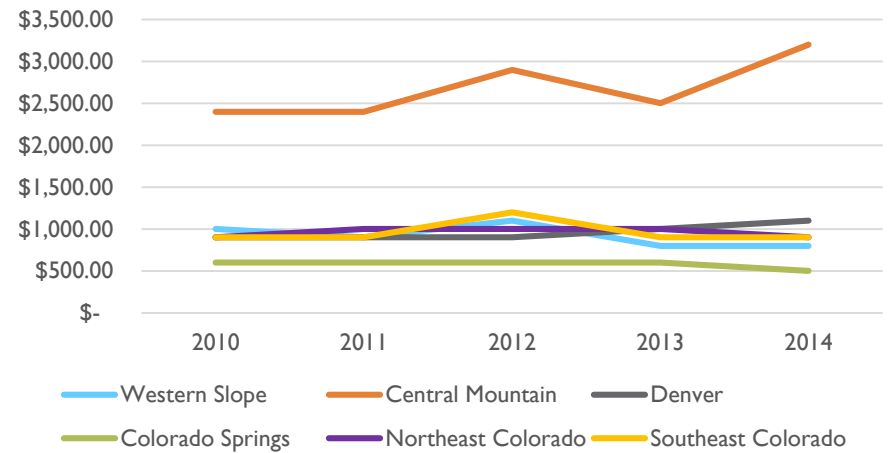
Knee Replacement Median Paid Amounts
2010-2014, Commercial Claims, CO APCD



Colonoscopy with Biopsy Median Paid Amounts
2010-2014, Commercial Claims, CO APCD



Colonoscopy with Lesion Median Paid Amounts
2010-2014, Commercial Claims, CO APCD



Diagnostic Colonoscopy Median Paid Amounts
2010-2014, Commercial Claims, CO APCD

