

COLORADO

Primary Care Payment Reform Collaborative Meeting

August 8, 2024









Meeting Goals & Requested Feedback

GOALS

- Discuss implications of AI for primary care
 - Reactions to July presentations
 - Issues/topics of interest or concern
- Discuss systems & market trends in Colorado, and influence on flow of primary care dollars
- Identify next steps, follow-up tasks, and/or needed resources

FEEDBACK

- What are the most pressing issues/topics related to AI and primary care?
- What are priorities for future discussion and/or recommendations related to AI?
- Is there interest/need to incorporate market or system-level dynamics into primary care investment recommendations?



* * Incorporate equity into discussion and recommendations * *

Draft Schedule





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Housekeeping & Announcements



Housekeeping & Announcements

- Meeting minutes approval of May meeting minutes
- Scheduling
 - Hybrid meeting in September details forthcoming
- Primary care/APM reporting stakeholder discussion
 Targeting August 22, 10-11 am invitation forthcoming





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Federal & State Updates



Federal Updates

- Transforming Episode Accountability Model (TEAM) finalized
 - 5-year mandatory model to incentivize coordination between care providers during surgery & services provided 30 days after
 - Requires referral to primary care services to support continuity of care and drive positive long-term outcomes
- Final Rule 2025 Inpatient Prospective Payment System (IPPS) and Long-Term Care Hospital Prospective Payment System (LTCH PPS)
 - Higher payments to hospitals for furnishing care to individuals experiencing homelessness and housing insecurity
 - Promote access to treatments for rural and underserved communities; increased new technology add-on payments to improve access to new gene therapy for sickle cell disease
 - Separate payment to small independent hospitals, including rural hospitals, for establishing/maintaining access to buffer stock of essential medicines

Federal Updates

- Final Rule 2025 Skilled Nursing Facility Prospective Payment System (SNF PPS)
 - Updates SNF Quality Reporting Programs (QRP) to better account for adverse social conditions that impact health
 - Adding 4 new social determinants of health items (one for living situation, two for food, one for utilities) and modifying one SDOH assessment (transportation)
- Final Rule Updates to Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP)
 - Includes addition of four new assessment items in the Social Determinants of Health (SDOH) category: Living Situation, Food, and Utilities to the IRF-Patient Assessment Instrument (PAI)



State Updates

- SB21-169 Stakeholder meetings
 - Health insurance meeting on <u>July 30</u>
 - <u>SB21-169 Protecting Consumers from Unfair Discrimination in</u> <u>Insurance Practices</u>
- HCPF Annual Stakeholder Webinar
 - August 27 from 8-11 am
 - **Register:** <u>https://us02web.zoom.us/webinar/register/WN_yr1yodo2Txa10zITMSc-Mg</u>





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Al in Primary Care



Discussion Questions

- How are you seeing AI impact primary care in Colorado?
 - Impacts on your practice (adoption/workflow)?
 - Impacts on your payments/reimbursements/costs?
 - Impact on patients?
- What are the key implications for primary care and the work of the Collaborative?
 - Payment or other policy levers that you would elevate?
 - Other strategies, considerations
 - Resource allocation
- Specific questions for: federal partners, other states, payers?



Artificial Intelligence - Health Care

Dr. James Barry University of Colorado

Jason Lapham Colorado Division of Insurance

Clinical

- Use in clinical practice
- Benefits and harms
- Governance and risk management frameworks
- Garbage in is garbage out

Insurance

- ° SB21-169
- Unfair discrimination in insurance practices
- Governance and risk management frameworks
- Testing big data systems, external consumer data and information sources, algorithms, and predictive models to identify unfair discrimination against protected classes



Al Terms & Definitions





Key Topics and Themes





Care Delivery





Care Delivery - Patients & Clinicians

- Previous use cases
 - Improve care by suggesting diagnoses or treatment based on patient data
 - Automatic interpretation of complex data
 - Process EHR to suggest additional diagnostic codes for billing
- Tool to support primary care not a substitute for human clinicians' acumen
 - Automating select aspects of work frees time for relationship building and tending
- AI implementation requires robust ethical oversight to avoid perpetuating or worsening inequities in health care
 - Pragmatic, patient-centered research needed
 - Clinicians should partner with informaticists and technology developers

Source: Using Artificial Intelligence to Improve Primary Care for Patients and Clinicians - JAMA Internal Medicine (2024)

Table. Potential Use Cases for AI in Primary Care

Use case	Examples of AI role	
Inbox management	Prioritize patient messages	
	Generate draft responses	
	 Edit physician messages to optimize communication, including for literacy appropriateness 	
Clinician	With transcription software:	
documentation	 Draft progress notes in real time during visits 	
	 Draft prior authorization, disability, and durable medical equipment requests 	
	 Draft a list of billing codes for visits 	
Between-visit panel management	 Accurately identify patients in need of cancer screening using unstructured and structured EHR data to determine exclusions 	
	 Identify patients with incomplete cancer screening (such as missed appointments), automate communication with patients, and provide scheduling and/or staff notification 	
	 Generate tailored messages to patients related to needed between-visit care needs 	
Individualized decision support	 Identify relevant information in structured and unstructured EHR data to prioritize differential diagnoses for new symptoms 	
	 Recommend medication options for chronic conditions, considering prior medication prescriptions, allergies, and intolerances noted in structured and unstructured EHR data 	

Abbreviations: AI, artificial intelligence; EHR, electronic health record.

Care Delivery - Patient Inbox Management

- Notable adoption, usability, and improvement in assessments of burden and burnout
 - Clinical pharmacists had highest utilization for primary care (44%);
 - Net promoter scores favorable among primary care physicians, advance practice practitioners (APPs), primary care clinical pharmacists, but unfavorable among primary care nurses
 - In primary care, modest expectations about message quality improved at end of pilot
- No improvement in overall reply time, read time, or write time
 - Clinicians overall expressed optimism about utility and ability to save time before pilot, and positive perceptions remained largely unchanged afterward
 - Feedback highlighted need for improvements in tone, brevity, personalization
- Cost each time GPT-4 is used to generate a draft response, which could represent substantial expense to US health care delivery system



Table 5. Qualitative Encoding of Free-Text Comments From Postsurveys

		No. of comments				
Theme	Representative quotations	Negative	Neutral	Positive	Total	
Draft message voice and/or tone	Positive: "I was impressed by the tone that varied based on patient's concerns and questions, and felt messaging was overall very professional and clear." Negative: "I think the drafts are great but can further be improved if it did not sound robotic and had a more personable touch."	14	2	10	26	
Future use	Positive: "Please continue to allow us to utilize this tool and spread to other SHC clinics!" Negative: "I still think it's a good idea but not ready for real life situations."	1	0	18	19	
Draft message tool utility	Positive: "Overall this is a very helpful tool." Negative: "Also, it struggled with having draft replies of more nuanced concerns."	4	2	13	19	
Draft message content relevance	Positive: "I especially appreciated the one example where a patient mentioned having frequent UTIs on a certain medication, and the response had pulled in the last 3 lab results from urinalysis!" Negative: "The Reponses often did not accurately reflect the questions. Sometimes way off. Often vague."		1	8	18	
Impact on workflow	Positive: "It helped with the 'translation' cognitive work that I hadn't ever realized I was doing before process of translating my medical understanding into patient-facing language." Negative: "I have to read the actual draft before starting to work on the actual request, as I don't know if the response is even appropriate."	9	0	7	16	
Impact on time	Positive: "It helped save me a lot of time starting from scratch." Negative: "Right now, it is just piling on top of the work that we are already doing, and it is faster for me to type a prose response that I have generated myself."	1	0	12	13	
Draft message length and/or brevity	Positive: "However, the responses are very thorough. I had a patient that needed a refill and the draft wrote out almost a whole letter when I typically would maybe just write a short sentence saying 'Yes, I will send!'" Negative: "Overall the responses seemed unnecessarily wordy in noncontributory ways."	8	2	1	11	
Draft message content accuracy	Positive: "I found the AI-generated draft replies pretty accurate and helpful." Negative: "Sometimes, the AI response was not completely accurate, but it was not difficult to make minor tweaks to the draft."	5	0	4	9	
Impact on patient engagement	Positive: "This may have a positive impact on patient satisfaction with longer messages." Negative: "Patients can tell these responses were AI generated, they are formatted like the AI responses we get on airline websites."	2	2	3	7	
Draft message content completeness	Positive: "Good things are AI can capture all the elements in the message patient sent and address each element." Negative: "The AI responses were a great initial draft, though often required some additional information or editing."	4	0	1	5	
Total	NA	57	9	77	143	

Source: Artificial Intelligence-Generated Draft Replies to Patient Inbox Messages - JAMA Open Network ((2024)

Abbreviations: AI, artificial intelligence; NA, not applicable; SHC, Stanford Health Care; UTI, urinary tract infection.

Care Delivery - Doctor-Patient-AI Relationship

General Perceptions of Al in Medicine

- Majority held optimistic perspective (76.6%)
- Sizeable percentage did not feel comfortable communicating role of AI-based tools to patients
- 72% reported passively learning about AI (popular news sources, casual conversations) vs actively seeking education

Source: Navigating the doctor-patient-AI relationship - a mixed-methods study of physician attitudes toward artificial intelligence in primary care - BMC Primary Care (2025)



Concerns about AI in Primary Care

- Technology concerns algorithmic bias, accuracy, safety
- Medicolegal implications
- Without augmenting system's ability to diagnose and treat patients, AI tools will not be helpful (OSA)
- Potentially lead to increase workload and physician burnout
 - Tools delegating work to physicians (need to verify or redo work)
 - Excessive focus on productivity
- May help or harm physicianpatient relationship
- Current payment structures don't support innovation

Future of Primary Care Workflow

- Shift toward digital health already occurring (in unscheduled and uncompensated way)
- Al tools for chronic disease management and disease screening augmented by remote patient monitoring systems raise considerations on how to allocate physician time hybrid in-person and virtual schedules
- Integration of AI into patientcentered, team-based care
- Role of AI in care coordination

Care Delivery - Doctor-Patient-AI Relationship



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Source: Navigating the doctor-patient-AI relationship - a mixedmethods study of physician attitudes toward artificial intelligence in primary care - BMC Primary Care (2025)

Table 2 Recommendations for primary care stakeholders

Stakeholder	Recommendation
Payors	Implement innovative reimbursement models for PCPs and other primary care team members engaging in digital health
Healthcare Systems	Schedule time and establish standards for PCPs to engage in digital health
Healthcare Systems	Provide PCPs with additional team members such as pharmacists or patient coordinators who can engage digitally with patients
Healthcare Systems	Develop and disseminate educational materials on the proper role of new AI tools to patients and physicians before tool implementation
Researchers	Run RCTs, pragmatic trials, or practice-based research between traditional and digitally enhanced PCP workflows
Researchers	Evaluate new Al-powered digital tools in the context of physician workflow instead of an isolated environment
PCPs	Advocate individually and collectively for Al tools that improve physician care quality, well-being, and the doctor-patient relationship



Thoughts & Reflections?



Payment - Timeline

2015-2020 FDA

- US Food and Drug Administration (FDA) cleared 222 AI devices and European Commission (EC) cleared 240 AI devices
- Approved for clinical use under "software as a medical device" or similar designation

August 2020 CMS

- CMS announced intent to provide coverage for first AI-specific Current Procedural Terminology (CPT) code & creation of first New Technology Add-On Payment (NTAP) for an AI device
- As initial policy, CMS adopted per-use payments for AI

As of 2023 FDA & CMS

- FDA has approved over 500 AI devices/AI-enabled clinical services
- CMS reimburses for at least 8 AI devices



Payment - Timeline

 CPT - apply to inpatient and outpatient

 NTAP - focuses on inpatient

Table 1. Selected AI devices that are reimbursed by US Medicare.				
Manufacturer	Technology	Description	Payment mechanism	Year reimbursement granted
Digital diagnostics	IDX-DR	Deep learning algorithm to diagnose diabetic retinopathy from fundoscopic images in the outpatient setting	СРТ	2020
viz.ai	Viz LVO	Radiological computer-assisted triage and notification software that analyzes CT images of the brain and notifies hospital staff when a suspected large-vessel occlusion (LVO) is identified	NTAP	2020
Rapid AI	Rapid LVO	Al-guided medical imaging acquisition system	NTAP	2020
Caption health	Caption guidance	intended to assist medical professionals in the acquisition of cardiac ultrasound images.	NTAP	2021
viz.ai	Viz SDH	Radiological computer-assisted triage and notification software that analyzes CT images of the brain and notifies hospital staff when a suspected subdural hematoma is identified	NTAP	2022 (candidate)
Rapid Al	Rapid aspects	Computer-aided diagnostic device characterizing brain tissue abnormalities on brain CT images	NTAP	2022 (candidate)
AlDoc	Briefcase for PE	Radiological computer-assisted triage and notification software that analyzes CT images of the chest and notifies hospital staff when a suspected pulmonary embolism is identified	NTAP	2022 (candidate)
PROCEPT BioRobotics Corporation	The AQUABEAM system	Autonomous tissue removal robot for the treatment of lower urinary tract symptoms due to benign prostatic hyperplasia (BPH).	NTAP	2020



Source: Paying for artificial intelligence in medicine - npj digital medicine (2022)

Payment - CMS Approaches

• Potential to lower spending and improve outcomes:



• Current CMS payment pathways:

Bundle new technology with existing service - no initial payment adjustment, adjust service price over time Bundle new technology with existing service - include add-on payment for use of new technology (until new price with AI-enabled component established)

Pay as a separate service



Payment - Potential CMS Strategies

• Balancing market dynamics (charging what market will bear) and innovation

Figure. Examples of US Food and Drug Administration (FDA)-Approved Artificial Intelligence-Enabled Clinical Services and Reimbursement Considerations





Payment - Adoption and Usage

Total Claims	Condition or Medical AI Procedure
67,306	Coronary artery disease
15,097	Diabetic retinopathy
4,459	Coronary atherosclerosis
2,428	Liver MR
591	Multiorgan MRI
552	Breast ultrasound
435	ECG cardiac dysfunction
331	Cardiac acoustic waveform recording
237	Quantitative MR cholangiopancreatography
67	Epidural infusion
4	Quantitative CT tissue characterization
1	Autonomous insulin dosage
1	CT vertebral fracture assessment
1	Noninvasive arterial plaque analysis
0	Facial phenotype analysis
0	X-ray bone density

Average median age of medical AI procedure is about a year (374 days)





Payment - Adoption and Usage

Top Medical AI Procedures and Adoption



Coronary Artery Disease 0501T-0504T



Example product: HeartFlow Analysis



Approved: 2019 CMS: \$930.34 Private: \$909.77





Example product: LuminetricsCore



Approved: 2018 CMS: \$45.46 Private: \$127.81





Example product: Cleerly



Approved: 2019 CMS: \$692.91

Liver MR 0648T, 0649T



Example product: Perspectum LiverMultiScan



Approved: 2017 Private: \$371.55



Source: Characterizing the Clinical Adoption of Medical AI Devices through U.S. Insurance Claims - NEJM AI (2023)

Payment - Adoption and Usage

- Presence of academic hospital had largest effect on likelihood of AI adoption (17 times more likely)
- Metropolitan zip codes had second largest effect (5.25 times more likely)
- High-income zip codes had a 1.45 times likelihood of AI adoption

Table 2. A Multivariate Logistic Regression on Whether a Zip CodeHas at Least One Documented Billing of a Medical AI CPT Code.*

Zip Code Characteristic	Log-Odds Coefficient
High income	0.373†
Metropolitan	1.65†
Has academic hospital	2.85†

 * Only zip codes with at least one institutional NPI (National Provider Identifier) are included in the analysis (n=22,704). AI denotes artificial intelligence, and CPT, Current Procedural Terminology.
 † P<0.001.

Association with at least one medical AI billing:

Zip codes with academic hospital: 71% Zip codes without academic hospital: 9% High income: 18% Low income: 9% Metropolitan: 14% Nonmetropolitan: 3%



Payment - Barriers and Considerations

IMPLEMENTATION BARRIERS

- Addition of AI may require significant changes to clinical workflow
 - Deployment factors: patient consent, internet speed/connectivity, poor lighting
- Value of AI algorithm to clinical practices is a function of health care setting
 - Clinics may operate at deficit for service provided, but patients may be incentivized to visit practices with state-of-art tech
- Medical AI devices need to have clear value proposition, but value of AI is multi-faceted and context dependent

PAYMENT ALTERNATIVES

- Do not offer separate reimbursement
 - Near zero-marginal costs of AI may lead to its overuse
- Include fixed cost with discounts or rebates if certain clinical or economic outcomes are not met
 - Revenue-sharing deal between AI developer and healthcare systems
- Higher reimbursements if certain positive outcomes demonstrated
- Factor in proportion of eligible patients who receive a given services in an "access-maximizing" model





Thoughts & Reflections?



Ethical Frameworks - Research Model

Kenneth Pimple - Heuristic Framework

True

- Trustworthy
- Accurate
- Reproduceable
- Verifiable

Good

- Improve care delivery
- Benefit patients, families, clinicians, public health
- Benefits/burdens equitably distributed
- Privacy

Wise

- Are the right people at table
- Are we asking the right questions



Ethical Frameworks - Health Equity

Objective 1: In what ways may AI effect HI in a primary care setting?

- 1. Algorithmic bias
 - \circ Unrepresentative data sets
 - Underlying biases
- 2. Increased access and the digital divide
 - Worried well
 - Availability & functional access

3. Trust of patients

- Privacy and security
- Preference for AI increased with perceived underlying inequity

4. Dehumanization and biomedicalization

- Adverse impacts on patients with complex needs
- Older patients with co-morbidities

5. Agency for self-care

 Socio-economic differences in attitudes/ability to self-care Objective 2: How is the patient-doctor relationship assumed to be affected by AI and what are implications for health equity

- AI may lead to shifting emphasis from social circumstances to measurable, wider objective observations
- Diabetes support tool: Al perceived to give biomedically sound recommendations but overlooked psychosocial factors
- 94% of GPs believed AI unable to replace GPs roles requiring empathetic ability
 - Loss of knowledge, experience, and intuition in relation to AI and technological progress

Objective 3: How can the implementation of AI affect inequity

- 1. Participatory approaches and community involvement
 - Involvement of target community throughout entire chain
 - Need to "mainstream" fundamental understanding of AI and potential impacts on healthcare and health equity
- 2. Acceptance from care providers, loss of opportunity and equity
 - PCPs too busy, lack resources to effectively adopt new technologies; poor uptake leaves field open to commercial section, likely to cater to "young and well"
 - Overemphasis on rapid change & agility in regulatory environment
 - Overconfidence in Al

Ethical Frameworks - Health Equity

- Role of primary care as mitigator and improver of health equity is dependent on primary care clinician's ability to contextualize care provided, work "outside the box" and see social factors influencing a patient's health
 - Risk that AI and purely biochemical approaches that fail to address psychosocial components will worsen health equity
- How AI is implemented is integral to how well it interacts with current systems and social contexts, and by extension how it affects health equity
 - Risk of AI-augmented interventions being directed toward young, healthy, and well-off
 - Social participation crucial in developing and implementing AI
- Need to look outside isolated clinical context in assessing impact of AI in primary care on health equity



 Most important goal of AI is to do no bad, which means it has to be explicitly and actively equity-promoting

Ethical Frameworks - Health Equity

Thoughts & Reflections?



Discussion Questions

- How are you seeing AI impact primary care in Colorado?
 - Impacts on your practice/community?
 - Impacts on your network(s)?
 - Impact on patients?
- What are the key implications for primary care and the work of the Collaborative?
 - Payment or other policy levers that you would elevate?
 - Other strategies, considerations
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- Specific questions for: federal partners, other states, payers?





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Colorado Marketplace



Flow of Health Care Dollars



Policy Challenges - Social and Health

- As health care spending continues to rise, what are we crowding out?
 - Trade-offs: education, social services, infrastructure
- Expensive, fragmented, and unequal health care system in U.S.
 - Invites predatory behavior from actors looking to exploit opportunities
- Private equity a symptom, not the cause
 - ✓ Policy levers to close loopholes/opportunities & mitigate harms to:



Workforce/Providers

Private Equity - Harms

- Systemic
 - Financialization of health care market "value shifting"
 - Consolidation acceleration thought PE
 - Increased costs; utilization impacts; access

Workforce

- Shifting staffing patterns
- Physician burnout moral crisis
- Loss of autonomy

• Patient care

- Health outcomes
- Costs increased cost-sharing, premium impacts, wage stagnation



Why health care? Why now?

DEMAND SIDE:

- Practice of medicine increasingly complex
- Simplify regulatory compliance, value-based contracting
- Provide administrative backend functions and supports

SUPPLY SIDE:

- Historically low interest rates; debt a cheaper vehicle to finance acquisitions
- Historically low anti-trust scrutiny of acquisitions
- Both have led to "stealth consolidation"
- Initial wave of PE started with acquisitions in hospital-based specialties (emergency medicine, anesthesiology, radiology)
- In last 5-7 years, shift to procedural specialties (dermatology, ophthalmology, GI)
- More recently shift to primary care and behavioral health

Private Equity in Colorado

- U.S. Anesthesia Partners
 - Owned in part by PE firm Welsh Carson Anderson & Stowe
 - Started purchasing anesthesiology practices in Denver Metro Area in 2015
 - By 2021, USAP bought out major competitors and established control of surgical anesthesia at two largest hospitals systems in Denver area (more than 70% of health plan reimbursements
 - Higher costs for consumers, onerous non-compete restrictions on health care professionals, patients facing delays and cancellations of care
 - USAP charged reimbursement rates at 30-40% higher than competing groups

• AGREEMENT WITH COLORADO ATTORNEY GENERAL REACHED IN FEB 2024

- Pay \$200,000 in monetary relief
- Divest exclusive contracts at five Colorado hospitals—St. Anthony Hospital, St. Anthony North Hospital, OrthoColorado Hospital, and Longmont United Hospital in the Denver-Boulder market, and Mercy Hospital in Durango
- Will release and modify non-compete agreements with clinicians to make them less onerous and more narrowly tailored; completely end non-compete agreement practice within 18 months of the agreement taking effect



Additional Practice Acquisitions - Colorado

- Capitol Pain Institute
 - Platform for PE investment firm Iron
 Path Capital
 - Operates clinical and ambulatory surgery centers in four other states
 - In 2023, acquired 3 practices and a surgery center in CO Springs

- OptumCare
 - Physician practice company of UnitedHealth Group
 - Since 2017 has acquired New West Physicians and DaVita Medical Group (including Mountain View Medical Group in Pikes Peak area)



Themes from PCPRC Discussion

- Important to shed light and bring visibility/awareness to issues
 - Promote creative thinking about federal and state policy levers
 - Primary care not a monolithic intervention
- Workforce concerns
 - Lack of new physicians to take place of retiring primary care physicians (not purchasing practices, not pursuing primary care as specialty)
 - Impact of acquisitions on staffing, morale, burnout
- Care quality concerns
 - Harmful clinical outcomes
 - Exacerbate health disparities
- Cost concerns



Centering Question

- Are the payments that we are putting forth by changing payment structures getting to the right places?
 - PE entities capitalizing on opportunity to make money off payment changes
 - Our goal: payments to strengthen primary care delivery and workforce
 - Is that happening, and if not, how do we get in front of that?



Today's Question

• How do market dynamics in Colorado impact flow of primary care dollars?



Participants in CMMI Models





CMMI Models in Colorado

- Primary Care First
 - · 2021 2026
 - 139 provider participants
- Making Care Primary
 - July 2024 Dec 2034
 - 9 participating provider organizations

- Medicare Shared Saving
 Program (MSSP)
 - 6 participating ACOs
 - 146 provider participants
- ACO REACH
 - 14 participants with Colorado service areas



Centering Question

- Are the payments that we are putting forth by changing payment structures getting to the right places?
 - ACO structures
 - Independent rural providers
 - Other



Draft Schedule





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Public Comment





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Thank you!!

