

HEALTH CARE COST & UTILIZATION IN 2021

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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 2021 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 2021

Key Findings

- Total costs per attributed patient increased by 12.5 percent in 2021. Much of the rapid cost growth in 2021 represents a return to pre-pandemic trends, following significant disruptions to care in 2020.
 - On average, this represents an increase of \$912 per patient per year.
 - Costs for professional services increased the most, by 16.2 percent.
 - Pharmacy costs had the smallest increase, by 5.4 percent.
- Over the two-year period of 2020 and 2021, total cost of care grew at an annualized rate of 4.7 percent per year, which was slightly lower than the pre-pandemic trend of 4.9 percent per year from 2014 to 2019.
- All regions of the state showed an increase in total cost of care, but the amount varied by region.
 - The largest increase was for patients living in the Rochester area. For this group, the total cost of care increased by 14.3 percent, or \$111 per patient per month (\$1,332 per year).
 - The smallest increase was for patients living in the Duluth area. The total cost of care increased by 8.1 percent or \$50 per patient per month (\$600 per year).
- There were increases across all types of utilization. Outpatient surgery had the largest increase at 18.7 percent. Also notable was the 15.5 percent increase for radiology and 14.7 percent increase in lab tests.
- There was also an increase in the percentage of commercial health plan members who used any health care services in 2021 compared to 2020. For all ages, the percentage of people who had any health care utilization increased from 88.2 percent to 92.8 percent.

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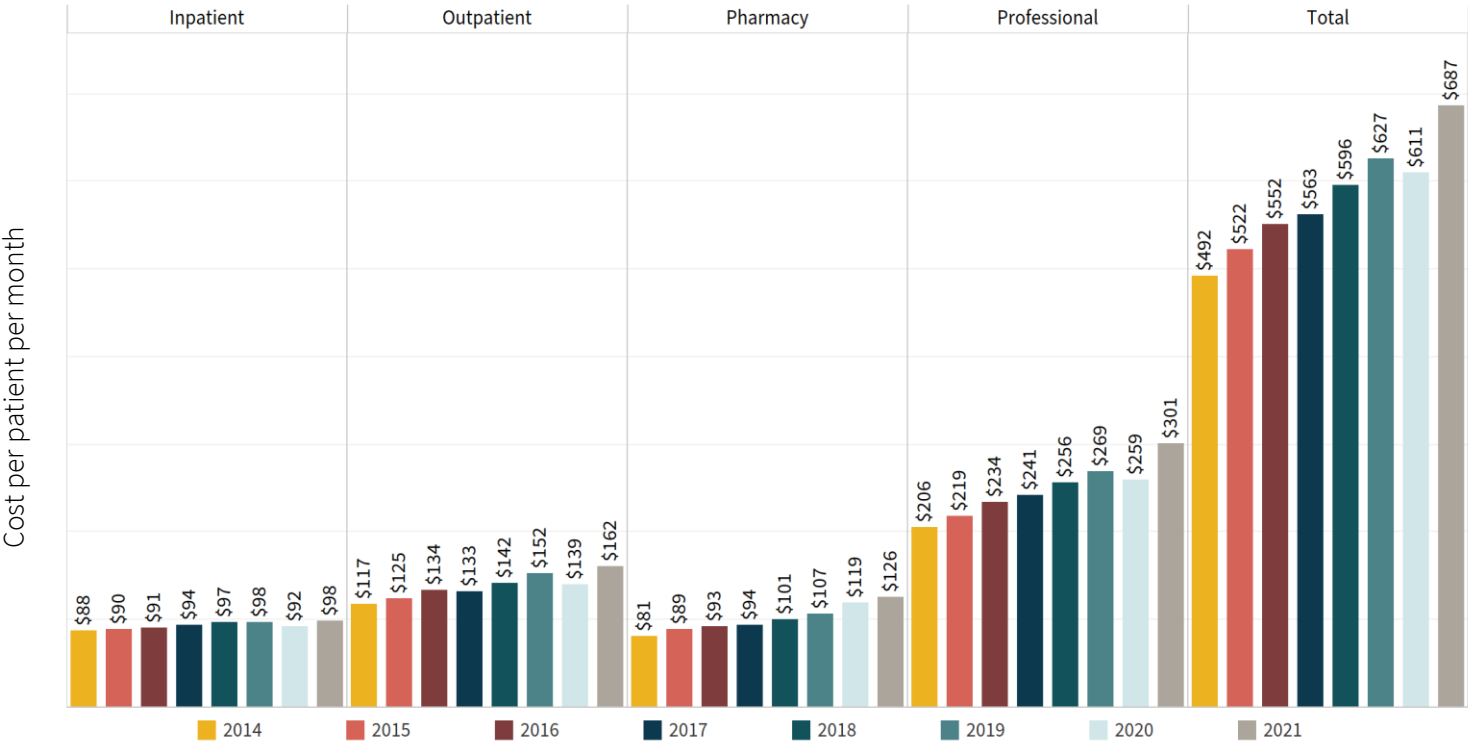
Detailed medical group information are available through MNMCM's Dynamic Tables, an interactive tool available [here](#).

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

Section One: Total Cost Of Care

COST TREND BY TYPE OF SERVICE, PER PATIENT PER MONTH

Commercially Insured Patients 2014 to 2021



In 2021 the average total cost of care (TCOC) for commercially insured patients cared for by Minnesota primary care providers was \$687 per month, an increase of \$76 compared to 2020 and \$60 compared to 2019.

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.

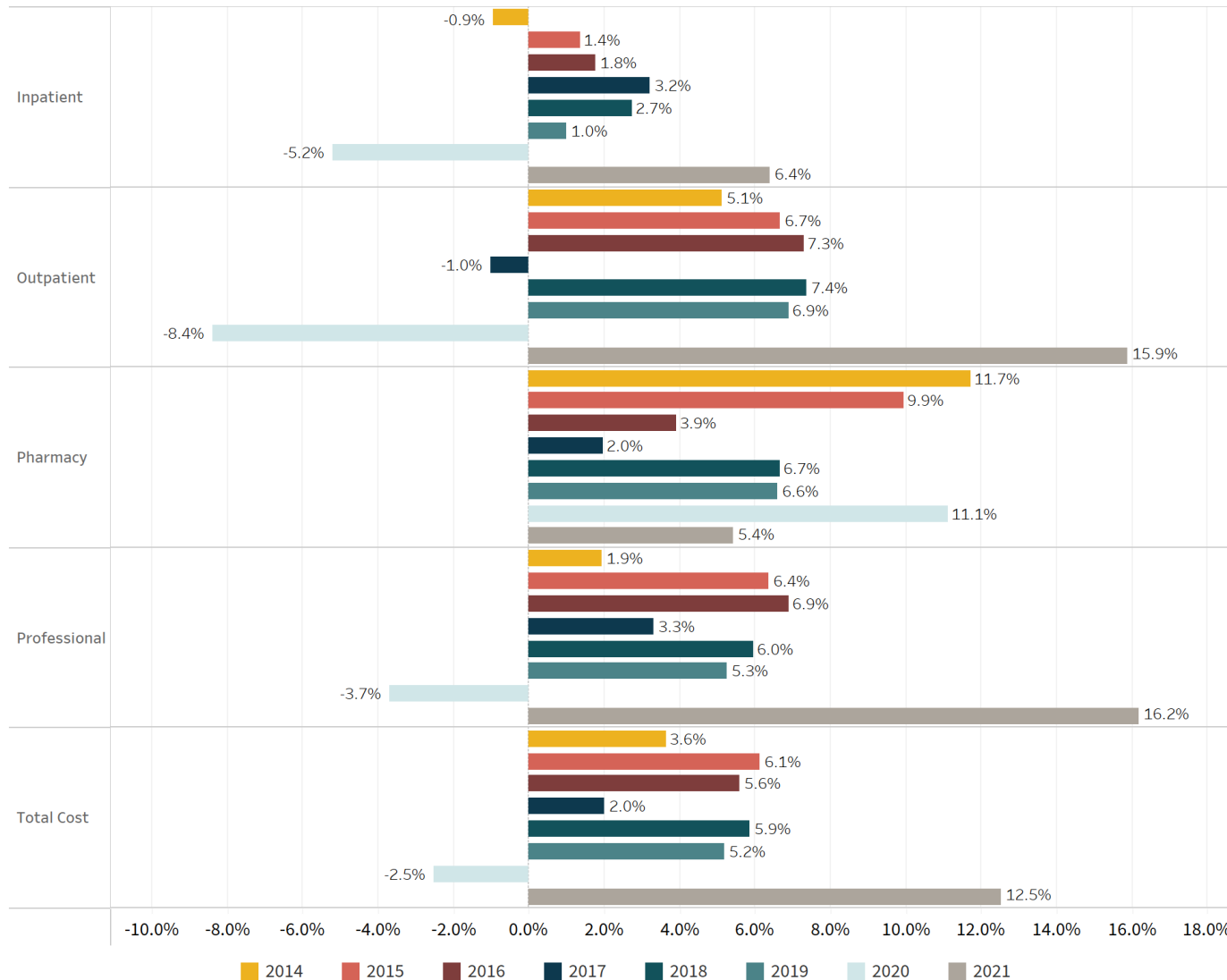
High-cost outliers are costs over \$125,000 for any patient.

This analysis includes 1,267,450 patients and \$9.9 billion in claims.

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

EIGHT YEAR TREND IN COST GROWTH

Commercially Insured Patients, Cost Per Patient 2014 to 2021



For people with private health insurance who were attributed to a primary care provider, the total cost of care increased by 12.5 percent in 2021, after falling 2.5 percent in 2020. For the two-year period of 2020 and 2021, the average annual cost growth was 4.7 percent, which is slightly below the average annual growth of 4.9 percent from 2014 to 2019. Much of the rapid cost growth in 2021 represents a return to pre-pandemic trends, following significant disruptions to care in 2020.

Cost for professional services increased the most, by 16.2 percent. This is followed by outpatient hospital services, which increased by 15.9 percent.

Pharmacy costs increased the least at 5.4 percent.

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

REGIONAL TRENDS 2019 – 2021

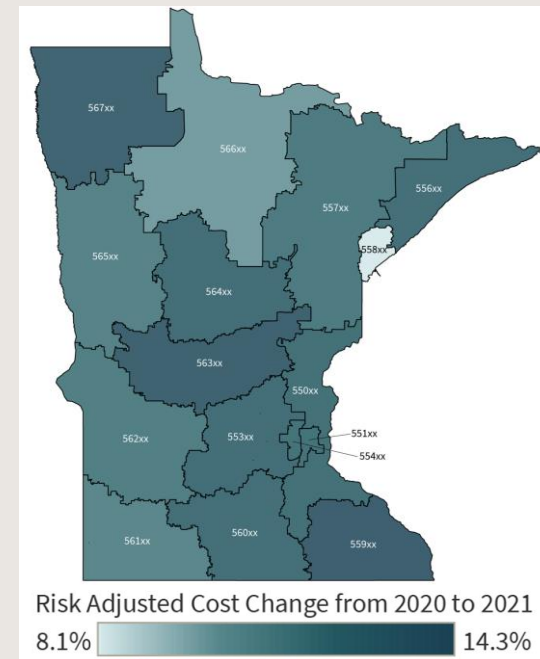
Commercially Insured Patients' Risk-Adjusted Costs by Region of Residence (3-digit Zip Code)

Region Zip Code and Major City	Risk Adjusted Cost			Change		Percent Difference from State Average		
	2019	2020	2021	2019-2020	2020-2021	2019	2020	2021
550xx Stillwater	\$586	\$565	\$635	-3.7%	12.5%	-2.9%	2.1%	1.9%
551xx St Paul	\$542	\$527	\$591	-2.8%	12.2%	-5.4%	-4.7%	-5.3%
553xx Minnetonka	\$546	\$525	\$591	-3.8%	12.7%	-4.8%	-5.0%	-5.2%
554xx Minneapolis	\$545	\$535	\$600	-1.8%	12.2%	-4.9%	-3.2%	-3.8%
556xx Two Harbors	\$664	\$623	\$701	-6.2%	12.6%	15.8%	12.7%	12.4%
557xx Cloquet	\$670	\$646	\$722	-3.6%	11.8%	16.9%	16.9%	15.8%
558xx Duluth	\$642	\$612	\$661	-4.7%	8.1%	12.0%	10.7%	6.1%
559xx Rochester	\$831	\$781	\$892	-6.1%	14.3%	45.0%	41.2%	43.0%
560xx Mankato	\$684	\$633	\$713	-7.4%	12.6%	19.3%	14.6%	14.3%
561xx Windom	\$639	\$603	\$671	-5.6%	11.2%	11.5%	9.1%	7.5%
562xx Wilmar	\$612	\$597	\$666	-2.5%	11.6%	6.7%	7.9%	6.8%
563xx St Cloud	\$526	\$491	\$560	-6.6%	14.0%	-8.3%	-11.2%	-10.3%
564xx Brainerd	\$568	\$567	\$640	-0.2%	12.8%	-0.8%	2.6%	2.6%
565xx Detroit Lakes	\$567	\$560	\$623	-1.2%	11.4%	-1.1%	1.3%	0.0%
566xx Bemidji	\$673	\$648	\$713	-3.7%	10.1%	17.4%	17.3%	14.4%
567xx Thief River Falls	\$628	\$607	\$690	-3.4%	13.7%	9.5%	9.7%	10.6%
Risk adjusted and outlier removed MN resident average*	\$573	\$553	\$624	-3.5%	12.8%	NA	NA	NA

*MN resident average includes only patients with a Minnesota ZIP code as their place of residence. Risk Adjustment includes accounting for patient mix using the Johns Hopkins ACG tool and removal of outlier costs, defined as cost over \$125,000 for any patient.

All regions of the state had an increase in total cost of care. The range was from 8.1 percent (\$50 per patient per month) to 14.3 percent (\$111 per patient per month).

All 16 regions also had an increase in total cost of care compared to 2019 as well.



DRIVERS OF REGIONAL COST VARIATION, 2021

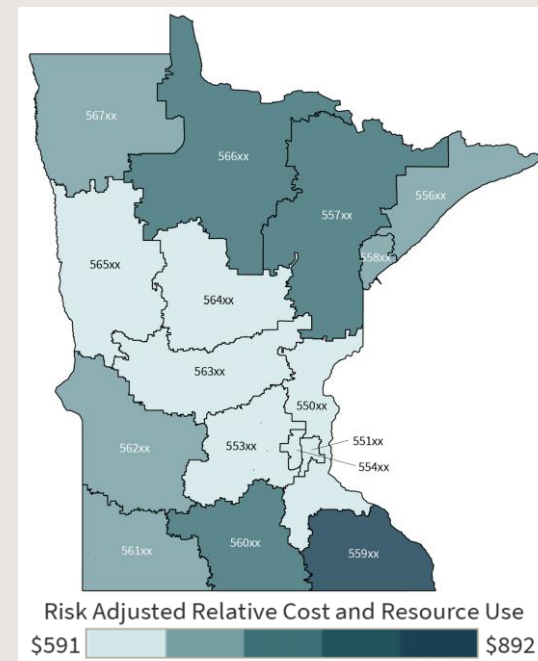
Commercially Insured Patients' Risk-Adjusted Costs by Region of Residence (3-digit Zip Code)

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	1.9%	2.0%	-0.2%	\$ 635	
551xx	St. Paul	-5.3%	1.3%	-6.5%	\$ 591	
553xx	Minnetonka	-5.2%	-1.0%	-4.2%	\$ 591	
554xx	Minneapolis	-3.8%	1.8%	-5.5%	\$ 600	
556xx	Two Harbors	12.4%	0.2%	12.2%	\$ 701	
557xx	Cloquet	15.8%	4.6%	10.7%	\$ 722	
558xx	Duluth	6.1%	-1.2%	7.4%	\$ 661	
559xx	Rochester	43.0%	4.0%	37.5%	\$ 892	
560xx	Mankato	14.3%	-3.9%	19.0%	\$ 713	
561xx	Windom	7.5%	0.5%	7.0%	\$ 671	
562xx	Wilmar	6.8%	-4.4%	11.7%	\$ 666	
563xx	St. Cloud	-10.3%	-7.9%	-2.6%	\$ 560	
564xx	Brainerd	2.6%	-2.6%	5.3%	\$ 640	
565xx	Detroit Lakes	0.0%	-2.1%	2.1%	\$ 623	
566xx	Bemidji	14.4%	3.8%	10.2%	\$ 713	
567xx	Thief River Falls	10.6%	5.8%	4.5%	\$ 690	

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.

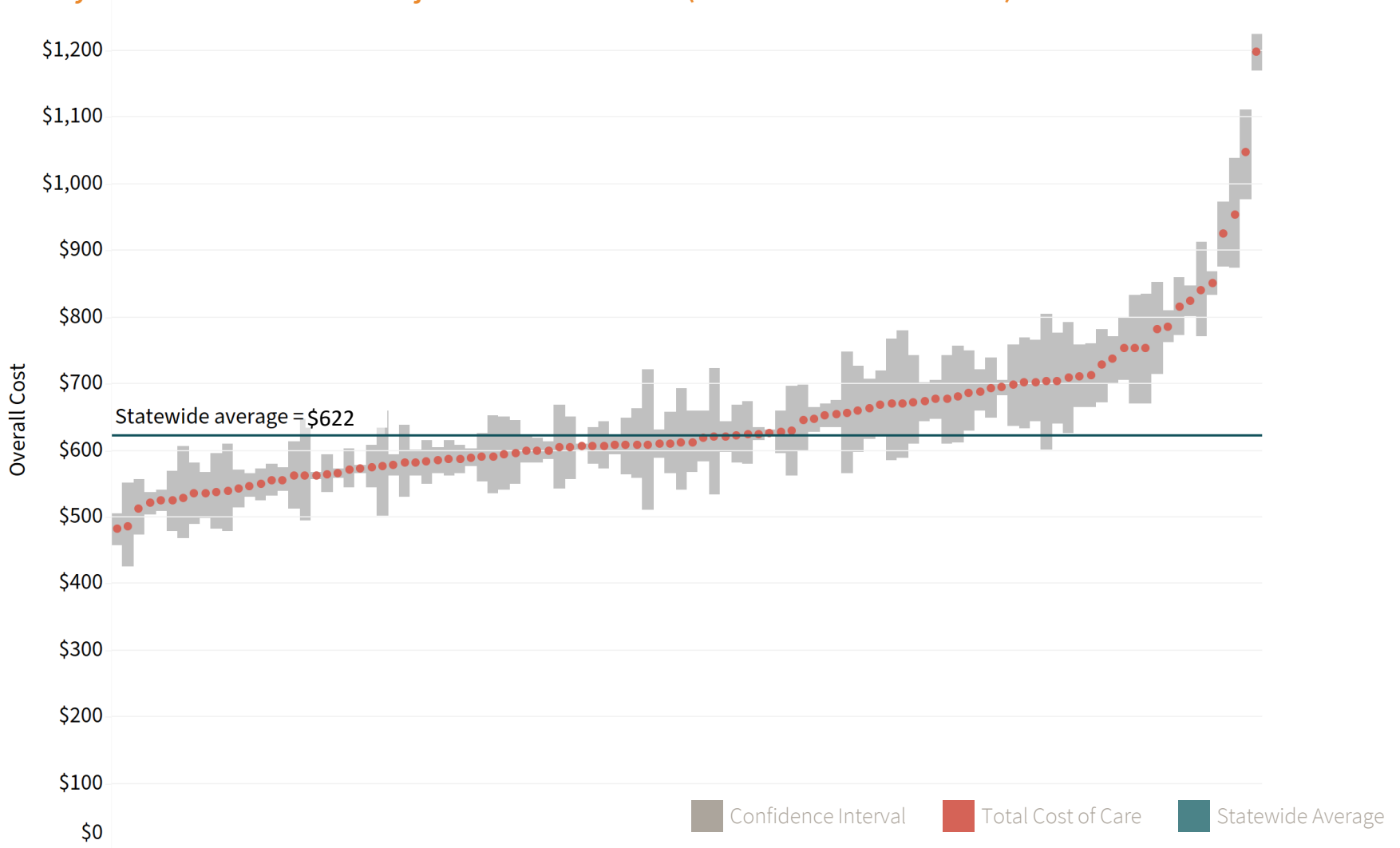
The metropolitan areas of Minneapolis and St. Paul have lower costs due to lower prices. The St. Cloud and Minnetonka areas have lower cost due to lower resource use and lower prices.

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



2021 TOTAL COST OF CARE BY MEDICAL GROUP

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

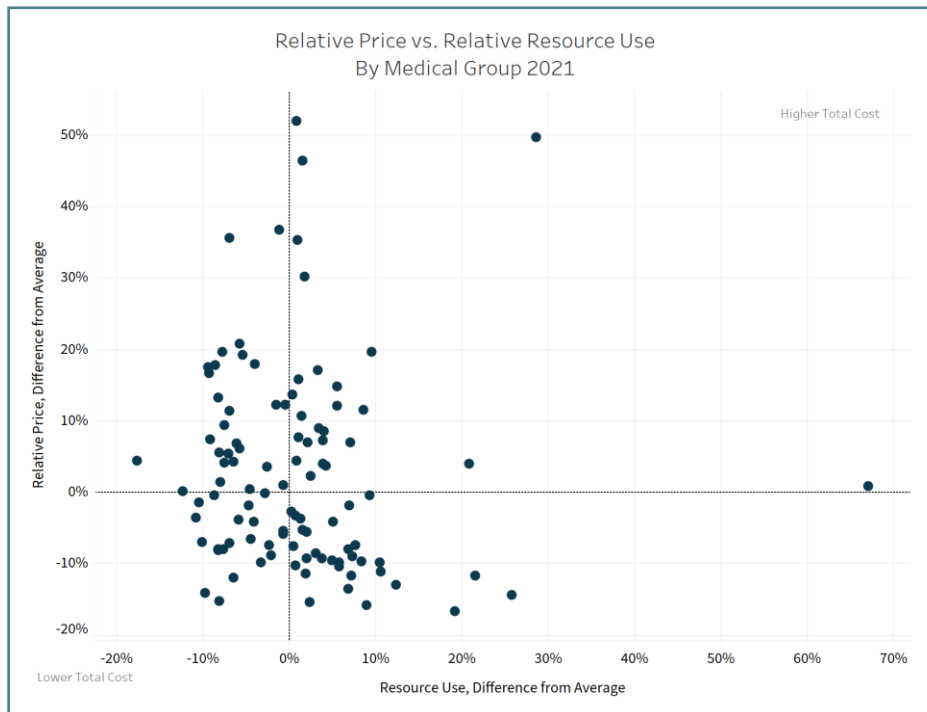


Consistent with previous years, there continues to be substantial variation in costs among medical groups. In general, medical groups remained in the same quartiles of relative costs in 2021 as they did in 2020.

Detailed results of the TCOC analysis by medical group can be found via MNCM's Dynamic Tables, which can be accessed [here](#).

2021 RELATIVE PRICE VS. RELATIVE RESOURCE USE

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



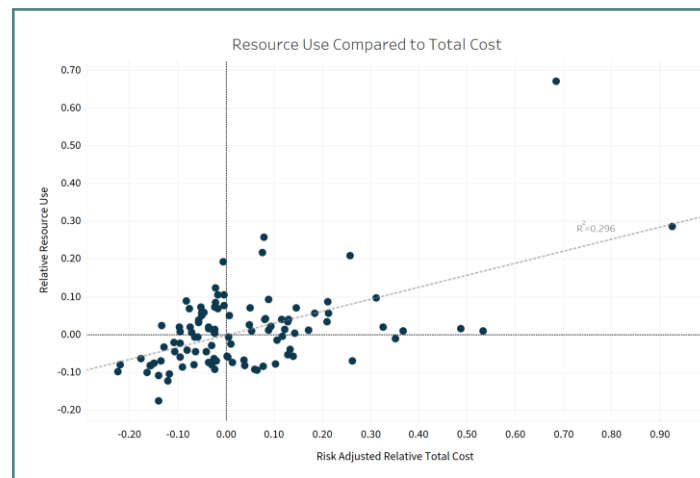
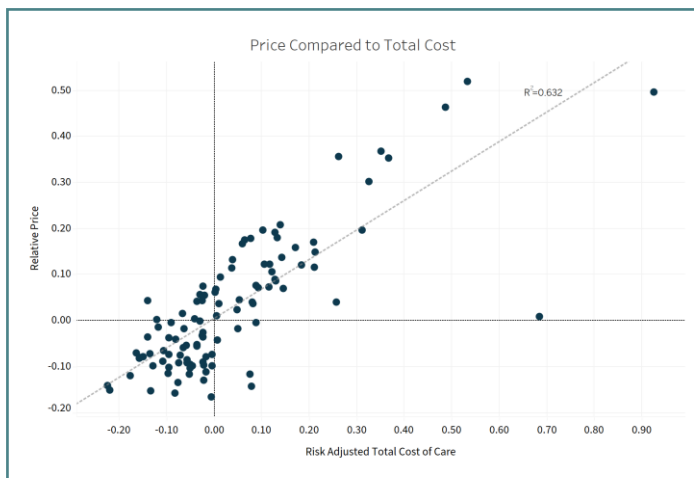
Total Cost is a product of use and price

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.

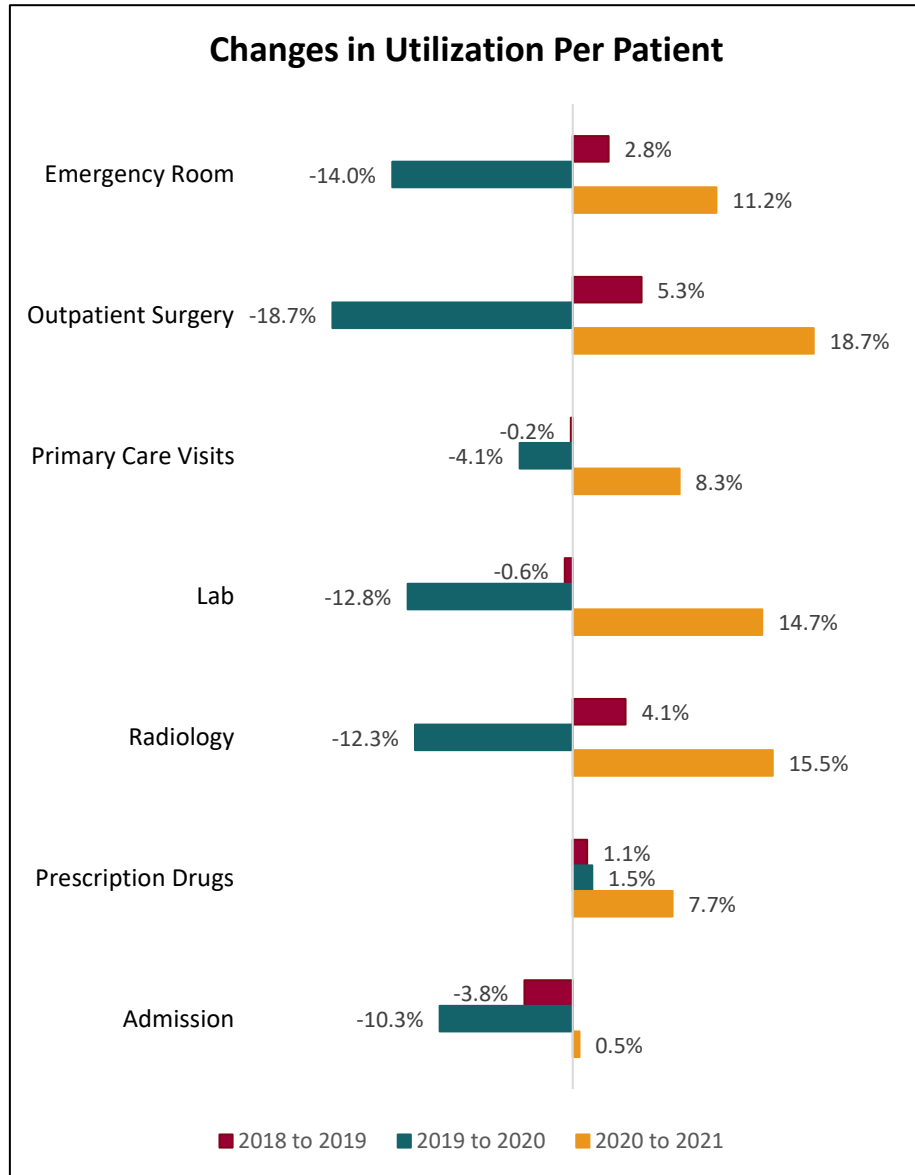
Variation in price continues to be a more significant factor in how total cost of care varies across medical groups than the amount of resources used.



Section Two: Utilization

UTILIZATION OF MEDICAL SERVICES

Commercially Insured Patients



Utilization Metrics per 1,000 patients per year				
	2018	2019	2020	2021
Emergency Room	166	171	147	163
Outpatient Surgery	131	138	112	134
Primary Care Visits	2,622	2,618	2,510	2,718
Lab	6,311	6,272	5,467	6,272
Radiology	944	983	862	996
Prescription Drugs	15,262	15,433	15,666	16,880
Admission	55	53	47	47

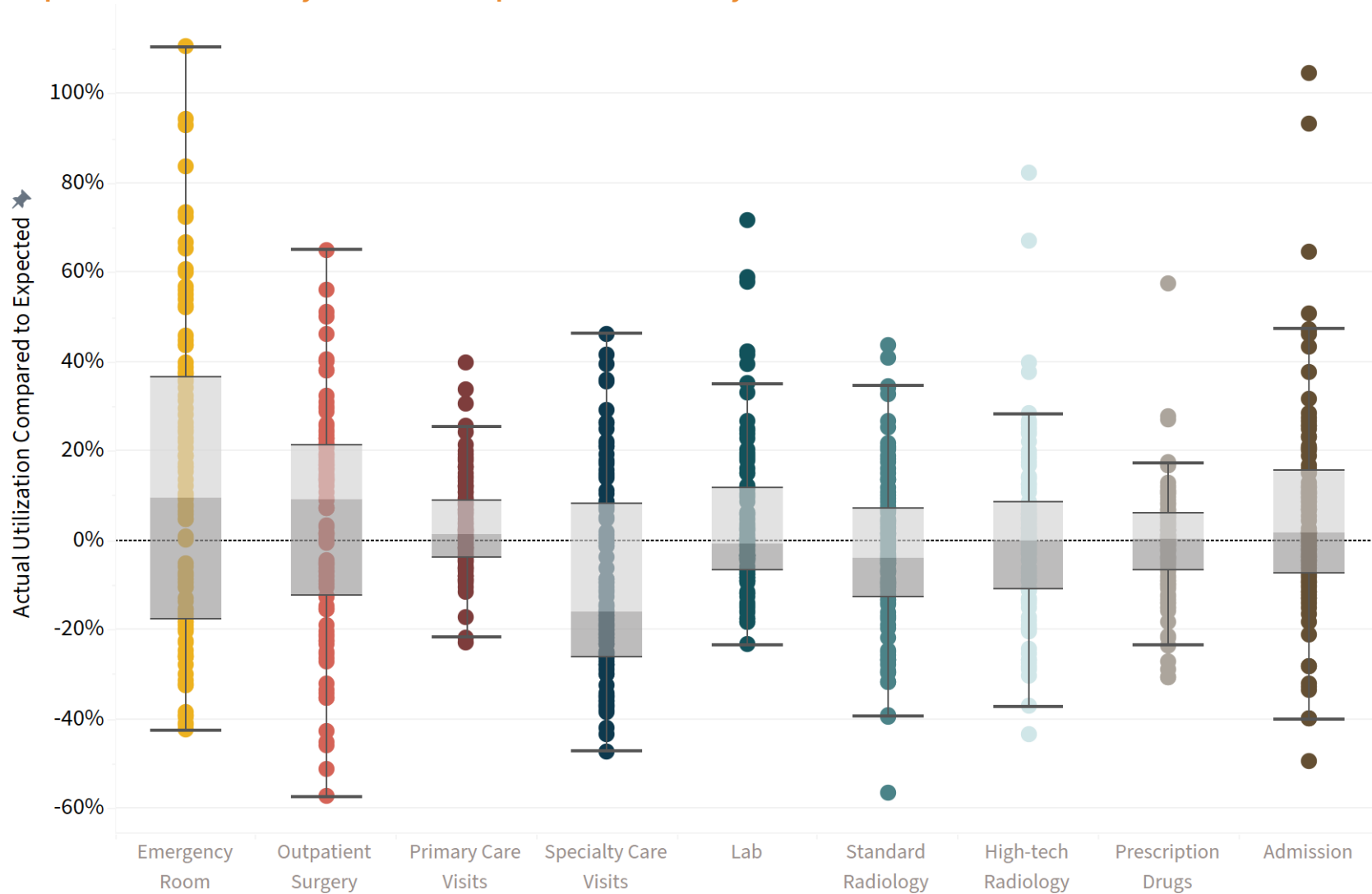
To further understand variation in resource use, MNCM’s analysis also includes variation across medical groups in the utilization of common categories of medical services, such as inpatient hospital admissions or radiology services.

In 2021, utilization of all service types increased compared to 2020. The largest increase was in outpatient surgery, with 18.7 percent followed by radiology at 15.5 percent. Lab services also saw an increase at 14.7 percent. Inpatient admissions had the smallest increase in utilization at 0.5 percent.

Inpatient admissions, emergency visits, and outpatient surgery utilization were lower in 2021 compared to 2019. Primary care visits, prescription drug use, and radiology were higher in 2021 compared to 2019.

2021 VARIATION IN UTILIZATION

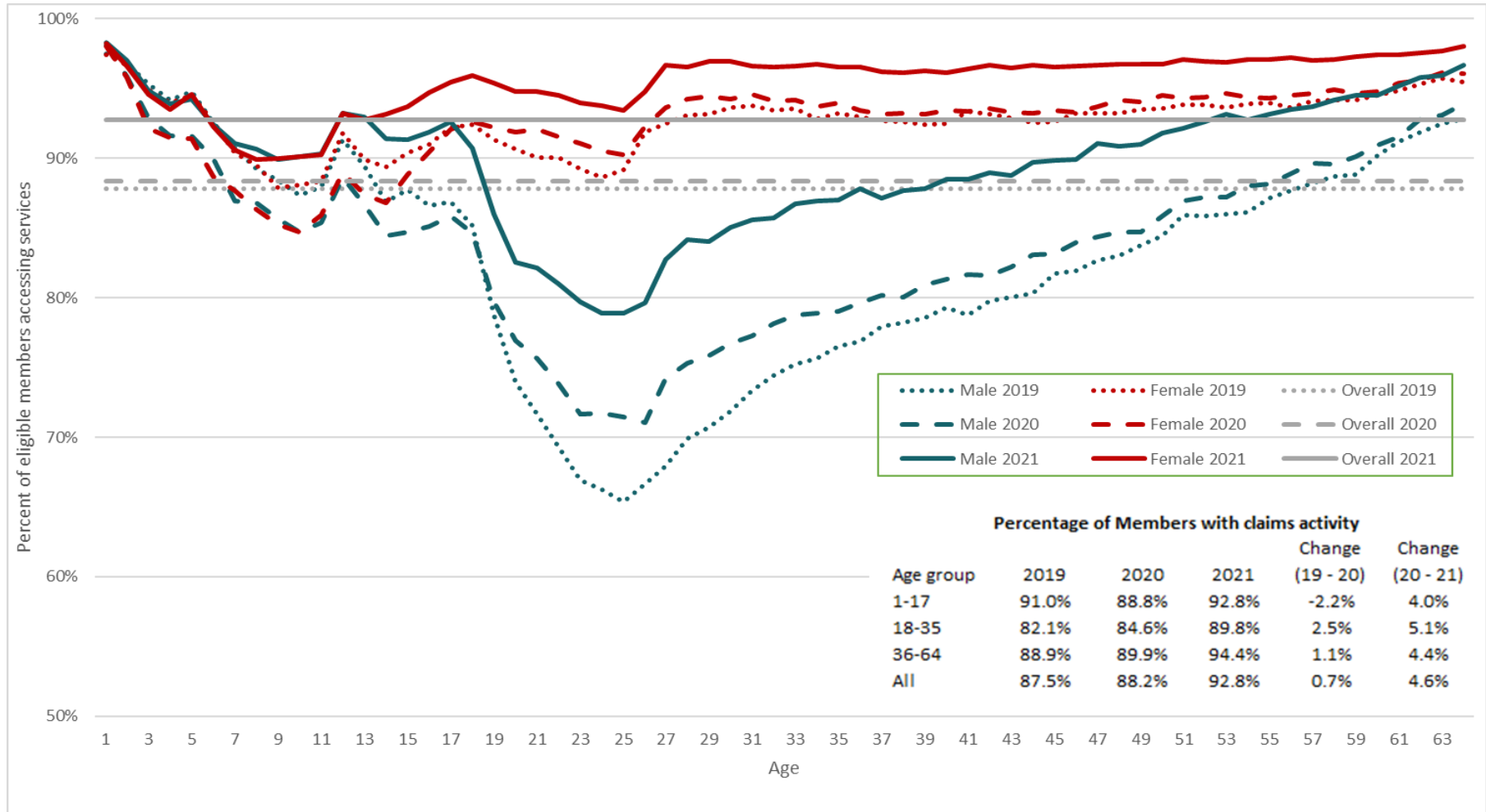
Actual to Expected Utilization by Medical Group for Commercially Insured Patients



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 50% below expected for the patient mix to 105% above.

PERCENTAGE OF HEALTH PLAN MEMBERS UTILIZING SERVICES

Percentage of commercially insured members with any health care utilization by age and sex, 2019 - 2021



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.

With total spending per person increasing in 2021, people with commercial health insurance were more likely to have claims in 2021 compared to 2019 and 2020. Health care claims increased across all age groups, with the age group 18-35 having the largest increase by 5.1 percent. Overall, the percentage of people who had any health care utilization increased from 88.2 percent to 92.8 percent. Women continue to access health care at a higher rate than men.

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, 2021, through December 31, 2021. This analysis includes claims processed as of April 30, 2022.

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.

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 2020 dates of service.

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 120 of Johns Hopkins ACG grouper plus gender and age. No outlier adjustments.

SAMPLE SIZE REQUIREMENTS FOR PUBLIC REPORTING

- TCOC: Minimum of 600 attributed patients per medical group.

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.