Topic Brief: Alternative Payment Models

Date: 1/09/24
Nomination Number: 1058

Purpose: This document summarizes the information addressing a nomination submitted on June 13, 2023 (link to EHC posted topic nomination) through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

Issue: The nominator of this topic represents the New York State Department of Health on behalf of the Medicaid Medical Directors Network (MMDN). They are interested in whether alternative payment models (APMs) improve patient outcomes, whether the accrued savings are sufficient to be shared with providers, and if the evidence supports one APM strategy over another in Medicaid patient populations. They plan to use the findings of an AHRQ evidence report to adjust the design and reach of APMs within state Medicaid programs and to educate providers and consumers on these models.

Findings:

The EPC Program will develop a new systematic review based on this nomination. The scope of this topic with respect to which advanced models to include will be further developed in the topic refinement phase. When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment.

Background

As of September 2023, more than 88 million individuals were enrolled in Medicaid and the Children's Health Insurance Program (CHIP).[1] There is increasing attention to the cost and value of care in the US healthcare system, and a historical focus on quality and safety. Based on historical trends, healthcare treatment costs are expected to increase significantly in the coming years.[2] Public and private payers are looking for methods to curb spending while maintaining or improving the quality, safety, and equitable access to care across the care continuum.[3] The rapid increase in healthcare spending in the US has led to the creation of novel payment models to ensure the sustainability of the healthcare system. Traditional fee-for-service (FFS) reimbursement models can incentivize the volume of care without accounting for the value and quality of that care.[4] Alternative payment models (APMs) attempt to attach reimbursement to value and quality.

Since the 1980s, the US Centers for Medicare & Medicaid Services (CMS) has driven payment reform using APMs to shift reimbursement away from (FFS) payments. The Centers for Medicare and Medicaid Services define an APM as a reimbursement strategy incentivizing health systems and providers to implement high-quality, cost-efficient care.[5] The Health Care

Payment Learning & Action Network (HCP LAN) is a voluntary group of public and private healthcare leaders who provide thought leadership, strategic direction, and ongoing support to accelerate the adoption of alternative payment models (APMs) in the US.[6]

The HCP LAN APM Framework, is a common vocabulary and pathway for measuring success toward aspirational, national APM adoption goals. The framework classifies APMs in four categories and specifies core principles and design rules for value-based models. Category 3 and 4 APMs in the framework are considered advanced APMs (AAPMs) and qualify for potentially higher reimbursement from the CMS Quality Payment Program.[7] Currently, only 40% of health care dollars spent are in Category 3 & 4 APMs.[8] By 2030, The LAN aspires to see 100% of Medicare and 50% of Medicaid payments in AAPMs nationally.[9] Below are the key components of Category 3 & 4 APMs:

> **APMs Built on Fee-for-Service Architecture (Category 3)**: Blend the traditional Fee-for-Service payment approach with measures to improve care delivery, encourage coordination across the healthcare ecosystem, manage costs and ensure appropriate care while focusing on specific procedures, episodes of care or sets of service.[10]
>
> **Population-Based Payment (Category 4):** A holistic approach to healthcare delivery, focusing on broader care coordination, prevention, and wellness across a defined population, rather than focusing on individual procedures or episodes of care. These payment structures contrast with Fee-for-Service (FFS) arrangements and are designed to encompass a broader scope of care.[10]

As adoption of APMs increase nationally by both public and private payers, models continue to evolve rapidly without strong evidence of effectiveness. The nominator, on behalf of the MMDN, is interested in evidence that APMs improve patient outcomes and control costs in Medicaid populations. They are also interested in whether the accrued savings can be shared with providers, and if the evidence supports the adoption of APMs, and if so, should one APM strategy be promoted over another. A new evidence review by AHRQ could help to close the knowledge gap among policymakers and providers about the effectiveness of Medicare and Medicaid value-based purchasing programs (VBPs).

Scope

1. What is the evidence that value-based payments (alternative payment models) improve patient outcomes for Medicaid patients?
2. Are shared savings in Medicaid value-based payments (alternative payment models) sufficient to support changes in care delivery models?

Table 1. Questions and PICOTS (population, intervention, comparator, outcome, timing and setting)

Questions	1. KQ1 and KQ2
Population	Adult Medicaid patients attributed to provider(s) participating in APM. Adult patients covered by Medicare FFS, Medicare Advantage and commercially insured.
Interventions	HCP-LAN Category 3 or 4 – APM models based shared savings; shared-savings/shared-risk; full capitation.

Comparators	Fee-for-service Medicaid; fee-for-service Medicare; commercially insured.
Outcomes	Total cost of care, hospitalizations, re-hospitalizations, ED visits; mental health metrics including follow-up after ED visits or hospitalizations; measures related to vaccinations, hypertension, and/or diabetes.

Abbreviations: APM=alternative payment model; ED=emergency department HCP-LAN=Health Care Payment Learning & Action Network; KQ=key question.

Summary of Literature Findings

We conducted a targeted search of the literature for existing systematic reviews and primary studies. We identified a total of 41 publications that met our inclusion criteria. (See Table 2.) Based on conversations with the nominators, we only included studies that evaluated category 3 or 4 APMs on the HCP LAN framework. Study populations in the selected publications included Medicare, Medicaid, and dual-eligible beneficiaries.

We found three publications of systematic literature reviews which each addressed both key questions (KQs). One review was focused on APMs for mental health and substance use disorder services[11] and two publications reported on the impact of APM design on patient outcomes, cost of care and patient and provider experiences.[12, 13] We did not find any high-quality systematic evidence reviews that covered the concerns of the nominators.

In addition to the systematic literature reviews, we also found a total of five controlled trials, four of which were randomized trials[14-17] and one which was not randomized.[18] Three of the trials addressed bundled payment APMs for joint replacement surgery,[14, 16, 17] one was focused on shared savings within ACOs[15] and the final study explored integrated primary care with behavioral health services.[18] Three trials addressed KQ1[14, 15, 17] and three trials addressed KQ2.[16-18]

The remainder of the publications (n=33) were of primary studies with the majority using retrospective (n=24) or prospective (n=6) cohort study designs using large data sets from Medicare and Medicaid.

Eighteen publications addressed KQ1. Of these, seven studies focused on accountable care organizations/shared savings;[19-25] one focused on a multi-state, primary care home model;[26] five focused on capitation/global budgets;[27-31] and five focused on bundled payments/episodes of care.[32-36]

Twenty-seven publications addressed KQ2. Of these, ten studies focused on accountable care organizations/shared savings;[19, 21, 24, 37-43] two focused on primary care/behavioral health home models;[26, 44] five focused on capitation/global budgets;[27, 29-31, 45] and ten focused on bundled payments/episodes of care.[32-34, 36, 46-51]

See Appendix A for additional details about literature search methods.

Table 2. Systematic reviews and primary literature by KQ

Question	Reviews	Primary Research
KQ 1: APMs & Patient Outcomes	Total: 3 • Cochrane: 0 • AHRQ: 0	Total: 21 Trials: (3) • RCT (3)

(n=21*)	• Other: Narrative Review (3)[11-13] Focus of Reviews: • Mental health and substance use disorders[11] • Impact of value-based payments on patient outcomes, cost, and patient & provider experience[12, 13]	• ACOs/MSSP/PCMH/GB[15] • BP/EOC[14, 17] Observational/Qualitative (18) • ACOs/MSSP (7)[19-25] • PCMH (1)[26] • Capitation/GB (5)[27-31] • BP/EOC (5)[32-36]

KQ 2: APMs & Cost Savings *(n=31*)*	Total: 3
	
	• Cochrane: 0
	• AHRQ: 0
	• Other: Narrative Review (3)[11-13]
	
	Focus of Reviews:
	• Mental health and substance use disorders[11]
	• Impact of value-based payments on patient outcomes, cost and patient & provider experience[12, 13]
		Total: 30
		
		Trials: (3)
		• RCT (2)
		  • ACOs/MSSP/PCMH/GB[16]
		  • BP/EOC[17]
		• nRCT (1)
		  • ACOs/MSSP/PCMH/GB[18]
		
		Observational/Qualitative (27)
		• ACOs/MSSP (10)[19, 21, 24, 37-43]
		• PCMH/BHH (2)[26, 44]
		• Capitation/GB (5)[27, 29-31, 45]
		• BP/EOC (10)[32-34, 36, 46-51]

Abbreviations: ACO=accountable care organization; APM=alternative payment model; BHH=behavioral health home; BP=bundled payment; EOC=episode of care; GB=global budget; KQ=key question; MSSP=Medicare Shared Savings Program; nRCT=non-randomized controlled trial; PCMH=primary care medical home; RCT=randomized controlled trial.

Summary of Selection Criteria Assessment

Alternative Payment Models (APMs) represent an increasing percentage of US healthcare providers' public and private reimbursement methods. However, as payers continue to seek effective ways to control rising costs without compromising patient safety and quality and equitable access to care, new models arise without clear evidence of benefits for specific populations and care contexts. A new evidence review that addresses questions related to the impact of APMs in Medicaid populations would be a welcome addition to the national conversation around effectively moving the US healthcare system from volume to value.

Please see Appendix B for detailed assessments of individual EPC Program selection criteria.

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Appendix A: Methods

We assessed nomination for priority for a systematic review or other AHRQ Effective Health Care report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix B for detailed description of the criteria.

Appropriateness and Importance

We assessed the nomination for appropriateness and importance.

Desirability of New Review/Absence of Duplication

We searched for high-quality, completed or in-process evidence reviews published in the last three years (October 30, 2020 – October 30, 2023) on the questions of the nomination from these sources:

- AHRQ: Evidence reports and technology assessments
  - AHRQ Evidence Reports https://www.ahrq.gov/research/findings/evidence-based-reports/index.html
  - EHC Program https://effectivehealthcare.ahrq.gov/
  - US Preventive Services Task Force https://www.uspreventiveservicestaskforce.org/
  - AHRQ Technology Assessment Program https://www.ahrq.gov/research/findings/ta/index.html
- US Department of Veterans Affairs Products publications
  - Evidence Synthesis Program https://www.hsrd.research.va.gov/publications/esp/
  - VA/Department of Defense Evidence-Based Clinical Practice Guideline Program https://www.healthquality.va.gov/
- Cochrane Systematic Reviews https://www.cochranelibrary.com/
- ECRI Institute ECRI | Trusted Voice in Healthcare
- Epistemonikos https://www.epistemonikos.org/
- PCORI https://www.pcori.org
- University of York Centre for Reviews and Dissemination database https://www.crd.york.ac.uk/CRDWeb/
- PROSPERO Database (international prospective register of systematic reviews and protocols) http://www.crd.york.ac.uk/prospero/
- PubMed https://www.ncbi.nlm.nih.gov/pubmed/
- Clinical Trials.gov ClinicalTrials.gov

Impact of a New Evidence Review

The impact of a new evidence review was qualitatively assessed by analyzing the current standard of care, the existence of potential knowledge gaps, and practice variation. We considered whether it was possible for this review to influence the current state of practice through various dissemination pathways (practice recommendation, clinical guidelines, etc.).

Feasibility of New Evidence Review

The impact of a new evidence review was qualitatively assessed by analyzing the current standard of care, the existence of potential knowledge gaps, and practice variation. We considered whether it was possible for this review to influence the current state of practice through various dissemination pathways (practice recommendation, clinical guidelines, etc.).

Search strategy

MEDLINE ALL (Ovid) <1946 to October 30, 2023>
Date searched: October 31, 2023
1 prospective payment system/ or reimbursement, incentive/ (10195)
2 ("alternative payment$1" or APM$1 or capitated or (pay adj2 performance) or P4P$1 or "prospective payment" or PPS$1 or "shared saving$1").ti,ab,kf. (19055)
3 or/1-2 (25517)
4 Medicaid/ (27964)
5 (CMS or Medicaid).ti,ab,kf. (48941)
6 or/4-5 (58947)
7 Outcome Assessment, Health Care/ or exp Patients/ or Quality Indicators, Health Care/ (180171)
8 (beneficiar* or inpatient$1 or outcome$1 or outpatient$1 or patient$1).ti,ab,kf. (9174445)
9 or/7-8 (9211192)
10 and/3,6,9 (1035)
11 limit 10 to english language (1034)
12 limit 11 to yr="2020 - 2024" (175)
13 12 and ((meta-analysis or systematic review).pt. or (meta-anal* or metaanal* or ((evidence or review or scoping or systematic or umbrella) adj3 (review or synthesis))).ti.) (5)
14 limit 11 to yr="2018 - 2024" (284)
15 14 and ((controlled clinical trial or randomized controlled trial).pt. or (control or controls or controlled or placebo$1 or random* or trial*).ti,ab,kf.) (50)
16 14 and (Cohort Studies/ or Comparative Study/ or Controlled Before-After Studies/ or Cross-Sectional Studies/ or exp Evaluation Studies as Topic/ or Follow-Up Studies/ or Interrupted Time Series Analysis/ or Longitudinal Studies/ or Prospective Studies/ or Retrospective Studies/ or (cohort$1 or "before-after" or ((comparative or evaluation) adj3 study) or cross-sectional or (difference adj3 differences) or follow-up or "interrupted time" or longitudinal$2 or prospective$2 or retrospective$2).ti,ab,kf.) (151)

Cochrane Central Register of Controlled Trials (Ovid EBM Reviews) <September 2023>
Date searched: October 31, 2023
1 prospective payment system/ or reimbursement, incentive/ (165)
2 ("alternative payment$1" or APM$1 or capitated or (pay adj2 performance) or P4P$1 or "prospective payment$1" or PPS$1 or "shared saving$1").ti,ab. (1381)
3 or/1-2 (1484)
4 Medicaid/ (386)
5 (CMS or Medicaid).ti,ab. (2391)
6 or/4-5 (2430)
7 Outcome Assessment, Health Care/ or exp Patients/ or Quality Indicators, Health Care/ (13694)
8 (beneficiar* or inpatient$1 or outcome$1 or outpatient$1 or patient$1).ti,ab. (1357207)
9 or/7-8 (1358775)
10 and/3,6,9 (49)
11 limit 10 to english language (49)
12 limit 11 to yr="2018 - 2024" (17)

APA PsycInfo (Ovid) 1806 to October Week 3 2023
Date searched: October 31, 2023
1 Health Care Reimbursement/ (41)
2 ("alternative payment$1" or APM$1 or capitated or (pay adj2 performance) or P4P$1 or "prospective payment" or PPS$1 or "shared saving$1").ti,ab. (3153)
3 or/1-2 (3192)
4 Medicaid/ (2900)
5 (CMS or Medicaid).ti,ab. (8510)
6 or/4-5 (8639)
7 "Quality of Care"/ or exp Patients/ or exp Treatment Outcomes/ or exp "Treatment Process and Outcome Measures"/ (266795)
8 (beneficiar* or inpatient$1 or outcome$1 or outpatient$1 or patient$1).ti,ab. (1190737)
9 or/7-8 (1269466)
10 and/3,6,9 (147)
11 limit 10 to english language (147)
12 limit 11 to yr="2020 - 2024" (22)
13 12 and ((evidence or review or scoping or systematic or umbrella) adj3 (review or synthesis)).ti. (0)
14 limit 12 to ("0830 systematic review" or "1200 meta analysis") (0)
15 limit 11 to yr="2018 - 2024" (32)
16 15 and (control or controls or controlled or placebo$1 or random* or trial*).ti,ab. (3)
17 limit 15 to "0300 clinical trial" (0)
18 or/16-17 (3)
19 15 and (cohort$1 or "before-after" or ((comparative or evaluation) adj3 study) or cross-sectional or (difference adj3 differences) or follow-up or "interrupted time" or longitudinal$2 or prospective$2 or retrospective$2).ti,ab. (9)
20 limit 15 to ("0430 followup study" or "0450 longitudinal study" or "0451 prospective study" or "0453 retrospective study" or 1800 quantitative study or 2100 treatment outcome) (25)
21 or/19-20 (25)

ClinicalTrials.gov
Date searched: October 31, 2023
("alternative payment" OR APM OR capitated OR "pay for performance" OR P4P OR "prospective payment" OR "shared savings") AND (CMS OR Medicaid) | Recruiting, Not yet recruiting, Active, not recruiting, Enrolling by invitation Studies | First posted from 01/01/2018 to 10/31/2023 (0)

PROSPERO
Date searched: October 31, 2023
("alternative payment" OR APM OR capitated OR pay-for-performance OR P4P OR "prospective payment" OR "shared savings") AND (beneficiaries OR inpatient OR outcome OR outpatient OR patient) AND (Systematic Review OR Meta-Analysis):RT WHERE CD FROM 30/10/2020 TO 31/10/2023 (28)

EPISTEMONIKOS
Date searched: October 31, 2024
(title:((title:("alternative payment" OR APM OR capitated OR pay-for-performance OR P4P OR "prospective payment" OR "shared savings") OR abstract:("alternative payment" OR APM OR capitated OR pay-for-performance OR P4P OR "prospective payment" OR "shared savings")) AND (title:(CMS OR Medicaid) OR abstract:(CMS OR Medicaid)) AND (title:(beneficiaries OR

inpatient OR outpatient OR patient) OR abstract:(beneficiaries OR inpatient OR outpatient OR patient))) OR abstract:((title:("alternative payment" OR APM OR capitated OR pay-for-performance OR P4P OR "prospective payment" OR "shared savings") OR abstract:("alternative payment" OR APM OR capitated OR pay-for-performance OR P4P OR "prospective payment" OR "shared savings")) AND (title:(CMS OR Medicaid) OR abstract:(CMS OR Medicaid)) AND (title:(beneficiaries OR inpatient OR outpatient OR patient) OR abstract:(beneficiaries OR inpatient OR outpatient OR patient)))) (23)

Value

We assessed the nomination for value. We considered whether the clinical, consumer, or policymaking context had the potential to respond with evidence-based change, if a partner organization would use this evidence review to influence practice, and if the topic supports a priority area of AHRQ or the Department of Health and Human Services.

Appendix B. Selection Criteria Assessment

Selection Criteria	Assessment
1. Appropriateness	
1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the United States?	Yes. Value-based payments (alternative payment models) focused on improving quality and reducing costs are increasingly the norm for the United States healthcare system.
1b. Is the nomination a request for an evidence report?	Yes. The MMDN need reliable evidence to guide their policymaking, including what reimbursement models work best to improve quality and control costs of care.
1c. Is the focus on effectiveness or comparative effectiveness?	Yes. APMs have been in use for over 10 years but there is still not consensus over which models work best, for which populations, and in which settings.
1d. Is the nomination focus supported by a logic model or biologic plausibility? Is it consistent or coherent with what is known about the topic?	Yes.
2. Importance	
2a. Represents a significant disease burden; large proportion of the population	Yes. As of September 2023, 81,408,432 individuals were enrolled in Medicaid and 7,006,341 individuals were enrolled in CHIP.[1]
2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the US population or for a vulnerable population	Yes. As of September 2023, 81,408,432 individuals were enrolled in Medicaid and 7,006,341 individuals were enrolled in CHIP.[1]
2c. Incorporates issues around both clinical benefits and potential clinical harms	Yes.
2d. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers	Yes.
3. Desirability of a New Evidence Review/Absence of Duplication	
3. A recent high-quality systematic review or other evidence review is not available on this topic	Yes. We found 3 narrative reviews but no systematic reviews that address the nominator's questions.
4. Impact of a New Evidence Review	
4a. Is the standard of care unclear (guidelines not available or guidelines inconsistent, indicating an information gap that may be addressed by a new evidence review)?	Yes. There are no guidelines that address the nominator's questions.
4b. Is there practice variation (guideline inconsistent with current practice, indicating a potential implementation gap and not best addressed by a new evidence review)?	Yes. There are many approaches to APMs in the United States with significant variation in design, implementation, and outcomes.
5. Primary Research	
5. Effectively utilizes existing research and knowledge by considering: - Adequacy (type and volume) of research for conducting a systematic review	Size/scope of review: We found 3 narrative reviews and 41 primary studies including 5 trials.

- Newly available evidence (particularly for updates or new technologies)	
6. Value	
6a. The proposed topic exists within a clinical, consumer, or policy-making context that is amenable to evidence-based change and supports a priority of AHRQ or Department of Health and Human Services	Yes. There is no clear winner in the field of APMs in Medicaid populations. A new review could aid policymakers in designing and implementing the most effective reimbursement models for this population.
6b. Identified partner who will use the systematic review to influence practice (such as a guideline or recommendation)	Yes. 56 members of the MMDN represents all 50 states, the District of Columbia and all U.S. territories.[52]

Abbreviations: AHRQ=Agency for Healthcare Research and Quality; APM=alternative payment model; CHIP= the Children's Health Insurance Program; MMDN=Medicaid Medical Directors Network