



HEALTH CARE COST & UTILIZATION

2019 REPORT

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Introduction

As an independent nonprofit dedicated to empowering health care decision makers with meaningful data, MN Community Measurement (MNCM) is a statewide resource for timely, comparable information on health care costs and quality. MNCM has one of the most robust public transparency efforts in the nation related to health care costs, which provides perspective on total cost of care, resource use and price as drivers of total cost, and prices for individual services. This report, which MNCM publishes annually, includes data from our analysis of 2018 health care costs for Minnesotans who have private health insurance.

As shown in the diagram below, total cost is a function of resource use times price. This report includes information on all three components (Sections 1 and 2). In addition, it also provides a deeper look at health care utilization (Section 3) and prices for individual services (Average Cost Per Procedure section 4).



This report would not be possible without the partnership and collaboration of Blue Cross Blue Shield of MN, HealthPartners, Medica Health Plans and PreferredOne.

REPORT PREPARATION DIRECTION

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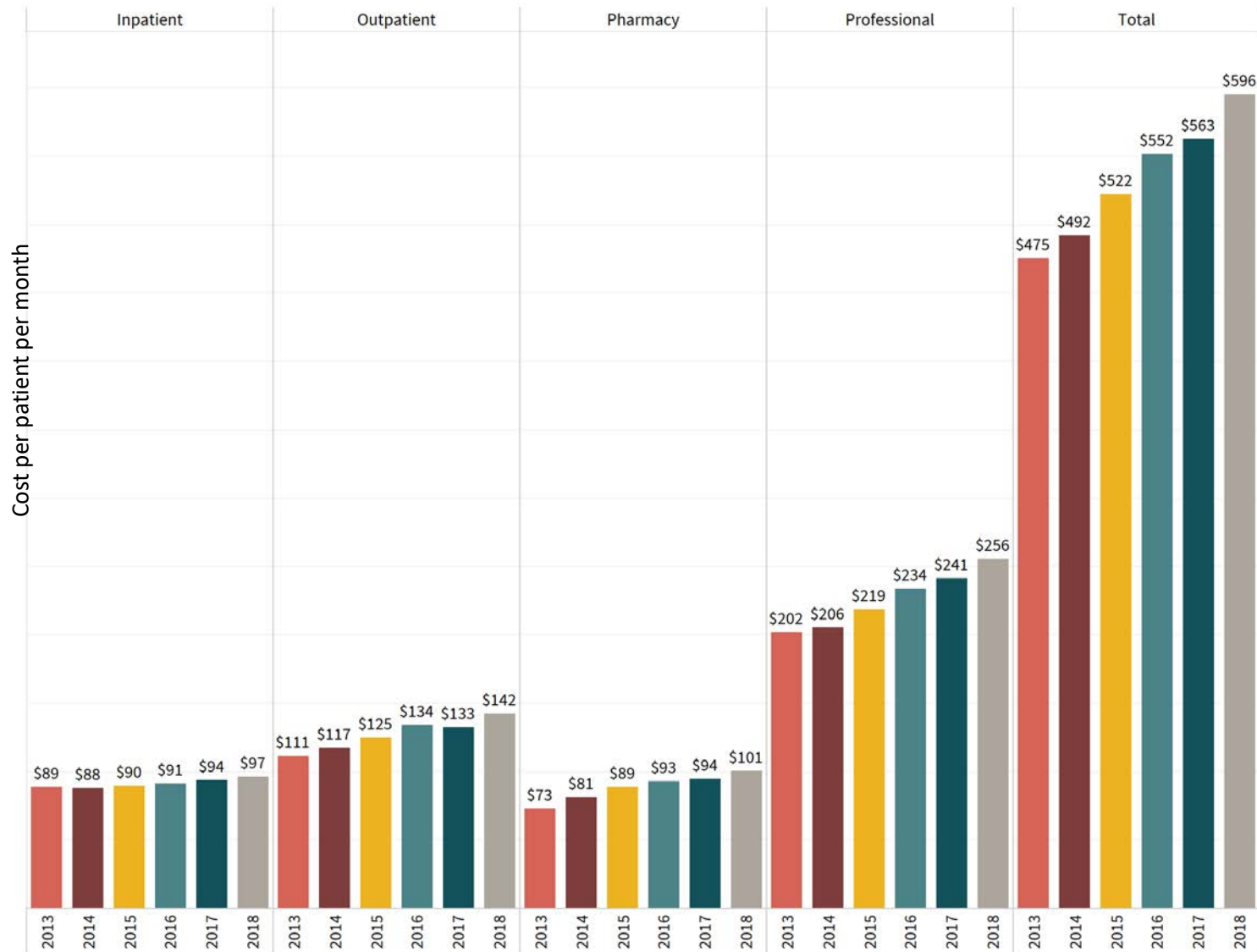
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SECTION ONE: TOTAL COST OF CARE

COST TREND BY TYPE OF SERVICE, PER PATIENT PER MONTH

Commercially Insured Patients 2013-2018



Includes all costs for patients who are attributed to a primary care provider, without adjustments for high cost outliers

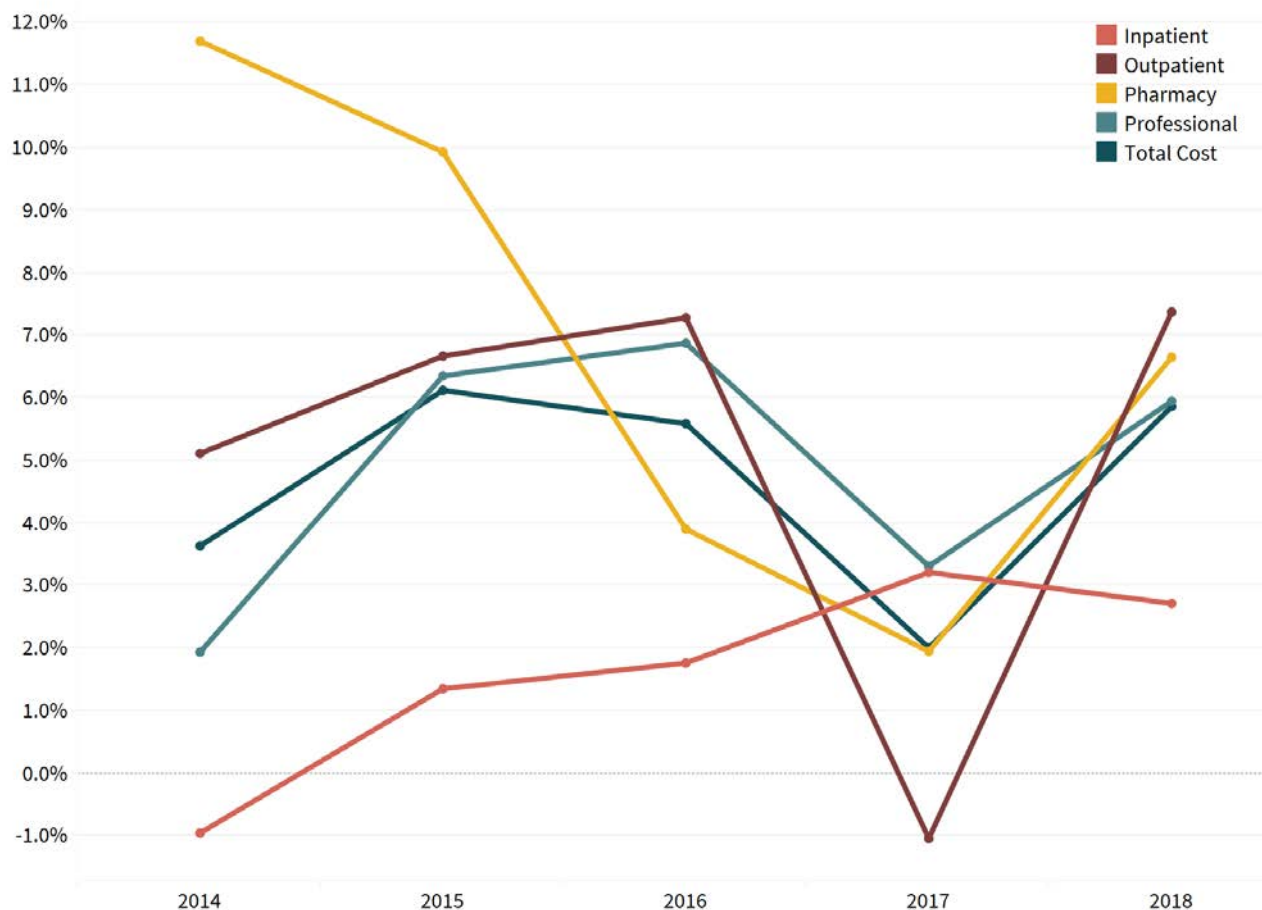
The analysis in this report is based on claims data for 2018 from the four health plans with the largest commercially-insured patient populations in Minnesota: Blue Cross Blue Shield of Minnesota, HealthPartners, Medica Health Plans, and PreferredOne.

In 2018, the average total cost of care (TCOC) for commercially insured patients cared for by Minnesota primary care providers was \$596 per month, an increase of \$121 or 25 percent since 2013.

This analysis includes 1,587,000 patients and \$10.6 billion in claims.

FIVE YEAR TREND IN COST GROWTH

Commercial Patients in Minnesota, Cost Per Patient



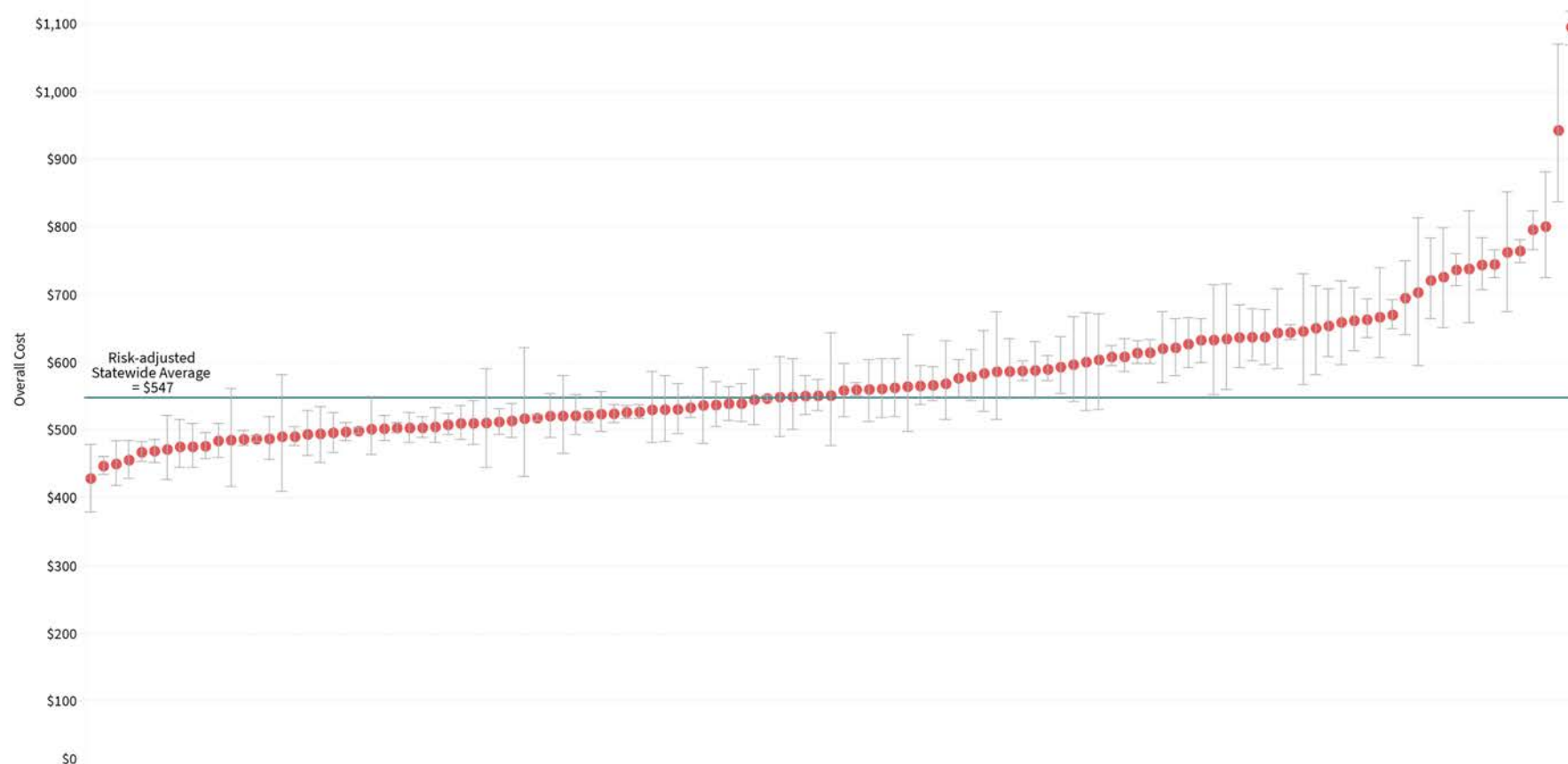
For people with private health insurance, the total cost of care increased by 5.9 percent per person in 2018. After a slowdown in 2017, growth was similar to the rates seen in 2015 and 2016.

Outpatient hospital services grew the fastest (7.4%) while inpatient hospital grew most slowly (2.7%)

Includes all costs for patients who are attributed to a primary care provider, without adjustments for high cost outliers

2018 TOTAL COST OF CARE BY MEDICAL GROUP

Commercially Insured Patients Risk Adjusted Relative Costs (95% confidence intervals)



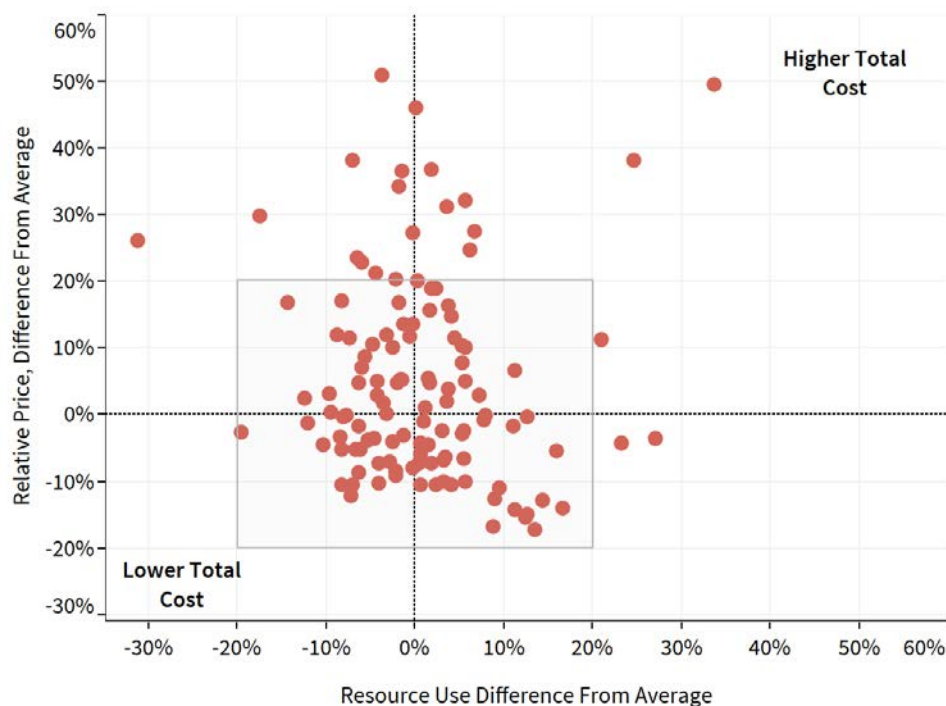
Consistent with previous years, there continues to be substantial variation in costs among medical groups. This year, improvements in the methodology allow for more precise calculation of confidence intervals that identify whether a medical group's TCOC is statistically above or below the statewide average.

Since MNCM began publishing its TCOC analysis, the variation in total cost of care among medical groups in the region has remained stable. There is no statistical evidence that the variation between medical groups is widening or narrowing. In addition, there has been little change in the relative positions of medical groups within the overall cost distribution. Detailed results of the TCOC analysis by medical group are included in the separate appendix to this report.

SECTION TWO: RESOURCE USE AND PRICE INDEX

2018 RELATIVE PRICE VS. RELATIVE RESOURCE USE

Commercial Patient Risk-Adjusted Costs by Attributed Medical Group



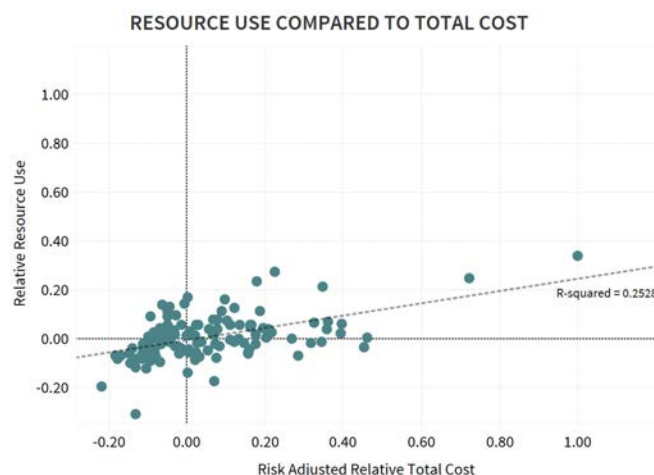
Total Cost is a product of use and price

Total cost is driven by both the amount of resources used and the price of each resource. To better understand the reasons for cost variation, MNCM's analysis separates total cost into these two components.

The top chart shows the relationship between relative price and relative resource use. There is significant variation in both.

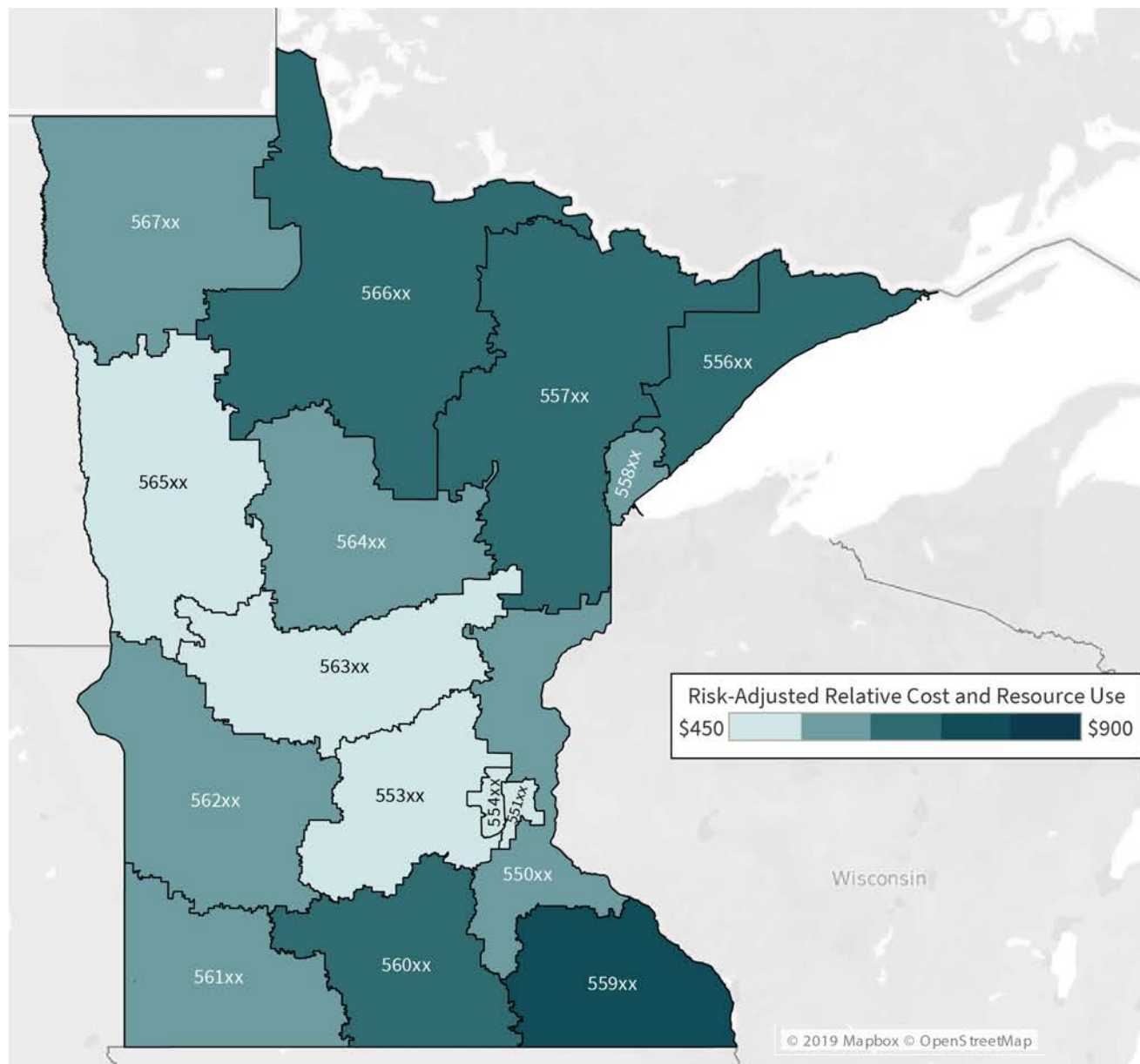
The bottom two charts display the relationship between price and total cost then resource use and total cost.

The variation in price is a more significant factor in the total cost of care than the amount of resources used.



2018 MINNESOTA REGIONAL COMPARISON

Commercial Patient Risk-Adjusted Costs by Patient Home Area (3-digit Zip Code), Regardless of Where Care is Received



Comparison of Minnesota patients by area of residence (3-Digit Zip Code) shows substantial variation in risk-adjusted cost of care.

The risk-adjusted cost of care varies from a low of \$501 in the Central MN area (ZIP code 563xx) to a high of \$797 in southeastern Minnesota (ZIP Code 559xx).

2018 MINNESOTA REGIONAL COMPARISON, continued

Commercial Patient Risk-Adjusted Costs by Patient Home Area (3-digit Zip Code), Regardless of Where Care is Received

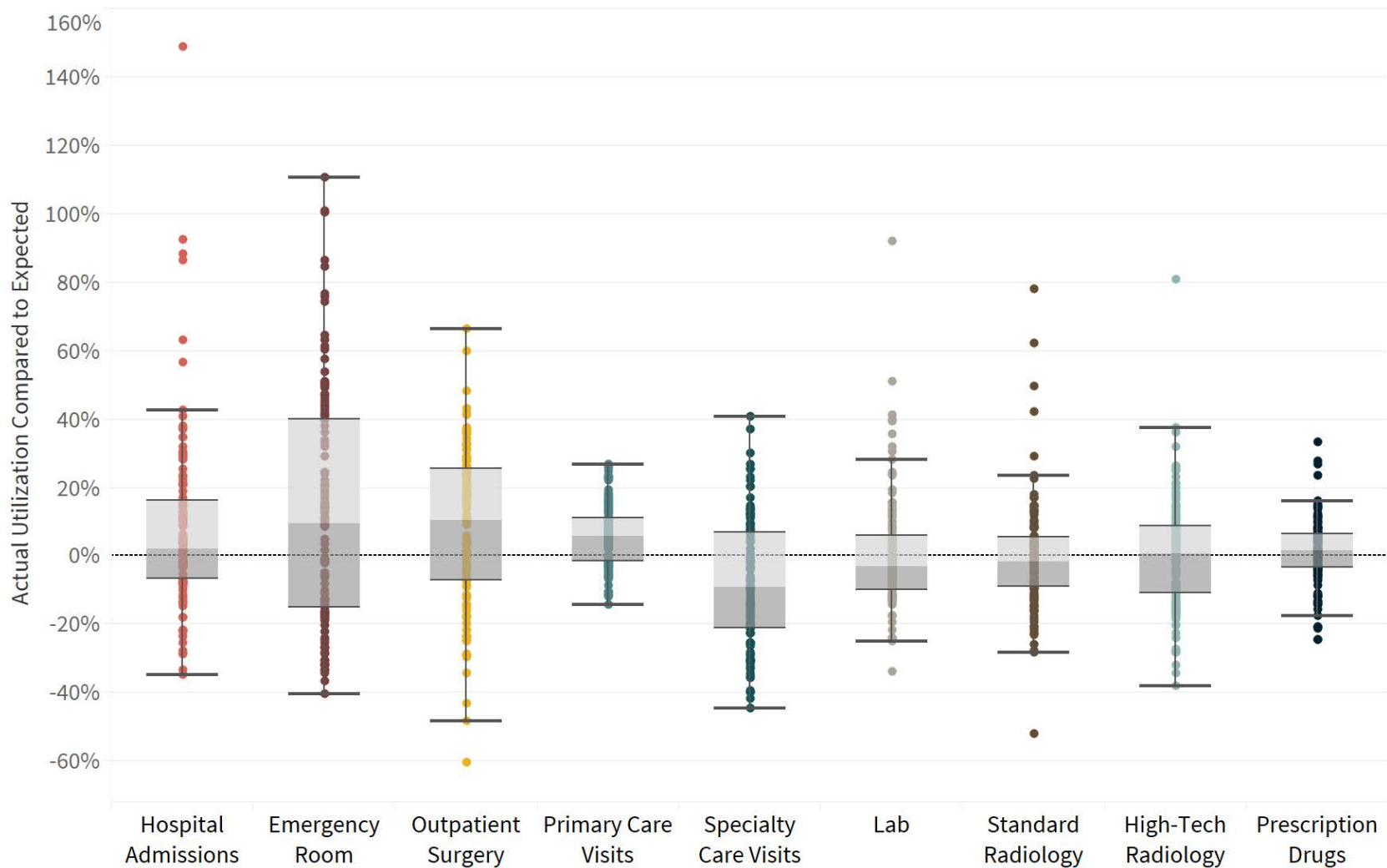
REGION		RELATIVE COST AND RESOURCE USE - RISK ADJUSTED					
Three-Digit Zip Code	Major City in Zip Code Area	Total Cost	Relative Use	Price	Cost Per Member Per Month		
550xx	Stillwater	1.6%	2.0%	-0.3%	\$557		
551xx	St. Paul	-5.6%	-0.1%	-5.5%	\$517		
553xx	Minnetonka	-4.9%	-1.0%	-3.9%	\$521		
554xx	Minneapolis	-5.3%	0.8%	-6.0%	\$519		
556xx	Two Harbors	17.6%	4.6%	12.5%	\$638		
557xx	Cloquet	17.0%	3.6%	12.9%	\$641		
558xx	Duluth	13.4%	2.6%	10.5%	\$621		
559xx	Rochester	45.5%	6.0%	37.2%	\$797		
560xx	Mankato	19.2%	0.0%	19.2%	\$653		
561xx	Windom	9.8%	3.0%	6.6%	\$602		
562xx	Wilmar	11.0%	0.7%	10.2%	\$608		
563xx	St. Cloud	-8.6%	-5.6%	-3.1%	\$501		
564xx	Brainerd	-0.4%	-6.4%	6.4%	\$545		
565xx	Detroit Lakes	-1.4%	-2.5%	1.0%	\$540		
566xx	Bemidji	17.2%	6.0%	10.5%	\$642		
567xx	Thief River Falls	11.0%	5.1%	5.6%	\$608		

The metropolitan areas near Minneapolis and St Paul have a lower than average overall cost of care, primarily due to lower prices; the central Minnesota areas that include St Cloud, Brainerd and Detroit Lakes have lower total costs due to lower resource use. The primary driver for higher cost areas is the price of services.

SECTION THREE: UTILIZATION

2018 VARIATION IN UTILIZATION

Actual to Expected Utilization by Medical Group for Commercial Patients



This figure illustrates the variation across medical groups in utilization rates of different services, adjusted for age, gender, and risk. For example, medical group variation in inpatient admissions ranges from 35% below expected for the patient mix to 149% above, while variation in pharmacy prescriptions filled ranges from 25% below to 35% above. Detailed results of this analysis by medical group are included in the separate appendix to this report.

AVERAGE COST PER PROCEDURE

2018 COMMERCIAL AVERAGE COST PER SERVICE

EXAMPLES	Commercial Range			Government Fees October 2018 when comparable		Commercial as a Percentage of Medicare	
	Minimum	Median	Maximum	Medicare	Medicaid		
EYE SERVICES							
Determination of Refractive State	\$5	\$33	\$57		\$14		
Eye Exam new patient	\$84	\$210	\$382	\$153	\$109	137%	<div></div>
Visual Acuity Screen	\$2	\$7	\$58		\$2		
IMAGING							
Chest X-ray (2 views)	\$29	\$66	\$361	\$32	\$23	206%	<div></div>
Knee X-ray (3 views)	\$51	\$83	\$491	\$38	\$27	218%	<div></div>
LABORATORY							
Complete Blood Count (CBC)	\$9	\$14	\$59	\$8	\$7	175%	<div></div>
Glycated hemoglobin test	\$14	\$21	\$86	\$12	\$11	175%	<div></div>
Gonorrhea test	\$32	\$68	\$152	\$43	\$39	158%	<div></div>
Lipid panel	\$15	\$29	\$123	\$17	\$15	171%	<div></div>
MEDICAL SERVICES							
Cardiac Stress test	\$159	\$218	\$417	\$72	\$51	303%	<div></div>
Pure Tone hearing test air	\$17	\$30	\$65		\$8		
Spirometry test	\$52	\$87	\$125	\$36	\$25	242%	<div></div>
MENTAL HEALTH SERVICES							
Psychiatric diagnostic evaluation	\$106	\$229	\$469	\$138	\$122	166%	<div></div>
OFFICE VISIT							
Office visit, new patient, 20 minutes	\$65	\$169	\$202	\$76	\$59	222%	<div></div>
Office visit, established patient, 15 minutes	\$63	\$157	\$253	\$74	\$57	212%	<div></div>
PHYSICAL THERAPY AND CHIROPRACTIC							
Physical Therapy evaluation - low complexity	\$77	\$139	\$253	\$86	\$61	162%	<div></div>
SURGERY							
Stitches for a wound	\$124	\$213	\$273	\$89	\$63	239%	<div></div>
Vasectomy	\$587	\$972	\$1,760	\$378	\$269	257%	<div></div>

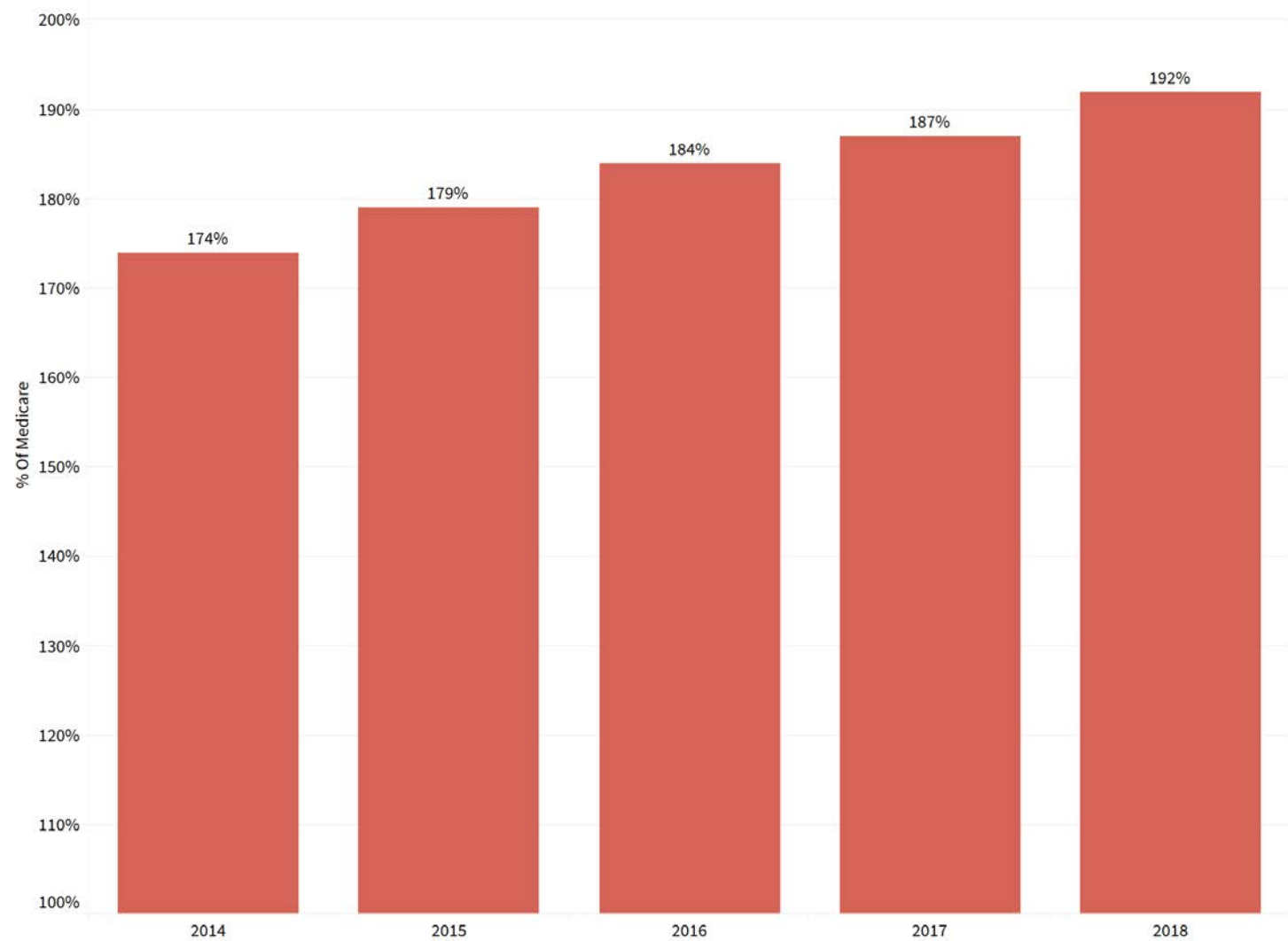
Average Cost per Procedure (ACP) is a measure of the average amount paid to each medical group by commercial health plans for specific common ambulatory care procedures and services. The measures represent actual amounts paid for services, not list prices, and include amounts paid by insurance and patient out of pocket costs.

This table provides examples of pricing variation for procedures that a patient could shop for. The complete list of 119 procedures is included in Appendix Table 4. Prices by medical group are available at MNHealthscores.org

As shown here, prices for individual services vary substantially – for example, from \$159 to \$417 for a cardiac stress test.

COMPARISON OF COMMERCIAL PRICES TO MEDICARE FEE SCHEDULE

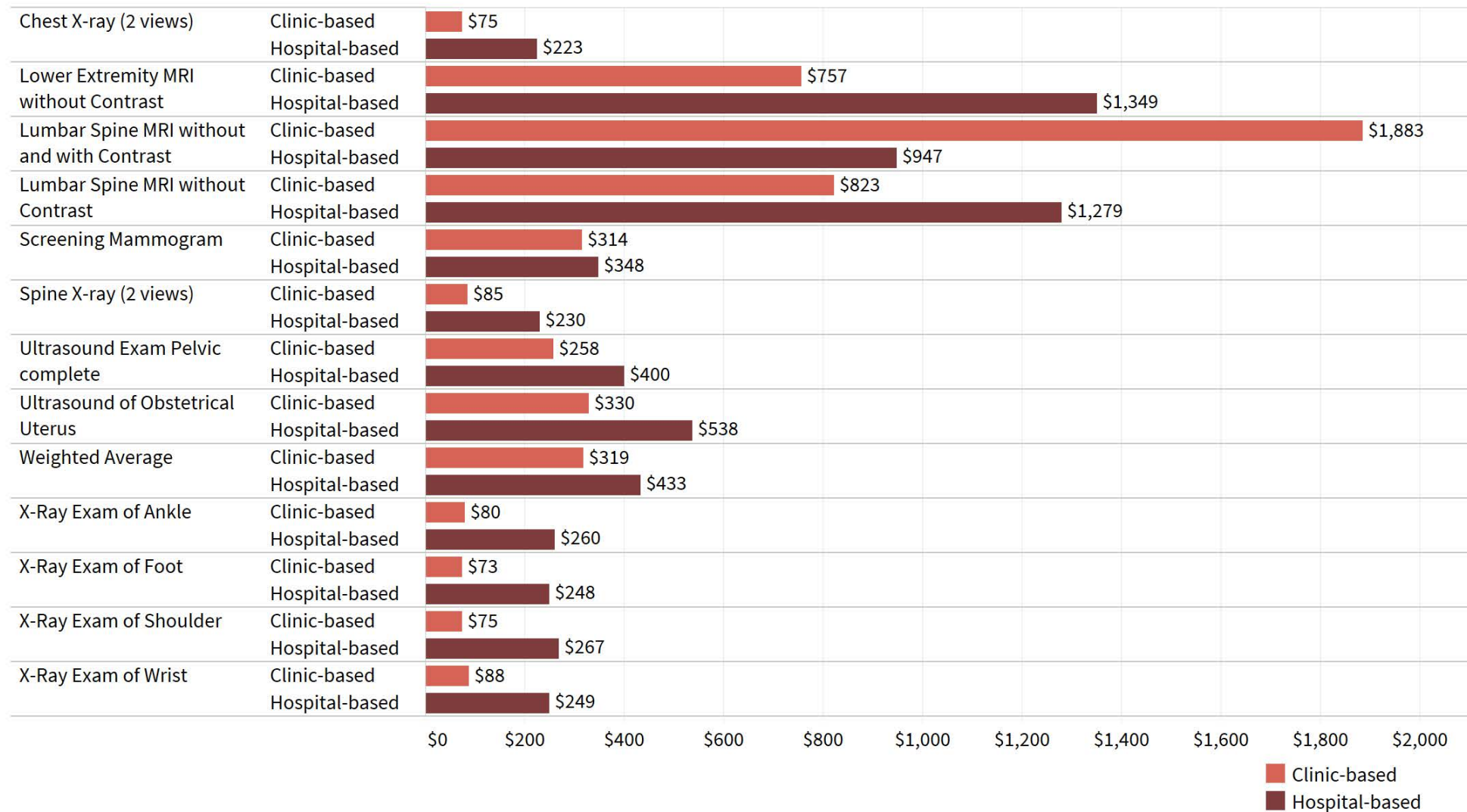
2014 - 2018



MNCM has published this pricing data yearly since 2014. For the services that have been included in all five years and have a directly comparable Medicare fee, the average price paid by private insurance for this group of services combined increased from 174 percent of Medicare in 2014 to 192 percent of Medicare in 2018, as shown above.

2018 AVERAGE PRICES FOR IMAGING SERVICES

Clinic Compared to Hospital Outpatient for Commercial Patients



The cost of imaging services is typically higher (by as much as 267 percent) in an outpatient hospital setting compared to a clinic setting. As an overall market basket, the set of services cost 36% more when performed in a hospital outpatient setting.

Methodology

All data collected and calculated in a unique collaborative process between Blue Cross Blue Shield of MN, HealthPartners, Medica Health Plans, PreferredOne and MN Community Measurement.

Total Cost of Care (TCOC), [TCI](#) (Total Cost Index) and [TCRRV](#) (relative resource use) Measures were developed and are maintained by HealthPartners.

- **COST:** For the purposes of this report, cost is defined as allowable charges which is the total paid by the health plan and the patient. Billed charges are **not** used to define costs.
- **DATA SOURCE:** Administrative claims from Blue Cross Blue Shield of MN, HealthPartners, Medica Health Plans and PreferredOne.
- **DATES OF SERVICE:** January 1, 2018 through December 31, 2018. This analysis includes claims processed as of April 30, 2019.
- **PATIENT ATTRIBUTION (ASSIGNMENT):**
 - [TCOC](#): All costs are assigned to the medical group with the patient's majority of primary care activity.
 - [Average Cost Per Procedure](#): Attribution is based on billing provider and includes all commercial patients from participating health plans.
- **POPULATION:**
 - Commercial patients for individual plan and group plans, including self insured employer groups.
 - TCOC: Patients age 1-64 who were on same health plan for at least nine months during the 2018 calendar year.
 - Average Cost Per Procedure: All commercial patients enrolled in the four health plans during 2018
- **RISK ADJUSTMENT:**
 - [TCOC](#): Costs are adjusted for known risk factors that are reported in administrative claims, using version 11.0 of the Johns Hopkins Adjusted Clinical Groups (ACG) grouper. Costs above \$125,000 per patient are removed when comparing medical groups but included when calculating statewide trends.
 - [Utilization](#): Utilization is adjusted for known risk factors that are reported in administrative claims, using version 11.0 of Johns Hopkins ACG grouper plus gender and age. No outlier adjustments.
 - [Average Cost Per Procedure](#): Not risk adjusted as this is a measure of cost per unit not rate or appropriateness of care.
- **SAMPLE SIZE REQUIREMENTS FOR PUBLIC REPORTING**
 - [TCOC](#): Minimum of 600 attributed patients per medical group.
 - [Average Cost Per Procedure](#): Minimum of 50 services per procedure per medical group with data from at least three of the health plans.

New for 2019 Report:

Confidence Interval for Total Cost of Care

The confidence interval for the Total Cost of Care measure is calculated by “bootstrapping with replacement” which is a process where many samples are pulled from the full data set, each time calculating the outcome. MNCM calculated the 95 percent confidence interval for the TCOC for each medical group by repeating the process 600 times from unique randomly selected subsets of the data.

The confidence interval is calculated as the 2.5th percentile and 97.5th percentile of the 600 repeated calculations.

Appendix

<https://mncm.org/wp-content/uploads/2019/11/2019-mncm-cost-appendix-tables-FINAL-v2.pdf>

Pg Title

2 – Total Cost of Care, Resource Use and Price Index by Medical Group

6 – Utilization: Facility Based Services

10 – Utilization: Office Visits and Pharmacy Use

14 – Utilization: Diagnostic Services

18 – Average Cost Per Procedure: X-Ray Exam of Spine

19 – Average Cost Per Procedure: Lumbar Spine MRI With and Without Contrast

19 – Average Cost Per Procedure: Pure Tone Hearing Test

