



Exploring the Cost of Colonoscopy in Utah
July 2019 through June 2020

Utah Department of Health
Office of Health Care Statistics
Center for Health Data and Informatics

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About this Report

The Utah Department of Health, Office of Health Care Statistics (OHCS) produced this report at the request and under the direction of the Transparency Advisory Group (TAG). The TAG is a subcommittee of the Utah Health Data Committee (HDC). The mission of the Transparency Advisory Group is to identify opportunities to make high value information on health care cost and quality available to Utahns—including businesses, consumers, and providers. The Transparency Advisory Group also plans outreach and connections with stakeholders across Utah, and provides expertise, guidance, feedback, and input on data publications, to comply with state law (26-33a).¹

Consistent with this mission, the Transparency Advisory Group selected colonoscopies as a procedure with high health care value for Utahns. This report identifies differences in costs between certain facilities as well as the variation that can exist within a health care provider.

About the Data

Utah's All Payer Claims Database

The OHCS is responsible for managing the Utah All Payer Claims Database (APCD) under authority granted to the Utah Department of Health (UDOH) and the Utah Health Data Committee.² Licensed commercial health insurance carriers and pharmacy benefit managers covering 2,500 or more Utahns are required to submit member eligibility, medical claims, dental claims, and pharmacy claims as well as a healthcare provider file by administrative rule. In addition to commercial insurance data, the APCD collects data from Medicaid. The OHCS contracts with Milliman MedInsight for APCD data collection and processing. Milliman also enhances these data with risk adjusters, cost calculations, quality measures, and patient-provider attribution before delivering the APCD back to the OHCS on a semi-annual basis.

¹ <https://le.utah.gov/xcode/Title26/Chapter33A/26-33a.html>

² Utah Code 26-33a-104, <https://le.utah.gov/xcode/Title26/Chapter33A/26-33a-S104.html>.

About the Office of Health Care Statistics

The OHCS implements the goals and directions of the HDC. The office collects, analyzes, and disseminates health care data. These data help people understand cost, quality, access, and value in our healthcare system and allow users to identify opportunities for *improvement*.

The data sets under the purview of the office include:

- **Consumer Assessment of Healthcare Providers and Systems (CAHPS)**—Annual customer satisfaction surveys relating to health plan performance.
- **Healthcare Effectiveness Data and Information Set (HEDIS)**—Annual quality measures relating to health plan performance.
- **Healthcare Facility Data (HFD)**—A collection of information about all inpatient, emergency room, and outpatient surgery/diagnostic procedures performed in the state.
- **All Payer Claims Data (APCD)**—A collection of data about health care paid for by third parties, including insurers, plan administrators, and dental and pharmacy benefits plans.
- **Patient Safety Surveillance and Improvement Program (PSSIP)**—A reporting mechanism which captures patient safety events (injuries, deaths, or other adverse events) associated with healthcare delivery and administration of anesthesia, which fosters conversations on how to minimize adverse patient safety events in Utah.

Utah Health Data Committee

The HDC was created by Utah Code 26-33a.³ Members are appointed by the governor, confirmed by the Senate, and represent various perspectives from industry and the community—public health, purchasers, providers, payers, and patients. By law, members are required to have experience with health data.

HDC Mission Statement (Adopted 1994, Amended 2020)

The mission of the HDC is to support health improvement initiatives through the collection, analysis, and public release of healthcare information. Through public-private collaboration, the HDC actively participates in the planning, development, implementation, and maintenance of a statewide health data reporting system, which provides accurate and independently validated information regarding healthcare in the state of Utah. The HDC implements policies to transform data into objective baseline, trend, and performance measurement information, which is made available while preserving patient privacy and confidentiality.

³ Utah Health Data Authority Act <https://le.utah.gov/xcode/Title26/Chapter33A/26-33a.html>

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Introduction

Colonoscopy is a common medical procedure. Depending on where the procedure is done, the cost of the colonoscopy can differ significantly. This can place a financial burden on people who must consider such factors as, for example, paying for a portion of the cost themselves if they don't have medical insurance, have a high deductible plan, or a plan with a high rate of cost sharing with the member.

Methods

The Utah All Payers Claim Database (APCD) was used for this analysis. The APCD contains 44 different payer datasets including commercial plans, Medicaid plans, Medicare Advantage plans, pharmacy benefit managers (PBMs), dental data sources, behavioral, and limited benefit plans. For this analysis, only data from commercial plans were used.

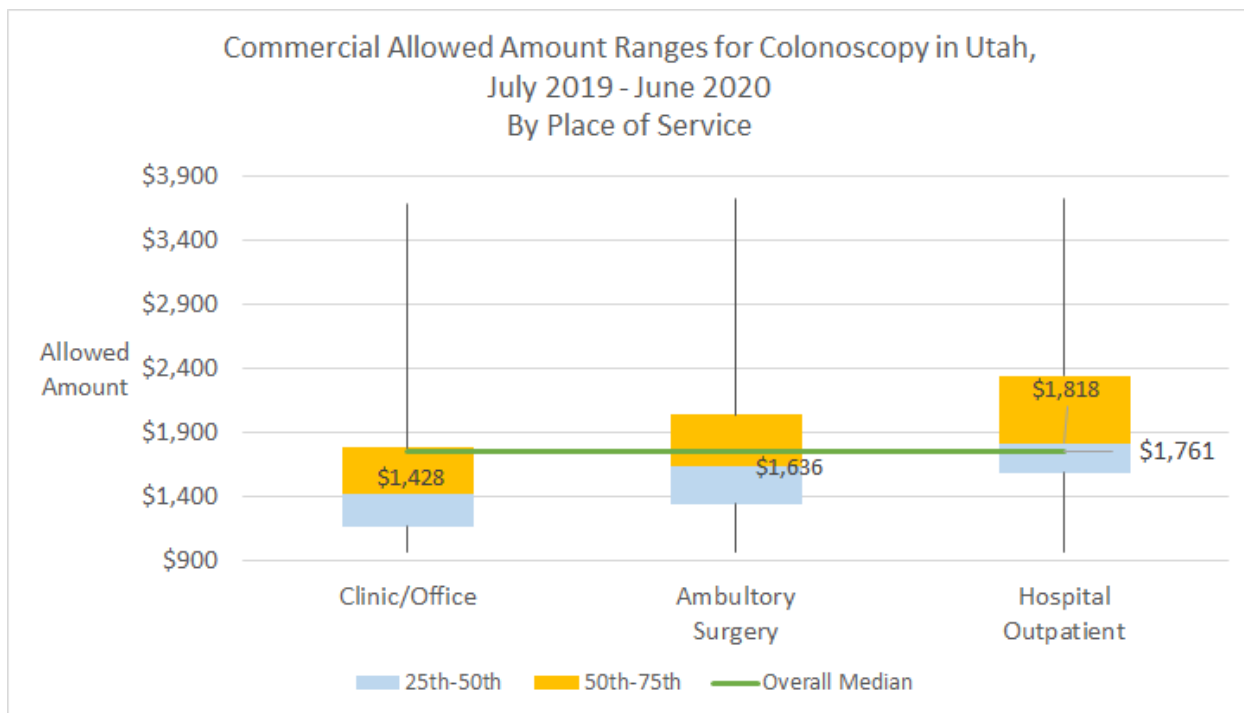
Colonoscopy claims were determined by the CPT4 codes 45385, 45380, 45378. These codes represent over 95% of all colonoscopies performed and exclude the more complex colonoscopy procedures. Claims coming from secondary insurance were excluded in the analysis. This was done to remove any duplication of cost from the analysis and to report on only the total amount a provider was paid. Total costs were calculated by linking a colonoscopy claim to all facility costs for that day, as well as costs associated with other qualifying CPT4 codes. These other qualifying codes included surgery costs as well as anesthesiology and pathology procedures and costs. Additionally, the top and bottom 10% of colonoscopy cases were removed from this analysis to minimize the possibility of errors skewing results due to abnormally high or low costs. The APCD, which represents claims from multiple data suppliers, is a complex, yet rich dataset, but is not completely immune from entry error prior to being contributed to the state's dataset. Removal of the top and bottom 10% ensured this analysis remained focused on presenting what most Utahns are likely to pay for a preventive colonoscopy.

Results

Using commercial APCD data available from July 2019 through June 2020, the average amount a provider was paid (known as the allowed amount) for a colonoscopy, and related services, after removing the top and bottom 10% ranged from \$977 to \$3,730. The median amount paid (50th percentile) was \$1,761. The 25th percentile (meaning 25% of colonoscopies cost this much or less) for the state was \$1,513, while the 75th percentile (meaning 75% of colonoscopies cost this much or less) was \$2,247.

These statewide costs can be broken into three distinct places of service: clinic/office, ambulatory surgery, and hospital outpatient. The median cost between these categories varied by \$390, with the clinic office setting being the least expensive on average and the hospital outpatient setting being the most expensive. These differences are illustrated in figure 1, below.

Figure 1. Box and whisker plot of colonoscopies by place of service.



It should be noted, however, that the range of costs for the clinic/office setting ranged from \$977 up to \$3,689, with 25% of the colonoscopies costing approximately \$1,788 or more. One of the main reasons for this wide range of costs may be in part due to differences in negotiated rates between insurance companies and individual providers. Another reason that may explain some of the variation is differences in type of colonoscopy conducted and additional procedures performed (such as tissue samples sent for examination by a pathologist).

Looking closer into the “place of service” categories showed that amounts individual providers charged varied greatly. The lowest cost provider in the clinic/office setting had a median (midpoint) allowed amount of \$1,161, while the highest cost provider in a clinic/office setting had a median allowed amount of \$2,335. The median for the ambulatory surgery and hospital outpatient settings ranged from \$1,221 to \$1,900 and \$1,655 to \$3,279, respectively.

Aside from observing median variation between providers, an important aspect of understanding colonoscopy cost is the interquartile range. This range is the difference between the 25th and 75th percentiles. A small interquartile range means there is less variation in cost for a given provider

compared with a provider that has a larger interquartile range. Individual providers interquartile range ranged from \$176 to \$1,318. These differences in cost and cost ranges are depicted in figures 2-5.

Figure 2. Comparison of allowed amounts for colonoscopies in Utah performed in a clinic/office setting.

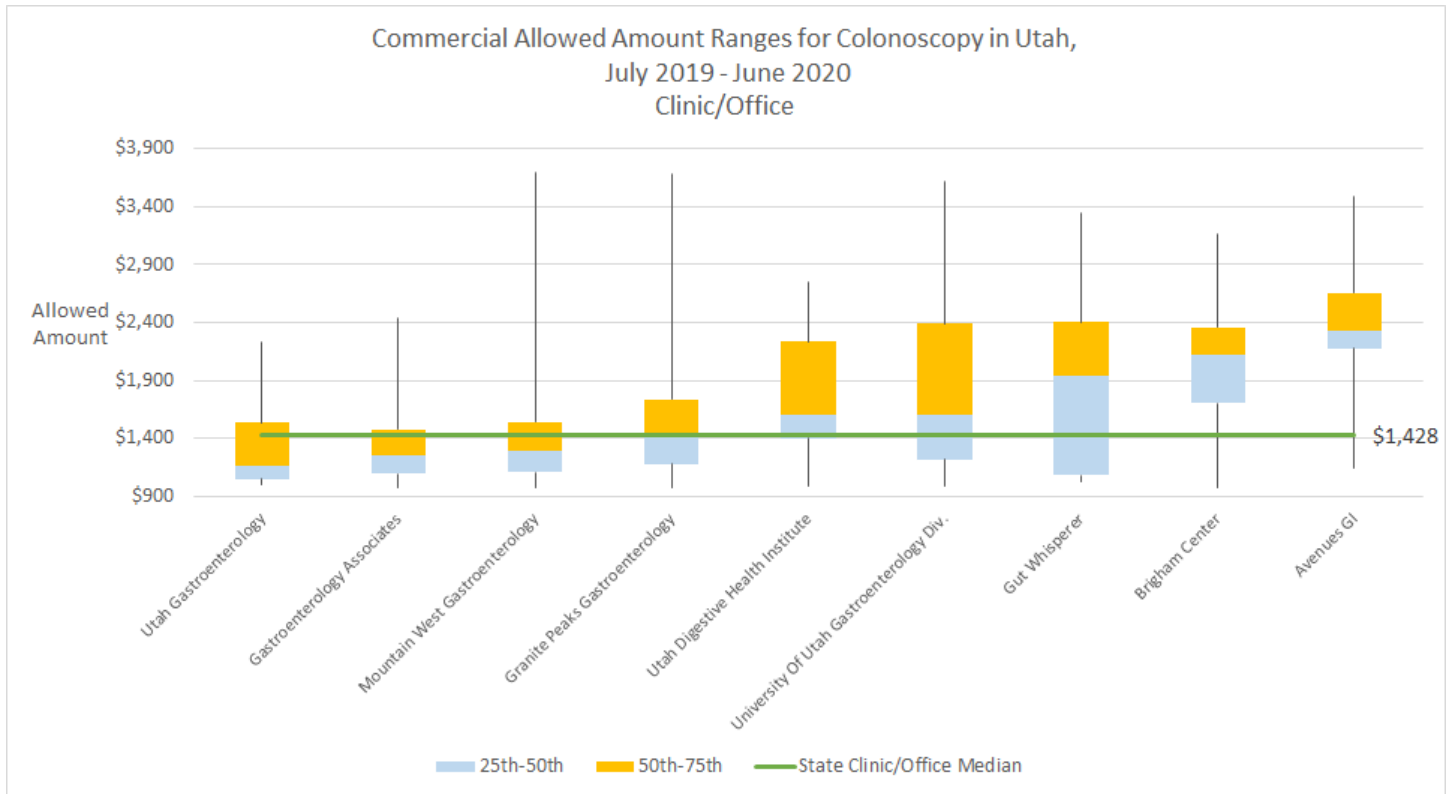


Figure 3. Comparison of allowed amounts for colonoscopies in Utah performed in ambulatory surgery settings.

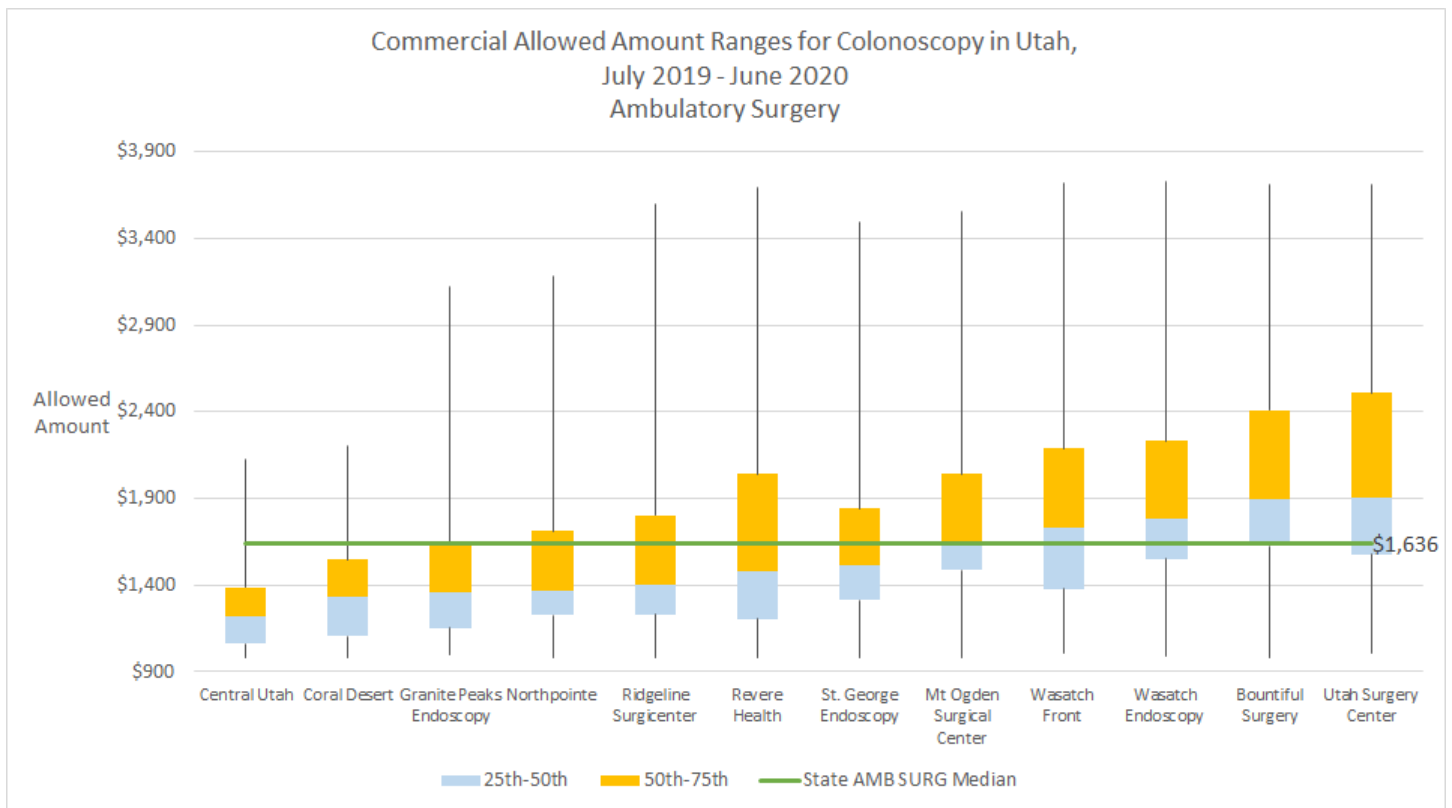
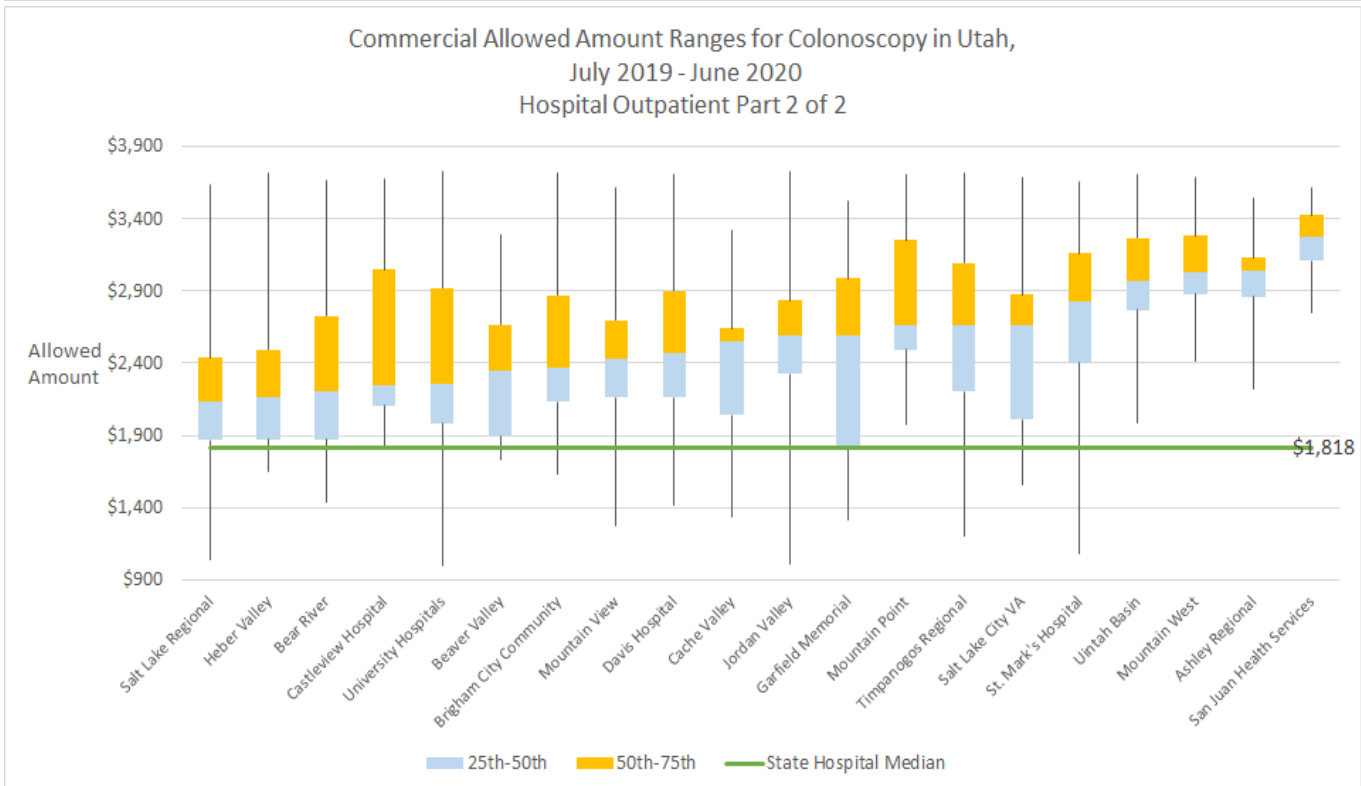
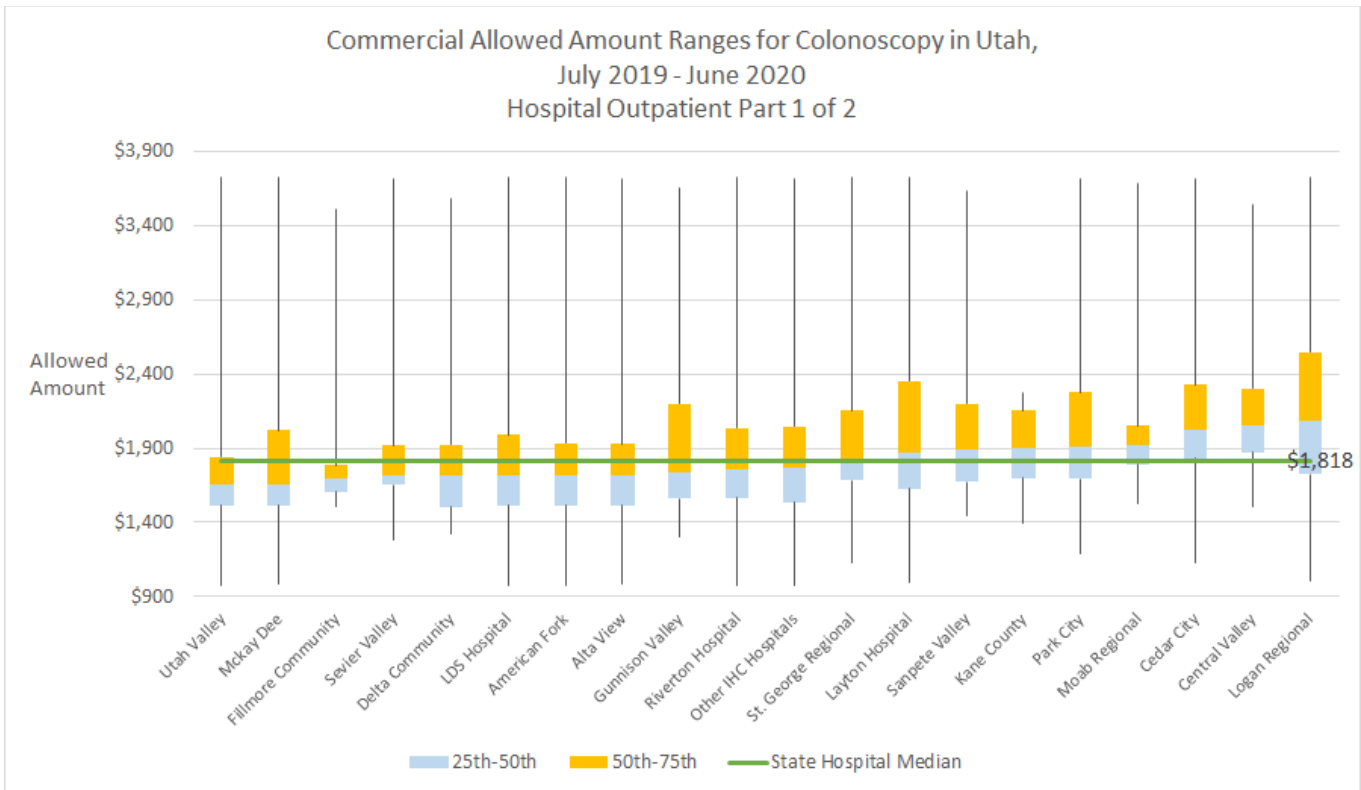
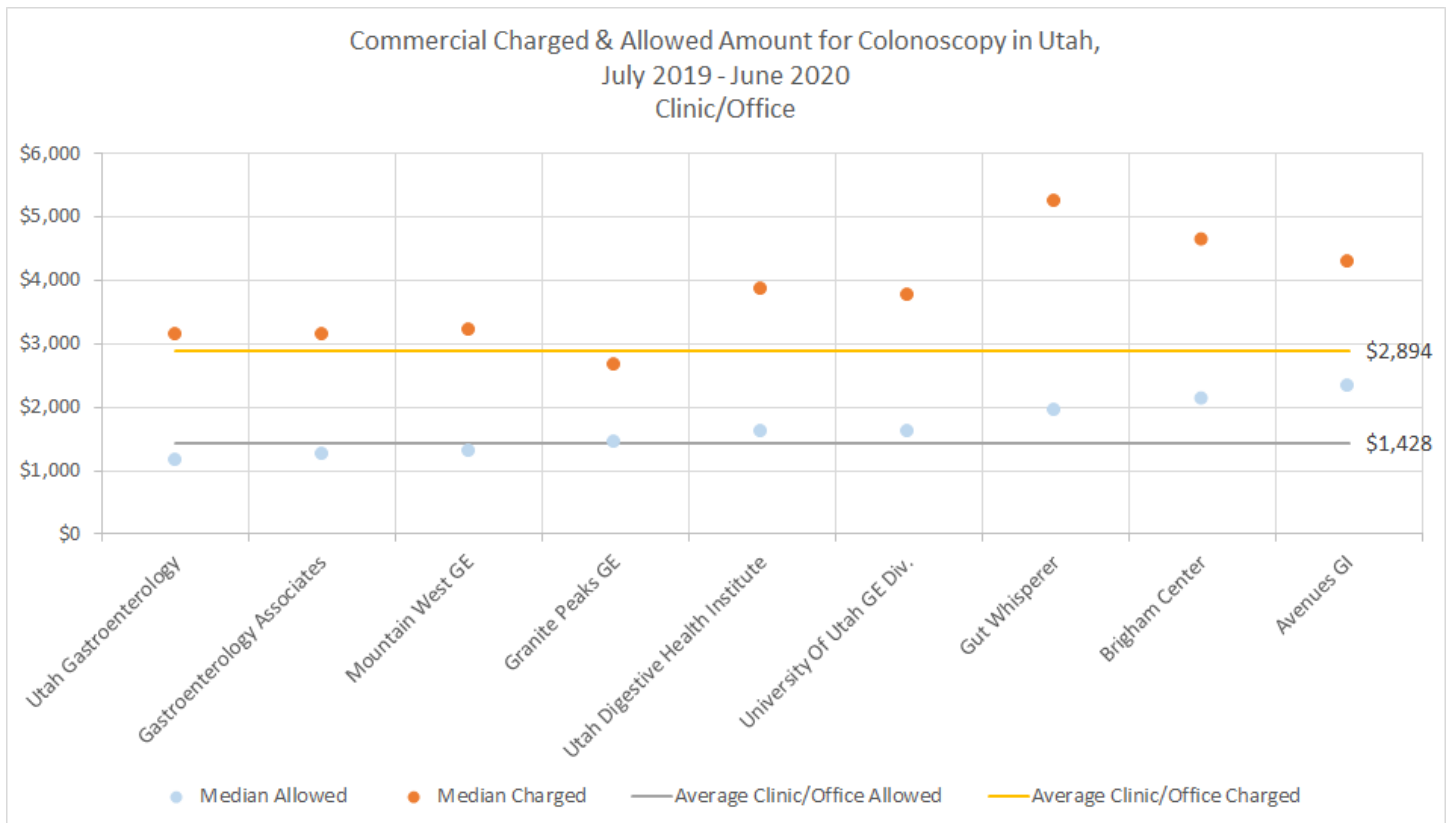


Figure 4. Comparison of allowed amounts for colonoscopies in Utah performed in hospital outpatient settings.



One other consideration for individuals who may not be covered by insurance or those who receive services that are considered out-of-network, is that they may be responsible for the full charged amount. Traditionally, the charged amount is higher than what insurance providers negotiate with the healthcare providers. The median charged amount for the clinic/office setting was \$2,894, while the ambulatory surgery and hospital outpatient were \$7,356 and \$4,181, respectively. If a patient is faced with the responsibility for the full charged amount it may be possible to negotiate the costs with the provider before the service is performed. Figures 6-9 compare differences between the median allowed amount and the median charged amount. A full view of these data are available online.⁴

Figure 5. Comparison of charged and allowed amounts for colonoscopies in Utah in clinic/office settings.



⁴ <https://opendata.utah.gov/browse?category=Health>

Figure 6. Comparison of charged and allowed amounts for colonoscopies in Utah in ambulatory surgery settings.

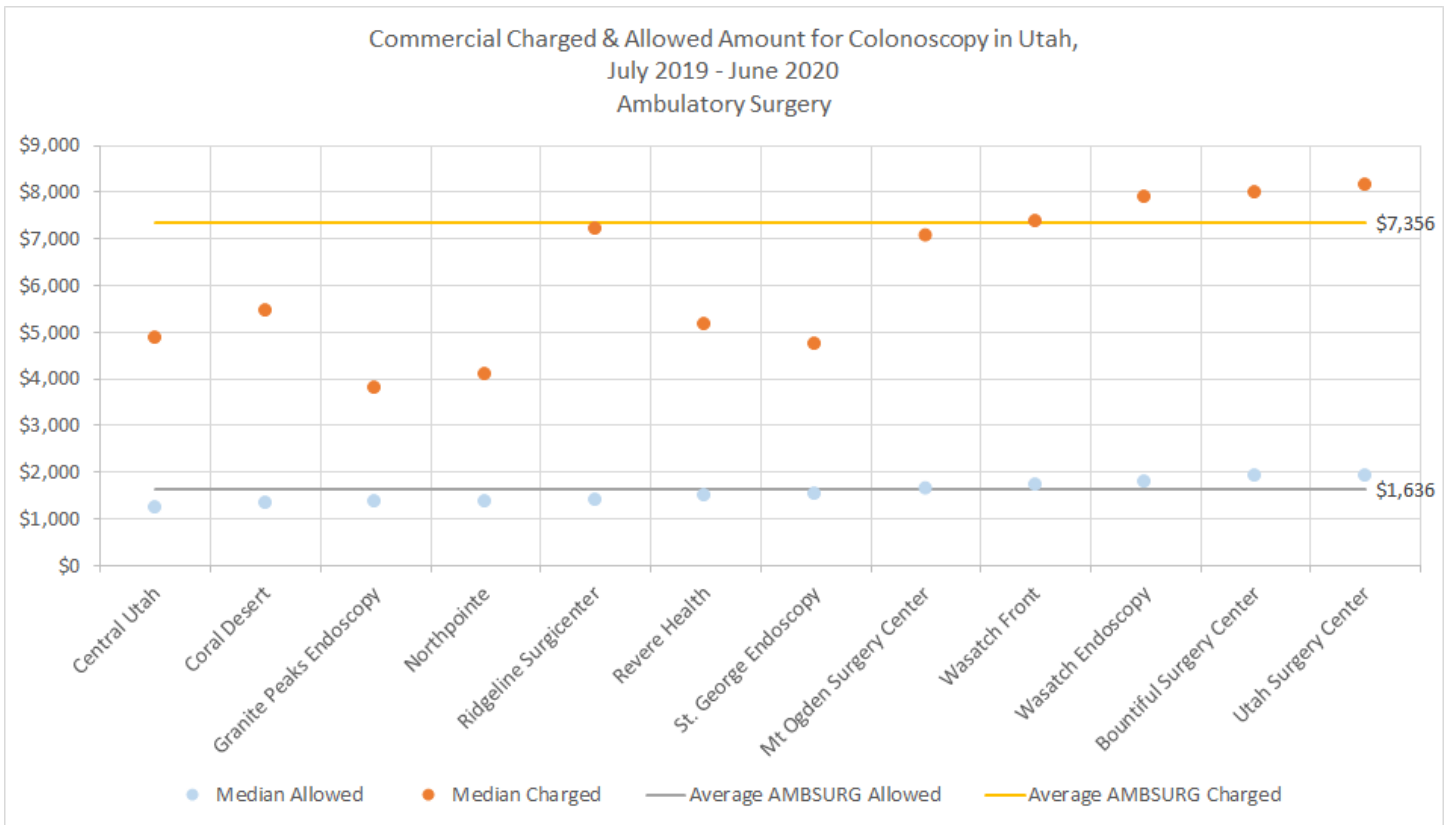
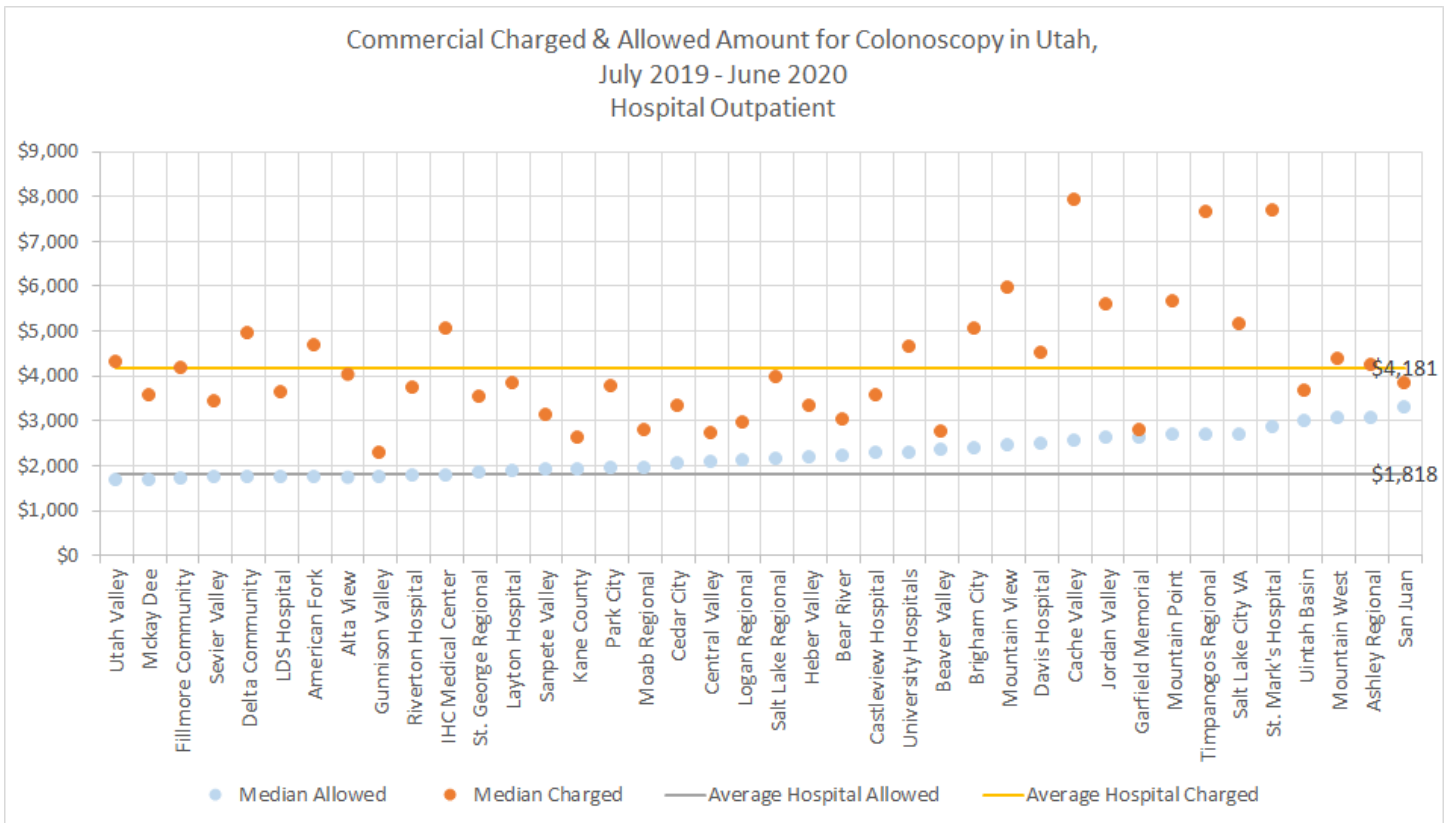


Figure 7. Comparison of charged and allowed amounts for colonoscopies in Utah in hospital settings.



Conclusion

The cost of a colonoscopy can vary depending on the provider and their negotiated allowed amounts across various insurance plans. Additionally, under some circumstances, preventive colonoscopies may be fully covered. This analysis is intended to demonstrate the degree of differences in costs for a colonoscopy across the state, which can vary based on a number of factors. This analysis can also serve as a guide and to demonstrate that selecting a low-cost provider may be possible. Patients are encouraged to check with their insurance company to explore in-network, low cost, and high-quality providers.

For more information regarding this analysis, please contact Brantley Scott at bsscott@utah.gov. Be sure to bookmark the Utah Department of Health’s Office of Health Care Statistics to stay updated with new analyses and publications.