

Colorado Commission on Affordable Health Care

2016 Report to the Colorado General Assembly
and Colorado Governor

November 15, 2016

Table of Contents

Opening Letter from Chair	3
Commission members.....	5
Introduction	7
Defining Cost, Price, and Spending	7
Commission’s Framework to Identify and Prioritize Recommendations	8
Shared Framework and Approach	8
Level Setting	8
Statewide Meetings	11
Rural Discrepancies in Premiums	12
Workforce.....	12
Education and Transparency	13
Topics.....	18
Transparency.....	18
Recommendations.....	21
Pharmacy	23
Recommendations.....	28
Payment Reform.....	30
Recommendations.....	35
Social Determinants of Health	37
Recommendations.....	41
Health Care Workforce	43
Recommendations.....	45
Next Steps.....	46
Glossary	47
Appendix A — Statewide Meetings Documents	52
Endnotes	64

Opening Letter from Chair

November 15, 2016

Governor John Hickenlooper
Office of the Governor
Colorado Capitol
200 E Colfax Ave.
Denver, CO 80203

Representative Elizabeth McCann
Chairman, House Committee on Health,
Insurance, and Environment
200 E Colfax Ave.
Denver, CO 80203

Senator Kevin Lundberg
Chairman, Senate Committee on Health and
Human Services
200 E Colfax Ave.
Denver, CO 80203

Representative Dianne Primavera
Chairman, House Committee on Public
Health Care and Human Services
200 E Colfax Ave.
Denver, CO 80203

Gov. Hickenlooper, Sen. Lundberg, and Reps. McCann and Primavera,

I am pleased to present the November 2016 report of the Colorado Commission on Affordable Health Care on behalf of my fellow commission members and staff. This report builds on the Commission's Nov. 16, 2015 report, which comprehensively explored the major cost drivers within the health care system.

The Commission spent a year exploring potential strategies to confront rising health care costs — complementing its monthly meetings over the past 27 months with listening sessions in communities across the Centennial State.

This report lays out a series of potential avenues for action. Although the Commission recognizes that the issue of rising cost in health care remains a serious topic of discussion and concern among policymakers and communities, we urge policymakers not to rush to judgment when attributing blame or in developing legislative actions. Since many of the topics outlined in this report interact with one another, pulling on one string to attempt to reduce the overall cost can create unintended market reactions, making matters worse.

The Commission also learned that some of the factors impacting costs cannot be affected by a single state, especially one that has a relatively small and widely dispersed population. Therefore, the Commission makes a few recommendations for a consolidated, continuous, and thoughtful interaction with our federal delegation — to request federal action to address these matters.

Colorado does have the ability to impact many of the issues identified in our report, and we have suggested regulatory and market approaches to address these areas. Each of these recommendations received the required two-thirds majority.

They include:

- Improving transparency related to health care cost and quality for consumers and providers as well;
- Expanding the number and effectiveness of health care workers, especially in primary care and in less populated areas of the state;
- Focusing on the Social Determinants of Health as a way to improve the overall health of the state, and reduce the disease burden within the cohort of those with lower incomes;
- Improving access to behavioral health for all Coloradans;
- Creating a pilot using state employees to test the effect that bundled payments and value-based purchasing might have on employer health care costs; and,
- Continuing to innovate within the state's Medicaid program.

We look forward to continuing our work and adding other recommendations during the last seven months of our tenure. Meanwhile, we hope that we will be able to interact with you about our findings, and recommendations.

Respectfully submitted on behalf of the Commission,

A handwritten signature in black ink, appearing to read "W. Lindsay III", with a stylized flourish at the end.

William N. Lindsay III
Chairman, Colorado Commission on Affordable Health Care

Commission members

Elisabeth Arenales of Denver, from an organization representing consumers and understands consumers with chronic medical conditions

Jeffrey J. Cain, M.D., FAAFP, of Denver, a health care provider who is not employed by a hospital and who is a physician recommended by a statewide society or association whose membership includes at least one-third of the doctors of medicine or osteopathy licensed in the state

Rebecca Cordes of Denver, representing large, self-insured Colorado businesses

Greg D'Argonne of Littleton, with expertise in health care payment and delivery

Steve ErkenBrack of Grand Junction, representing carriers offering health plans in the state

Ira Gorman, PT, PhD, of Evergreen, a health care provider who is not employed by a hospital and is not a physician

Linda Gorman of Greenwood Village, a health care economist

Bill Lindsay (Chair/Planning Committee Chair) of Centennial, representing licensed health insurance producers

Marcy Morrison of Manitou Springs, from an organization representing consumers

Dorothy Perry, PhD, of Pueblo, with expertise in public health and the provision of health care to populations with low incomes and significant health care needs

Cindy Sovine-Miller (Vice-Chair) of Lakewood, representing small Colorado businesses

Christopher Gordon Tholen of Centennial, representing hospitals and recommended by a statewide association of hospitals

Legislative Charge — Senate Bill 14-187

The Mission of the Commission is to ensure that Coloradans have access to affordable health care in Colorado.

The Commission shall focus its recommendations on evidence-based cost-control, access, and quality improvement initiatives and the cost-effective expenditure of limited state moneys to improve the health of the state's population.

Powers and Duties of the Commission:

- Identify, examine, and report on cost drivers for Colorado businesses, individuals, Medicaid, and the uninsured.
- Data analysis on evidence based initiatives designed to reduce health care costs while maintaining or improving access to and quality of care.
- Analyze the impact of increased availability of information.
- Review, analyze, and seek public input on state regulations impacting delivery and payment system innovations.
- Analyze impact of out-of-pocket costs and high-deductible plans.
- Examine access to care and its impact on health costs.
- Review reports and studies for potential information.
- Report outcomes of the 208 Commission

Ex officio Commission members

Susan Birch, MBA, BSN, RN, Executive Director,
Colorado Department of Health Care Policy and
Financing

Alicia Caldwell, Deputy Executive Director
Strategic Communications and Legislative
Affairs, Colorado Department of Human Services

Marguerite Salazar, Commissioner of Insurance,
Colorado Department of Regulatory Agencies

Jay Want, M.D., representing the Colorado All
Payer Claims Database

Larry Wolk, M.D., MPH, Executive Director,
Colorado Department of Public Health and
Environment

Legislative Charge (continued)

Collect and review data including:

- Rate Review Process Data from DOI
- Payment information from HCPF
- The impact of Medicaid expansion
- Evaluate the impact of a Global Medicaid Waiver
- Review information on pricing transparency: Adequacy, composition, and distribution of physician and health care networks; Drug Formularies; Co-Insurance, copayments, and deductibles; and Health plan availability
- Make recommendations entities that should continue to study health cost drivers
- Make recommendations to the Congressional delegation about needed changes in federal law

Introduction

Rising health care costs pose significant challenges for families, businesses, and public agencies across Colorado. It is essential that the Centennial State find strategies to at a minimum stabilize health care costs and ultimately confront the root causes of this trend.

Colorado policymakers created the Colorado Commission on Affordable Health Care (Commission) in an effort to identify the causes of rising health care costs, and explore and make recommendations about how the state might use its authority and policy levers to confront the principal drivers of health spending and cost in Colorado. The Commission is comprised of bipartisan health care experts, including PhDs, physicians, and health insurance executives.

There are no simple solutions. The drivers of health care cost growth are complex and multifaceted. Just as no single factor is responsible for our high and rising health care costs, no single policy solution will be adequate to meet this challenge. Government regulation of health care can sometimes aid and sometimes hinder innovation. Thus, it is important to understand the impact of any proposal for change before taking action.

Improving efficiency and reducing costs in health care in Colorado will require extraordinary public leadership, political courage, and a commitment from the public and private sectors. Leaders from all sectors will need to collaboratively advocate for systemic changes in order to ensure that health care remains affordable for all Coloradans.

Defining Cost, Price, and Spending

Health care cost and health care spending are often interchangeable but are distinct concepts with distinct meanings. While much of the data analysis focuses on spending, the work of the Commission has focused primarily on cost.

The Commission operated using these definitions:

- **Cost:** The resources it takes for health care suppliers to produce goods or services, including labor, equipment, facilities, and administration.
- **Price:** The amount received by health care suppliers in exchange for their goods or services. In a free market economy, the price is determined by the interaction between the demand of buyers and the supply of sellers. When prices are higher than suppliers' costs, profits are generated; when prices are lower than suppliers' costs, losses occur. However, in some health care programs like Medicare and Medicaid, the government sets prices. When prices are set above what the free market would otherwise establish, supply often exceeds demand and surpluses occur. When prices are set below the market price, shortages occur.

- **Spending:** The price of the goods or services multiplied by the quantity purchased. This means that both price and quantity impact total spending.

Shared Framework and Approach

Numerous commissions, task forces, and blue ribbon panels have tackled issues surrounding health care in Colorado and across the nation. Although those entities have made important progress, the Commission is focused on health care costs — for individuals, families, businesses, and public agencies. This focus not only ensures that the Commission’s work is not duplicative of earlier efforts, but also zeroes in on this critical issue for Coloradans.

The Commission created the following framework to identify and prioritize recommendations.

Level Setting

The Commission’s [November 2015 report](#) to the Legislature provided an overview of the drivers of health care spending growth in Colorado.

The Commission’s analysis sets a useful baseline for the Commission’s work and directs the focus on where Colorado could address health care costs and maximize value. The Commission used these analyses to address the principal drivers of cost in Colorado’s health care market.

While year-over-year health care spending increased by 5.4 percent in July 2015 across the nation, the annual rate of increase dipped slightly to 4.9 percent in July 2016. In Colorado, the annual growth rate of health care spending increased from 5.8 percent in 2015 to 5.9 in 2016.ⁱ

Spending for different types of services all grew, but at uneven rates (see Figure 1). Most notably, annual spending growth slowed for prescription drugs, falling from 8.5 percent to 3.9 percent between July 2015 and July 2016. The highest level of growth was in home health care.

Commission’s Framework to Identify and Prioritize Recommendations

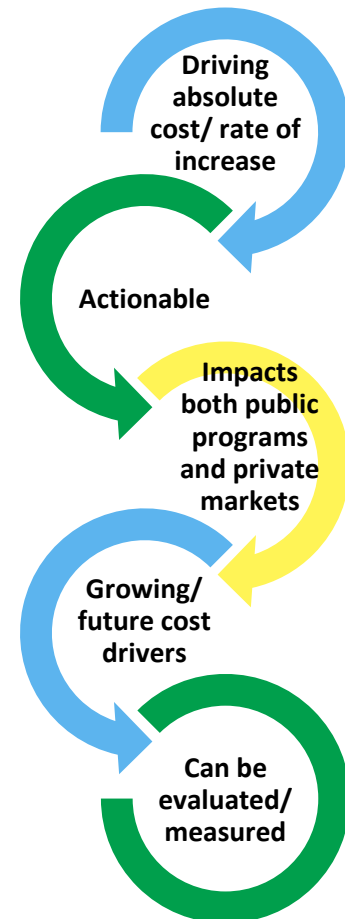
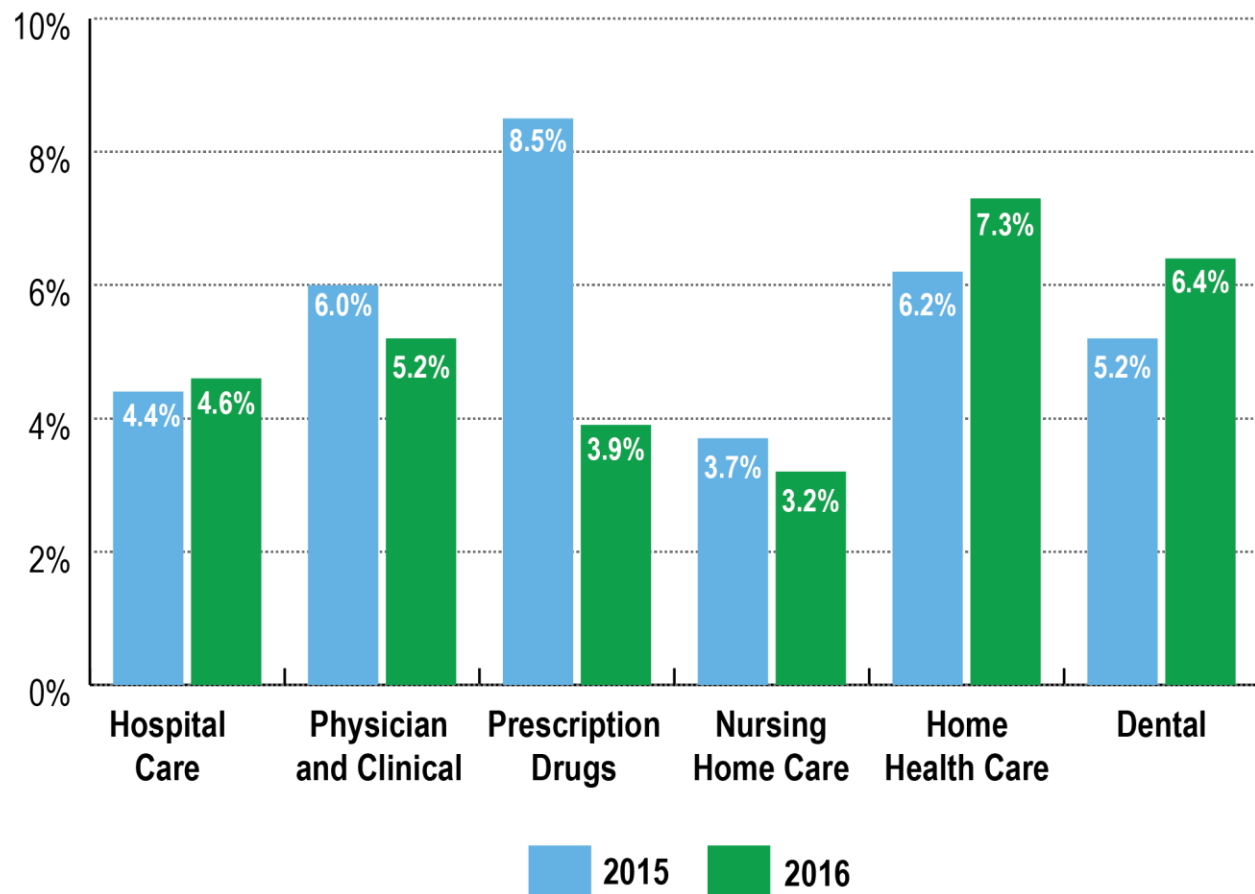


Figure 1. Health Spending Year-Over-Year Growth for Selected Categories, United States



Source: Altarum Institute, September 2016

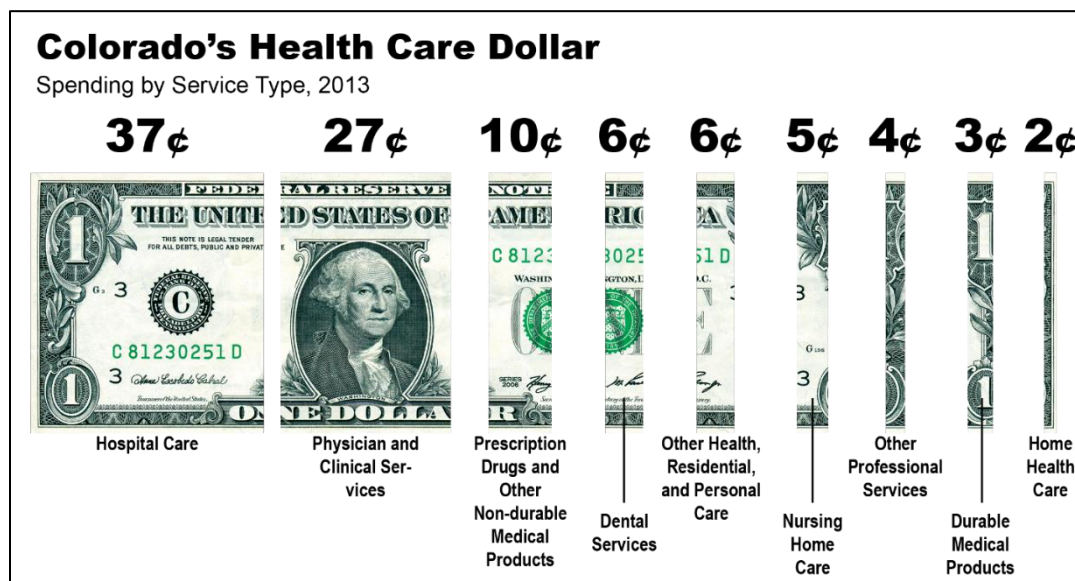
Despite these marginal improvements, the big picture has not changed. Spending on health care is growing faster than the economy as a whole. Thus, a greater share of personal and governmental budgets is being devoted to health spending. In both Colorado and the nation, the rate of growth in health spending is expected to increase substantially over the coming years. Between 2015 and 2020 the average annual growth rate of health spending in Colorado is expected to be 7 percent compared to 6 percent in the United States.ⁱⁱ

Personal health care spending in Colorado increased 300 percent over the past 20 years, reaching \$40.5 billion in 2015.ⁱⁱⁱ This growth outpaced the expansion of Colorado's overall economy, which grew by approximately 270 percent, as well as the overall rate of inflation, which increased by 160 percent during the same time period.

The Commission's 2015 report analyzed health care spending by type of service and found that hospital care accounts for the greatest share of spending — 37 cents of each dollar of health care expenditures in Colorado. (See Figure 2.) Physician and clinical services rank second and

prescription drugs ranks third. These three categories account for nearly three-quarters of Colorado's personal health care expenditures.

Figure 2.



Source: National Health Expenditure Accounts, CMS, Office of the Actuary, 2011 and 2014

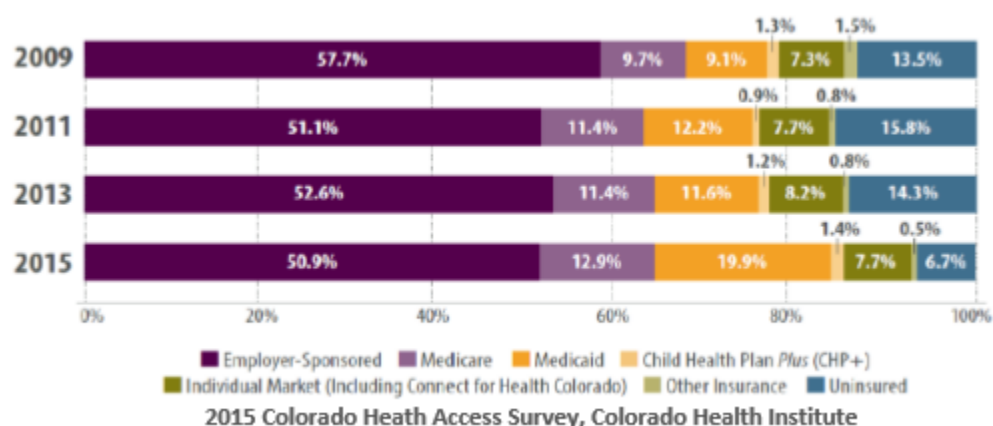
Spending is spread among a variety of payers, led by commercial insurance, which paid for more than 40 percent of personal health care expenditures in 2013. Medicare accounted for 17 percent of spending. Medicare has historically been largely beyond the reach of state policymakers, but recent conversations between the Commission and the Centers for Medicare and Medicaid (CMS) suggested possible flexibility in the future.

The Commission's 2015 report also looked at spending by disease or condition. Circulatory conditions, ill-defined conditions and musculoskeletal conditions were the top three.

Finally, the 2015 report delved into spending by age. Per capita health care spending rises dramatically after age 65, with people between ages 65 and 84 spending an average of \$15,000 a year on health services — triple the per capita spending of 19- to 44-year-olds.

The 2015 report also looked at changes in insurance status. Colorado's insurance market in Colorado has undergone significant changes in the past seven years, in part because of state and federal policy reforms (see Figure 3).

Figure 3. Insurance Coverage of Coloradans, 2009 to 2015



The proportion of Coloradans with private health insurance coverage declined between 2009 and 2015 from 58 percent to 51 percent of the population.

Between 2013 and 2015, enrollment in public programs increased significantly. While the uninsurance rate declined by 7.6 percentage points, enrollment in Medicaid increased by 8.3 percentage points in large part because of the expansion of eligibility for the program. With one in five Coloradans now covered by Medicaid, reforms and pilot initiatives in the Medicaid program can have significant impact on overall spending in Colorado.

Statewide Meetings

Rising health care costs affect different communities and regions of Colorado in very different ways. Exploring these regional experiences and perspectives is central to the Colorado Commission on Affordable Health Care's work.

In an effort to build on the Commission's 2015 report and its initial assessment of the primary drivers of health care costs in Colorado, the Commission sought out statewide feedback on this issue as well as potential solutions. The Commission started this process by utilizing a questionnaire circulated among Colorado health care stakeholders and interested Coloradans. The Commission received responses from organizations and individuals, ranging from ClinicNet, Colorado Academy of Family Physicians, Colorado Association of Health Plans and AHIP, Colorado Business Group on Health, Colorado Coalition for the Medically Underserved, Colorado Community Health Network, Colorado Foundation for Universal Health Care, Colorado Hospital Association, Colorado Medical Society, Colorado Nursing Association, Colorado Telehealth Network, COPIC, Health Care for All, LiveWell, Colorado Children's Campaign, and PhRMA.

To build on these perspectives, the Commission conducted a series of meetings in communities across Colorado to gather regional perspectives and to ensure the body's work and recommendations reflected the entirety of the Centennial State.

The Commission's seven meetings — held in Adams County, Alamosa, Colorado Springs, Grand Junction, Greeley, Sterling, and Summit County — centered around a series of questions aimed at probing the primary drivers of health care costs and potential strategies to arrest them:

- What do you think are the fundamental cost drivers in your region and why?
- What are the barriers to reducing cost?
- What would you change to improve health care cost?
- Do you have any thoughts on the recommendations and topics that the Commission is addressing?

The Commission's meetings, which were each scheduled for 90 minutes, yielded a series of insights from their 139 total participants. The key participant takeaways are grouped by topic and summarized below. These participant comments informed the work of the Commission and shaped its recommendations and future work.

Rural Discrepancies in Premiums

The cost of premiums came up repeatedly in rural parts of Colorado — particularly in Grand Junction and Summit County. In several communities, participants said the largest individual, family, and business expense was health insurance premiums. Participants raised a series of issues possibly at the root of geographic discrepancies in health care premiums and costs, including: utilization rates; fewer carriers offering plans and a lack of competition; limited numbers of health care providers; small pools of potential customers; charges; and cost-shifting. Participants also raised concerns about the increasing rate of uninsured residents, and the strain on the safety net.

The Commission will be looking specifically at the issue of cost in rural areas in its next report. The Commission also is working with the Division of Insurance and the Department of Health Care Policy and Financing to examine rural cost drivers and make recommendations related to costs in rural areas.

Workforce

Meeting participants repeatedly raised concerns about the health care workforce and health care workforce pipeline, especially in rural areas. Specifically, participants noted how challenging it is to bring good physicians to rural Colorado; primary care does not pay enough to attract enough physicians; patients struggle to find specialists where they live; hospitals have to hire nurses from other countries to reduce costs; it is difficult to balance a community's desire for a broad range of available services with cost effectiveness. In addition, participants identified specific issues with access to mental health care practitioners.

Some participants mentioned that direct primary care practices are becoming more and more popular, because the doctors are able to reduce insurance-related paperwork. Although this move allows practices to lower costs, it can burden patients by limiting their access to these practices. There is a corresponding impact on the workload burden for the rest of the provider pool, particularly in rural communities already facing a primary care shortage, since the other patients must still find care from another provider.

Participants suggested a series of potential solutions for the lack of workforce and infrastructure to train, attract, and retain a workforce (especially in rural areas):

- Transfer some physician workload to nurses and nurse practitioners, physician assistants and other doctoral level providers such as pharmacists, and physical therapists
- Take advantage of telemedicine — with Australia providing a possible model — and mobile health — one stakeholder pointed out a mobile emergency room with state of the art technology that is able to treat 90 percent of patients’ needs
- Expose the health care professionals in training to rural areas and their needs
- Improve patient-to-nurse ratios
- Offer nurse shifts in-home under Medicare/Medicaid
- Train more medical assistants and pharmaceutical techs to help alleviate administrative burdens
- Establish “Grow Your Own” workforce-development programs
- Offer loan repayment or forgiveness for long-term commitments to underserved communities
- Make certain specialists from Denver available in smaller cities once a week or a few times a month

Education and Transparency

Participants across Colorado frequently raised the idea of increasing consumer knowledge of insurance and coverage options as well as treatment options. Several individuals noted that care coordinator positions can help patients navigate health care systems. Others suggested consumer reports to help Coloradans shop around for health care services. They also emphasized the need for the health care world to use simpler systems that are easy to navigate and understand.

Attendees said they were particularly frustrated with a lack of transparency in billing, charges and costs. Many agreed that hospital charge masters are a fiction that does not tie back to actual costs — and charges vary widely among facilities. Attendees strongly suggested using the same payment rate regardless of the payer to avoid cost-shifting. Participants suggested an easier-to-use state website for cost transparency and cost comparison.

All in all, participants made clear that choices and transparency in insurance and providers and transparency in hospital bills would be very helpful.

Pharmaceuticals

Participants expressed their frustration with pharmaceutical costs, citing the greatly increased costs of certain prescriptions (e.g., inhalers and materials for testing for diabetes). Attendees agreed on the importance of transparency with respect to why costs can be so high for certain prescriptions. Many participants said they were frustrated about the pharmaceutical cost sharing requirements imposed on them by insurance companies. No one denied that drugs are useful in treating disease and avoiding more expensive or intensive treatment, and acknowledged the reality that many will bear the brunt of the high costs for the benefit of that drug, but the increases in cost were an issue that participants felt needed to be addressed by the Commission.

Several participants identified the issue of the over-prescription of drugs, especially opioids.

Competition/Choice

Especially in more rural areas, participants expressed concern about the lack of competition and the impact of insurance mergers in particular the mergers between Anthem-Cigna and Humana-Aetna which participants felt was reducing choice. Participants acknowledged that competition for facilities/providers and insurance options is hard to provide in rural areas because of economies of scale. In Sterling, participants were adamant that they would be happy to pay more — sometimes significantly more — simply to have more insurance choices.

Electronic Medical Records

Although participants often acknowledged that electronic medical records (EMR) have the potential to be a useful tool, a lack of interoperability, inability to communicate between systems, and inefficient provider workflow decreases efficiency and remains a challenge. Implementation is also a challenge in smaller facilities or for older providers. Most providers present agreed that the lack of uniformity in EMR was one of the key challenges in the effective use of EMR and pointed out the additional challenges for EMR with respect to HIPAA and behavioral health.

One individual noted that EMRs *should* be able to provide a benefit to the consumer, but with the amount of upkeep and staff time it takes to maintain EMR systems, it is difficult to argue that such a benefit actually exists.

Preventive Care and Social Determinants

In most communities, participants talked about the importance of preventive care and the social determinants (STD rates, poverty issues, poor nutrition, environmental challenges, housing, etc.) driving health care needs, but they struggled with what to focus on and how to

fund/staff this kind of care. One stakeholder pointed out that providers could use data from the assessments that counties conduct every five years to track trends with ailments within that county to better apply preventive care. Several providers had success with hot-spotting to handle high-risk case management.

In some cities, capitation has made it easier to pay for preventive care and address behavioral health and social determinants. Under a fee-for-service model in that city, behavioral health participants said that they could never deliver the same kind of comprehensive care allowed for under a capitated rate. To encourage more use of preventive care and consideration of social determinants, attendees suggested creative funding models like value-based payment and better alignment of quality metrics across all payers.

There was some agreement that having interdisciplinary conversations about the relationships among health, education, housing, and poverty would be useful.

Facilities

Participants expressed frustration with an apparent proliferation of unnecessary facilities and an absence of certain necessary ones. In rural areas, for instance, even as participants identified the lack of hospitals (for instance, there is no critical access hospital in some Eastern Colorado cities), they also noted that facilities that may not be needed — especially free-standing emergency rooms — are still being built.

The challenge with the rules in Medicaid and Medicare was raised as an issues by providers. The inability of a provider to authorize an MRI in primary care setting drives unnecessary utilization as they must then send the patient to an emergency room to MRI. Some participants went so far as to say that freestanding emergency rooms should not exist or that they should always be affiliated with a hospital.

Some attendees proposed reinstating Certificate of Need requirements to open up new facilities. Participants also presented some research on the profitability of hospitals on the West Slope and suggested that the nonprofit hospital system is being seriously abused; they requested public scrutiny directed at how these facilities are operating.

Payment Issues

Participants discussed payment challenges and encouraged the Commission to recommend accelerating payment reform. Providers in attendance also noted that managing revenue is extremely time intensive and takes away from the time that providers have to devote to patients. They pointed out that payment reform could incentivize continuity of care, which greatly improves care. In some cities, attendees offered specific recommendations, such as:

- Value-based or aggregate payments for behavioral health and preventive care

- Allowing physical therapists to expand what they can bill for under Medicaid — especially because physical therapy can be an alternative to prescribing pain medications
- Allowing pharmacists, who often counsel patients, to bill directly
- Increasing the very low payments for Colorado’s indigent care programs
- Have all payers, public and private, pay the same rates to providers to level the playing field; eliminate cost shifting
- Develop pathways of care and disallow admitting privileges for providers who do not abide by them
- Use hospital provider fees to ensure all providers within that facility are contracted with insurers

Behavioral Health

Many participants agreed that parity between physical and mental health care does not yet exist. The more rural or less dense the area, the less likely there is to be quality mental health care that is covered by insurance.

Mountain Community, Rural Health Costs

Many participants cited frustrations with the disparities between medical care and insurance offerings in rural communities in Colorado versus the Front Range and wondered why there has to be such a discrepancy. One attendee said that the same tests in Eastern Colorado often cost four times more than the tests in Denver; this also is true for specialists.

Colorado’s mountain and resort communities have among the highest insurance premiums in the country. In some cases, the cost of health insurance premiums in Summit and Lake counties exceed residents’ mortgage payments. Participants said that Summit County residents are forced to choose among paying for their mortgage, food, and health insurance, which is driving higher uninsured rates. To begin to address this, participants in Western Colorado called for more flexibility related to high deductible plans. They also suggested changing the structure of tax credits available through Connect for Colorado; if costs are so much higher in certain counties, there must be some way to modify the tax credit structure and increase it based on the need in community.

Though less representative of discussion themes across most or all cities/counties, participants also discussed challenges and recommendations related to the following:

- **Patient-Centered Medical Homes:** When it comes to solutions, one group of participants discussed Patient-Centered Medical Homes (PCMH) as a mechanism for increasing value. PCMHs can offer better data and relief from administrative burdens in order to treat more patients. Attendees discussed the value of team-based practices, which can better integrate behavioral health care.

- **Challenges with Specific Populations:** In Alamosa, several individuals expressed frustration with billing and payments for treating those involved with the justice system. Individuals are often billed under Medicaid rather than care being paid for by the prison.

Conclusions

Coloradans' perspectives on health costs are as diverse and varied as the Centennial State's geography. Throughout the Commission's meetings, however, there were common threads, including concerns about the availability of health care facilities, primary care, and specialists as well as the need for a more transparent and straightforward conveyance of information about health care costs.

Participants expressed appreciation for the Commission taking the time to listen to their concerns — which informed the recommendations and content of this report. The Commission anticipates continuing to engage with Coloradans — and hosting future statewide meetings, pending funding from the state — to inform its ongoing work.

Topics

The Commission formulated recommendations in five areas: transparency, pharmacy, payment reform, the social determinants of health, and workforce. The Commission started with these topics because they have evidence of success in controlling spending. The report examines each of the five areas in detail.

Transparency

What's the problem? There is a shortage of easy to understand, easy to access data on the price of health services and the quality of health care.

How does the problem contribute to spending? Consumers can make better, more cost-effective decisions about health care spending when they know the cost and quality of health care services. Consumers also tend to spend more when a third party such as an insurer is responsible for payment. Conversely, consumers tend to spend less when they are responsible for the price of health care services.

Competitive markets work better when consumers have reliable information about cost and quality that they can consider in tandem. Most of the retail economy works well in this regard. For example, prices for television sets are clearly posted and widely advertised so consumers can compare prices among different stores, and online reviews can help them compare the quality of competing brands.

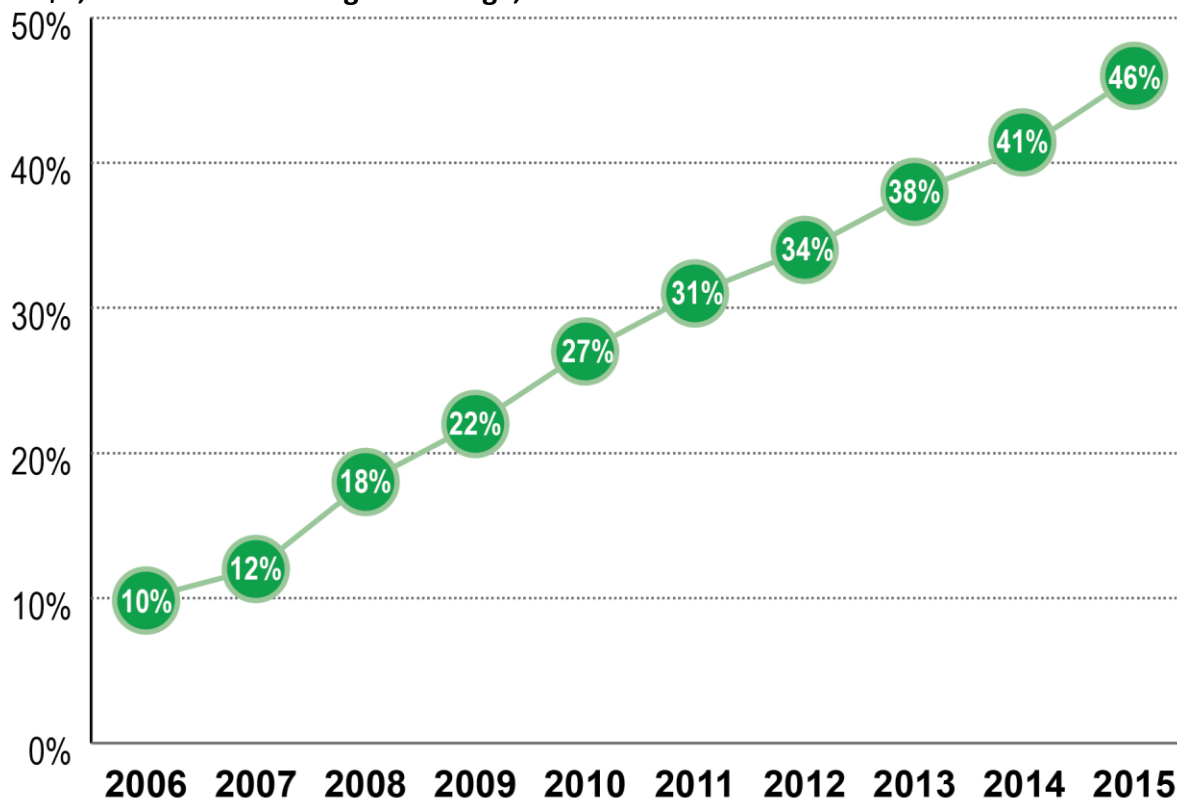
Health care is unlike other markets, however. Many of the data that consumers need to make decisions are not available or are dated and not helpful. Even when data are available, dissemination and accessibility are difficult. Patients struggle to find simple and accessible information on prices, quality, and efficacy of different treatment options. And even with correct information, decision making in health care is fundamentally different- because it relates to health, people are not necessarily looking for the least expensive alternative. In addition, third-party insurers traditionally pay most of the cost of health care in the United States, meaning that consumers have little incentive to discover the price of the services they are buying.

Health care is also different in that relatively few health care services are in fact “shoppable.” In cases where a patient needs immediate treatment, such as emergency services, more data on cost and quality of health care will not influence a patient’s decisions. In contrast, some medical procedures are scheduled in advance, such as knee replacements or routine blood tests. In these cases, patients could potentially shop among different options ahead of time. One recent study found that as much as 43 percent of health care spending could be considered shoppable. However, a patient’s incentive to shop is tied most closely to shoppable services for which patients pay out of pocket, usually in the form of deductibles and

coinsurance. This suggests that increased transparency on cost and quality may have only a modest effect on controlling health care costs.^{iv}

While there are many challenges to finding relevant and accessible data, transparency in health care markets is an important and evolving field that should be supported. The importance of transparency is underscored as health insurance deductibles and out of pocket costs continue to rise and consumers take a greater interest in the price of health care services. In fact, nearly half of workers in the United States are enrolled in a plan with an annual deductible of \$1,000 or more, up from 10 percent in 2006. (see Figure 4).

Figure 4. Percentage of Covered Workers Enrolled in a Plan with a General Annual Deductible of \$1,000 or More for Single Coverage, 2006-2015



Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 2006-2015.

Higher deductibles make consumers responsible for a bigger portion of their annual health spending, which in turn increases their interest in increasing the transparency of information about cost and quality. A number of studies have shown that high deductible health plans lead to lower health care spending. However, the RAND health insurance experiment indicated that greater cost sharing has been shown to reduce utilization of both appropriate and inappropriate care.^v Numerous initiatives have been implemented across the country to create more transparent information for health care consumers. While there is limited evidence on

the effectiveness of these initiatives to reduce health care spending, transparency tools are evolving rapidly and most experts agree that they hold potential.

Transparency Effects on Consumers

Colorado's most significant transparency initiative is the All Payer Claims Database (APCD), which is administered by the Center for Improving Value in Health Care (CIVHC). The APCD allows consumers to view differences in prices among providers, utilization of services among different populations and the prevalence of various conditions. Most states do not have data or tools comparable to the APCD. Colorado was one of just three states to receive an "A" for state transparency in health care in a report card published by the Health Care Incentives Improvement Institute and the Catalyst for Payment Reform.^{vi} Colorado's grade was based on the ability of consumers to view pricing information from the APCD before obtaining services.

Many transparency tools have failed to meaningfully impact health care spending. Evidence shows that consumers are unlikely to change their purchasing behavior based solely on cost data. A University of Oregon study suggests that consumers equate low-cost providers with low-quality service.^{vii} Instead, cost data must be combined with corresponding quality data to help change consumer behavior when consumers have choices among services or providers.

Other studies have found that consumers have a hard time navigating websites that report price data. They also can be difficult for consumers to access and understand. Consumers are more likely to use a website that consolidates price and quality information in a simple, easy-to-read format. There are a number of examples of private and public health pricing websites in both Colorado and elsewhere. For example, NH HealthCost in New Hampshire summarizes both the cost and quality of health care services furnished by different providers.

Transparency Effects on Providers

Evidence does suggest that public reporting of quality data can alter the behavior of health care providers. Providers may be motivated to change their behavior when they see themselves associated with high costs or low value. Or they may alter their behavior because they worry about their reputation among their peers.^{viii}

Studies of Hospital Compare, a service that tracks quality at Medicare-certified hospitals across the country, suggest that providers are more likely to improve their processes — such as administering appropriate medications at admission and discharge — when quality data are publicly reported.^{ix} While evidence shows that transparency changes providers' behavior, there is no consensus on whether increased transparency reduces the prices that providers charge.^{x,xi}

Transparency tools and consumers' use of them are still evolving. However, over time more and more data are becoming available. While there is still much more work to be done, the Commission supports efforts to make more transparent data available to consumers so they can make better informed decisions regarding quality and price of services they receive.

Decision Aids for Consumers

The Commission heard from experts on patient decision aids. These are booklets or web-based tools that provide objective information to a patient about treatment alternatives, such as joint replacement surgery or back surgery versus physical therapy.

One study found that decision aids improved knowledge among patients about their treatment options.^{xii} The aids helped patients to feel more informed about their decisions, to have more accurate expectations about the pros and cons of their treatment options, and to feel more empowered to participate in decisions about their care.

Results from the few studies conducted thus far have shown potential for savings. When patients use decision aids to learn about their treatment options, they are more likely to choose lower-cost options, according to studies published in peer-reviewed journals.^{xiii} For example, patients who use a decision aid to learn about the efficacy of different treatment options are often less likely to choose surgical options. In fact, researchers from the Group Health Research Institute found that decision aids were associated with a 26 percent reduction in hip replacement surgery and a 38 percent reduction in knee replacement surgery, and a 12 percent to 21 percent reduction in the cost of care over six months.^{xiv}

The Commission used these evidenced-based findings and expert testimony to develop the following recommendations to improve transparency.

Recommendations

- Support consumers making informed choices by compiling and reporting existing price, quality and clinical outcome metrics on publicly-facing website(s) such as but not limited to All Payer Claims Data Base (APCD). Ensure that the website(s) provides various tiers of timely information based on different consumers' understanding of price and quality data.
 - Create a state employee pilot using transparency tools to inform employees of the state of cost and quality metrics related to specific elective procedures.
 - Ensure the results of the pilot published after two years to demonstrate usage, changes in behavior, and savings. This pilot would provide proof of concept for the commercial market.
- Transparency is beneficial to more than just consumers. Research indicates that data provided to providers can change behavior. Thus, the state should seek to promote more transparent and publicly available data with a focus primarily around facilities, pharmaceuticals and providers' prices using resources including but not limited to APCD.
- Data that is made available for consumers and providers should be timely, accessible, consumer-friendly, actionable, and regularly updated.
- Encourage and support transparency vendors making data broadly available using the internet, including over mobile devices.

- Encourage vendors providing transparency tools to incorporate data from multiple sources including the APCD to provide cost and quality data to clinicians and facilities at the point of service. Because quality metrics are emerging, continue to improve these metrics to support desired clinical outcomes.
- Support a statewide total cost of care initiative (payments) to get an understanding of state costs relative to others states.
- Explore the potential for financial incentives to motivate consumers to use decision aids. Pilot patient decision aids among Medicaid enrollees and state employees. Evaluate the pilot and disseminate results to inform the private sector. The pilot should focus on those diseases and/or procedures for which multiple treatment options exist.

Pharmacy

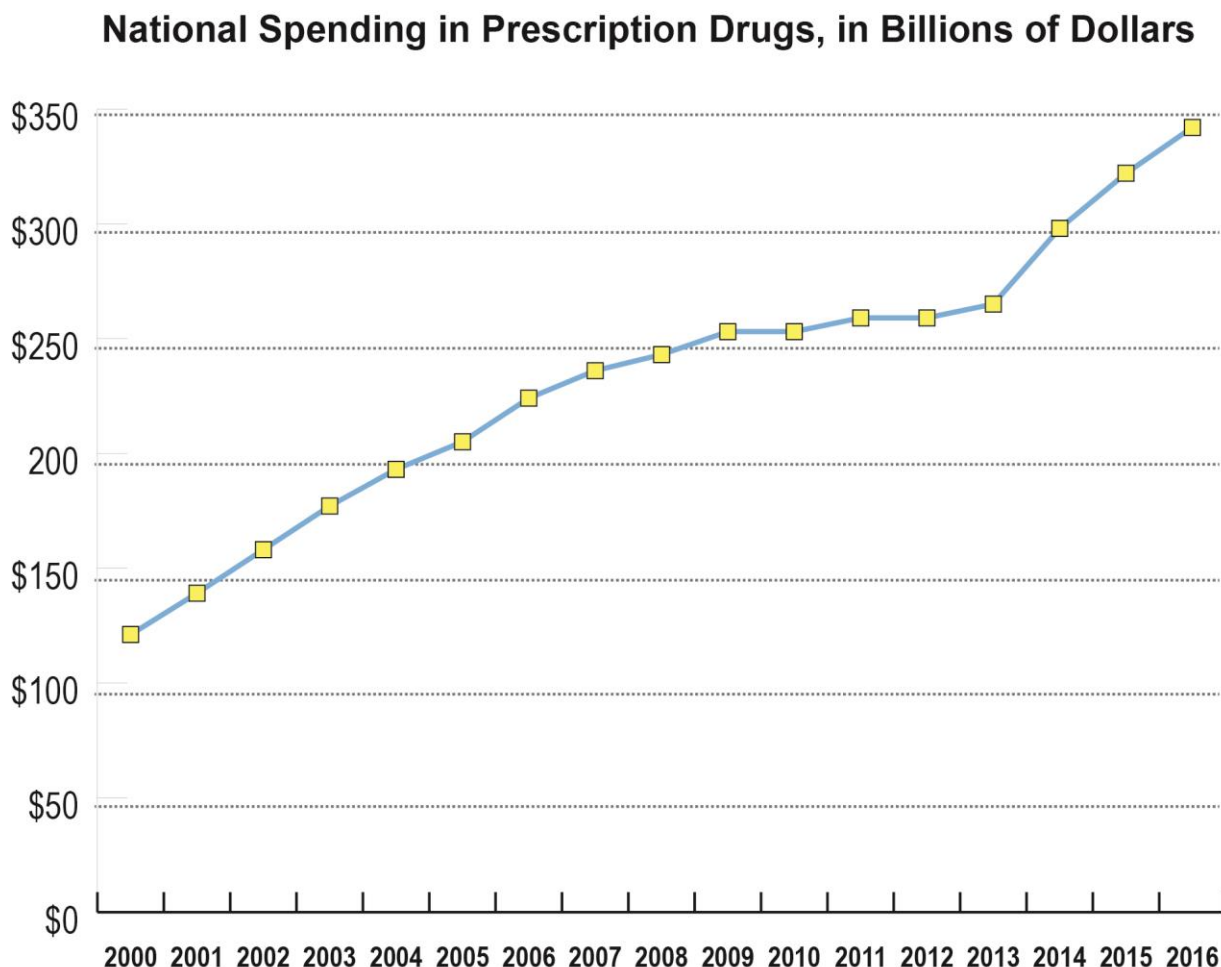
What's the problem? Recent spending increases on prescription drugs are driven by the emergence of specialty drugs that can treat serious illnesses, such as Hepatitis C and cancer.

How does the problem contribute to spending? A relatively small portion of the population is driving spending increases through the use of specialty drugs.^{xv} But the national market for drugs and federal regulations leave states with little leverage to control spending.

The pharmaceutical industry continues to provide life-saving and life-improving products. New blockbuster drugs Sovaldi and Harvoni cure Hepatitis C, a previously incurable illness. This cure comes at a cost. A single course of treatment costs more than \$80,000. Not only can these drugs save lives, but they can also improve quality of people's lives and reduce expensive services like inpatient hospital admissions. Many insurers suggest that because these drugs so significantly impact health and quality of life, they have limited leverage in negotiating prices with pharmaceutical companies.

Figure 5 summarizes pharmaceutical spending in the United States from 2000 to 2016. Over those 16 years, pharmaceutical spending increased by 280 percent, with an annual average increase of nearly 7 percent. Since 2000, the annual rate of growth of pharmaceutical spending slowly declined from 15 percent in 2001 to 2.8 percent in 2008. Since 2014 and the implementation of the ACA, however, the trajectory of pharmaceutical expenditures has shifted sharply upward. It should be noted that the increase in pharmaceutical expenditures reflects the impacts of changes in quantity of pharmaceutical drugs consumers use as well as increases in price.

Figure 5. National Spending on Prescription Drugs, 2000-2016 (in billions)



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary.

The Commission spent a significant amount of time learning more about the drivers of pharmaceutical spending from industry and policy experts.

Drivers of Drug Spending

Life-saving drugs have been brought to market that have substantially improved and extended the quality of life for many people. In addition, prescription drugs often can help patients avoid costlier treatments and hospitalization. However, it's expensive to bring new drugs to market.^{xvi} The U.S. Food and Drug Administration (FDA) has many regulatory protocols with which pharmaceutical companies must comply. These regulations drive up their cost of doing business. In addition, companies often spend millions of dollars on research and development

for drugs that never make it to market. Pharmaceutical firms say they recoup their costs by increasing the price of those drugs that do make it to market.

It's important to understand the difference between traditional and specialty drugs. Specialty drugs are drugs used to treat complex and chronic conditions such as cancer, cystic fibrosis or multiple sclerosis. They often require special handling such as refrigeration and monitoring. Unlike specialty drugs, traditional drugs do not require this special supervision. The traditional drug market includes generic equivalents for brand name medications — some that sell for as little as \$4 per bottle.

The recent increases in drug spending are driven primarily by the rising price of specialty drugs. All types of health care spending can be explained by two factors: the price of health care goods and services multiplied by the quantity of health care goods and services consumed. Figure 6 shows that the recent increases in drug spending have been driven primarily by the increasing price of specialty drugs, and secondarily by the increasing quantity of specialty drugs that consumers purchase.

Figure 6. Increases in Utilization and Price of Pharmaceutical Drugs, Commercially Insured Population, 2015

	Utilization	Price Per Unit	Total Trend
Traditional Drugs	1.9 percent	-2.1 percent	-0.1 percent
Specialty Drugs	6.8 percent	11.0 percent	17.8 percent

Source: Express Scripts. Data represent commercial prescriptions filled by Express Scripts

Data from Express Scripts, a prescription benefit plan provider, shows that the price per unit of specialty drugs increased by 11 percent in 2015 while the price of traditional drugs fell by more than two percent over that same time.

This means that a small fraction of the population — those who need specialty drugs — is responsible for a disproportionate share of drug spending. In fact, two percent of the population accounts for more than 43 percent of pharmaceutical spending (see Figure 7).

Figure 7. Distribution of Pharmaceutical Spending Among Population, U.S., 2014

	Percentage of Total Patients		Percentage of Total Costs	
>\$100,000	0.05 percent	{ 2.0 percent	6.5 percent	{ 43.3 percent
\$50,000 - \$99,999	0.17 percent		9.2 percent	
\$10,000 - \$49,999	1.8 percent		27.6 percent	
\$5,000 - \$9,999	3.1 percent		17.8 percent	
\$1,000 - \$4,999	15.6 percent		29.6 percent	
<\$1,000	48.2 percent		9.3 percent	
Non-utilizers	31.1 percent		—	

Source: Express Scripts

It is important to note that prices paid for pharmaceutical drugs do not solely compensate manufacturers of drugs.

Limited Options to Control Spending

These trends are important to keep in mind when choosing policy options to try to contain drug spending. For example, bulk purchasing pools for traditional drugs are not likely to be highly effective because it's seldom-used specialty drugs that are driving pharmaceutical spending.

The Commission discussed a number of policy ideas to address spending in this area, considering tradeoffs associated with more regulation of pharmaceutical drugs. Because of the unique challenges in the pharmaceutical market, and because states have only a limited set of tools to control pharmaceutical spending, recommendations that address pharmaceutical drugs are limited at this time.

The Commission's reasoning related to the following policy levers helps to place its few recommendations in context:

Cost Sharing

A number of states limit the cost sharing that patients must pay for prescription drugs in order to ensure that drugs are affordable for consumers.^{xvii} The Commission decided not to make this recommendation because such policies do not address the underlying cost of drugs. Insurance plans must still pay the same price to drug manufacturers regardless of the level of consumers cost sharing, so lower out-of-pocket costs would merely lead to higher insurance premiums for all.

Price Controls

The Commission discussed the possibility of implementing price controls on drugs. Some commissioners were concerned about the distortions that price controls can have on the market. In particular, they argued, price controls can lead to shortages and diminish the

industry's incentives to bring innovative drugs to market. Many of these new drugs, while expensive, can reduce health care spending in other areas such as hospitalization.

Colorado's relatively small population of 5.4 million also limits the state's leverage to negotiate lower prices with drug companies. Large insurance companies such as UnitedHealthcare, Anthem and Aetna cover tens of millions of people. There is no reason to think Colorado could get more leverage than these companies.

Increased Transparency

A number of states, including Colorado, have considered legislation to increase the transparency of pharmaceutical company pricing policies. All of these efforts have failed thus far. In Colorado, House Bill 16-1102 in 2016 would have required drug manufacturers to submit a report for any drug that costs more than \$50,000 per year or course of treatment for one patient. Manufacturers would have been required to summarize several types of costs, including research and development, marketing, regulation, and clinical trials. Manufacturers also would have been required to report on the profitability of these drugs. One of the Commission's concerns with the bill was the lack of sufficient funding and infrastructure for an entity to receive, verify, analyze and disseminate the data from pharmaceutical manufacturers.

Due to the failure of state legislatures across the country to require pharmaceutical manufacturers to make their costs public, the Commission opted not to pursue a recommendation in this area.

Multi-State Purchasing Compact

A number of states participate in multi-state purchasing agreements in which they leverage their combined purchasing power to negotiate lower prices for drugs to serve the Medicaid population. The Commission realizes that the significant driver of pharmaceutical drug spending is specialty drugs, which are not purchased in bulk and for which limited substitutes exist. Nonetheless, it recommends that participation in a multi-state purchasing pool be studied to determine if savings to Medicaid could be realized.

Pharmacy Reinsurance

When an insured patient needs high-costs medications, the insurance carrier or self-insured employer pays for them after the deductible is met. A pharmaceutical reinsurance program would be one way to spread the cost of these expensive drugs more evenly across payers.^{xviii} All payers would fund a reinsurance pool that would be tapped when a payer's cost for a drug or course of treatment meets a certain threshold.

The concept of reinsurance is not new among states. For example, some states have implemented other types of reinsurance such as small employer reinsurance pooling. However, a pharmaceutical reinsurance pool has not been tested. While pharmacy reinsurance would not address the underlying cost of pharmaceutical drugs, it could help spread the risk of high cost

patients across payers. The Commission recommends that the General Assembly study the feasibility of such a program in order to address the issue of access and affordability.

Federal Control

Commissioners discussed the lack of state options in the face of federal laws and regulations related to prescription drugs.

The federal government controls both the length of patents and the exclusivity for brand name drugs. Longer patents allow pharmaceutical companies to recoup their costs and make profits. When those patents expire, generic equivalents can legally enter the market — typically at much lower prices. Federal law makes patents valid for 20 years after the date of filing. Companies have opportunities to extend patents in order to study the impact of drugs on sub-populations, such as children.

The Federal Drug Administration (FDA) also controls a detailed review and evaluation process before drugs are approved for consumption. While this time-intensive process is important for the health and safety of consumers, some have questioned whether costs could be reduced by simplifying or shortening the process of bringing drugs to market.

The federal legislation that established Medicare Part D, the prescription drug benefit, prohibits Medicare from negotiating prices with pharmaceutical companies. Many analysts believe that Medicare should have the ability to negotiate lower prices for drugs just as other payers do, especially since seniors and people with disabilities tend to have high health needs.

Many countries impose price controls on pharmaceutical drugs. The price of the same drug can be 35 percent to 55 percent lower in these countries than in the United States.^{xix} A number of states have explored importing these lower cost drugs from other countries such as Canada. The FDA does not allow this practice because it does not have oversight over other drug distribution systems in other countries and can't protect against the possibility of contaminated, counterfeit or unsafe drugs. However, the FDA has allowed individuals to bring drugs from other countries into the United States for personal use.

These federal issues are the basis for the Commission's recommendation that leaders from the Colorado General Assembly and Executive Branch have targeted on-going communication with Colorado's congressional delegation. Those discussions should focus on potential changes in federal policies that could mitigate the growth of spending on pharmaceutical drugs.

Recommendations

- Recommend an ongoing, focused conversation between the legislature, executive branch, and Congressional delegation to promote active discussion and problem solving. These conversations should include the following topic areas:
 - Allow Medicare to negotiate prices

- Allow drug importation from other countries
 - Adjust the length of patents and criteria by which patents are renewed
 - Address the length of exclusivity
 - Evaluate rules and timeframes to bring a drug to market, including reducing the length of the FDA's evaluation process
- Study the feasibility of a reinsurance program for specialty drugs
 - Does not directly address price. But allows carriers and employers to spread risk.
- Evaluate the feasibility of a multi-state compact for the purchase of non-specialty drugs

Payment Reform

What's the problem? Fee-for-service payments reward providers for the quantity of their care rather than the quality of their care.

How does the problem contribute to spending? Providers make more money when they perform more services, even if those services are neither necessary nor valuable.

By now, the limitations of the health care system's fee-for-service payment arrangements are well known. Fee-for-service creates an incentive for volume rather than value. Value measures the outcomes associated with particular health care services relative to the price paid for those services. High value services are those that lead to better outcomes with lower expenditures compared to low value services that lead to the same or worse outcomes with higher expenditures.

The idea behind payment reform is to change the incentives for providers, allowing them to be compensated at the appropriate level while pushing for greater value for each dollar spent.

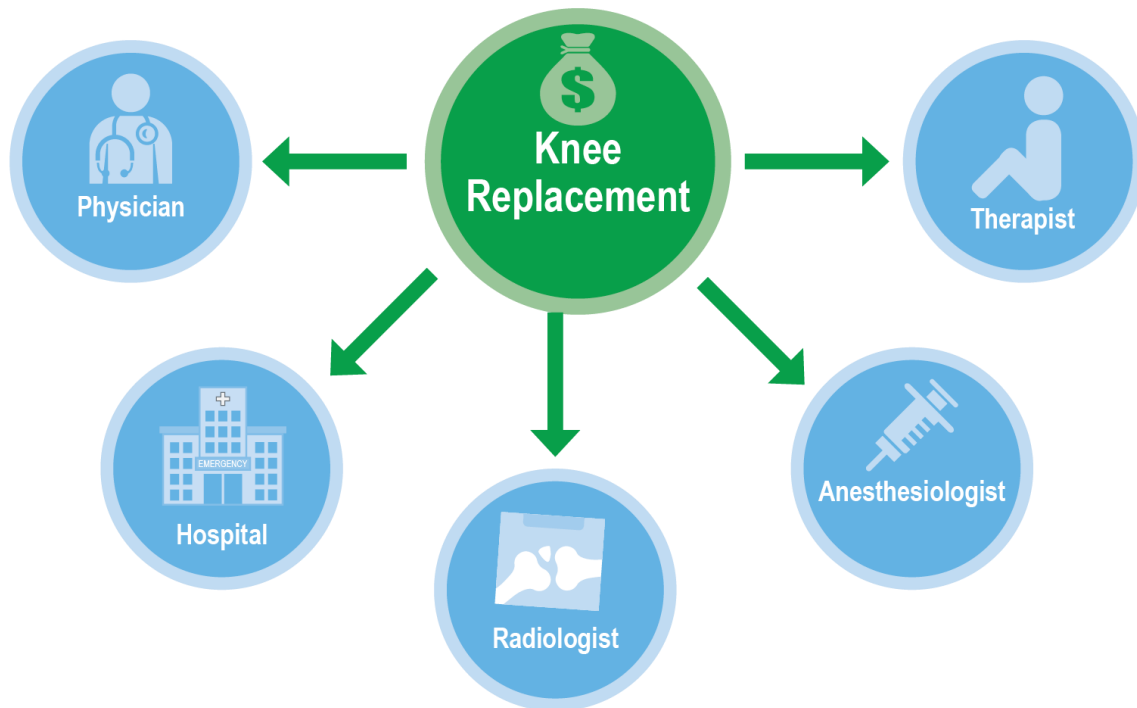
There are a variety of potential payment reforms Colorado could pursue, though each has its pluses and minuses. Colorado insurance companies and the federal and state government are already trying various approaches to payment reform which show some promise. Most reforms are in their early stages and are rapidly evolving. The Commission looked at the major efforts underway and discussed whether the prudent course of action for policymakers would be to develop pilot programs that could be studied and scaled up when appropriate.

Many types of payment reform have an element of pay-for-performance, where an incentive payment is given for a measured improvement in quality or outcomes. However, the methods used to measure quality improvements can place an added burden on providers. Because of the proliferation of payment reform initiatives and accompanying quality measures, providers struggle with reporting different measures for multiple programs. To the extent possible, the Commission recommends that these quality measures be consolidated to include the best possible metrics across all payers. These quality measures should be paired with cost metrics and made public to inform consumers about quality and cost of different providers. Additionally, the Commission recommends engaging with Colorado's multi-payer collaborative, the Comprehensive Primary Care Initiative. This group was formed in 2012 and consists of private and public payers. They provide enhanced compensation to select primary care practices for providing high quality, coordinated and patient-centered care. Payers also focus on aligning their practice level metrics.

The Commission looked in depth at a number of payment reform models.

Bundled Payment

This is a model that provides a single payment to a provider for all health care services associated with a defined episode of care. The episode may be a specific condition, such as diabetes, an event such as a heart attack, or a medical procedure such as a knee replacement.



A number of small pilot projects have shown that bundled payments can reduce expenditures. The effects on quality have been inconclusive but generally small.

Episodic bundles are most successful for conditions that have an easily identifiable start and end, such as hip replacements and knee replacements, or for a set time period for chronic conditions such as congestive heart failure. Policymakers are interested in bundled payments because data show that the level of payment for the same episode of care varies widely among different providers. Analysis by the Center for Improving Value in Health Care (CIVHC) confirms wide variation in different communities in Colorado. For example, according to analysis by CIVHC the average episode payments by commercial payers for hip and knee replacements in northern Colorado is \$78,000. On the other end of the spectrum, these payments are \$39,000 in Denver.^{xx}

RAND's modeling of bundled payments for a wide variety of conditions, events and procedures predicted savings of seven percent to 35 percent per episode.^{xxi} Congestive heart failure was predicted to save the most. Real-world experience with bundled payments may be a bit less

encouraging. A review of empirical studies conducted on actual bundled payments finds savings of 10 percent or less for bundled episodes compared with the fee-for-service system.^{xxii}

Evidence on quality improvements for bundled payment is mixed. One notable study by Geisinger Health System found reduced readmissions and a shorter average stay associated with its bundle of coronary artery bypass graft surgery.^{xxiii} But a review of studies on bundled payments by the Agency for Health Care Quality and Research found that while quality improved in some cases, it worsened in others.^{xxiv} Effects were minimal, however.

The Arkansas Health Care Payment Improvement Initiative is a national leader in bundled payment. It includes both Medicaid and commercial payers. Beginning in 2011, Arkansas began bundling payment for five episodes and conditions: total hip and knee replacement, perinatal care, ambulatory urinary tract infections, Attention Deficit Hyperactivity Disorder, and congestive heart failure. The first round of results showed improved quality and reduced spending. After two years in the new system, 88 percent of providers were able to lower their costs per episode.^{xxv} This allowed the providers and payers to share the \$2 million in savings.

Colorado PERA in 2016 began an optional bundled payment strategy for hip and knee replacements among pre-retirees in PERA's self-insured product. The average price of joint replacements has been halved due to the implementation of bundles.

CMS also launched a bundled payment initiative for joint replacements for Medicare enrollees in 67 major metropolitan areas throughout the country, including Denver. While it is too soon to have results from this initiative, it will be important for Colorado policymakers to monitor moving forward.

Researchers from RAND presented to the Commission empirical analysis from several bundled payment pilot projects. Their analysis found weak evidence regarding reductions in spending from bundled payments. However, they noted the need to interpret results with caution as most studies to date have included limited sample sizes and were conducted for short periods of time. RAND researchers emphasized that newer studies have much larger sample sizes and are being conducted over longer periods of time. The Commission plans to monitor these results.

Even though the evidence on bundled payment is mixed, this area does appear to offer more positive results than negative. The Commission recommends encouraging greater study of bundled payments, including more voluntary pilot programs for state employees and pre-Medicare state retirees. Certain conditions and episodes are better suited for bundled payments because they have a defined beginning and end or they have a large variation in expenditures. The Commission's recommendations also include pilots that measure cost, quality and patient satisfaction. Evaluation of these pilots should be made public to expand the evidence basis for other payers.

Rate-Setting

Hospital rate-setting is an idea that started in the late 1960s and early 1970s with at least 27 states reviewing or directly regulating hospital rates and budgets. A study of the states that implemented rate-setting found that it succeeded in controlling the rate of increase in per-admission costs in most states that used it.^{xxvi} However, many states have faced challenges in controlling the volume of services rendered.

Maryland and West Virginia are the only two states that still use rate-setting. West Virginia sets rates for all nongovernmental payers. Maryland, which began rate-setting for all payers in 1974, found itself at risk of losing its Medicare waiver by 2014 because it had loosened volume controls and exceeded limits on hospital expenditure growth. In order to maintain its waiver, Maryland implemented a new methodology beginning on January 1, 2014.

In this second phase, Maryland prospectively sets global budgets for hospitals every year. Hospitals continue to make claims for fee-for-service reimbursement, but they must ensure compliance with the prospectively established budget. If they fail to meet the requirements of the budget, they face penalties in the subsequent year.

The budget is not affected by the volume of services provided during a given year, so there is no incentive for hospitals to provide more volume to make more money. As part of the waiver it negotiated with CMS, per capita hospital revenue can't increase by more than 3.58 percent a year, and per capita Medicare hospital spending must be at least 0.5 percent below the national growth rate.

Maryland's per capita hospital spending growth for all payers in 2014 stood at 1.47 percent, less than half the targeted 3.58 percent, according to the Maryland Hospital Association. The rate of hospital-acquired conditions also improved more than anticipated. However, the hospitals did not meet their target for Medicare readmissions.

One form of rate setting is reference pricing. In this model, the payer sets a limit, or a reference price, on what it will pay for a particular service. Consumers can still use whatever provider they choose. However, the consumer is responsible for covering the difference between the provider's price and the reference price. A number of reference pricing pilots show promising results. For example, the California Public Employees' Retirement System (CalPERS) implemented reference pricing for certain services and surgeries. The number of California hospitals charging prices below the reference price increased from 46 to 72 between 2011 and 2015. In the two years after CalPERS implemented reference pricing, it saved \$7.0 million in colonoscopies, \$2.8 million in joint replacement surgery, \$2.3 million for arthroscopy, and \$1.3 million for cataract surgery.^{xxvii} While there were many changes in the provider market at this time which could have confounded results, evidence from reference pricing pilots show promise. Therefore, the Commission encourages the use of reference pricing with an eye towards any unintended consequences associated with the quality of care.

Value-Based Insurance Design

Value-based insurance design (VBID) is a broad category that gives patients incentives to use high-value services and providers and discourages them from using low-value services and providers. VBID methods can range from lower copays for preventive services to reduced cost sharing if beneficiaries change their behavior.

Most of the evidence around VBID comes from studies focused on cost-sharing for prescription drugs. When Pitney Bowes lowered its cost sharing for certain drugs for employees, the company saw increased utilization of these drugs and a corresponding reduction in emergency department visits and slower growth in health care costs.

Evidence on other VBID interventions is early. A review of eight VBID programs in the past six years found that they modestly increased use of the high-value services they targeted, usually without boosting overall spending.^{xxviii} However, VBID programs must be in place for a long time to achieve cost savings, and they are unlikely to achieve savings in their early years. The Commission believes that VBID programs have potential and should be studied in greater detail. In order to expand the evidence base, the Commission recommends that the state sponsor a VBID pilot program for state employees that includes an in-depth evaluation. Results of this evaluation would provide valuable information for private payers as they contemplate the costs and benefits of VBID programs.

Enhancement of Primary Care Payment Models

Medical care is more efficient and effective when patients' conditions are identified early and when patients receive the full range of treatment they need for everything that's troubling them — both physical and mental conditions. Good primary care can provide this service, especially when primary care providers help patients coordinate their care. The Commission recommends that payers provide enhanced funding for primary care models such as the primary care medical home (PCMH) and integrated care models that support both primary and behavioral health care services.

Colorado's Medicaid program supports primary care improvements through its Accountable Care Collaborative. This model currently reimburses primary care medical providers (PCMPs) and Regional Care Collaborative Organizations (RCCOs) a per member per month (PMPM) amount to provide care coordination and enhance primary care services. The Commission recommends that the state pay an enhanced PMPM for Medicaid clients with high or chronic health care needs. The enhanced payment could be used to finance multidisciplinary teams to meet clients' complex conditions. To the extent possible, physical, behavioral, and oral health services could be integrated. A number of metrics such as emergency department utilization and inpatient admissions could be tracked to measure program performance.

In the ACC Payment Reform Pilot, also known as Medicaid Prime, the Colorado Department of Health Care Policy and Financing provides Rocky Mountain Health Plans (RMHP) a global

payment to provide physical and behavioral health care services to Medicaid enrollees. This pilot shifts risk from the state's Medicaid agency to RMHP. RMHP shares savings with primary care providers and community mental health centers that meet annual quality targets. The model is designed to incentivize providers to improve coordination of care and health outcomes rather than increasing the quantity of services. During its first year of operations, savings to the state and federal government were \$12.6 million. Savings that were shared with providers totaled \$5 million.^{xxix}

Recommendations

- Support ongoing efforts (e.g., the work of the Multi-Payer Group, with the inclusion of the participation of providers and consumer groups) to develop common quality metrics across payers. Direct payers to use these to drive value-based payment models and enhance public reporting of provider performance on quality and costs.
- Encourage experimentation with new forms of pricing and payment including but not limited to:
 - Use of reference pricing for all payers
 - Warrantied payment for services
 - Bundled Payments, including:
 - Adoption of bundled methodologies as appropriate for all payers including in the state's employees' purchase of certain procedures and conditions.
 - Support a voluntary bundled payment program for:
 - State employees: Hips and knees, back surgery and congestive heart failure
 - Pre-Medicare state retirees: Continue for hip and knee replacements, pilot for back surgery and congestive heart failure
 - Medicaid: Chronic illness such as diabetes, asthma, or heart failure
 - Bundled payment programs will include:
 - Patient satisfaction measures
 - An evaluation of the effectiveness on cost and quality to inform the state and private sector and to augment the limited evidence that currently exists
 - Defined bundles that are consistent with other pilots (to the extent possible)
 - Consumer-directed care and payment approaches
- Study the potential for equalizing payments in rural communities across all payers.
- Create a pilot for state employees to adopt and test Value Based Insurance Design (VBID) approach to benefit design (e.g., high value services with low or no copay, lower value services with higher copays, etc.) in order to provide proof of concept for the marketplace.

- Enhance primary care payment using value-based models like the primary care medical home (PCMH) and integrated care models, and include adequate funding to fully implement these systems.
- Enhance per member per month (PMPM) payment in Medicaid through the RCCO's for high need, high cost complex patients, who have been identified as such through Statewide Data Analytics Contractor (SDAC) data, hospitals, healthcare organizations, community mental health centers. The PMPM would pay for the multidisciplinary team: a medical provider (NP/PA), behavioral health provider, care coordinator, health coach, dental/ oral health provider and a hospital based community health worker. The team would work intensely with the patient and link (or re-link) them into a medical home in the community once the patient completes the program. Should consider a shared PMPM for PCP and facility for care coordination. Metrics could then look at admission and ED visit rates. After program maturation there could be incentive metrics for performance to earn part of the PMPM. Core components for success include:
 - Close hospital partnerships for real time referrals and bedside enrollment
 - Behavioral health therapist as part of the team
 - Access to data: claims data, cost and utilization, and pre/post assessment for PH/BH capabilities within one EMR.

Social Determinants of Health

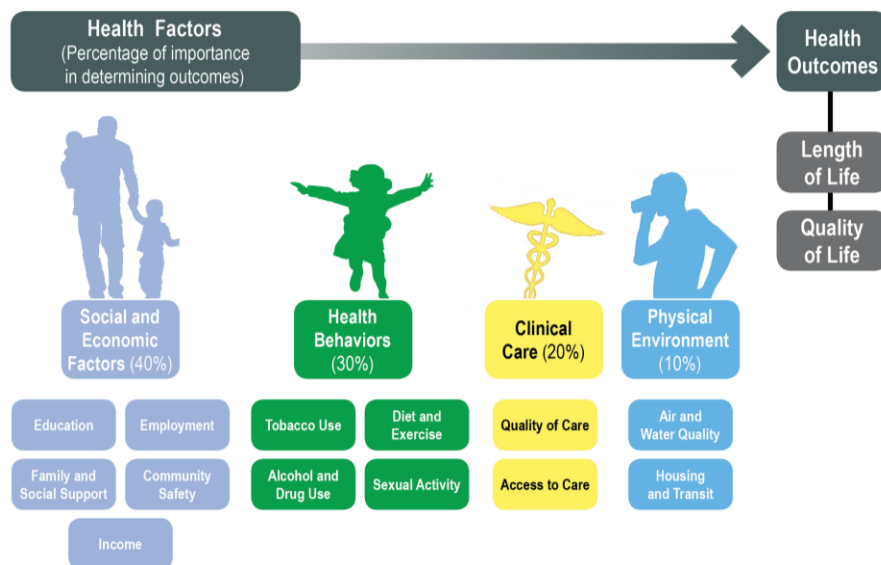
What's the problem? Social determinants of health — which encompass social, behavioral, and environmental influences on one's health and include socioeconomic factors such as education and income as well as of where a person lives — greatly influence overall health and chronic and behavioral disorders. These issues often cannot be addressed in a purely medical setting.

How does the problem contribute to spending? Half the country's health care costs are incurred by five percent of the population^{xxx} — people whose chronic conditions are worsened by their socioeconomic status.

The World Health Organization (WHO) defines health as a “state of physical, mental, and social well-being and not merely the absence of disease or infirmity.” Health experts are increasingly recognizing the crucial role of the social determinants of health — the factors outside of health care such as housing, income, and race/ethnicity that contribute to a person's health outcomes. In fact, research shows that clinical care only contributes to around 20 percent of a person's health outcomes^{xxxi} and accounted for only seven of the 30 years increase in life expectancy in the 20th century. It follows that health care outcomes can be more effectively improved by addressing the social determinants.

Figure 8 summarizes the relative importance of various factors that are associated with health outcomes.

Figure 8. Relative Influence of Different Factors on Health Outcomes

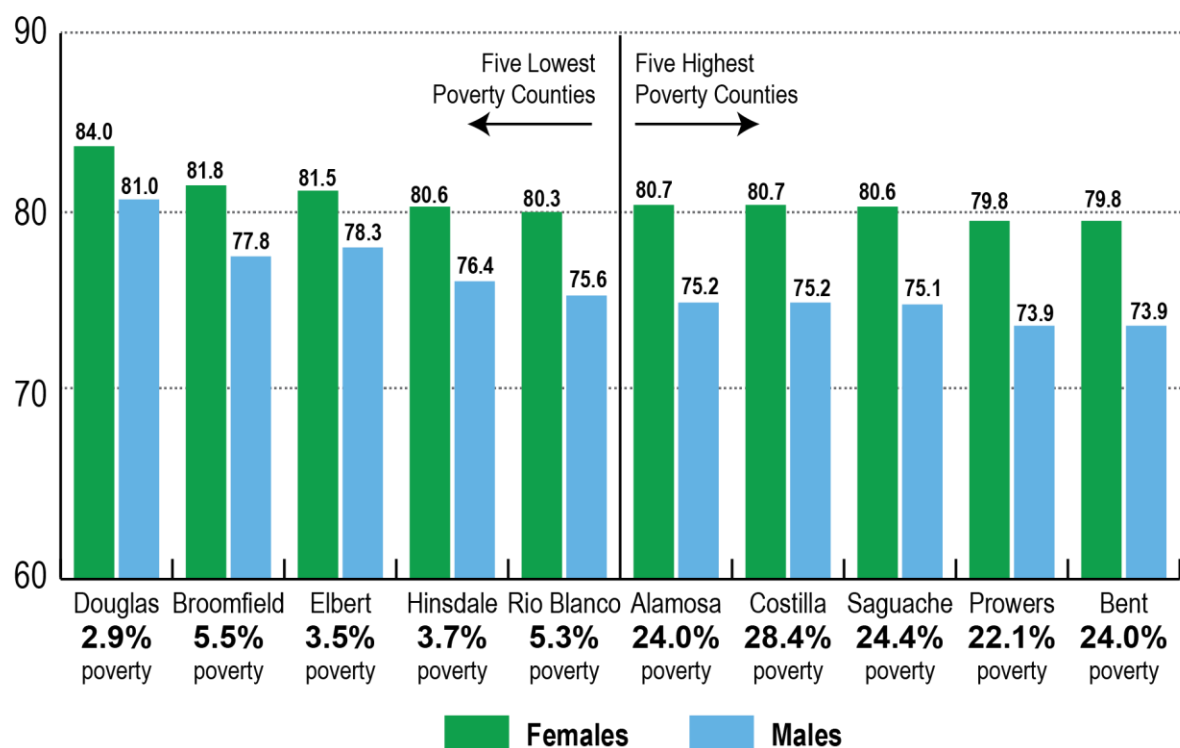


Source: Robert Wood Johnson Foundation County Health Rankings Model

Income is one of the most important determinants of an individual's health. In Colorado, income varies significantly by geography. It's no surprise that life expectancy differs by geography as well. Douglas County has the lowest poverty rate in the state, with only 2.9 percent of its population at or below poverty. On the other end of the spectrum, in Costilla County nearly one-third of the population has income at or below the poverty rate. However, analysis of county level data is just one way to measure geographic disparities. ZIP code level analysis shows significant variation within counties.

Data in Figure 9 summarize the association between income and life expectancy. Life expectancies in the five counties with the lowest levels of poverty are noticeably longer — especially for males — compared with the five most impoverished counties.

Figure 9. Life Expectancy for Females and Males in the Five Colorado Counties with the Highest and Lowest Poverty Rates



Source: Research by Commissioner Dorothy Perry

Research suggests that states that have a higher ratio of spending on social services and public health relative to health care have significantly better health outcomes among their residents.^{xxxii} This finding broadens the discussion beyond what should be spent on health care to what are appropriate levels of investment in social services and public health. Figure 10

shows some examples of public health programs for which the return on investment is particularly high.

Figure 10. Return on Investment of Various Public Health Initiatives

For every \$1 spent on:	We save:
Water fluoridation	\$38 in dental treatment costs
Preconception care program for women with diabetes	\$5.19 by preventing costly complications in both mothers and babies
School-based HIV/STD and pregnancy prevention programs	\$2.65 in medical and social costs

Source: Association of State and Territorial Health Offices

Moreover, a review by the Government Accountability Office (GAO) in 1992 reported that WIC cost \$296 million per year but avoided more than \$472 million in expected federal and state Medicaid costs (U.S. GAO, 1992). Similarly, national evidence indicates that home-delivered meals for older adults and people with disabilities improve physical and mental health and reduce Medicaid costs. One study estimated that every \$25 increase in home-delivered meals per older adult would be associated with a 1 percent decline in nursing home admissions.

The social determinants of health show up in many aspects of life, often in predictable ways. People with lower incomes and less education tend to have higher rates of obesity, disease, disability, and poor health compared with those who have higher incomes and more education. Income is an important determinant of health, and employment is an important determinant of income. Policies that lead to more available, higher paying, and stable jobs are likely to support improved access to health care and ultimately better health outcomes.

Research shows the foundations of adult health are laid in childhood. Adverse childhood experiences (ACEs) increase the risk of poor physical and behavioral health throughout life, according to the WHO. Other studies have shown that adverse experiences in early childhood lead to significant developmental delays and dramatically increase the suicide rate among adolescents and adults.

Early childhood education is often considered a cornerstone of social services and has been found to be associated with improved health outcomes, although most of the evidence supporting this premise is based on observational rather than interventional studies. Nonetheless, a seminal study in this area found that for children aged 0 to 5 years from disadvantaged backgrounds, participation in high-quality child care and preschool resulted in better health outcomes in adulthood (e.g., lower blood pressure and lower risk of metabolic syndrome).

The first three years of life are critical. Efforts to support mothers and children during this time have shown success. For example, the Nurse Family Partnership pairs highly trained nurses with vulnerable first-time mothers and their babies. The project has seen a 20 percent decrease in smoking during pregnancy as well as a 32 percent decrease in alcohol use. Data collected from Nurse Family Partnership pilot sites have shown that women who completed the program were more likely to be employed and worked more hours than women who did not participate.^{xxxiii} Savings from greater self-sufficiency have been achieved through lower use of food stamps and Temporary Assistance to Needy Families among participants in the program.^{xxxiv}

Social factors are especially important when addressing the vexing problem of “super utilizers” — the small number of people who account for an outsized share of health care consumption and spending. Five percent of the population accounted for 50 percent of national health care spending in 2010, the latest data available. These super utilizers often have complex social needs that extend beyond the health care system. Health often doesn’t come first for people who are struggling to find food, shelter, a job or a safe place to live.

Representatives from the Metro Community Provider Network (MCPN) shared with the Commission their findings from a program, Bridges to Care, that provides intensive supports to people with social and high health care needs. Analysis of the program, which included 96 participants, reduced health spending by around \$22,000 per participant. Much of the savings were generated through reductions in emergency room visits.^{xxxv}

Programs to address the social determinants of health have launched across the country, and several have been active in Colorado. Rutgers University received a federal grant to pilot a successful model from Camden, N.J., in four communities nationwide, including Aurora. The program identified frequent hospital users in two Aurora ZIP codes and provided intensive care coordination, education, and mental health care for eight weeks. Participants reduced their hospital use, with the heaviest hospital users showing the greatest improvement.^{xxxvi} The Commission recommends implementing a pilot of super utilizers with asthma to study of ways to provide care in low cost settings and prevent expensive emergency department and inpatient care.

The Colorado Opportunity Project aligns the departments of Health Care Policy and Financing, Public Health and Environment and Human Services to implement evidence-based programs to move people out of poverty. Colorado’s SIM program aims to integrate behavioral health and primary care for the majority of the state’s residents. And Medicaid’s Accountable Care Collaborative pushes for coordinated care that addresses social factors, not just medical care.

To the extent possible, silos between state agencies should be minimized so that people can receive the support and coordination of services necessary to address their specific conditions. Adoption of payment structures in Medicaid, including braided and bundled funding, will also

help facilitate the coordination of important services that support health. Adoption of payment structures in Medicaid could also help facilitate the coordination of important services that support health. In fact, CMS has provided some states funding opportunities to test different pilot programs in which Medicare and Medicaid beneficiaries are connected to programs that address social needs such as food insecurity, housing, transportation, utility needs and violence. States can support this model using payment structures that include blended or braided funding.

Blended funding merges funding from individual sources into one single funding stream. Braided strategies include coordinating funding from individual sources in order to leverage greater programmatic efficiency. Unlike the blended model, in the braided model, the separate funding sources are still distinguishable. The purpose of exploring these new models is not to increase funding per se, but to increase funding flexibility to more efficiently provide services to individuals with chronic conditions and high health care needs, as well as expand the use of creative types of services needed that do not have a specific billing codes (e.g., purchasing a bicycle for a patient who doesn't have transportation so they can get to their health care appointment; providing a bus pass to someone so they can go to a full service grocery store for nutritious foods because their low-income neighborhood only has a corner gas station store).

The social determinants of health are often challenging to address. It takes a long time to see results from investments, and timely data are hard to find. Expectations for the pace and scope of change are often too high. And more precise studies are needed to measure the complex links between various social determinants and health outcomes. This is why the Commission recommends that the General Assembly fund a study that analyzes the actuarial return on public health investments. Such a study would enable policymakers to understand the relative cost effectiveness of various investments and their impact on health.

This area provides numerous and varied opportunities to improve the health and quality of life of Coloradans while potentially reducing health care spending. However, the Commission is still exploring this very complex and nuanced topic. As such, it will have additional recommendations in its next report.

Recommendations

- Where appropriate reduce silos within state agencies so that Medicaid patients can receive the support needed to address their specific condition (e.g. housing, job training, and/or placement)
- Adoption of payment structures in Medicaid, such as braided or bundled funding, that address clients' social determinants of health
 - More meaningfully align state agencies on health and health care (health authority)
 - Pilot braided funding models for high utilizers for housing (MA showed savings)

- Expand Medicaid ACC medical home model to braid in funding for social services, including supportive housing and employment
- Create a pilot to identify urban, low-income patients with asthma from zip codes with high Emergency Department (ED) visits or hospitalizations due to asthma, and offer enhanced care including case management and home visits.
- Ask the legislature to provide financial support to measure the actuarial return on investment for public health.

Health Care Workforce

What's the problem? Health care workforce wages represent a significant portion of health care spending.

How does the problem contribute to spending? When providers do not practice at the top of their scope of practice, costs increase. When people do not have access to primary care services due to lack of providers, they are more likely to use more expensive specialized services.

The United States devotes 57 percent of its health care spending to labor, compared with 42 percent in Europe. Too often, health care providers are not practicing at the “top of their scope.” In other words, they are providing services that a practitioner with less training could provide in a more cost efficient and possibly even effective manner.

Fee-for-service payment models do not provide incentives to use the most efficient provider. Excessive costs pile up when practitioners provide services that can be provided by a less skilled and paid provider. One solution to this issue is team-based care. In this model, each member of the team practices at the top of his or her scope and delegates to lower-skilled providers on the team when necessary. This can lead to a more efficient use of resources and greater collaboration between different providers. For example, some analysis suggests that nurse practitioners and physician assistants can reduce labor costs by 5 percent to 9 percent compared with primary care physicians.^{xxxvii}

Investment in primary care is an important step toward using health care resources in a cost effective manner that supports better health. Studies in the early 1990s showed that states with higher ratios of primary care physicians to population had better health outcomes, including lower rates of all causes of mortality, poor self-reported health and lifestyle factors.^{xxxviii, xxxix} Access challenges can also lead to higher costs for the treatment of conditions that are potentially preventable and often expensive to treat. Additionally, studies have found that people with a regular source of care have a lower cost of care than those who lack a usual source.^{xl}

Based on national comparative analysis, Colorado has higher than average primary care physician capacity. Colorado has 94.6 primary care physicians for every 100,000 residents compared to 90.1 nationally.^{xli} While this is more primary care physicians compared with the national average, analysis conducted by the Colorado Health Institute points to regional shortages throughout the state. For example, Cheyenne, Elbert, Kit Carson, and Lincoln counties in the Eastern Plains have the lowest primary care capacity in the state. These counties would need almost a 200 percent increase in primary care physicians in order to meet established provider-to-patient benchmarks. On the other hand, Denver, Boulder, and Broomfield counties have more than sufficient primary care physician capacity.^{xlii}

Experts from the Colorado Department of Public Health and Environment (CDPHE) presented information to the Commission about ways to address the uneven distribution of primary health care professionals. They noted that low supply disproportionately impacts low income, publicly insured, uninsured, and geographically isolated Coloradans.

One of the ways to address the uneven distribution of primary care providers is to give providers incentives to practice in rural and underserved areas. Colorado makes available a number of programs such as the Colorado Health Service Corps and the National Health Service Corps that offer loan repayment and other financial incentives for physicians working in these areas. The Commission recommends that funding be increased and eligibility be widened for existing programs by adding additional provider types and that new programs be developed to attract providers to rural and underserved areas.

One of the biggest challenges in developing rigorous workforce policy options is the lack of regularly available data. For example, while it is possible to analyze the number of providers licensed to practice, many licensed providers do not provide direct patient care. It is also challenging to determine the specific communities where providers are rendering care. These limitations make it difficult to develop supply and demand estimates. The CDPHE is building a database to better analyze workforce capacity. The Commission recommends the continual improvement of data collection in order to better assess workforce and capacity gaps at the community level in order to identify policy solutions to close them.

One effective way to increase the primary care workforce is to strengthen primary care educational capacity. As family medicine residency capacity increases, so will Colorado's supply of family physicians. In Colorado, 65 percent of family medicine graduates practice within 25 miles of where they trained.^{xliii}

However, states have some limitations in this regard. Physician graduate medical education (GME), also referred to as residency training, depends on federal Medicare funding and includes complex federal program rules and regulations that inhibit Colorado's ability to direct or expand training to meet areas of our workforce need. Greater flexibility in GME requirements could help increase the number of primary care physicians.

There are also opportunities to work with local educational institutions to improve the supply of other types of providers. For example, community colleges train community health workers to connect people with services in the community. These workers can support community-based models that can improve access to care.

It is important to underscore the complexity of increasing the supply of medical providers. For example, efforts to graduate more nurses will be stymied if there are not enough faculty to provide coursework or clinical placements to provide training. Understanding the demand of

employers is essential. When new providers graduate, it is essential that the market is prepared to hire them.

Recommendations

- Support and allow people to have meaningful access to primary care and specialty care service. Including but not limited to:
 - Encourage where possible statutory and regulatory changes to enable, health care professionals to practice at the top of their scope of practice.
 - Work with CDPHE, community colleges and others to improve the supply and practice of nonprofessional individuals such as community health workers and other community members that can support efficient and cost effective community based delivery models.
- Direct and support CDPHE to align state efforts, data sets, and assess community needs to assess workforce needs on-going.
- Request that the executive branch and legislature work in conjunction with the Commission on Family Medicine to make revisions to HRSA and CMS concerning the federal Graduate Medical Education (GME) programs rules and regulations.
 - Seek additional slots in training programs in areas of CO workforce need.
 - Seek flexibility in GME requirements, especially in primary care, rural, and underserved training programs.
- Investigate pathways to assist health care professionals seeking rapid entrance to the CO workforce and for those that are foreign trained.
- Promote and support health care providers practicing in identified rural and underserved areas by increasing funding, eligibility, and policies including financial incentives (e.g., increase payment, reduce debt load) for those willing to serve in these areas including but not limited to the National and Colorado Health Services Corps.

Next Steps

The Commission has covered a great deal of ground since its inception. From analyzing spending and costs in the State has started to look ahead at the most promising recommendations to address issues of cost. That said, the Commission still has work to do to meet its legislative mandate.

The Commission moved beyond studies and sought direct input of all Coloradans that it hopes to do again in 2017. The Commission's statewide outreach meetings provided valuable and irreplaceable guidance to the Commission in its recommendations and its future work.

This report proposes a series of recommendations to achieve better, higher-value care for each person. It builds on current initiatives or the best evidence available to address health care costs in each part of our health care system.

The Commission will continue to build on progress to date. The work of the Commission will continue through June 30, 2017. The Commission will continue to work on the topics recommended in this report as well as look at the following topic areas:

- Rural
- Hospitals
- Free Standing Emergency Departments
- End of Life Care
- Market competition
- Consumer Directed Care

Glossary

Access to Care. The ability to obtain needed health care. Factors affecting access to care include insurance, affordability, capacity of the health care workforce and provider location.

Accountable Care Collaborative (ACC). Colorado's signature effort to transform the delivery of primary health care to clients insured by Medicaid. Launched by the Colorado Department of Health Care Policy and Financing (HCPF) in mid-2012, it is separated into seven Regional Care Collaborative Organizations (RCCOs), which provide administrative support. Primary Care Medical Providers (PCMPs) serve as patient medical homes and coordinate care, earning extra payments by meeting performance targets.

All-Payer Claims Database (APCD). A secure database that includes insurance claims data from commercial health insurance plans, Medicare and Medicaid in Colorado. Designed to increase transparency, it was created by the state legislature and is managed by the Center for Improving Value in Health Care.

Bundled Payment. A single payment to a provider or group of providers for all services associated with a health condition, such as diabetes, or an event, such as a heart attack, or a medical procedure, such as hip replacement. Providers receive a share of any savings if the cost is lower than the payment, but lose money if the cost is higher than the payment. Most bundled care episodes have a reasonably well-defined beginning and end. For chronic conditions, a bundled payment covers all treatment over a certain period of time such as 12 months.

Capitation. A financial arrangement between a health insurer and a provider or group of providers in which providers agree to offer a range of services to each covered enrollee in exchange for a fixed per member per month (PMPM) payment. The providers are at financial risk for care that exceeds the monthly payments, but keep the savings if the cost of care is below the monthly payments. Capitated payments are typically adjusted for the risk or severity of patients' conditions. They are often combined with quality metrics to prevent rationing of health care services.

Care Coordination. Efforts to better coordinate the care of patients, including facilitating communication between health care providers, assisting patients with creating self-directed care plans and providing education and self-care techniques.

Chronic Care Management. The coordination of health care and support services to reduce costs and improve the health of patients with chronic conditions, such as diabetes and asthma. These initiatives focus on evidence-based interventions and education to improve patients' self-management skills.

Coinsurance. A method of cost-sharing in which an insured person pays a defined percentage of his or her medical costs after meeting the deductible.

Colorado State Innovation Model (SIM). A proposal for government funding to transform health care delivery in Colorado by providing access to integrated primary care and behavioral health services in coordinated community systems. It is designed to reach 80 percent of residents by 2019.

Comprehensive Primary Care Initiative (CPCI). This initiative fosters collaboration between public and private health care payers to strengthen primary care. Medicare works with commercial and state health insurance plans and offers bonus payments to primary care doctors who better coordinate care for their patients. Colorado, one of seven states or regions nationally that is participating in CPCI, has 73 primary care practices, 335 providers, nine payers and about 41,000 Medicare beneficiaries involved in CPCI.

Consumer-Directed Attendant Supportive Services (CDASS). A Medicaid optional benefit that allows long-term care consumers to hire and supervise personal care attendants who deliver a defined set of services. CDASS allows enrollees to directly purchase and manage the services they need.

Consumer-Driven Health Care. An insurance model that combines a high-deductible health insurance plan with a tax-preferred health savings account. An enrollee may use the account to pay for routine health care expenses up to a certain amount, usually around \$2,000 per year. The model is based on the theory that individuals who are more directly responsible for the cost of routine health care will be more prudent purchasers and consume only what they need to stay healthy.

Cost Sharing. The portion of health care expenses paid by an insured individual, usually a copayment (the amount charged for a service such as an office visit or a prescription) and a deductible (the dollar amount that must be paid before insurance coverage begins).

Copayment. The amount charged to the covered individual for a service such as an office visit or a prescription under an insurance plan.

Deductible. The dollar amount that must be paid by the covered individual before insurance coverage begins. Some services, such as preventive care, are not subject to the deductible.

Electronic Medical Record (EMR). An individual medical and treatment record that has been digitized and stored electronically by a provider. The records contain information about a patient's care and are shared by all providers involved in his or her treatment.

Evidence-Based Medicine. The use of empirical, clinical evidence to inform treatment decisions in order to improve health outcomes.

Fee-for-Service (FFS). A payment method in which an insurer reimburses a physician or hospital for each service provided according to a fee schedule.

Formulary. A list of prescription drugs covered by a health insurance plan. It is also called a drug list.

Free-Standing Emergency Department (FSED). A facility that is structurally separate from a hospital and provides a range of care, from routine to emergency. There are two types: A hospital outpatient department owned and operated by a medical center or hospital system or independent centers owned by individuals or groups. The independent centers do not accept public insurance such as Medicaid or Medicare.

Global Payments. Global payments are the same thing as capitation. (Please see capitation.)

Health Disparity. A difference in health status that is closely linked with factors such as race/ethnicity, religion, socioeconomic status, gender, mental health, sexual orientation, geographic location or disabilities. People negatively affected by health disparities may experience greater social and economic obstacles to health.

Health Insurance Exchange. Also called Health Insurance Marketplace. An online marketplace created by the ACA that allows consumers to comparison shop for health insurance. The tax credits and cost-sharing support contained in the law are available only when plans are purchased through the marketplace. Colorado is one of 16 states and the District of Columbia to create state-based marketplaces. There are 27 federally facilitated marketplaces and seven partnerships. Colorado's marketplace is called Connect for Health Colorado.

Health Insurance Portability and Accountability Act (HIPAA). Law passed by Congress in 1996 to provide health insurance coverage and patient privacy protections. The privacy rules require confidentiality of medical records and other health information provided to health plans, doctors and hospitals. HIPAA also protects health insurance coverage for workers and their families when they change or lose their jobs.

Integrated Care. A patient-centered approach to health care provided by a multidisciplinary team of clinicians. This care may address physical health, oral health, mental health, substance use disorders, health behaviors and more.

Medicaid. The state-federal program created in 1965 to provide government health insurance to those with low incomes who fall within eligibility categories. States had the option to expand

eligibility under the Affordable Care Act beginning in 2014. Colorado's legislature approved the expansion and more than 1 million Coloradans are now enrolled. The Colorado Department of Health Care Policy and Financing (HCPF) oversees the Medicaid program.

Medicaid Waivers. Vehicles that states can use to test new ways to deliver and pay for health care services in the Medicaid program. Waiver requests must be approved by the secretary of Health and Human Services. States can use waivers to implement home- and community- based services programs and managed care. Arkansas is using a waiver to provide premium assistance for Medicaid clients to buy private insurance on the state health insurance exchange.

Medical Home. An increasingly popular model of primary care that is team-based, often in the office of the primary care physician, and coordinated across the care system, including specialty care, hospitals, home health care and community supports. The team oversees all of a patient's health care needs, with a focus on preventive care.

Patient-Centered Medical Home (PCMH). A health care delivery model that emphasizes care coordination and communication to enhance a patient's care. Usually, a patient's primary care provider is considered the medical home and the provider coordinates care with other providers, including specialists. The aim is to provide better care, lower costs and improve the patient experience.

Premium. Amount paid to an insurance company for providing health care coverage for benefits specified in a policy.

Premium Subsidy. Publicly financed assistance to help those with low incomes purchase insurance through a health insurance marketplace, a provision of the Affordable Care Act. The subsidy is calculated based on a sliding scale according to household income. Also known as an advanced premium tax credit.

Preventive Care. Health care that emphasizes the early detection and treatment of diseases. Prevention is intended to keep people healthier, reducing health care costs.

Primary Care. Medical care provided by physicians and other health professionals such as advanced practice nurses, physician assistants and certified nurse midwives. It is geared toward prevention, early intervention and continuous care for basic health care services. Primary care includes pediatrics, general, internal and family medicine and obstetrics and gynecology.

Provider Payment Rates. The total payment a provider, hospital or community health center receives for medical services to a patient. Compensation rates are based on illness category and the type of service administered.

Purchasing Pool. Purchasers, such as small firms and individuals, who join together to leverage their bargaining power when purchasing health insurance. Purchasing pools have the advantage of spreading risk across a greater number of individuals.

Social Determinants of Health. Personal, social, economic, environmental and other circumstances that contribute to a person's health.

Appendix A — Statewide Meetings Documents

Colorado Commission on Affordable Health Care

Statewide Meetings - Adams County



This data is provided to you from the Colorado All Payer Claims Database (CO APCD), Colorado's most comprehensive claims database, empowering smarter decisions in health care. As of this report, the CO APCD contains over 450 million medical and pharmacy claims, and represents 3.5 million unique lives (excluding self-insured). Lines of business included in this report are over 33 commercial payers, Medicaid, and Medicare Advantage.

In addition to reports like these, CO APCD data is available publicly through www.comedprice.org, and non-publicly through custom requests. The CO APCD offers many types of data products to ensure users have access to unique, customized and organized data. Please contact us at ColoradoAPCD@civhc.org for more information.

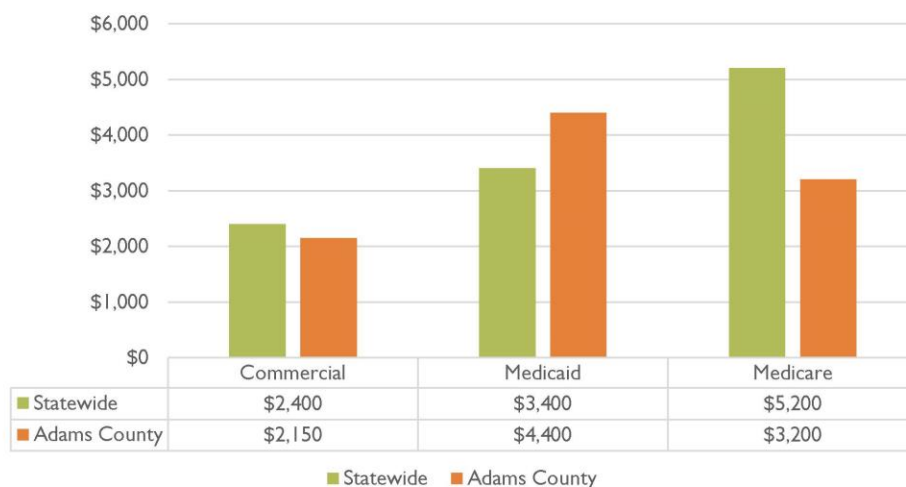
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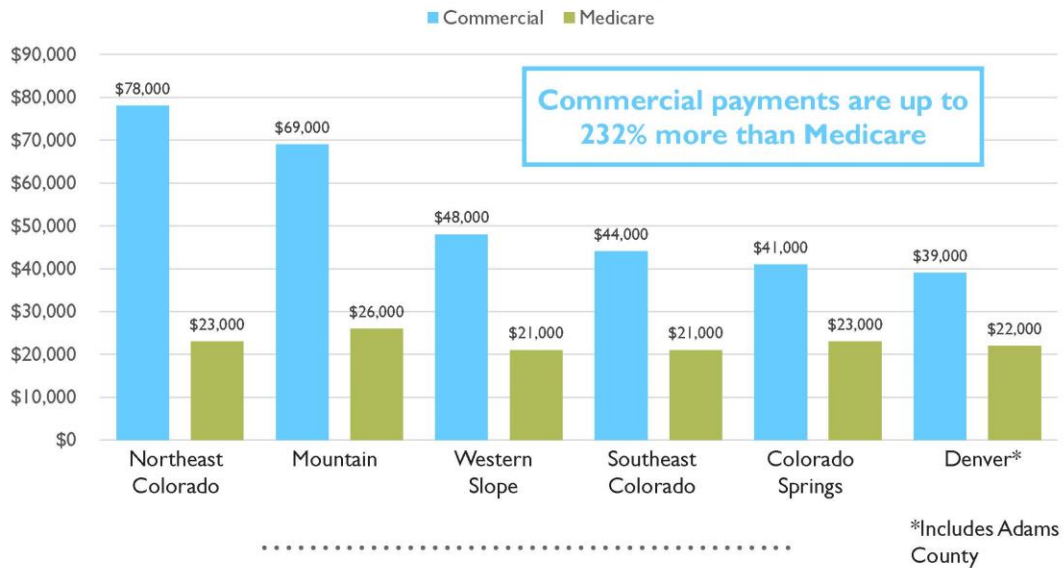
REPORT OVERVIEW

The first data table below shows the average per member, per year payments for Health Statistics Regions (HSR) 14. In addition, a comparison of Colorado hip and knee replacement episode payments (based on the Centers for Medicare and Medicaid Services (CMS) Comprehensive Care for Joint Replacement (CJR) methodology) by Colorado regions is displayed. Finally, a compilation of a variety of average paid amounts for high volume, high cost procedures for HSR 14 are, compared to the statewide averages.

**Average Per Member Per Year (PMPY) Payments for Adams County
Compared to Statewide - 2014**



Colorado Hip/Knee Replacement Average Total Episode Payments - Medicare vs. Commercial, 2014



High Cost, High Volume Procedure Payment Variation - Commercial, 2014

Procedures (APR-DRG, CPT)	Statewide Average	Adams County Average
301 - Hip Joint Replacement	\$28,800	**
302 - Knee Joint Replacement	\$30,300	\$41,000
304 - Dorsal & Lumbar Fusion Procedures (except curvature of back)	\$66,800	\$59,500
45378 - Diagnostic Colonoscopy	\$1,200	\$1,900
45380 - Colonoscopy and Biopsy	\$1,650	\$3,000
45385 - Colonoscopy w/Lesion Removal	\$1,450	\$3,100
70450 - CT Head/Brain w/o Dye	\$950	\$1,950
70553 - MRI Brain Stem w/o and w/Dye	\$1,500	\$1,350
74176 - CT Abdomen and Pelvis w/o Contrast	\$1,300	\$2,100
76705 - Echo Exam of Abdomen	\$300	\$550

RED signifies payments above the statewide average
 GREEN signifies payments below the statewide average

**Insufficient data

Colorado Commission on Affordable Health Care

Statewide Meetings - Alamosa



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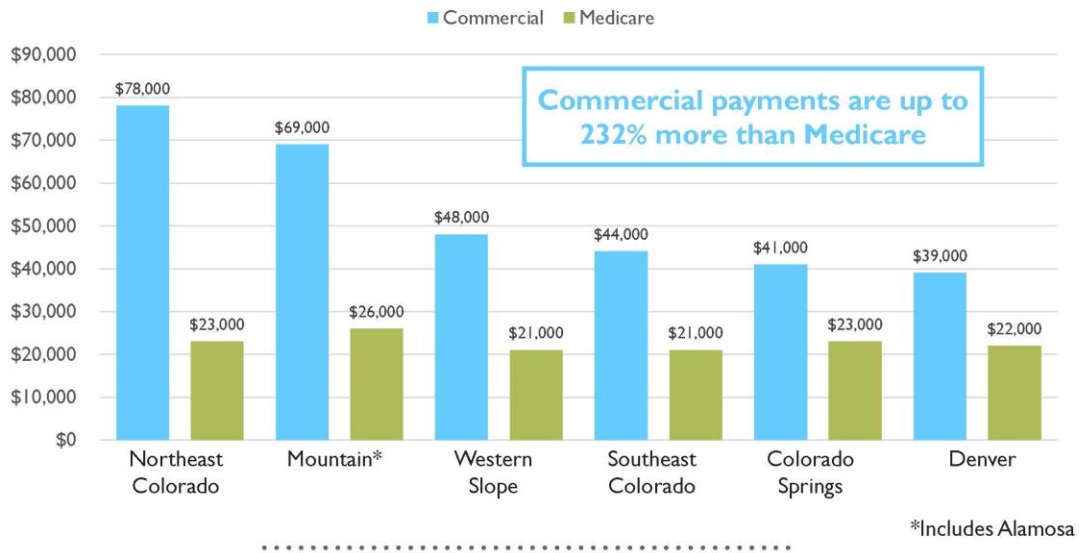
REPORT OVERVIEW

The first data table below shows the average per member, per year payments for Health Statistics Regions (HSR) 8, Alamosa. In addition, a comparison of Colorado hip and knee replacement episode payments (based on the Centers for Medicare and Medicaid Services (CMS) Comprehensive Care for Joint Replacement (CJR) methodology) by Colorado regions is displayed. Finally, a compilation of a variety of average paid amounts for high volume, high cost procedures for HSR 8 is compared to the statewide averages.

Average Per Member Per Year (PMPY) Payments for Alamosa Compared to Statewide - 2014



Colorado Hip/Knee Replacement Average Total Episode Payments - Medicare vs. Commercial, 2014



High Cost, High Volume Procedure Payment Variation - Commercial, 2014

Procedures (APR-DRG, CPT)	Statewide Average	Alamosa Average
301 - Hip Joint Replacement	\$28,800	\$48,400
302 - Knee Joint Replacement	\$30,300	**
304 - Dorsal & Lumbar Fusion Procedures (except curvature of back)	\$66,800	**
45378 - Diagnostic Colonoscopy	\$1,200	\$1,800
45380 - Colonoscopy and Biopsy	\$1,650	\$2,100
45385 - Colonoscopy w/Lesion Removal	\$1,450	**
70450 - CT Head/Brain w/o Dye	\$950	\$1,000
70553 - MRI Brain Stem w/o and w/Dye	\$1,500	\$1,950
74176 - CT Abdomen and Pelvis w/o Contrast	\$1,300	\$1,550
76705 - Echo Exam of Abdomen	\$300	\$300

RED signifies payments above the statewide average
 GREEN signifies payments below the statewide average

**Insufficient data

Colorado Commission on Affordable Health Care

Statewide Meetings - Colorado Springs



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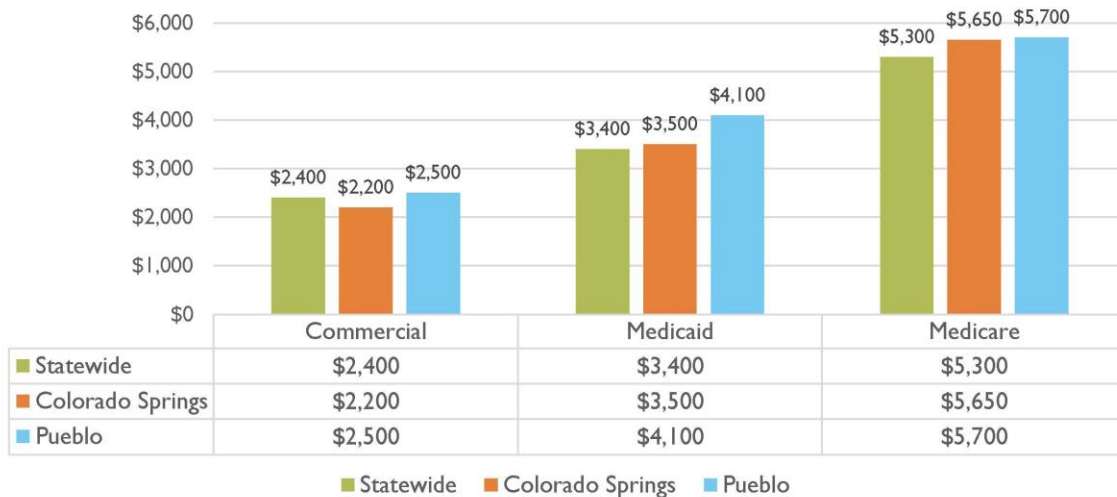
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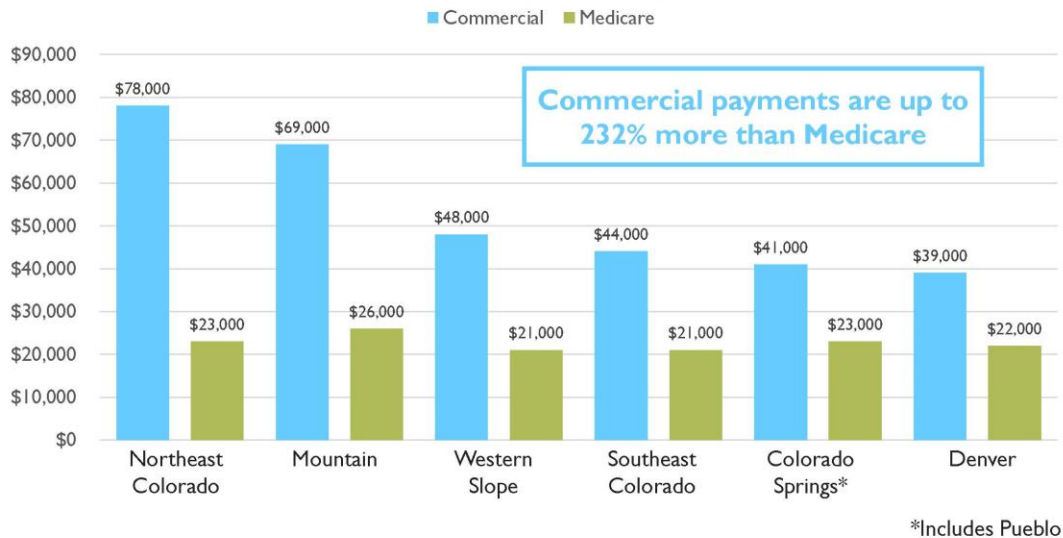
REPORT OVERVIEW

The first data table below shows the average per member, per year payments for Health Statistics Regions (HSR) 4 and 7, Colorado Springs and Pueblo, respectively. In addition, a comparison of Colorado hip and knee replacement episode payments (based on the Centers for Medicare and Medicaid Services (CMS) Comprehensive Care for Joint Replacement (CJR) methodology) by Colorado regions is displayed. Finally, a compilation of a variety of average paid amounts for high volume, high cost procedures for HSRs 4 and 7 are compared to the statewide averages.

Average Per Member Per Year (PMPY) Payments for Colorado Springs and Pueblo Compared to Statewide - 2014



Colorado Hip/Knee Replacement Average Total Episode Payments - Medicare vs. Commercial, 2014



High Cost, High Volume Procedure Payment Variation - Commercial, 2014

Procedures (APR-DRG, CPT)	Statewide Average	Colorado Springs Average	Pueblo Average
301 - Hip Joint Replacement	\$28,800	GREEN \$28,300	RED \$34,600
302 - Knee Joint Replacement	\$30,300	GREEN \$30,100	RED \$37,600
304 - Dorsal & Lumbar Fusion Procedures (except curvature of back)	\$66,800	GREEN \$60,800	**
45378 - Diagnostic Colonoscopy	\$1,200	GREEN \$700	RED \$1,400
45380 - Colonoscopy and Biopsy	\$1,650	GREEN \$1,100	RED \$1,800
45385 - Colonoscopy w/Lesion Removal	\$1,450	GREEN \$800	GREEN \$1,400
70450 - CT Head/Brain w/o Dye	\$950	GREEN \$800	GREEN \$650
70553 - MRI Brain Stem w/o and w/Dye	\$1,500	RED \$1,800	GREEN \$1,000
74176 - CT Abdomen and Pelvis w/o Contrast	\$1,300	GREEN \$1,200	GREEN \$1,100
76705 - Echo Exam of Abdomen	\$300	RED \$350	\$300

RED signifies payments above the statewide average
 GREEN signifies payments below the statewide average

**Insufficient data

Colorado Commission on Affordable Health Care

Statewide Meetings - Grand Junction



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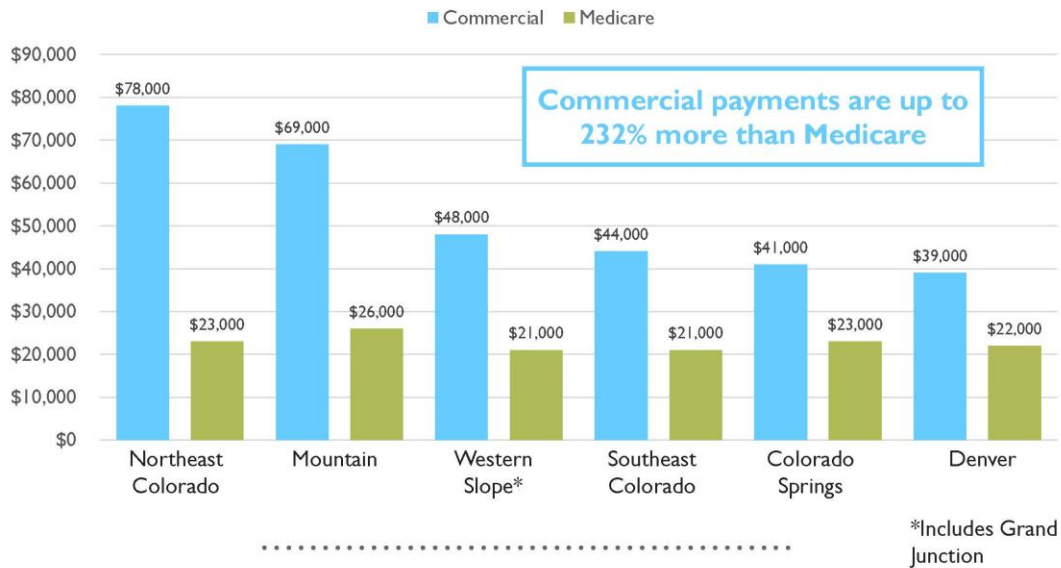
REPORT OVERVIEW

The first data table below shows the average per member, per year payments for Health Statistics Regions (HSR) 19 and 10, Grand Junction and Grand Junction Region, respectively. In addition, a comparison of Colorado hip and knee replacement episode payments (based on the Centers for Medicare and Medicaid Services (CMS) Comprehensive Care for Joint Replacement (CJR) methodology) by Colorado regions is displayed. Finally, a compilation of a variety of average paid amounts for high volume, high cost procedures for HSRs 19 and 10 are compared to the statewide averages.

Average Per Member Per Year (PMPY) Payments for Grand Junction and The Grand Junction Region, Compared to Statewide - 2014



Colorado Hip/Knee Replacement Average Total Episode Payments - Medicare vs. Commercial, 2014



High Cost, High Volume Procedure Payment Variation - Commercial, 2014

Procedures (APR-DRG, CPT)	Statewide Average	Grand Junction Average	Grand Junction Region Average
301 - Hip Joint Replacement	\$28,800	\$39,300	**
302 - Knee Joint Replacement	\$30,300	\$39,700	\$34,600
304 - Dorsal & Lumbar Fusion Procedures (except curvature of back)	\$66,800	\$66,000	**
45378 - Diagnostic Colonoscopy	\$1,200	\$1,350	\$2,400
45380 - Colonoscopy and Biopsy	\$1,650	\$1,350	\$2,400
45385 - Colonoscopy w/Lesion Removal	\$1,450	\$1,000	\$2,500
70450 - CT Head/Brain w/o Dye	\$950	\$1,000	\$800
70553 - MRI Brain Stem w/o and w/Dye	\$1,500	\$2,200	\$1,900
74176 - CT Abdomen and Pelvis w/o Contrast	\$1,300	\$1,800	\$900
76705 - Echo Exam of Abdomen	\$300	\$400	\$300

RED signifies payments above the statewide average
 GREEN signifies payments below the statewide average

**Insufficient data

Colorado Commission on Affordable Health Care

Statewide Meetings - Sterling, Greeley



This data is provided to you from the Colorado All Payer Claims Database (CO APCD), Colorado's most comprehensive claims database, empowering smarter decisions in health care. As of this report, the CO APCD contains over 450 million medical and pharmacy claims, and represents 3.5 million unique lives (excluding self-insured). Lines of business included in this report are over 33 commercial payers, Medicaid, and Medicare Advantage.

In addition to reports like these, CO APCD data is available publicly through www.comedprice.org, and non-publicly through custom requests. The CO APCD offers many types of data products to ensure users have access to unique, customized and organized data. Please contact us at ColoradoAPCD@civhc.org for more information.

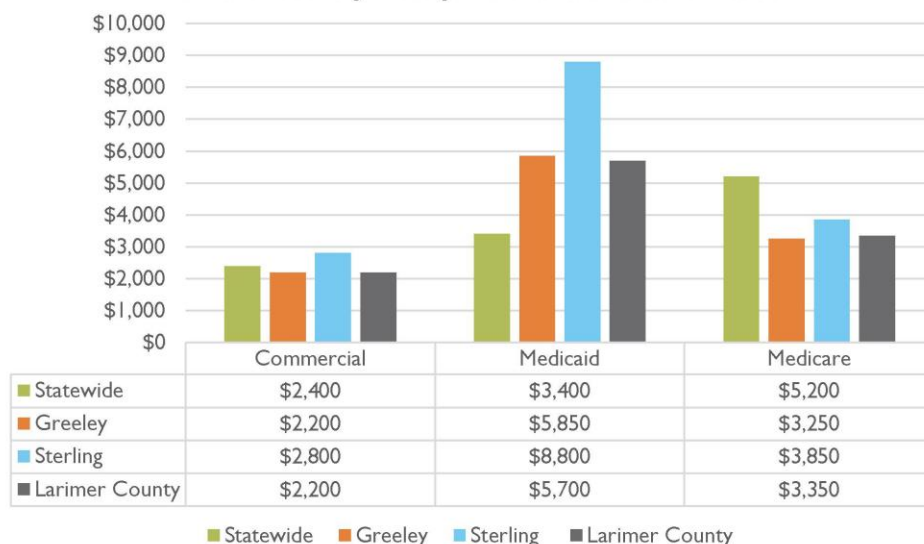
DATA USE AGREEMENT

Any use or disclosure of this CO APCD report is subject to and limited by the CO APCD Data Use Agreement (DUA) and Colorado law. CIVHC takes reasonable steps to ensure CO APCD data integrity but cannot ensure the complete accuracy of data submissions made by payers to the CO APCD.

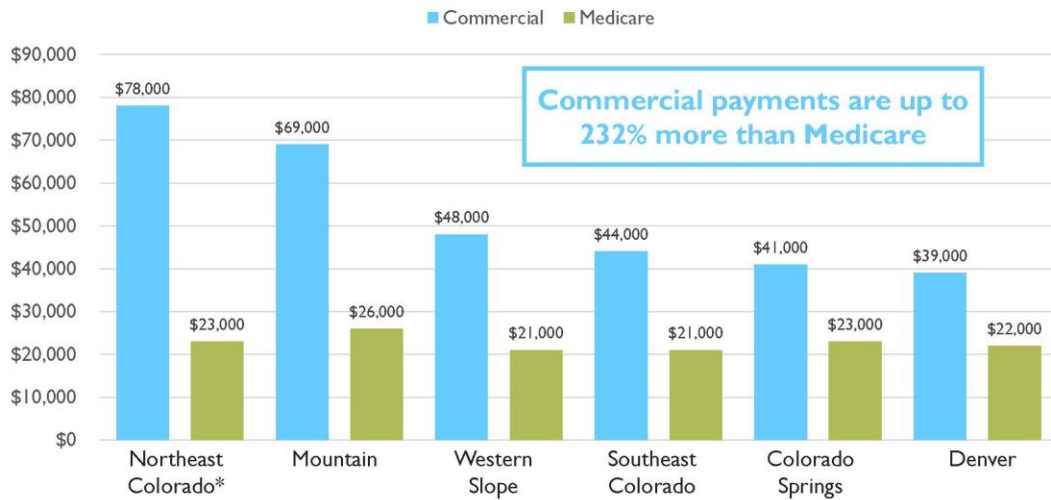
REPORT OVERVIEW

The first data table below shows the average per member, per year payments for Health Statistics Regions (HSR) 18, 1, and 2, Greeley, Sterling, and Larimer County, respectively. In addition, a comparison of Colorado hip and knee replacement episode payments (based on the Centers for Medicare and Medicaid Services (CMS) Comprehensive Care for Joint Replacement (CJR) methodology) by Colorado regions is displayed. Finally, a compilation of a variety of average paid amounts for high volume, high cost procedures for HSRs 18, 1, and 2 are compared to the statewide averages.

Average Per Member Per Year (PMPY) Payments for Greeley, Sterling, and Larimer County Compared to Statewide - 2014



Colorado Hip/Knee Replacement Average Total Episode Payments - Medicare vs. Commercial, 2014



*Includes Greeley, Sterling, & Larimer County

High Cost, High Volume Procedure Payment Variation - Commercial, 2014

Procedures (APR-DRG, CPT)	Statewide Average	Greeley Average	Sterling Average	Larimer County Average
301 - Hip Joint Replacement	\$28,800	\$56,800	\$34,600	\$56,800
302 - Knee Joint Replacement	\$30,300	\$61,000	\$37,600	\$61,000
304 - Dorsal & Lumbar Fusion Procedures (except curvature of back)	\$66,800	\$83,900	**	**
45378 - Diagnostic Colonoscopy	\$1,200	\$2,300	\$1,400	\$2,300
45380 - Colonoscopy and Biopsy	\$1,650	\$3,350	\$1,800	\$3,350
45385 - Colonoscopy w/Lesion Removal	\$1,450	\$3,400	\$1,400	\$3,400
70450 - CT Head/Brain w/o Dye	\$950	\$500	\$650	\$500
70553 - MRI Brain Stem w/o and w/Dye	\$1,500	\$1,300	\$1,000	\$1,300
74176 - CT Abdomen and Pelvis w/o Contrast	\$1,300	\$950	\$1,100	\$950
76705 - Echo Exam of Abdomen	\$300	\$300	\$300	\$300

RED signifies payments above the statewide average
GREEN signifies payments below the statewide average

**Insufficient data

Colorado Commission on Affordable Health Care

Statewide Meetings - Summit County



This data is provided to you from the Colorado All Payer Claims Database (CO APCD), Colorado's most comprehensive claims database, empowering smarter decisions in health care. As of this report, the CO APCD contains over 450 million medical and pharmacy claims, and represents 3.5 million unique lives (excluding self-insured). Lines of business included in this report are over 33 commercial payers, Medicaid, and Medicare Advantage.

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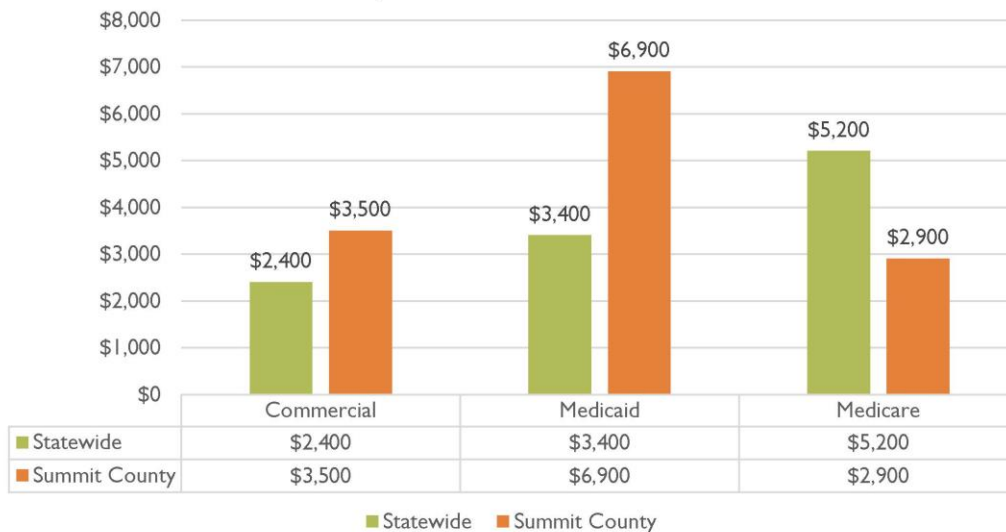
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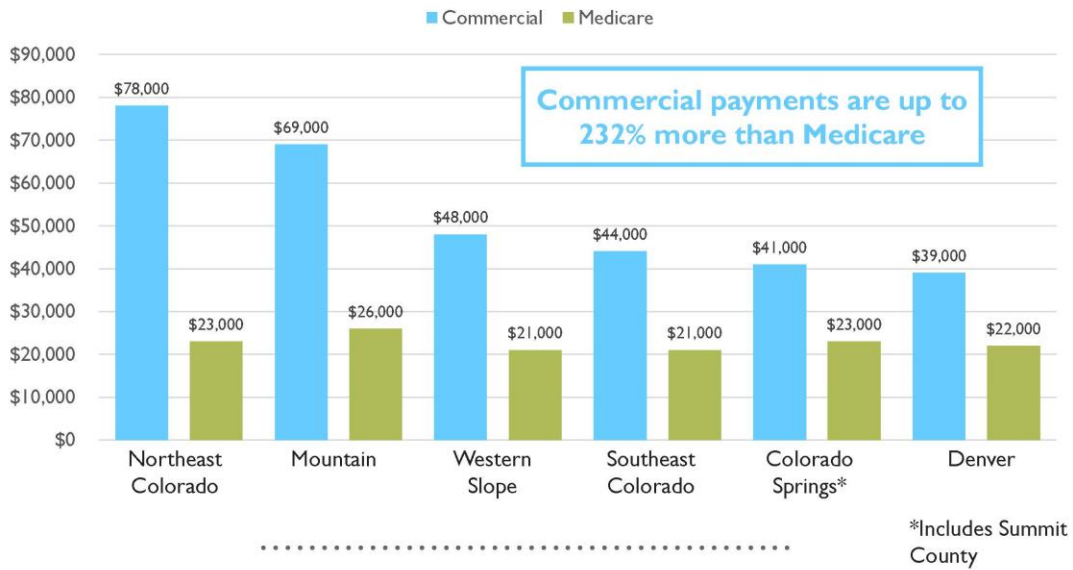
REPORT OVERVIEW

The first data table below shows the average per member, per year payments for Health Statistics Regions (HSR) 12. In addition, a comparison of Colorado hip and knee replacement episode payments (based on the Centers for Medicare and Medicaid Services (CMS) Comprehensive Care for Joint Replacement (CJR) methodology) by Colorado regions is displayed. Finally, a compilation of a variety of average paid amounts for high volume, high cost procedures for HSR 12 are compared to the statewide averages.

Average Per Member Per Year (PMPY) Payments for Summit County Compared to Statewide - 2014



Colorado Hip/Knee Replacement Average Total Episode Payments - Medicare vs. Commercial, 2014



High Cost, High Volume Procedure Payment Variation - Commercial, 2014

Procedures (APR-DRG, CPT)	Statewide Average	Summit County Average
301 - Hip Joint Replacement	\$28,800	\$56,250
302 - Knee Joint Replacement	\$30,300	\$51,500
304 - Dorsal & Lumbar Fusion Procedures (except curvature of back)	\$66,800	\$75,000
45378 - Diagnostic Colonoscopy	\$1,200	\$2,450
45380 - Colonoscopy and Biopsy	\$1,650	\$3,000
45385 - Colonoscopy w/Lesion Removal	\$1,450	\$3,300
70450 - CT Head/Brain w/o Dye	\$950	\$1,250
70553 - MRI Brain Stem w/o and w/Dye	\$1,500	\$2,350
74176 - CT Abdomen and Pelvis w/o Contrast	\$1,300	\$2,400
76705 - Echo Exam of Abdomen	\$300	\$400

RED signifies payments above the statewide average
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**Insufficient data

Endnotes

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