Colorado's Primary Care Payment Reform Collaborative



Sixth Annual Recommendations Report

Acknowledgements

Special thanks to the members of the Primary Care Payment Reform Collaborative who devoted many hours to developing the findings and recommendations presented in this report:

- **Polly Anderson,** Vice President of Strategy and Financing, Colorado Community Health Network
- Josh Benn, Director of Employee Benefits Contracts, Colorado Department of Personnel and Administration
- Isabel Cruz, Policy Director, Colorado Consumer Health Initiative
- Britta Fuglevand, Payment Reform Implementation Unit Supervisor, Colorado Department of Health Care Policy and Financing
- Patrick Gordon, Chief Executive Officer, Rocky Mountain Health Plans
- John Hannigan, Regional Administrator CMS Denver (Region 8), Centers for Medicare and Medicaid Services
- ▶ Steve Holloway, MPH, Health Access Branch Director, Colorado Department of Public Health and Environment
- ▶ Lauren S. Hughes, MD, MPH, MSc, MHCDS, FAAFP, State Policy Director, Farley Health Policy Center; Associate Professor, Department of Family Medicine, University of Colorado Anschutz Medical Campus
- Alexandra Hulst, PhD, LMFT, Practice Manager, Family Health West
- Rajendra Kadari, MD, MPH, FACP, Chief Executive Officer and Co-Founder, Summit Medical Consultants
- Cassana Littler, MD, FAAP, American Academy of Pediatrics Colorado Chapter
- ▶ Amanda Massey, Lead Director, Government Affairs, CVS Health
- **Kevin McFatridge**, Executive Director, Colorado Association of Health Plans
- Amy Scanlan, MD, Chief Medical Officer, Trinsic Clinically Integrated Network
- ▶ **Gretchen Stasica**, ASA, MAAA, Executive Director, Actuarial Services, Kaiser Permanente

Colorado's Primary Care Payment Reform Collaborative

Sixth Annual Recommendations Report

- **5** Executive Summary
- 6 Colorado's Primary Care Payment Reform Collaborative
- 8 Introduction and Key Context
- 11 Recommendations
- 11 Recommendation 1:

Monitor the Impact of Marketplace Dynamics on Colorado's Primary Care Practices

15 Recommendation 2:

Promote Ethical and Equitable Adoption of Artificial Intelligence (AI)

18 Recommendation 3:

Evaluate the Progress of Payment Models in Driving Health Equity

- 20 Conclusion
- 21 Appendix A: Primary Care Payment Reform Collaborative Standard Operating Procedures and Rules of Order
- 21 Appendix B: Primary Care Reform Collaborative Work and Impact Highlights to Date
- 23 Appendix C: Primary Care Spending and Alternative Payment Model Use in Colorado, 2020-2022, Center for Improving Value in Health Care
- **24** Endnotes



Executive Summary

The Primary Care Payment Reform Collaborative (the Collaborative) is pleased to present this sixth annual recommendations report.

Since its creation in 2019, the Collaborative has focused on strengthening primary care through increased investment and advancing the adoption of value-based payment models to support and promote the delivery of high-quality, whole-person and whole-family care that improves health outcomes for all Coloradans. This year, the Collaborative has chosen to focus on three topics: marketplace dynamics that affect primary care practices, new technology such as artificial intelligence (AI), and health equity. Health equity is a long-standing priority for the Collaborative, and marketplace dynamics and AI are two timely and influential topics affecting primary care.

Over the past six years, the Collaborative's recommendations to strengthen primary care have focused on strategies related to care delivery, including integrated care delivery, and payment mechanisms. During that time, however, Colorado and the nation have seen some significant shifts in the primary care landscape. In this report, the Collaborative has chosen to examine overarching trends — marketplace dynamics and Al — that have and will continue to shape primary care and, therefore, the Collaborative's work. Marketplace dynamics, including increasing consolidation and private equity investment, are having large impacts on payers, providers, and ultimately patients, prompting concerns about increased prices, the sustainability of independent practices, and the real and potential negative impacts on patient care. Al tools hold great promise for health and health care. However, these tools also raise concerns regarding their development and deployment. In this report, the Collaborative identifies and discusses concerns and opportunities for both areas.

This report also revisits and expands on recommendations related to health equity,

a core principle that continues to guide the Collaborative's work. This year, the Collaborative focuses on tracking the progress of valuebased payments to address health disparities. These three topics lead to the following recommendations:

Recommendation 1: Monitor the Impact of Marketplace Dynamics on Colorado's Primary Care Practices. Marketplace dynamics of primary care practices, particularly consolidation and private equity investment, should be monitored in Colorado. These dynamics have a direct impact on the quality and cost of health care. An understanding of marketplace trends is necessary to support the primary care workforce and inform future investment in primary care infrastructure.

Recommendation 2: Promote Ethical and Equitable Adoption of Al. New technology, including artificial intelligence (Al) tools, should be thoughtfully adopted into the primary care setting. Valid concerns about Al accuracy, impacts on practice workflow, and consent regarding the rapid adoption of this technology should be meaningfully addressed.

Recommendation 3: Evaluate the Progress of Payment Models in Driving Health Equity.

Payment models should drive meaningful actions to address health equity. This includes incentivizing evidence-informed actions that improve the quality of care and lead to a reduction in disparate health outcomes. The extent to which payment models are successful in addressing disparities and directing quality improvements in health care should be tracked and used to inform model adjustments.

Note: The recommendations in this report are a product of the Collaborative and should not be construed as recommendations or specific opinions of the Division of Insurance (DOI) or Department of Regulatory Agencies (DORA).



Colorado's Primary Care Payment Reform Collaborative

The Primary Care Payment Reform Collaborative was established by House Bill 19-1233. It works to develop recommendations and strategies for payment system reforms to reduce health care costs by increasing the use of primary care. Colorado has been an early leader in primary care payment reform among states. When the Collaborative was established in 2019, Colorado was one of only a handful of states engaged in strategies to increase investment in primary care. Now, at least 20 states are focusing on primary care, through a range of activities including measuring and reporting on primary care spending, setting spending targets, and establishing primary care task forces.¹

The Collaborative is tasked with the following:

- **Recommend** a definition of primary care to the Insurance Commissioner.
- Advise in the development of broad-based affordability standards and targets for commercial payer investment in primary care.
- Coordinate with the Colorado All Payer Claims Database to analyze the percentage of medical expenses allocated to primary care by insurers, Health First Colorado (Colorado's Medicaid program), and Child Health Plan Plus (CHP+).
- Partner with the Department of Health Care Policy and Financing to align primary care quality models with the Collaborative's recommendations through the Accountable Care Collaborative and other alternative payment models.

- Report on current health insurer practices and methods of reimbursement that direct greater resources and investment toward health care innovation and care improvement in primary care.
- Identify barriers to the adoption of alternative payment models by health insurers and providers and develop recommendations to address these barriers.
- Develop recommendations to increase the use of alternative payment models that are not feefor-service in order to:
 - Increase investment in advanced primary care models;
 - Align primary care reimbursement models across payers; and
 - Direct investment toward higher-value primary care services with the aim of reducing health disparities.
- Consider how to increase investment in advanced primary care without increasing costs to consumers or increasing the total cost of health care.
- **Develop** and share best practices and technical assistance with health insurers and consumers.

Collaborative members represent a diversity of perspectives, including health care providers, consumers, carriers, employers, and federal and state health care agencies and departments. Since 2019, the Collaborative has made yearly recommendations on how to develop strategies for increased investment in primary care that deliver the right care in the right place at the right time.

Figure 1: The Collaborative's Impacts to Date

Laying the Groundwork

Definition of Primary Care. Recommended a comprehensive definition of primary care to direct future investment in primary care, which informed <u>House Bill 22-1325</u>.

Collecting Data. Partnered with the Center for Improving Value in Health Care (CIVHC) to develop a method to collect and analyze data on primary care and alternative payment model (APM) expenditures.

Pushing for More Investment

Primary Care Investment Target. Recommended payers increase the percentage of total medical expenditures spent on primary care by at least 1 percentage point annually in 2022 and 2023. This target was implemented by the DOI for commercial payers (Regulation 4-2-72).

Promoting Advanced Primary Care Models. Recommended investment support for advanced primary care delivery including comprehensive, integrated behavioral health and team-based care. This work informed the DOI's development of the Primary Care Implementation Plan reporting requirements established in <u>Regulation 4-2-72</u> and the structure of core competencies APM model parameters rules (<u>Regulation 4-2-96</u>).

Promoting Value-Based Care. Repeatedly recommended increased investment through APMs that prioritize value-based care and continually tracked investment targets through data provided by CIVHC.

Centering Equity

Advancing Equity. Health equity has been centered every year in work and recommendations, including recommendations for data-collection frameworks to support equity-driven care delivery and payment methodologies.

Building Consensus

Multi-Payer Alignment. Recommended building on multi-payer alignment efforts in the state to advance high-quality, value-based care, which led to the <u>Colorado APM Alignment Initiative</u>, a multi-stakeholder engagement effort to discuss and develop recommendations for Colorado-specific, consensus-based APMs that could be used to advance alignment of value-based payment approaches within the public and commercial markets.

National Example. Colorado's work around multi-payer alignment has garnered national attention and contributed to the state's selection to participate in the Health Care Payment and Learning Action Network's <u>State Transformation Collaborative</u> and the Center for Medicare and Medicaid Innovation's new <u>Making Care Primary</u> model.



The Collaborative is scheduled to sunset on September 1, 2025. In October 2024, DORA released its <u>review and recommendation</u> of the Collaborative, which recommended the legislature continue the Collaborative for seven years, until 2032. The General Assembly will decide the next steps for the Collaborative in the 2025 legislative session.

Introduction and Key Context

This year's report of the Primary Care Payment Reform Collaborative (the Collaborative) builds upon earlier recommendations from the five previous annual reports. A summary of past annual reports is available in Appendix B. Historical information about the Collaborative, including previous recommendation reports, is available on the DOI's Primary Care Payment Reform Collaborative website.

The Collaborative reached the findings and recommendations in this report through a process of iterative discussion. The Collaborative held 11 meetings in 2024. All Collaborative meetings are open to the public, with meeting times and locations posted in advance on the Collaborative's website. Time for public comments is reserved during each meeting. Past meeting materials and reports are also available on the website.

Addressing Key Context Surrounding Primary Care

The Collaborative believes primary care is foundational to a highly functioning health care delivery system and reaffirms its north star that increased investment in primary care is needed to improve patient outcomes, increase health equity, and reduce health care costs. Primary care remains an area of underinvestment both at the federal and state levels.² Additional investment is needed as primary care is experiencing immense burnout among clinicians and other health care professionals, low recruitment, and earlier-than-anticipated departure from the workforce. Challenges with affordability and access to health care across Colorado have also been heightened by the end of continuous Medicaid coverage through the Public Health Emergency (see breakout box). These headwinds leave safety net clinics and small, rural, and independent practices in tenuous financial states.

The Public Health Emergency Unwind

The U.S. Department of Health and Human Services Public Health Emergency (PHE) for COVID-19 expired on May 11, 2023.³ This expiration meant that associated provisions, such as continuous enrollment in state Medicaid programs throughout the PHE, also came to an end, and people covered through Health First Colorado, Colorado's Medicaid program, were required to re-enroll.4 According to data from the Kaiser Family Foundation, Colorado saw a larger than anticipated drop in people who were disenrolled from Medicaid.⁵ Many state and local initiatives were established to continue reaching individuals who were disenrolled.

Over the past six years, the Collaborative has made strides in advancing primary care investment through value-based payment in Colorado. The Collaborative's recommendations have helped shape policies within the state, such as the development of a statutory definition of primary care, and informed the development of new regulatory tools, including a primary care investment target for private payers and aligned parameters for primary care alternative payment models (APMs). Collaborative members have offered insights on the methodology for collecting and analyzing primary care and APM spending data. The Collaborative has also taken an active role in addressing emergent issues, notably the COVID-19 pandemic, when it issued recommendations for the use of telehealth in primary care, a modality that remains important to ensuring access to care. The Collaborative also issued recommendations specific to the integration of behavioral health into primary care, recognizing the continuing rise of behavioral health needs, especially among children and youth.

The work of the Collaborative has also played an important role nationally. Colorado was one of four states selected to participate in the **State** Transformation Collaborative (STC), an initiative of the Health Care Payment and Learning Action Network that seeks to accelerate the shift from fee-for-service (FFS) to value-based, personcentered approaches through Medicaid and Medicare collaboration and partnership. In addition, the Center for Medicare and Medicaid Innovation is partnering with Colorado to pilot Making Care Primary, a new primary care model to enhance access to and quality of primary care services. Through Making Care Primary, which launched in July 2024, Colorado has an opportunity to include Medicare in the state's ongoing multi-payer alignment efforts.

However, additional work remains. Changes in the primary care landscape will shape challenges and opportunities for primary care and future efforts to strengthen primary care. The recommendations and discussion in this report focus on two features of the current landscape, marketplace dynamics and artificial intelligence, and one ongoing priority, health equity.

The focus on marketplace dynamics and artificial intelligence acknowledges that primary care is influenced by many factors outside the clinician's office. Changing market trends have implications for the business and sustainability of primary care practices, which affect patients, providers, and payers alike. In recent years, the rapid consolidation of health care practices and systems has had significant effects on independent practices and led to increased health care costs.⁶ Additionally, nationally, private equity investors have taken an interest in the field and made record investments in health care.7 Concerns about the effects of consolidation and private equity are numerous. The Collaborative recommends that trends in these marketplace dynamics in Colorado should be monitored.

The increasing use of AI systems is transforming the health care landscape significantly, including assisting in enhancing efficiency and patient care. Use cases for AI range from reducing administrative burden to assisting with diagnoses. They will continue to evolve. However,

clinicians and staff are concerned Al could cause or exacerbate existing data quality, ethical, and equity issues. Questions remain about how to build and maintain patient trust with this new technology. The Collaborative recommends that Al be thoughtfully adopted into primary care by addressing these questions, engaging end users in the design process, and assessing the applicability of existing laws, regulations, and consumer protections.

Health equity is a long-standing commitment of the Collaborative. Several of its past recommendations have focused on this subject (see second, third, and fifth annual reports in Appendix B: Summary of Previous Annual Reports). This year, the Collaborative has turned its focus to accountability and assessing the progress that value-based payment models can make toward addressing health equity. Several statewide efforts to promote value-based payment models are in progress in Colorado. This year the Collaborative puts forward considerations that can be used to evaluate the impact of these efforts in improving health disparities.

At the time of this report, the Collaborative anticipates the introduction of legislation that would extend the Collaborative to September 2032, based on the recommendation in the Colorado Office of Policy, Research and Regulatory Reform 2024 Sunset Review report. Regardless of the outcome, the Collaborative strongly supports continued action to strengthen primary care. The issues and recommendations in this report provide important insights and considerations for future work.

Update on Investment in Primary Care and Spending Through Alternative Payment Models

To understand spending on primary care in Colorado and track changes in investment over time, the Collaborative has received annual reports on primary care spending and APM use in Colorado from the Center for Improving Value in Health Care (CIVHC).

Total Primary Care Spending. In December 2024, CIVHC presented the most recent findings of spending based on data from the Colorado All Payer

Claims Database for calendar years 2021-2023. This analysis includes commercial, Medicaid, and Medicare Advantage payers. It is important to note that this primary care spending data does not include self-funded employer data. Self-funded plans, in which employers pay for their employee health claims directly, are estimated to comprise around 50% of what most Coloradans think of as the "insurance market" (coverage that is not obtained through a public source such as Medicaid, Medicare, or the Veterans Administration). These plans are not subject to state regulation and therefore are not required to report data to CIVHC.

Key findings from CIVHC data show that primary care spending across all reporting payer types has increased from 15% in 2021 to 18% in 2023. Most payer types showed modest changes in primary care spending, except for Medicare Advantage, which increased from 17% to 27% in this time. Medicaid showed a small increase from 18% to 19%. On the other hand, commercial payers showed nearly no change in spending and Child Health Plan *Plus* (CHP+) showed a decrease, from 17% to 12%. Overall, this demonstrates uneven investment in primary care across payers.

Value-Based Payment Model Spending. In addition to overall primary care spending, CIVHC reports on the percentage of primary care spending that is funneled through APMs, both as a percentage of total medical expenditures and as a percentage of primary care spending. In 2023, value-based APMs (which, for the purposes of this report, exclude risk-based payments and capitated payments not linked to quality) accounted for 28.7% of total medical spending and 54.1% of total primary care spending across all reported payer types. ⁱ

Prospective Payments. Through its recommendations reports, the Collaborative has consistently supported prospective payments to providers and practices. Prospective payments allow greater flexibility to providers to provide care responsive to their patients' needs. In 2023, prospective payments under APMs accounted for 42.5% of total medical and 80.6% of total primary care spending across all reported payer types.

Improving Data Quality. Tracking of primary care and value-based payment model spending is essential for understanding payer investments in primary care. Data from the Colorado All Payer Claims Database provide valuable insights, however certain data challenges remain. Changes in payer systems and reporting processes make it difficult

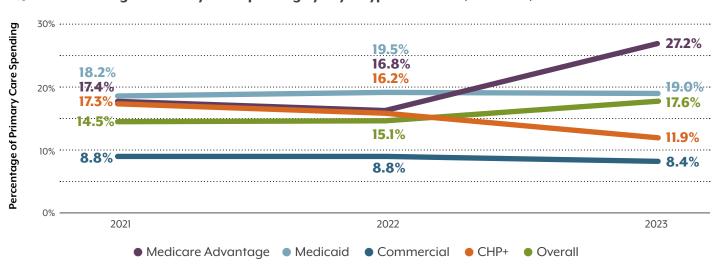


Figure 2: Percentage of Primary Care Spending by Payer Type Over Time (2021-2023)i

Certain payers are excluded from the primary care investment requirements of Colorado Regulation 4-2-72, including Kaiser Permanente Colorado and Denver Health, and the figures reported here. For more information, please see Appendix C for the full CIVHC report on primary care spending and alternative payment model use.

to compile spending data year-over-year. The complexities and nuances of valuebased payment arrangements can also make it difficult to capture and appropriately categorize spending. Payers have continually worked with CIVHC and the DOI to refine their data collection and reporting methodologies. These adjustments improve the process but make it difficult to track investment levels over time.

Currently, CIVHC does not collect data in a way that allows primary care and APM spending to be broken out by age group. Therefore, it is not possible to determine the amount of current spending on children or aging adults. Understanding the flow of resources to patient populations by age group is a priority for the Collaborative and an area of focus for future improvement in data collection.

Additionally, the Collaborative wishes to partner with the Colorado Department of Public Health and the Environment (CDPHE) and CIVHC to better understand where people are getting their primary care and the impact that market disruptors (such as Amazon One) are having in this space. Improved understanding of primary care sources will help contextualize observed changes in primary care spending by commercial, Medicaid, and Medicare Advantage payers.

The Collaborative looks forward to continuing work with CIVHC, CDPHE, and other partners to improve and augment primary care spending and other areas of data collection to ensure the data is as timely and actionable as possible. Additional data on the number of self-insured lives and the impact this current gap in reporting has on observed primary care spend is of interest. While the Collaborative is pleased to see primary care spending increasing in certain lines of business, other trends, particularly the decline for CHP+, raise concerns. Without an increased, sustained investment in primary care systemwide, the impacts on patient outcomes will be limited.

Recommendations

The recommendations and discussion in this report focus on the topics of market dynamics, Al technology, and health equity. As the primary care landscape continues to shift, high-quality health care and equitable treatment that leads to improved patient outcomes must continue to be a clear priority. Payment structures that support these goals are essential to maintaining and improving access to care. The recommendations in this report suggest how to thoughtfully consider these topics in order to lay the foundation for future responsible investment.

Recommendation 1:

Monitor the Impact of **Marketplace Dynamics on Colorado's Primary Care Practices**



Approved by Unanimous Consensus

Marketplace dynamics that influence primary care practices, particularly consolidation and private equity investment, should be monitored in Colorado. These dynamics have a direct impact on the quality and cost of health care. An understanding of marketplace trends is necessary to support the primary care workforce and inform future investment in primary care infrastructure.

Types of Consolidation

Horizontal mergers. Consolidation between entities that offer the same or similar services, such as when a health system acquires a hospital or when two physician practices that provide overlapping services merge.

Vertical mergers. Consolidation between entities that offer different services along the same supply chain, such as when a hospital or health plan acquires a physician practice.

Cross-market mergers. Consolidation between two providers that operate in different geographic markets for patient care.

"Soft" consolidation. Other types of affiliations between health care entities that occur without necessarily changing ownership. Examples include accountable care organizations or joint ventures.

Source: Definitions drawn or adapted from Kaiser Family

Sixth Annual Recommendations Report

Consolidation, Private Equity, and Venture Capital

The nation is seeing an increasing amount of consolidation among health care practices. Consolidation occurs when hospitals, health systems, or other health care entities join under common ownership through a merger or acquisition. Consolidation can take multiple forms, including horizontal mergers, vertical mergers, and cross-market mergers (see breakout box). There are also other types of business relationships, sometimes referred to as "soft" forms of consolidation, such as accountable care organizations and joint ventures.⁵

Private equity investment has been a major driver of consolidation in recent years. Private equity is a form of corporate ownership that often entails relying on loans to acquire a business, taking it private, and attempting to increase its value with the goal of selling it at a profit in three to seven years. While not all consolidation is driven by private equity investment, consolidation of physician practices by private equity has significantly changed the health care market.

Venture capital (VC) is another form of investment in which financial actors take indirect control of health care entities. Venture capitalists often make early-stage investments in innovative startups, but in contrast to private equity, may seek minority shares, rather than controlling interest, and make investment on a longer-term time frame. Venture capital and private equity are forms of the "financialization" of health care, leading to the transformation — and disruption — of the health care market.

National Marketplace Data and Trends

In 2012, 29% of physicians worked for a hospitalowned or health system-owned practice. By 2022, that number increased to 41%. Over this 10-year period, large health care systems grew and captured much of the health care practice market. Now, nationally, the 10 largest health systems account for one in five (22%) of every nonfederal general acute care hospital beds.⁵ In a parallel trend, private equity investment in health care has increased in the past decade. From 2010 to 2019, the estimated annual value of private equity deals in health care increased from \$41.5 billion a year to \$119.9 billion a year.⁶

Understanding the Colorado Landscape

Tracking Colorado's health care market is difficult for two main reasons. First, the different types of consolidation, including "soft" consolidation, paint a complicated picture of partnerships among hospitals, health systems, and practices. Each type of consolidation has different benefits and drawbacks for patients and providers. For example, consolidation could help a financially struggling practice stay open by infusing the practice with money and resources. On the other hand, a larger health system may not be familiar or receptive to a local community's needs and may make decisions to cut needed services. The forces surrounding consolidation are often multifactorial, making it difficult to measure.

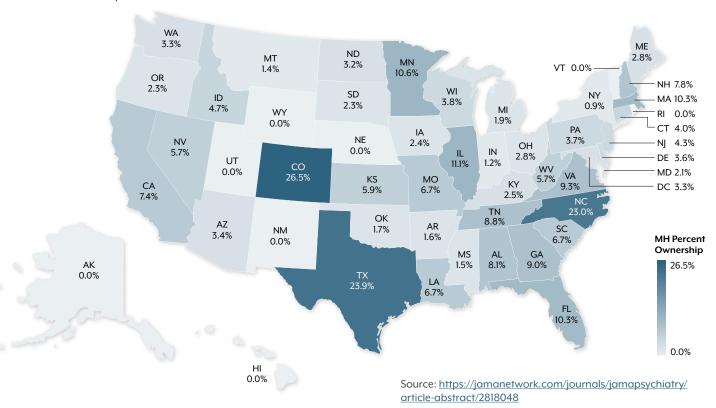
Second, business practices and decisions around consolidation, venture capital investment, and private equity acquisitions are not transparent. Private equity involvement in health care is of particular concern because private equity firms operate under the public and regulatory radar. Many private equity transactions in health care are not reportable to antitrust or financial regulatory authorities. As a result, private equity investment in health care lacks meaningful oversight.⁸

Despite the complications that make the Colorado landscape difficult to track, there are clear examples of significant consolidation and private equity investments in Colorado. In 2022, a national health care provider, VillageMD, bought one of the largest primary care practices in Northern Colorado, Associates in Family Medicine. More recently, the Colorado Attorney General intervened in a monopolization that drove up prices for patients receiving surgical anesthesia services, forcing a health care company, U.S. Anesthesia Partners of Colorado, Inc., to divest some of its practices and pay a fine. The consolidation and private are clear.

Data from the Private Equity Stakeholder Project show that 11 hospitals in both rural and urban

Map 1. Share of Clinical Facilities Owned by Private Equity

Mental Health Outpatient and Residential Facilities



areas in Colorado are either owned or backed by private equity investors. Furthermore, in 2024, Colorado had the highest percentage of mental health outpatient and residential facilities owned by private equity in the nation (26.5%). These examples demonstrate the high level of recent consolidation and private equity investment in health care in Colorado and the importance of tracking these key market trends.

Negative Impacts on Payers, Providers, and Patients

Consolidation and private equity investment raise concerns about negative impacts to payers, providers, and patients given this financialization of the health care sector.¹³

Cost of Care

The rise in health care costs due to consolidation has a clear negative impact on payers and purchasers, who must pay more to cover their members' benefits, and patients, who share in paying this increased cost of care. Evidence

shows that consolidation leads to higher prices for payers and consumers, straining payer budgets and burdening patients and families with high out-of-pocket costs. There is clear evidence that consolidation leads to higher health care costs, particularly for horizontal consolidation. Studies show prices increase anywhere from 3% to 65% as a result of hospital mergers.

Quality of Care

The shift from independent physician-operated practices to corporate or consolidated practice groups has direct impacts on care delivery.

Concerns exist that private equity owners, who do not necessarily have a clinical background, may make decisions that prioritize cost cutting or savings for financial benefit over high-quality patient care or good working conditions for health care staff. However, the evidence is mixed on how general consolidation impacts quality of care overall. One study of Medicare claims found that hospital mergers resulted in no change in 30-day readmission but led to a decrease in patient

experience measures.¹⁶ Other studies have found increased negative health outcomes following consolidations or private equity takeovers. For example, markets with increased consolidation in cardiology showed increases in negative health outcomes, with a 5-7% increase in riskadjusted mortality. Another study of over 662,000 hospitalizations showed that private equity acquisitions resulted in an increase of 25.4% in hospital-acquired conditions, namely risk of falls and IV-associated bloodstream infections. 15 The Nicholas C. Petris Center on Health Care Markets and Consumer Welfare warned that "the private equity business model is fundamentally incompatible with sound health care that serves patients."7

Provider and Practice Experience

Private equity investment is creating larger concern about the extraction of wealth and resources from practices and providers. Evidence shows that selling hospital assets, including real estate, buildings, and equipment, is a common practice in private equity.¹⁷ These decisions can ultimately leave hospitals dealing with unsustainable leases, massive debt, and a dearth of resources.

Increasing consolidation has also led to a proliferation of provider noncompete agreements. Noncompete agreements restrict employees from joining competitors or starting similar businesses within a given timeframe and geographical area after leaving their jobs. 18 These agreements have become widespread in health care; estimates place the percentage of primary care doctors bound by a noncompete as high as 45%. 19 This restricts health care employee and provider options for independence and movement in highly concentrated markets. Noncompete agreements can put downward pressure on wages, worsening health care workforce shortages, particularly in rural areas.²⁰ These agreements can also have negative downstream effects on patient access and choice.21

In Colorado, physicians are afforded some level of protection from noncompete agreements.²² Under Colorado Revised Statutes, noncompete provisions in employment, partnership, or corporate agreements involving physicians cannot

restrict the right of a physician to practice medicine. However, this statute does allow agreements with physicians to include provisions that "require the payment of damages in an amount that is reasonably related to the injury suffered by reason of termination of the agreement," including "damages related to competition." In addition, physicians who leave an employer are narrowly allowed to disclose their continuing practice of medicine and new professional contact information to patients with "rare disorders," but may otherwise be subject to nonsolicitation and confidentiality provisions.

Collaborative members are concerned that physicians may have low awareness of these protections and, as a result, may sign agreements that include noncompete provisions. Additionally, challenging a noncompete or nonsolicitation agreement may be prohibitively expensive or time intensive. The Collaborative is aware of the recent introduction of legislation in Colorado, Senate Bill 25-083, which would amend existing statutes in relation to the practice of medicine, and will be monitoring this bill over the course of the 2025 legislative session.

Role of Value-Based Payment

Value-based payment models could mitigate negative outcomes that result from private equity investment, given their focus on balancing cost savings with high-quality primary care. The Collaborative's work focuses on developing strategies for increased investment in primary care through value-based payment models. In its first recommendations report, the Collaborative recommended an increased investment target. This target was later implemented by the DOI in Regulation 4-2-72, which requires carriers to increase the proportion of total medical expenditures in Colorado allocated to primary care by one percentage point annually in calendar years 2022 and 2023. Rapidly rising health care costs work against this type of investment target and are the reason the Collaborative finds it important to monitor the marketplace dynamics of consolidation and private equity investment. Directing payment reform requires examining how these dynamics impact the flow of payments both on the state and federal levels.

Recommendation 2:

Promote Ethical and Equitable Adoption of Artificial Intelligence (AI)



Approved by Unanimous Consensus

New technology, including Al tools, should be thoughtfully adopted into the primary care setting. Valid concerns about Al accuracy, impacts on practice workflow, and consent regarding the rapid adoption of this technology should be meaningfully addressed.

Key Al Terms

Artificial Intelligence (AI). An engineered or machine-based system that can, for a given set of objectives, generate outputs such as predictions, recommendations, or decisions influencing real or virtual environments. Al systems are designed to operate with varying levels of autonomy.²³

Generative Al. The class of Al models that emulate the structure and characteristics of input data in order to generate derived synthetic content. This can include images, videos, audio, text, and other digital content.24

Bias. A systematic error. In the context of fairness, we are concerned with unwanted bias that places privileged groups at systematic advantage and unprivileged groups at systematic disadvantage.²⁷

Emergence of Al

The use of Al in health care is not new, but use has surged with recent advancements in Al models. In particular, models that take in data and inputs and generate new content, commonly known as generative AI, have become popular. The prevalence of a large, complex health care software ecosystem has facilitated the rapid proliferation of this technology into many practices. In 2022, one fifth of hospitals in the U.S. had adopted some form of Al. The number is likely higher now.²⁵

The applications of Al in primary care are numerous. Al tools can aid with everything from care delivery, such as diagnosis and patient counseling, to administrative tasks, such as managing patient panels, records review and synthesis, and documentation.²⁶ Collaborative members have witnessed increasing use of Al across Colorado in a variety of settings. Health systems and smaller, independent practices are using or have considered using Al to help with administrative tasks. These tasks include documentation, inbox management, and other administrative duties.

Easing Administrative Burden

Primary care providers are tasked with multiple duties beyond simply providing primary care services, such as health-related social needs screening, integration of behavioral health services, collaboration with public health entities, and more. Each of these expectations comes with a host of additional administrative tasks. A recent study of primary care recommendations estimated that physicians would need 27 hours per day to provide the recommended care (preventive, chronic, and acute) to a panel of 2,500 adult patients, including administrative work, such as documentation, managing inboxes, and responding to patient messages.²⁷ The study points to the larger problem of the high workload and administrative burden that accompanies current patient management. The Milbank Memorial Fund's annual 2024 Health of US Primary Care Scorecard Report found that "technology has become a burden to primary care."28 This workload stresses the health care workforce and leads to high levels of burnout among primary physicians.²⁹

Al technology has the potential to decrease time spent on administratively burdensome tasks such as documenting patient encounters, populating visit notes, and retrieving medical records.²⁴ While early signs suggest Al can reduce the time to complete administrative tasks, Collaborative members are concerned that the addition of Al could lead to higher expectations of productivity without meaningful improvement in quality of care. For example, time and capacity gained back through AI may shift to expectations for higher patient loads. A 2018 survey of providers found that many primary care providers report being overloaded with patients, seeing an average of 20 patients per day. Additional research is needed to understand whether AI tools can lead to more quality time with patients or other valuable uses of provider time and how such tools impact patient volume.

Accuracy and Bias

The Collaborative is monitoring potential concerns around accuracy, algorithmic bias, and liability from the use of Al. First, users may experience "over-trust" of AI and become lax about monitoring Al output;³¹ this is a risk for use of Al within primary care settings if staff are not properly trained on these tools and diligent in their use. Second, the quality of outputs produced by Al tools depends on the quality of data input into the tool. If existing patient data from patient panels or charts is inaccurate or incomplete, then its output may also be flawed, potentially leading to incorrect diagnoses or treatment suggestions. These concerns, among many others, point to the need for high levels of testing of the accuracy and appropriate use of Al in health care settings.

Finally, the Collaborative shares concerns that Al may promote or worsen harmful biases if designed with biased assumptions or trained on biased data, which compounds existing social inequities. These biases impact underserved communities, such as communities of color, which can be subject to Al predictions that are less accurate or underestimate the need for care.³²

Inequitable Uptake of Al Technology

The adoption of AI in primary care raises concerns about worsening disparities in access to resources between large, well-resourced and small, under-resourced practices. Due to high overhead costs, small independent and rural practices may lack the financial resources, technological infrastructure, and technical expertise to implement and effectively use AI tools. This could widen an existing gap in access to advanced health care services and resources

for underserved communities. Larger, resourcerich practices may attract providers who have been trained in modern academic and research centers that use such tools. If new providers train on tools that are not available in rural and other underserved areas, it may serve as a deterrent for providers to seek jobs in those areas, worsening workforce disparities.

Patient Consent and Engagement

Data use and consent is a significant concern in the use of Al. No specific federal regulation concerning AI or its use in health care currently exists. However, existing laws and regulations such as the Health Insurance Portability and Accountability Act (HIPAA), the Health Information Technology for Economic and Clinical Health (HITECH) Act, and the Affordable Care Act (ACA) Section 1557 nondiscrimination rules, can be leveraged to ensure responsible use of Al. In Colorado, the legislature has protected consumers from discrimination in the use of Al algorithms (SB24-205). Additionally, Colorado law protects consumers from insurance practices that result in discrimination on the basis of race, color, national or ethnic origin, religion, sex, sexual orientation, disability, gender identity, or gender expression (SB21-169). However, since regulation of discrimination in algorithm data use is still new, it is unclear how these protections will play out. This leaves many patients and other health care stakeholders wary of Al tools.

Currently, whether an Al tool is used in health care and health records is determined by the provider or health system, notably leaving patients out of the loop. In cases where patients are authorizing consent for the use of Al tools, the consent is embedded into forms for patient portals and other platforms that are necessary for communicating with their providers, leaving little choice to meaningfully decline use of Al. This raises the issue of whether patients are allowed the chance to participate in informed consent of these tools.

Surveys highlight patient concern over the use of Al.³³ In 2023, 60% of U.S. adults said

they would be uncomfortable with their provider relying on AI for medical care, with 33% feeling like health outcomes for patients would get worse if AI were involved.³⁴ These concerns raise important questions about the role of AI in the provider-patient relationship. If patients do not trust AI-assisted care, then AI could cheapen clinical advice, even if a physician endorses the advice. Further, if patients do not trust AI, then it may not be appropriate to use it for communication between a provider and a patient.

Answers to these important concerns should be guided by patient voice in the development and use of Al tools. This issue is complex, and not all patients experience technology and trust in the health care system the same way. A variety of patient perspectives is needed to best inform this issue, including patients from different communities, backgrounds, and ages. Part of addressing the issue is designing systems that empower patients to make informed decisions about their data and how it is used. As Al is increasingly adopted, this includes building trust and fostering a more equitable and patient-centered approach.

Payment Considerations for AI

Al tools are beginning to be used to process billing and payments. An analysis of Current Procedural Terminology (CPT) codes created explicitly for medical Al shows there is nascent but growing adoption of Al in health care. Fifty percent of CPT codes associated with Al were created in 2022 or later.³⁵

Aside from direct payment for AI CPT codes, AI has the potential to support other areas of payment. First, risk adjustment is a key component of payment models to support practices that serve complex or high-acuity clients. In its third recommendations report, the Collaborative encouraged the use of social data to improve risk adjustment models. AI tools can theoretically help incorporate social data and needs prediction. However, it is important that AI companies are transparent about when AI is being used and what data is included in risk adjustment so that models can be scrutinized and improved. Many current AI models are trained in adult populations, so care must be taken when applying these models to

other populations. In pediatrics, for example, it's important that risk adjustment take into account whole-family data — and not just patient-specific data — to properly capture risk. Therefore, any AI models applied to pediatric populations would need to be designed with that capability, along with other tailored considerations for this population.

Second, Al tools could be used to support components of primary care delivery that are incentivized or supported through value-based payment structures. This may include supporting advanced primary care activities such as care coordination, same-day triage, patient messaging, and assuring continuity of care. Finally, Al could help support providers and payers in managing patients and therefore support providers' abilities to meet quality metrics associated with value-based payment contracts. Al could help sort through complex or high-volume information to provide key updates to providers so they can be responsive to the health needs of their patients.

The financial impacts of the adoption of Al are still unclear. It is possible the initial cost of the new technology could raise health care costs, but it's uncertain how it may save on costs in other areas. The effects of Al on costs for the provider, payer, and patient should be monitored as the technology is adopted.

The Collaborative believes it is too early to make a recommendation related to payment about this technology. Al brings tremendous potential to benefit primary care by assisting providers in their critical work and reducing the amount of time spent on laborious tasks. However, given the rapid adoption of Al, it is important to be thoughtful about how Al is adopted into the health care setting. These concerns about the use of AI in primary care should be considered by policymakers and health care leaders. The Collaborative wishes to underscore the importance of thinking through how to ethically and equitably adopt use of Al. Patient and provider voice should be a key component of addressing these concerns as the adoption of Al continues to unfold.

Recommendation 3:

Evaluate the Progress of Payment Models in Driving Health Equity



Approved by Unanimous Consensus

Payment models should drive meaningful actions to address health equity. This includes incentivizing evidence-informed actions that improve the quality of care and lead to a reduction in disparate health outcomes. The extent to which payment models are successful in addressing disparities and directing quality improvements in health care should be tracked and used to inform model adjustments.

Focusing on Health Equity in Payment

The Collaborative has consistently elevated the importance of health equity throughout its work and in its past recommendations reports. While past reports have focused on identifying gaps and needs, the focus must now shift to taking action to address these needs.

Data Collection

Data collection to identify disparities and social needs is essential for health equity. The Collaborative has put forward recommendations supporting both types of data collection. In its second annual report the Collaborative recommended that data collection at the plan, health system, and practice level should allow for analysis of racial and ethnic disparities. In its fifth annual report the Collaborative recommended payers should support and incentivize clinician and nonclinician providers working on integrated care teams to collect health-related social needs data through screenings.

Support for Culturally Responsive Care

Throughout its recommendations, the Collaborative has promoted the importance of culturally responsive care. In its third annual report, the Collaborative suggested cultural competency training and implicit bias training as a foundational step for payers and providers to build competence in health equity. It also

emphasized that future work should explore how to quantify the measurement of cultural responsiveness. In its fifth recommendations report the Collaborative emphasized the importance of team-based care payment support in primary care. Team-based care can include nonclinical workforce, such as community health workers, who can provide culturally competent services. Additionally, team-based care can reduce workforce entry barriers by opening positions that require less credentialing and value diverse experiences.

Accountability for Health Equity

The Collaborative has previously shared three guiding principles that are essential to further efforts to improve equity:

- Elevate the voices of individuals and families alongside experts in the health care field.
- Incentivize action to reduce disparities.
- Focus on whole-person and whole-family care.

These principles remain relevant and can be used as a framework to track the progress of payment reform in driving change.

Elevate the voices of individuals and families alongside experts in the health care field.

This guiding principle remains a priority for the Collaborative and for other primary care reform efforts. In 2024, the United States of Care published policy principles to engage patients in "patient-first care." In these principles, changing from fee-forservice to value-based payment is an essential part of reform.³⁶ Any assessment of the success of valuebased payment initiatives should include patient and family voices. Meeting people where they are and hearing patient concerns should be prioritized.

Incentivize action to reduce disparities.

Payment models should continue to be evaluated for whether they are specifically incentivizing providers to take action to reduce disparities. This includes using demographic, social, and health data to understand what impact value-based payments have on disparities. In addition to tracking health trends, examining the design and implementation of these models can help identify opportunities to align best practices to address disparities.

Focus on whole-person and whole-family care.

Payment models should support the importance of social drivers to patient health. Support for clinical and nonclinical providers to conduct health-related social needs screening, referrals, and successful connections to needed services is key. As described in the Collaborative's fifth annual report, the extent to which screening and referring is successful in connecting patients and their families with resources that can address and resolve social needs is an important area of focus to understand progress. In coming years, the implementation of the social health information exchange in Colorado will play a key role in supporting providers' abilities to assess and address patients' social as well as physical needs.³⁷

Examples of Infrastructure to Track Progress

While adequate data collection is foundational to address health equity, additional infrastructure is required to coordinate, evaluate, and promote accountability for health equity. There are examples of payers in other states and at the national level that maintain collaborative initiatives to evaluate the implementation of their value-based models. This includes monitoring cost savings and health outcomes, including any reductions in health disparities.

National Examples

As a result of widening disparities brought on by the COVID-19 pandemic, Aetna's Medicare Multicultural Care Management program employed care managers specifically trained in culturally competent care to work with Black and Hispanic Medicare patients.³⁸

The program focused on holistically meeting the needs of medically complex members through medication management and connections to community resources, with the goal of addressing and closing gaps in care.

Centers for Medicare and Medicaid Services is coordinating the implementation of a new primary care model through the Making Care Primary effort. The goal of this 10.5-year model is to improve quality of care by supporting the

delivery of advanced primary care services such as care coordination and promoting communitybased connections to address health related social needs. The Making Care Primary effort is based on previous models including the Comprehensive Primary Care and Primary Care First models and the Maryland Primary Care Program. Through collaboration with stakeholders in eight states, including Colorado, the Making Care Primary model has made improvements to previous models to advance health equity, demonstrating how collaborative efforts can work together to address disparities. For example, the Making Care Primary Model provides additional capacity building resources to practices new to implementing valuebased care models and helps create more holistic care pathways by facilitating partnerships with state Medicaid agencies, social service providers, federally qualified health centers, and specialty care.39

Massachusetts Example

Blue Cross Blue Shield Massachusetts in 2009 implemented the Alternative Quality Contract, a global payment model that combines an annually adjusted fixed per-patient payment with substantial performance incentive payments. ⁴⁰ In 2019, a rigorous evaluation of the Alternative Quality Contracts of Blue Cross Blue Shield of Massachusetts concluded that the contracts resulted in cost savings and improved quality of care. However, in this evaluation, data was not disaggregated by demographic factors to assess for a reduction in disparities, which limits the ability to understand and draw lessons about the model's impact on health equity. ⁴¹

Michigan Example

Blue Cross Blue Shield Michigan hosts the Michigan Social Health Intervention to Eliminate Disparities (MSHIELD) Collaborative Quality Initiative to evaluate and hold accountable health equity-focused initiatives in hospitals and other collaborative quality initiatives, community organizations, and payers. MSHIELD uses demographic and health data to identify quality improvement goals for equitable health outcomes. This includes developing Health Equity Dashboards to track progress in addressing health equity.

Role of the Collaborative

The Collaborative is interested in tracking and understanding the progress that value-based payment models make in addressing health disparities. Using payment as a tool to prioritize high-quality patient care is an ongoing focus of the Collaborative. As noted, adequate data collection is needed to understand progress. In the future, the Collaborative aims to leverage the Colorado All Payer Claims Database as a source of claims data on alternative payment models. The Collaborative also hopes to explore more examples of robust infrastructure that can support the continued evaluation of value-based payment models, such as the three examples listed above.

Conclusion and Future Work

The recommendations in this report address the long-standing priority of health equity and two timely topics of marketplace dynamics and AI. These recommendations underscore the Collaborative's long-standing commitment to promoting high-quality care for those in Colorado who need it most. At the time of this report, legislation is anticipated to continue the Collaborative's work in increasing and supporting investment in primary care. The Collaborative is looking forward to the prospect of continuing this work and has identified priorities for future work that will focus on measuring investment in primary care and the impact of value-based payments on improving health outcomes.

The Collaborative values its ongoing partnership with CIVHC and hopes to continue using the Colorado All Payer Claims Database to better understand the state of primary care spending and value-based payment model reporting and impacts. An analysis of this data source and other states' efforts can help measure Colorado's progress in supporting primary care and the impact of value-based payments in the primary care setting. Additionally, the

Collaborative would like to increase data transparency by exploring the option of sharing data about primary care spending and value-based payment models in a public dashboard. Such a dashboard could increase both awareness and accountability of steps the state is taking to strengthen the primary care infrastructure.

The Collaborative welcomes the opportunity to continue to explore important topics in primary care payment reform as they arise. Multi-stakeholder discussions around key issues related to both care delivery and payment are important to ensure primary care remains not just viable but is thriving in Colorado. This important work, however, is just a step toward achieving larger state goals around improving patient outcomes, and ensuring all Coloradans have access to high-quality primary care. The Collaborative remains committed to not just increasing investment in primary care but developing strategies to ensure that investment results in accessible, affordable, and equitable care for all. Primary care continues to face headwinds in the rapidly changing health care environment. Payment redesign will help alleviate some of these forces, but processes must be put in place to support payment reform that can deliver streamlined, high-quality, costefficient, patient-centered care by a well-trained and supported workforce.

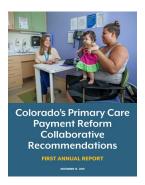


Appendix A:

Primary Care Payment Reform Collaborative Standard Operating Procedures and Rules of Order

A copy of the Primary Care Collaborative Standard Operating Procedures and Rules of Order is available at the following link: https://drive.google.com/file/d/12AvTBMuNE--OleK0qZ2IG4G1e7CKzgPr/view

Appendix B: Summary of Past Annual Reports



First Annual Report | 2019

Definition of primary care. The Collaborative recommends a broad and inclusive definition of primary care, including care provided by diverse provider types under both fee-forservice and alternative payment models.

Primary care investment target. All commercial payers should be required to increase the percentage of total medical expenditures (excluding pharmacy) spent on primary care by at least one percentage point annually through 2022.

Measuring the impact of increased primary care spending. The state should identify and track short-, medium-, and long-term metrics that are expected to be improved by increased investment in primary care.

Investing in advanced primary care models.

Increased investment in primary care should support providers' adoption of advanced primary care models that build core competencies for whole-person care.

Increasing investment through alternative payment models. Increased investment in primary care should be offered primarily through infrastructure investment and alternative payment models that offer prospective funding and incentives for improving quality.



Second Annual Report | 2020

Multi-payer alignment. Multipayer alignment is crucial to the success of alternative payment models, and Colorado should build upon the prior and ongoing work of payers and providers to advance high-quality, valuebased care. Practices need

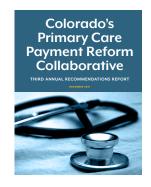
common goals and expectations across payers. Alignment across payers improves efficiency, increases the potential for change, and reduces administrative burden for practices.

Measuring primary care capacity and performance. Measures used to evaluate primary care alternative payment models should be aligned across public and private payers and reflect a holistic evaluation of practice capacity and performance.

Measuring system-level success. Measures to determine whether increased investment in primary care and increased use of alternative payment models are achieving positive effects on the health care system should examine various aspects of care and value.

Incorporating equity in the governance of health reform initiatives. The governance of initiatives to support and enhance primary care services should reflect the diversity of the population of Colorado.

Data collection to address health equity. Data collection at the plan, health system, and practice levels should allow for analysis of racial and ethnic disparities.



Third Annual Report | 2021

Guiding increased investment in primary care.

Investment in primary care should be offered primarily through value-based payments and infrastructure investment. Value-based payments include alternative payment models that

offer prospective funding, provide incentives for improving quality, and improve the accessibility and affordability of primary care services for all Coloradans.

Centering health equity in primary care. Health equity must be a central consideration in the design of any alternative payment model. Value-based payment arrangements should provide resources to support providers and patients in achieving better care and more equitable outcomes.

Integrating behavioral health care within the primary care setting. A variety of effective models for the integration and coordination of behavioral health and primary care should be encouraged and supported through alternative payment models and other strategies.

Increasing collaboration between primary care and public health. Increased investment in primary care should support collaboration with public health agencies to advance prevention and health promotion to improve population health.



Fourth Annual Report | 2022

Aligning quality measures.

Quality measures should be aligned across payers to ensure accountability, standardization, and continuous improvement of primary care alternative payment models. Aligned

quality measure sets may include a menu of optional measures, reducing the administrative burden while still allowing for flexibility.

Improving patient attribution. Patient attribution methodologies for primary care alternative payment models should be patient-focused, clearly communicated to providers, and include transparent processes for assigning and adding or removing patients from a practice's patient attribution list.

Improving risk adjustment. Incorporating social factors into risk adjustment models as a tool to advance health equity is essential to ensure providers have adequate support to treat high-need populations. An evidence-based, proven social risk adjustment model is needed. Additionally, increased transparency is needed around the components of current payer-level risk adjustment models.



Fifth Annual Report | 2023

Payment for behavioral health integration.

Behavioral health integration should be intentionally supported as a key component of increased investment in primary care.

Workforce for behavioral

health integration. Payers should support and promote care delivery strategies that incorporate nonclinical providers as part of the care delivery team to holistically address whole-person and whole-family health needs.

Health-related social needs screening. Payers should support and incentivize clinician and nonclinician providers working on integrated care teams to conduct health-related social needs screening, referrals, and successful connections to needed services.

Medication-assisted treatment. Payers should support primary care providers and members of integrated care teams in offering medication-assisted treatment services through adequate payment that reflects the additional time and training needed to address complex patient needs.

Appendix C: Primary Care Spending and Alternative Payment Model Use in Colorado, 2021-2023, Center for Improving Value in Health Care

A copy of the report is available at the following link:: https://drive.google.com/file/d/1XfNDIGmZTkDGj_UxcPli0UIs-H76s-ri/view

Endnotes

- 1 Goldberg J. et al. Increasing Investment in Primary Care Lessons from States. To the Point (blog). (2024). https://www.commonwealthfund.org/blog/2024/increasing-investment-primary-care-lessons-states
- 2 Committee on Implementing High-Quality Primary Care. Implementing High-Quality Primary Care. (2021) National Academies of Sciences, Engineering, and Medicine. https://nap.nationalacademies.org/catalog/25983/implementing-high-quality-primary-care-rebuilding-the-foundation-of-health
- 3 Centers for Medicare and Medicaid Services. Moving Forward after the COVID-19 Public Health Emergency. Retrieved January 23, 2025. https://www.cms.gov/priorities/health-equity/minority-health/resource-center/moving-forward-after-covid-19-public-health-emergency
- 4 Department of Health Care Policy and Financing. End of the Federal COVID-19 Public Health Emergency. (2023) https://hcpf.colorado.gov/covid-19-phe-planning
- 5 Bichell R. E., Colorado Dropped Medicaid Enrollees as Red States Have, Alarming Advocates for the Poor. (2024) KFF Health News. https://kffhealthnews.org/news/article/colorado-medicaid-unwinding-blue-red-states/
- 6 Levinson Z. et al. Ten Things to Know About Consolidation in Health Care Provider Markets. Kaiser Family Foundation. (2024) https://www.kff.org/health-costs/issue-brief/ten-things-to-know-about-consolidation-in-health-care-provider-markets/
- Walsh C. Private Equity and the Practice of Medicine. (2024). Harvard Magazine. https://www.harvardmagazine.com/2024/05/right-now-private-equity-hosptials
- 8 Scheffler R. M., Alexander L. M., and Godwin J. R. Soaring Private Equity Investment in the Healthcare Sector: Consolidation Accelerated, Competition Undermined, and Patients at Risk. (2021) The Nicholas C. Petris Center on Health Care Markets and Consumer Welfare. https://petris.org/soaring-private-equity-investment-in-the-healthcare-sector-consolidation-accelerated-competition-undermined-and-patients-at-risk/
- 9 Ferrier P. National health care provider VillageMD buys Associates in Family Medicine. (2022) Coloradan. https://www.coloradoan.com/story/money/2022/04/05/villagemd-buys-fort-collins-based-associates-family-medicine/9461515002/
- 10 Colorado Attorney General Phil Weiser. Private equity-run U.S. Anesthesia Partners to end Colorado health care monopoly under agreement with Attorney General Phil Weiser. (2024) https://coag.gov/press-releases/usap-health-care-monopoly-attorney-general-phil-weiser-2-27-2024/
- 11 Private Equity Stakeholder Project. Private Equity Stakeholder Project Private Equity Hospital Tracker. https://pestakeholder.org/private-equity-hospital-tracker/
- 12 Meline M. Chart of the Day: State Variation in Private Equity Ownership in Mental Health and Substance Use Disorder Facilities. (2024) Leonard Davis Institute of Health Economics at the University of Pennsylvania. https://ldi.upenn.edu/our-work/research-updates/chart-of-the-day-state-variation-in-private-equity-ownership-in-mental-health-and-substance-use-disorder-facilities/
- 13 Brunch J. D. et al. The Financialization of Health in the United States. (2024) The New England Journal of Medicine. 390, (2) https://www.nejm.org/doi/abs/10.1056/NEJMms2308188
- 14 Miller J. Care Costs More in Consolidated Health Systems (2023) Harvard Catalyst. https://catalyst.harvard.edu/news/article/care-costs-more-in-consolidated-health-systems/
- 15 Levinson Z. et al. Environmental Scan on Consolidation Trends and Impacts in Health Care Markets (2022) Rand. https://www.rand.org/pubs/research_reports/RRA1820-1.html
- 16 Beaulieu N. Changes in Quality of Care after Hospital Mergers and Acquisitions. (2020) New England Journal of Medicine. 382, (1) https://pubmed.ncbi.nlm.nih.gov/31893515/
- 17 Schrier E. et al. Hospital Assets Before and After Private Equity Acquisition. (2024) JAMA. 332, (8) https://jamanetwork.com/journals/jama/fullarticle/2821826
- 18 Johns Hopkins University Hopkins Business of Health Initiative. The Impact of Noncompetes on Healthcare: 7 Expert Takeaways. (2023) https://hbhi.jhu.edu/news/impact-noncompetes-healthcare-7-expert-takeaways
- 19 American Medical Association (AMA). AMA to Urge End of Noncompete Covenants in Many Physician Contracts. (2023) https://www.ama-assn.org/press-center/press-releases/ama-urge-end-noncompete-covenants-many-physician-contracts
- 20 Federal Trade Commission. FTC Announces Rule Banning Noncompetes. (2024) https://www.ftc.gov/news-events/news/press-releases/2024/04/ftc-announces-rule-banning-noncompetes#xd_co_f=yzM5MGUyYjUtYjRkOS00M2FhLWJkM2MtNzJyNDk0NThmZTA0

- 21 Prasad, A., Goswamy, R., and Bresnahan, R. The past, present, and future of restrictive covenants in medicine in the United States. (2025). Annals of Internal Medicine, 178(1), 70–74. Retrieved February 6, 2025. https://doi.org/10.7326/annals-24-01670
- 22 Colorado Revised Statues. § 8-2-113
- 23 National Institute of Standards and Technology. Glossary. Retrieved January 23, 2025. https://airc.nist.gov/Al_RMF_Knowledge_Base/Glossary
- 24 National Institute of Standards and Technology. Generative Artificial Intelligence. Retrieved January 23, 2024. https://csrc.nist.gov/glossary/term/generative_artificial_intelligence
- 25 Baten R. B. A. How are US hospitals adopting artificial intelligence? Early evidence from 2022. (2024) Health Affairs Scholar. 2, (10) https://academic.oup.com/healthaffairsscholar/article/2/10/qxae123/7775605#google_vignette
- 26 Kuawiti A. et al. A Review of the Role of Artificial Intelligence in Healthcare. (2023) Journal of Personalized Medicine. 13, (6) https://pmc.ncbi.nlm.nih.gov/articles/PMC10301994/
- 27 Porter J. Revisiting the Time Needed to Provide Adult Primary Care. (2022) Journal of General Internal Medicine. 38. https://link.springer.com/article/10.1007/s11606-022-07707-x
- 28 Jabbarpour Y. et al. The Health of US Primary Care: 2024 Scorecard Report No One Can See You Now. (2024) Millbank Memorial Fund. https://www.milbank.org/publications/the-health-of-us-primary-care-2024-scorecard-report-no-one-can-see-you-now/
- 29 Shanafelt T. et al. Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population. (2012) JAMA Internal Medicine. 172, (18) https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1351351
- 30 Weber D. O. How Many Patients Can a Primary Care Physician Treat? (2019) American Association of Physician Leadership. https://www.physicianleaders.org/articles/how-many-patients-can-primary-care-physician-treat
- 31 Zerilli J., Bhatt U., and Weller A. How Transparency Modulates Trust in Artificial Intelligence (2022) Patterns. 3, (4) https://pmc.ncbi.nlm.nih.gov/articles/PMC9023880/
- 32 Mittermaier M., Raza M. M., and Kvedar J. C. Bias in Al-Based Models for Medical Applications: Challenges and Mitigation Strategies. (2023) NPJ Digital Medicine. https://www.nature.com/articles/s41746-023-00858-z
- 33 Robertson C. Diverse Patients' Attitudes Towards Artificial Intelligence (AI) in Diagnosis. (2023) PLOS Digital Health. https://pmc.ncbi.nlm.nih.gov/articles/PMC10198520/
- 34 Tyson A. et al. 60% of Americans Would Be Uncomfortable with Provider Relying on Al in Their Own Health Care. (2023) Pew Research Center. https://www.pewresearch.org/science/2023/02/22/60-of-americans-would-be-uncomfortable-with-provider-relying-on-ai-in-their-own-health-care/
- 35 Wu K. et al. Characterizing the Clinical Adoption of Medical Al Devices through U.S. Insurance Claims. (2023) New England Journal of Medicine Al. https://ai.nejm.org/doi/full/10.1056/Aloa2300030
- 36 United States of Care. Principles to Promote a Health Care System Grounded in "Patient-First Care" (2024) https://unitedstatesofcare.org/wp-content/uploads/2024/09/Patient-first-care-principles-usofcare.pdf
- 37 Office of eHealth Innovation. Social Health Information Exchange (SHIE). Retrieved January 23, 2025. https://oehi.colorado.gov/SHIE
- 38 Beerman L. Aetna Medicare Executive on Healthcare Inequity: 'I Feel More Hopeful.' (2022) Health Leaders. https://www.healthleadersmedia.com/payer/aetna-medicare-executive-healthcare-inequity-i-feel-more-hopeful
- 39 Centers for Medicare and Medicaid Services Innovation Center. How the CMS Innovation Center is Supporting Primary Care. (2024). https://www.cms.gov/files/document/primary-care-infographic.pdf
- 40 Blue Cross Blue Shield Massachusetts Alternative Quality Contract. (2019). Primary Care Collaborative. https://archive.thepcc.org/initiative/blue-cross-blue-shield-massachusetts-alternative-quality-contract
- 41 Song Z. et al. Health Care Spending, Utilization, and Quality 8 Years into Global Payment. (2019) The New England Journal of Medicine. 381, (3) https://www.nejm.org/doi/full/10.1056/NEJMsa1813621



1999 Broadway, Suite 600 • Denver, CO 80202 • 303.831.4200 coloradohealthinstitute.org

