

HEALTH CARE COST & UTILIZATION IN 2022

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Introduction

ABOUT MN COMMUNITY MEASUREMENT

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 quality, costs and equity. While Minnesota has some of the best health indicators in the country, there continues to be wide variation in health care quality and wide disparities in outcomes for different population groups. Measurement in health care delivers value to patients, providers, payers, and purchasers and the community.

ABOUT THIS REPORT

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 2022 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.



ACKNOWLEDGEMENTS

This report is made possible by the engagement of several stakeholders, medical groups, payers and MNCM's Data Validation and Data Analysis teams. Each are committed to continuous improvement and recognize the important role measurement plays in helping our community establish priorities and improve together.

MNCM extends particular thanks to the following health plans for their collaboration in providing the data for this report:

- Blue Cross and Blue Shield of Minnesota
- HealthPartners
- Medica Health Plans
- PreferredOne

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HEALTH CARE COST & UTILIZATION IN 2022

Key Findings

- Total costs per attributed patient without adjustments for outliers increased by 7.0 percent in 2022. The cost growth in 2022 represents a return to pre-pandemic trends, following significant disruptions to care in 2020.
 - This represents an increase of \$48 per patient per month. On an annual basis, the increase in 2022 was \$581 per person.
 - Costs for pharmacy use increased the most, by 17.1 percent.
 - Inpatient costs had the smallest increase, by 0.4 percent.
- Over the three-year period of 2020, 2021, and 2022 total cost of care grew at an annualized rate of 5.5 percent per year, which was higher than the pre-pandemic trend of 4.9 percent per year from 2014 to 2019. General inflation was also higher than recent historical averages in 2021 and 2022, which likely contributed to the higher annualized rate from 2020 to 2022.
- Some services saw an increase in utilization while some had decreases:
 - Utilization of emergency room, outpatient surgery, lab services, radiology, and prescription drugs increased compared to 2021. The largest increase was in outpatient surgery, with 8.0 percent followed by emergency room visits at 7.2 percent.
 - Inpatient admissions decreased 4.3 percent and primary care visits decreased 2.1 percent compared to 2021.
- Regional variation in total cost is driven by both the amount of resources used and the price of each resource.
 - The metropolitan areas of Minneapolis and St. Paul have lower costs due to lower prices.
 - The Windom and Detroit Lakes area have lower costs due to lower resource use.
 - The St. Cloud and Minnetonka areas have lower cost due to both lower resource use and lower prices.
- There was a decrease in the percentage of commercial health plan members who used any health care services in 2022 compared to 2021. For all ages, the percentage of people who had any health care utilization decreased from 92.8 percent to 89.5 percent.

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Detailed medical group information are available through MNCM's Appendix Tables, available [here](#).

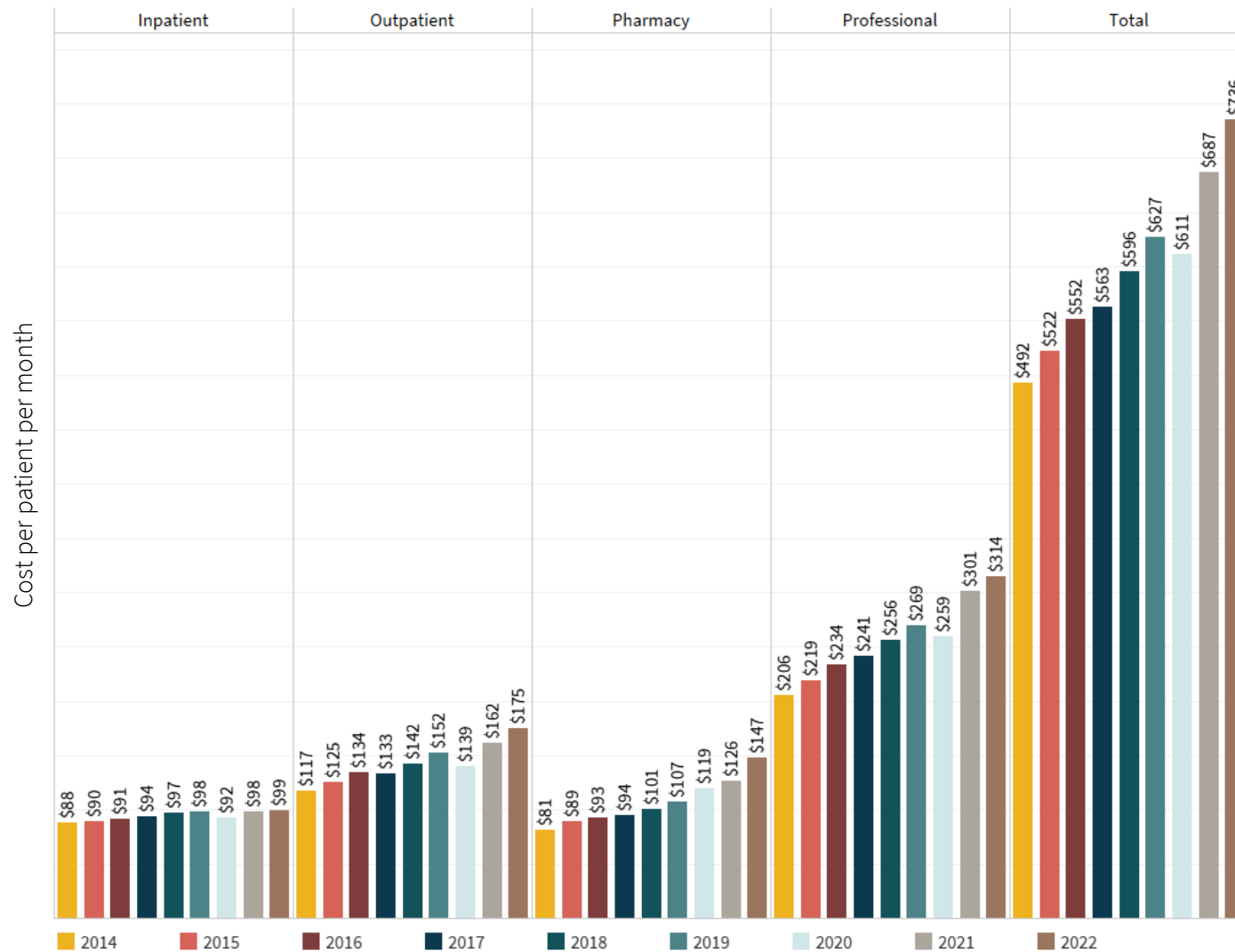
Medical group profile pages through MNHealthScores are also available [here](#).

MNCM cautions comparison of 2022 regional and medical group results to prior years due to a slight change in how the methodology was applied by one of the contributing health plans. The change does not affect statewide trending but does affect risk adjustment at the medical group and regional levels.

Section One: Total Cost Of Care

COST TREND BY TYPE OF SERVICE, PER PATIENT PER MONTH

Commercially Insured Patients 2014 to 2022



In 2022 the average total cost of care (TCOC) for commercially insured patients cared for by Minnesota primary care providers was \$736 per month, an increase of \$48 compared to 2021 and \$109 compared to 2019. On an annual basis, the increase in 2022 was \$581 per person.

In this report, cost is defined as the actual amount paid to the health care provider by the health plan and/or the patient. This chart includes all costs for patients who were attributed to a primary care provider, without adjustments for high-cost outliers.

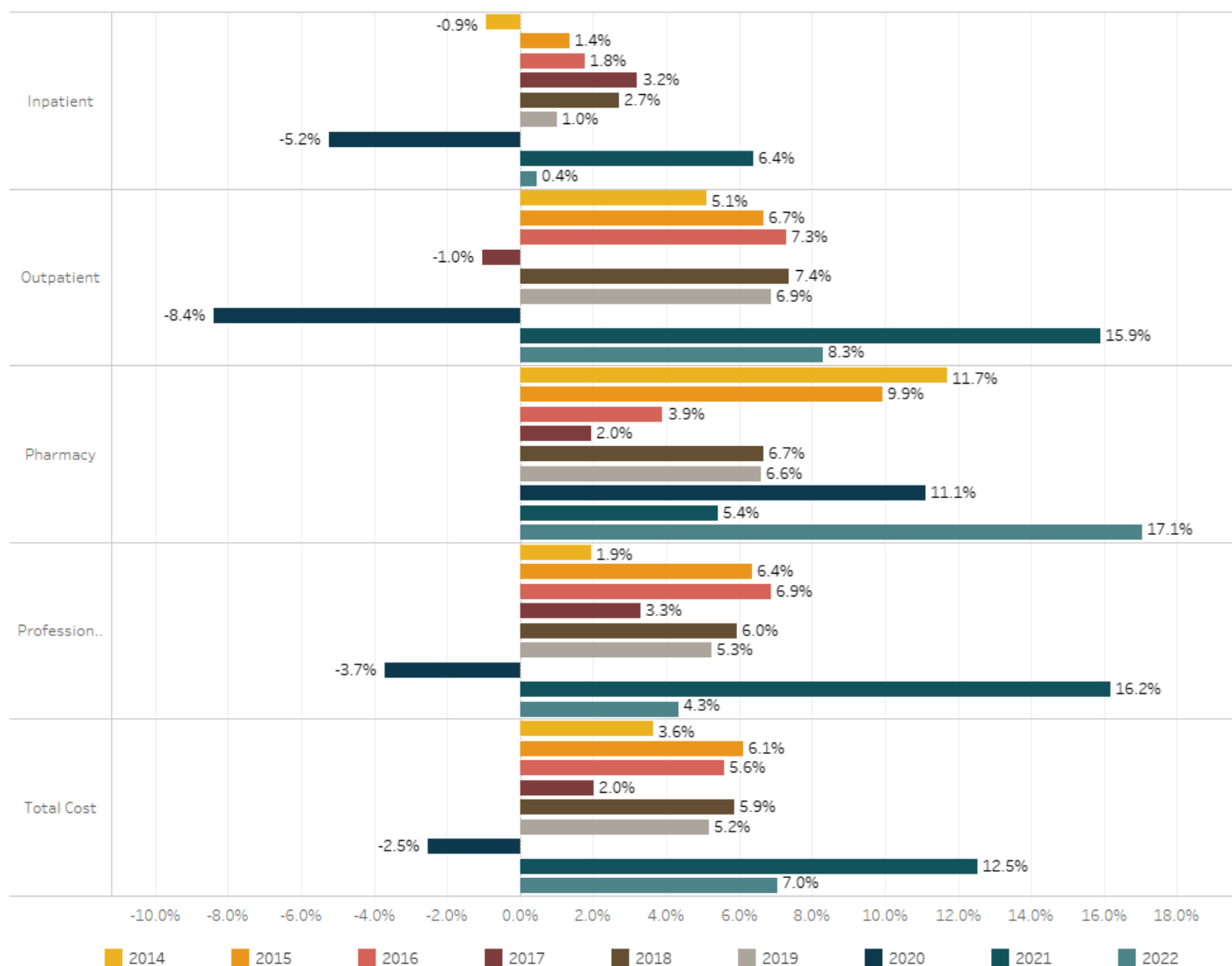
High-cost outliers are costs over \$125,000 for any patient.

This analysis includes 1,172,670 patients and \$9.8 billion in claims.

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

NINE YEAR TREND IN COST GROWTH

Commercially Insured Patients, Cost Per Patient 2014 to 2022



For people with private health insurance who were attributed to a primary care provider, the total cost of care increased by 7.0 percent in 2022. Over the three-year period of 2020, 2021, and 2022 total cost of care grew at an annualized rate of 5.5 percent per year, which was higher than the pre-pandemic trend of 4.9 percent per year from 2014 to 2019. General inflation was higher over the past couple years, which likely contributed to the higher annualized rate from 2020 to 2022.

Cost for pharmacy use increased the most, by 17.1 percent. This is followed by outpatient hospital services, which increased by 8.3 percent.

Cost for inpatient services increased the least at 0.4 percent.

This chart includes all costs for patients who were attributed to a primary care provider, without adjustments for high-cost outliers.

DRIVERS OF REGIONAL COST VARIATION, 2022

Commercially Insured Patients' Risk-Adjusted Costs by Region of Residence (3-digit Zip Code)

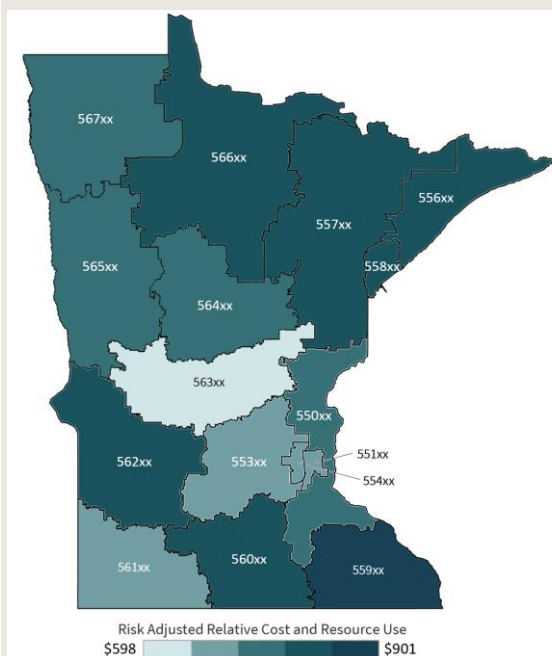
REGION		RISK ADJUSTED RELATIVE COST AND RESOURCE USE			
Three-digit zip code	Major city in zip code area	Total Cost	Relative use	Price	Cost per member per month
550xx	Stillwater	1.3%	1.8%	-0.4%	\$ 664
551xx	St. Paul	-3.6%	2.7%	-6.2%	\$ 632
553xx	Minnetonka	-5.2%	-1.7%	-3.6%	\$ 622
554xx	Minneapolis	-2.3%	3.3%	-5.5%	\$ 641
556xx	Two Harbors	13.2%	-0.5%	13.7%	\$ 742
557xx	Cloquet	12.9%	3.5%	9.1%	\$ 740
558xx	Duluth	9.3%	2.0%	7.2%	\$ 717
559xx	Rochester	37.4%	-0.5%	38.0%	\$ 901
560xx	Mankato	12.6%	-4.6%	18.1%	\$ 738
561xx	Windom	-1.2%	-7.9%	7.3%	\$ 648
562xx	Wilmar	7.5%	-2.8%	10.6%	\$ 705
563xx	St. Cloud	-8.8%	-6.9%	-2.0%	\$ 598
564xx	Brainerd	0.5%	-4.0%	4.7%	\$ 659
565xx	Detroit Lakes	-0.6%	-2.8%	2.3%	\$ 652
566xx	Bemidji	10.0%	-2.7%	13.0%	\$ 721
567xx	Thief River Falls	2.9%	-1.9%	5.0%	\$ 675

MNCM cautions against comparing 2022 regional and medical group results to prior years due to a slight change in how the methodology was applied by one of the contributing health plans. The change does not affect statewide trending but does affect risk adjustment at the medical group and regional levels.

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 metropolitan areas of Minneapolis and St. Paul have lower costs due to lower prices. The Windom and Detroit Lakes area have lower costs due to lower resource use. The St. Cloud and Minnetonka areas have lower cost due to lower resource use and lower prices.

Overall, variation in prices is the primary driver of regional variation in costs.



2022 TOTAL COST OF CARE BY MEDICAL GROUP

Commercially Insured Patients' Risk-Adjusted Relative Costs (95% confidence interval)

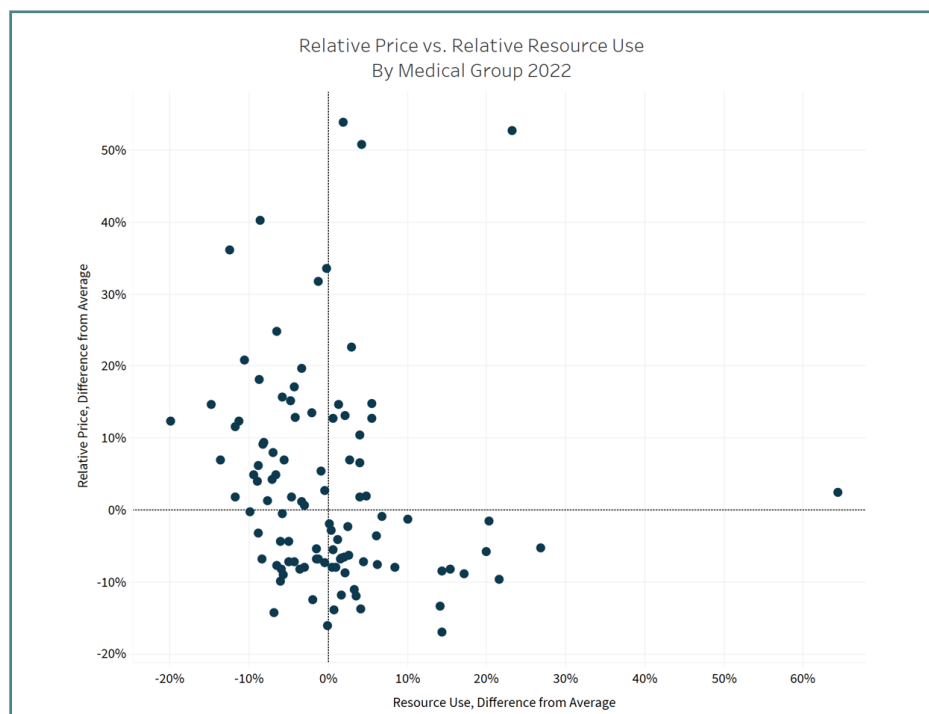


Consistent with previous years, there continues to be substantial variation in costs among medical groups. Detailed results of the TCOC analysis by medical group can be found via MNCM's Appendix Tables, which can be accessed [here](#).

MNCM cautions against comparing 2022 regional and medical group results to prior years due to a slight change in how the methodology was applied by one of the contributing health plans. The change does not affect statewide trending but does affect risk adjustment at the medical group and regional levels.

2022 RELATIVE PRICE VS. RELATIVE RESOURCE USE

Commercially Insured Patients' Risk-Adjusted Relative Costs by Medical Group

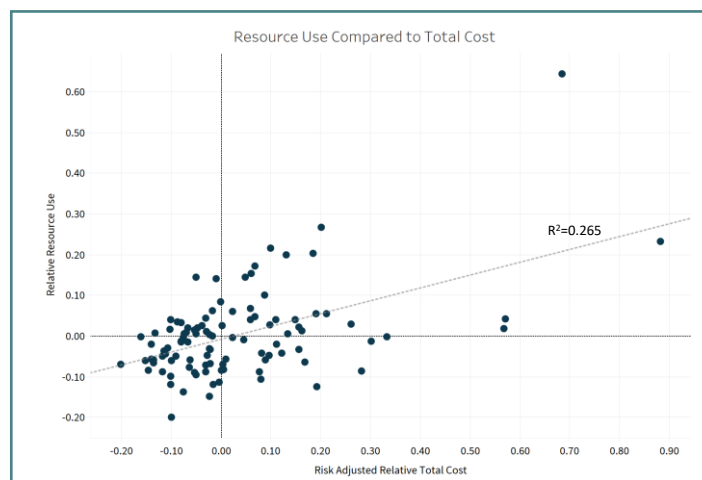
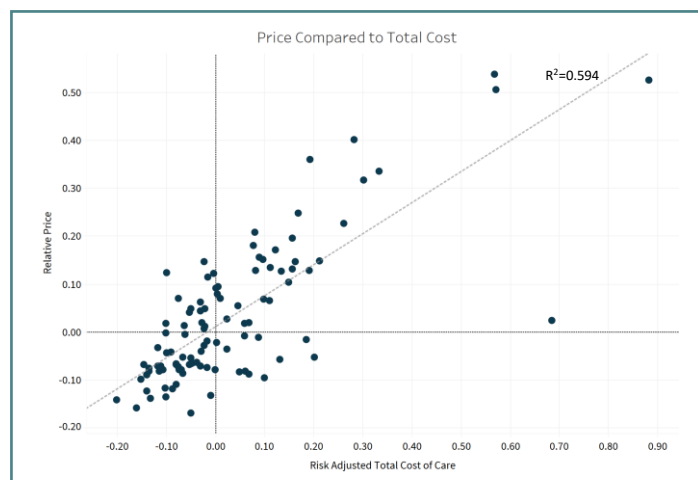


Total Cost is a product of use and price

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.



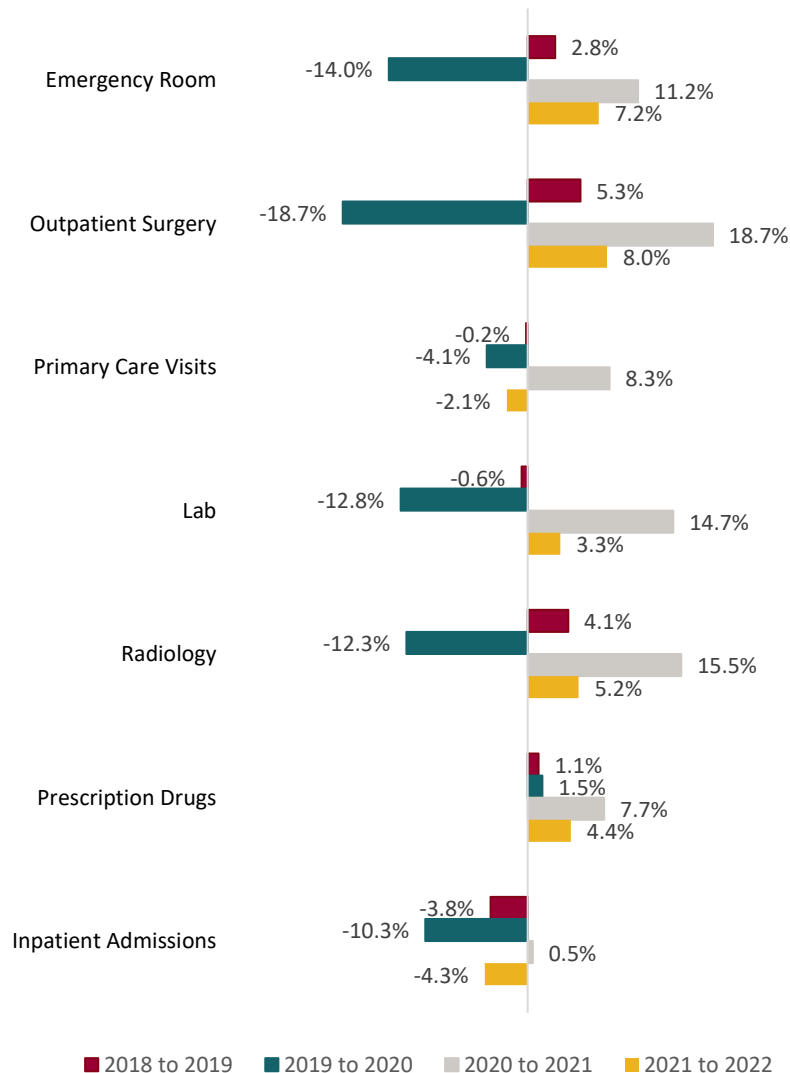
Variation in price continues to be a more significant factor in how total cost of care varies across medical groups than the amount of resources used.

Section Two: Utilization

UTILIZATION OF MEDICAL SERVICES

Commercially Insured Patients

Changes in Utilization Per Patient



Utilization Metrics per 1,000 patients per year

	2018	2019	2020	2021	2022
Emergency Room	166	171	147	163	175
Outpatient Surgery	131	138	112	134	144
Primary Care Visits	2,622	2,618	2,510	2,718	2,660
Lab	6,311	6,272	5,467	6,272	6,480
Radiology	944	983	862	996	1,048
Prescription Drugs (count of 30 day prescriptions)	15,262	15,433	15,666	16,880	17,617
Inpatient Admissions	55	53	47	47	45

To further understand variation in resource use, MNCM's analysis also includes variation across medical groups in the utilization of common categories of medical services, such as inpatient hospital admissions or radiology services.

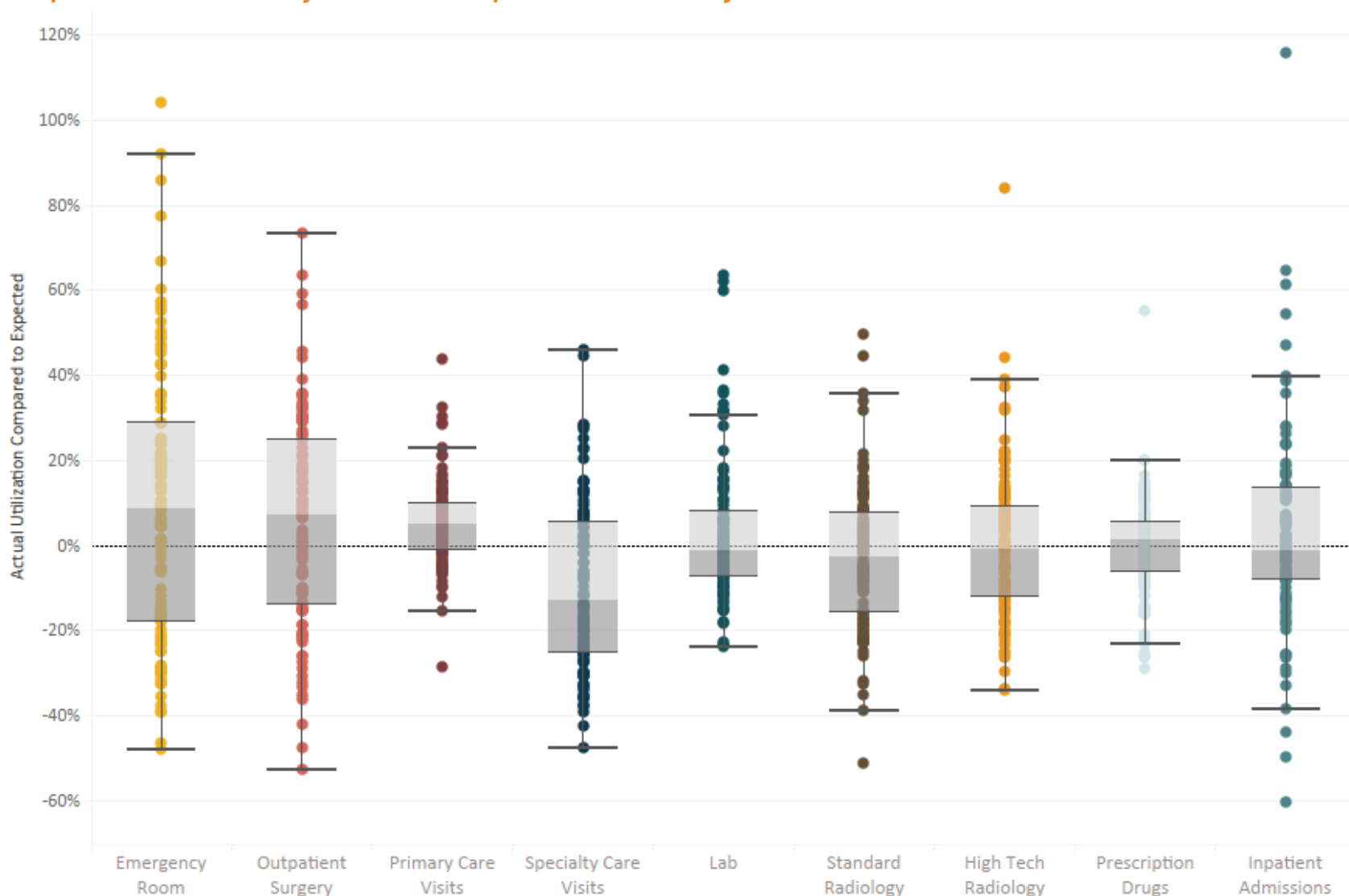
In 2022, utilization of emergency room, outpatient surgery, lab services, radiology, and prescription drugs increased compared to 2021. The largest increase was in outpatient surgery, with 8.0 percent followed by emergency room visits at 7.2 percent.

Inpatient admissions decreased 4.3 percent and primary care visits decreased 2.1 percent compared to 2021.

Inpatient admissions were lower in 2022 compared to 2019. All other utilization of medical services were higher in 2022 compared to 2019.

2022 VARIATION IN UTILIZATION

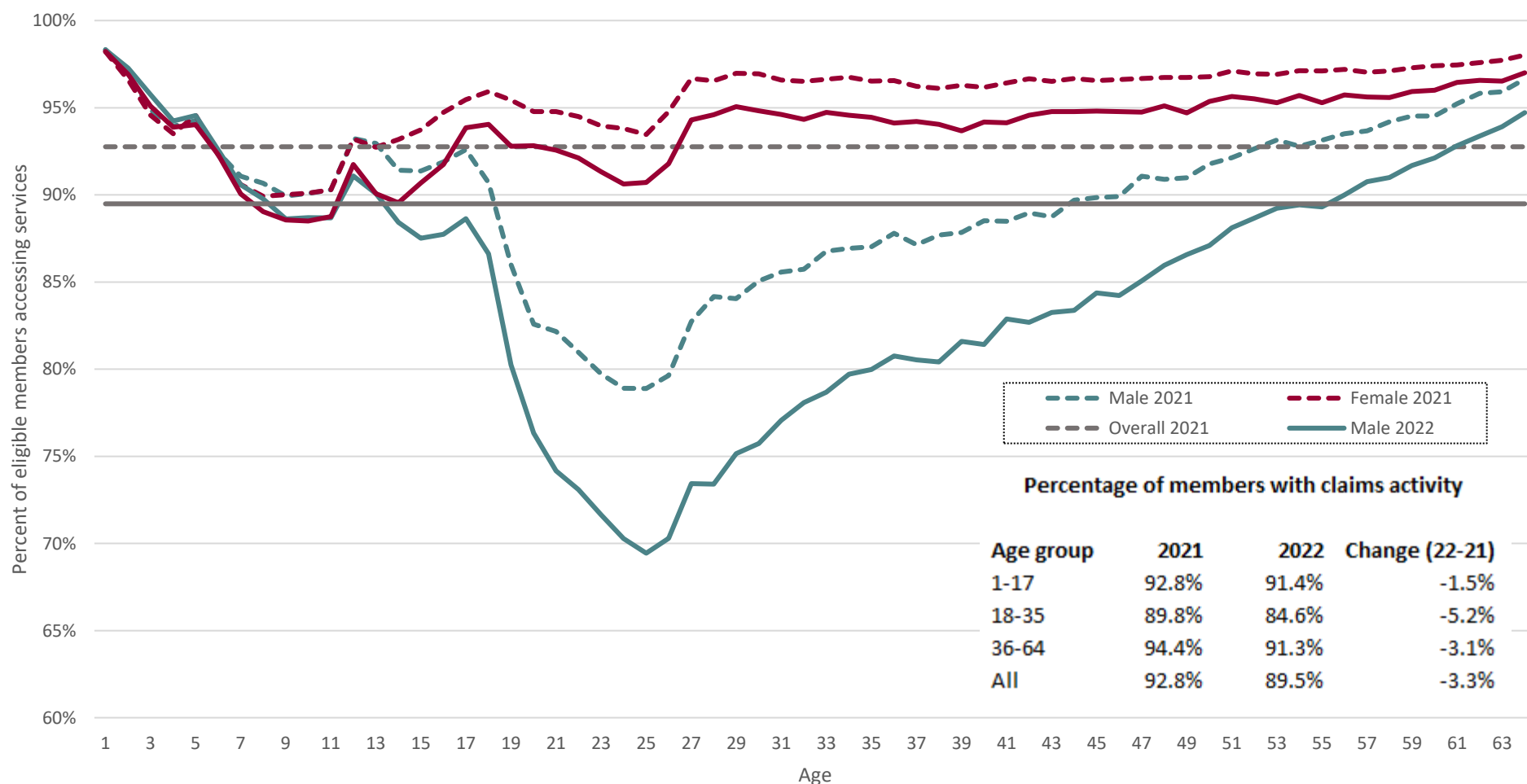
Actual to Expected Utilization by Medical Group for Commercially Insured Patients



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 61% below expected for the patient mix to 116% above. Detailed results by medical group can be found via MNCM's Appendix Tables, which can be accessed [here](#).

PERCENTAGE OF HEALTH PLAN MEMBERS UTILIZING SERVICES

Percentage of commercially insured members with any health care utilization by age and sex, 2021 - 2022



This chart includes all commercially insured patients, regardless of whether they are attributed to a medical group.

Every year there are health plan members who, even though they have benefits for the full 12 months, do not have any health care claims.

Although total spending per person increased in 2022, people with commercial health insurance were less likely to have claims in 2022 compared to 2021. Health care claims decreased across all age groups, with the age group 18-35 having the largest decrease by 5.2 percent. Overall, the percentage of people who had any health care utilization decreased from 92.8 percent in 2021 to 89.5 percent in 2022. Women continue to access health care at a higher rate than men.

SECTION THREE: AVERAGE COST PER PROCEDURE

2022 COMMERCIAL AVERAGE COST PER PROCEDURE

EXAMPLES



Average Cost per Procedure

		Commercial Range			Government Fees when comparable	
		Minimum	Median	Maximum	Medicare	Medicaid
IMAGING						
71046	Chest X-ray (2 views)	\$49	\$85	\$348	\$35	\$25
72100	Spine X-ray (2 views)	\$68	\$100	\$308	\$41	\$30
72131	Lumbar Spine CT without contrast	\$323	\$485	\$1,381	\$139	\$101
72148	Lumbar Spine MRI without contrast	\$459	\$840	\$3,623	\$207	\$152
72158	Lumbar Spine MRI without and with contrast	\$864	\$1,016	\$3,672	\$348	\$254
73030	X-Ray Exam Of Shoulder	\$54	\$86	\$345	\$36	\$26
73110	X-Ray Exam Of Wrist	\$68	\$102	\$301	\$42	\$31
73562	Knee X-ray (1 or 2 views)	\$60	\$102	\$248	\$42	\$31
73610	X-Ray Exam Of Ankle	\$59	\$92	\$323	\$38	\$28
73630	X-Ray Exam Of Foot	\$54	\$87	\$370	\$36	\$26
73700	Lower Extremity CT without contrast	\$326	\$511	\$1,052	\$139	\$101
73721	Lower Extremity MRI without contrast	\$447	\$579	\$3,010	\$219	\$160
76805	Ultrasound of Obstetrical Uterus	\$211	\$321	\$814	\$140	\$103
76856	Ultrasound Exam Pelvic complete	\$182	\$249	\$860	\$110	\$80
77067	Screening Mammography digital	\$187	\$342	\$644	\$133	\$97
MENTAL HEALTH						
90791	Psychiatric diagnostic evaluation	\$136	\$294	\$471	\$177	\$145
90792	Psychiatric diagnostic evaluation with medical services	\$186	\$438	\$959	\$197	\$162
90832	Psychotherapy, 30 minutes with patient and/or family member	\$60	\$131	\$240	\$77	\$63
90834	Psychotherapy, 45 minutes with patient and/or family member	\$81	\$182	\$327	\$101	\$83
90837	Psychotherapy, 60 minutes with patient and/or family member	\$108	\$141	\$449	\$149	\$122
90853	Group Psychotherapy	\$10	\$44	\$163	\$27	\$22
LABORATORY						
80048	Basic metabolic panel	\$9	\$12	\$93	\$8	\$8
80050	General Health Panel	\$34	\$59	\$316	.	\$50

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 (i.e., not list prices) and include amounts paid by insurance and patient out-of-pocket costs.

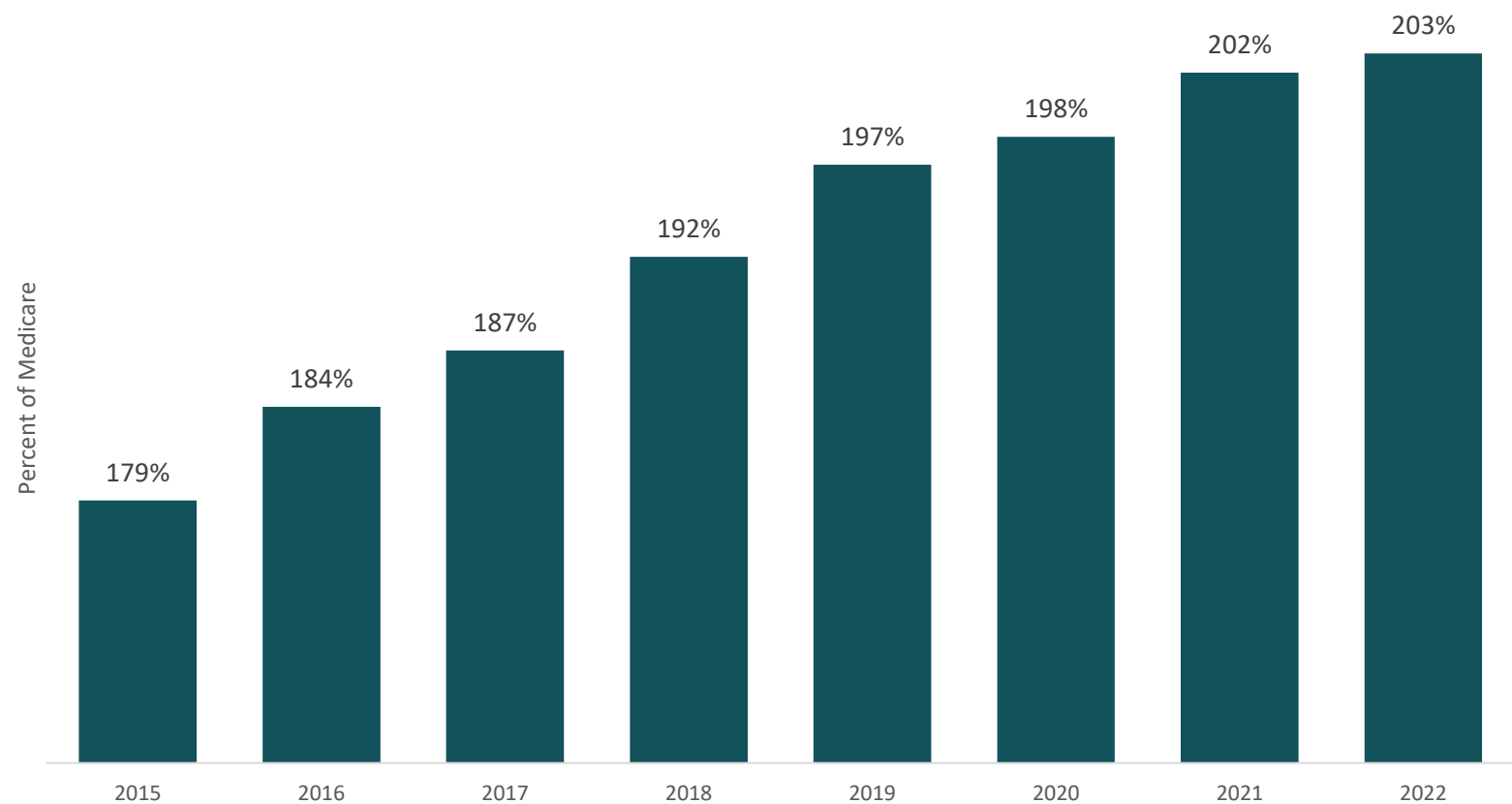
This table provides examples of pricing variation for procedures that a patient could shop for.

As shown here, prices for individual services vary substantially across providers — for example, from \$49 to \$348 for a chest X-ray. Complete results by procedure and by medical groups are available [here](#).

MNCM plans to discontinue this measure in future years, since new federal price transparency requirements make it easier for consumers to obtain information specific to their situations.

COMPARISON OF COMMERCIAL PRICES TO MEDICARE FEE SCHEDULE

2015 to 2022



MNCM has published this pricing data yearly since 2014. For the services that have been included in the last eight years and have a directly comparable Medicare fee, the average price paid by private insurance for this group of services combined increased from 179 percent of Medicare in 2015 to 203 percent of Medicare in 2022, as shown above. MNMCM plans to discontinue this measure in future years, since new federal price transparency requirements make it easier for consumers to obtain information specific to their situations.

METHODOLOGY & DEFINITIONS

- **COST:** For the purpose of this report, cost is defined as allowable charges which is the total paid by the health plan and patient. Billed charges are not used to define costs.
- **DATA SOURCE:** Administrative claims from Blue Cross Blue Shield of Minnesota, HealthPartners, Medica Health Plans and PreferredOne.
- **DATES OF SERVICE:** January 1, 2022, through December 31, 2022. This analysis includes claims processed as of April 30, 2023.
- **PATIENT ATTRIBUTION (ASSIGNMENT):**
 - TCOC: All costs are assigned to the medical group with the patient's majority of primary care activity, including in-person and telehealth visits.
 - 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 aged 1-64 who were on same health plan for at least nine months during the 2022 dates of service.
 - Average Cost Per Procedure: All commercial patients enrolled in the four health plans during the 2022 dates of service.
- **RISK ADJUSTMENT:**
 - TCOC: Costs are adjusted for known risk factors that are reported in administrative claims, using version 13.0 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 13.0 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 health plans.

All data collected and calculated in a unique collaborative process between Blue Cross Blue Shield of Minnesota, 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 and are endorsed by the National Quality Forum.

Calculating the 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.