SIM Final Report

June 12, 2019

Disclaimer

Opinions expressed are those of the Ohio Department of Medicaid and do not necessarily reflect the official view of the Department of Health and Human Services or any of its agencies.

Executive summary

The United States has the highest per capita healthcare costs in the world, yet still performs poorly in terms of access and key outcome measures like infant mortality – and Ohio is no exception. When the state embarked on its healthcare transformation in 2013, it was ranked 17th in terms of cost per resident, yet in the bottom quartile for health outcomes.[1] Ohio set out to address this issue and remains committed to bringing impact and innovation to the people we serve.

In 2013, Ohio began a multi-year journey to transform the way healthcare is delivered and paid for statewide – shifting healthcare reimbursement from the fee-for-service (FFS) structure, which rewards volume, to value-based payment, which strives to achieve the triple aim of improving patient experience, improving quality and reducing cost growth.

Starting in 2013, Ohio participated in the State Innovation Models (SIM) initiative under Center for Medicare and Medicaid Innovation (CMMI), as a first step to implement value-based payment. Under SIM, Ohio Department of Medicaid – in collaboration with Managed Care Plans and commercial partners collectively responsible for ~80% of the state's population[2] – designed and launched two value-based payment programs: Comprehensive Primary Care (CPC) and Episodes of Care (Episodes). Together these models incentivize high-quality, coordinated care tailored to specific patient needs such as reducing health costs by managing chronic conditions and preventing unnecessary emergency department visits and admissions.

Ohio's CPC program provides financial incentives for primary care practices to provide more coordinated care with the goal of improving access to care, improving quality, and reducing the total cost of patient care in the short and long term (e.g., lowering the frequency of high-cost services such as inpatient stays and emergency services). The program launched for Ohio Medicaid on January 1, 2017 and now includes nearly 1.25M[3] members statewide, representing ~40% of the state Medicaid population.[4]

Ohio's Episodes program provides financial incentives to a broad array of provider types (e.g. hospitals, surgeons, primary care providers and specialists) that manage high-cost encounters and other acute conditions, in order to drive more efficient, higher quality care. Episodes were selected and prioritized for implementation based on criteria that included size, relevance to Medicaid and other populations, and potential sources of value. The Episodes program was launched in 2015 and now includes over 43 episodes in reporting, with 18 linked to payment as of January 1, 2019, covering care for more than 1.5M members, representing ~51% of the state Medicaid population.[5]

By 2017, when the CPC program launched, the combined programs covered ~65% of Medicaid members, ~35% of Medicaid spend, and ~35% of clinical providers.[6] Other stakeholders, including Ohio's Managed Care Plans and several commercial payers, continued to support and build on the work under SIM for broader impact in Ohio.

Ohio's SIM grant period ended on March 14, 2019, marking a key milestone for the state in its broader journey toward statewide improvements in health outcomes and value. On the heels of SIM, Ohio Department of Medicaid is celebrating the successes of the CPC and Episodes programs to date and continuing to develop additional strategies to achieve Ohio's broader population health and wellness priorities.

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[1] Source: Commonwealth Fund. *Scorecard on State Health System Performance*, 2014.
[2] Source: Ohio SIM Test Grant Application: Project Narrative.
[3] As of Q1 2019, 1.2M members were attributed to the 250 practices enrolled in CPC for CY2019.
[4] Total state Medicaid population is 3.1M members, defined as average monthly members for CY2017 from the June 2018 caseload report.
[5] Projected population receiving care covered by the episodes program is 1.6M as of 2019. Total state Medicaid population is 3.1M members, defined as average monthly members for CY2017 from the June 2018 caseload report.
[6] Medicaid claims data CY2015-17. Note: Total Medicaid members defined as average monthly members for CY2017 from the June 2018 caseload report. CPC members defined as members with at least 6 member months attributed to a CPC practice in 2017 with exclusions applied. Episode members defined as members with at least one episode in 2017 across all 43 episodes with no exclusions applied. Members covered by episodes assumes consistent overlap with the CPC program from episodes linked to payment in 2017. Spend for CPC and Episodes is non risk-adjusted and includes all CPC members and all Episodes with no exclusions. Program-eligible spend is restricted to just claims and encounters, and excludes non-medical spend such as outside payments to MCPs, Medicare, supplemental payments to providers, and administrative costs. Clinical provider total count includes all billing providers with a claim in 2017, excluding those that would never be eligible for CPC or Episodes (e.g. labs, ancillary, DME, etc.). 2.0M total members were covered by the CPC and Episodes program in 2017, accounting for 7BN in spend and receiving care from 15.2K providers. See Appendix for additional methodology detail.

Early results

Across CPC and Episodes, there is evidence of improvement on the goals for transformation in Ohio's health delivery system. In 2017, total overall quality performance improved by 2.1%[7] and total cost avoidance across the two programs was $121.1-181.5M.[8]

- In the CPC program, overall quality performance of CPC practices improved by ~2.2% annually from 2015-2017. In 2017, the first Ohio CPC performance year, there were 111 practices enrolled in CPC. Of the thirty-four practices meeting size requirements for shared savings eligibility,[9] five received a combined total of $11.2M in shared savings payments.[10] Meanwhile, Ohio CPC had a negative 1.9% cost trend compared with the non-CPC control group for risk-adjusted total cost of care per member per month (PMPM)[11] – resulting in $78.1M in net annual savings[12] and $89.3M in gross annual savings[13]. For 2017, 95% of CPC practices met all program requirements including exceeding quality and efficiency thresholds on relevant measures and performing activity requirements.

- In the Episodes program, efficient performance in the average episode spend trend did not have an adverse impact on quality, as average performance rates across all episode quality metrics held largely steady for the first two years of the program. Over the same two-year period, average costs per episode decreased for the nine episodes linked to payment in 2017 (e.g., the spend trend was *negative*); the average non-risk-adjusted spend trend decreased by 0.9% annually from 2015 to 2017, resulting in an estimated $31.8-92.2M in annual savings[14].

- In 2017, episode providers (referred to as Principal Accountable Providers, or PAPs) received $4.0M in positive incentive payments across nine episodes, incurred $4.2M in negative incentive payments[15], and 74% of unique episode PAPs met quality requirements.

Beyond SIM

The Ohio CPC and Episodes programs served as a foundation for broader statewide transformation. Through the SIM grant, Ohio has established capabilities and a model for collaboration with clinical and other stakeholders across the state, including within Ohio Department of Medicaid (ODM), other agencies, providers, Medicaid Managed Care Plans, and commercial payers. This method of engagement has been used to continue to refine the CPC and Episodes programs over time to more precisely meet the needs of patients and providers with more timely and relevant feedback, keeping up with evidence-based care and forging more effective payer partnerships.

The state has already successfully leveraged their cornerstone programs for new initiatives to further Ohio's priorities, including continuing to achieve the triple aim, increasing transparency to facilitate deeper insights into potential delivery system improvements, and ongoing alignment with other federal and payer programs to

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[7] Average across all quality metrics used for payment, weighted evenly, with average quality metric rate (adjusted so higher is always better) for all quality metrics used for payment weighted evenly.

[8] Total cost avoidance is determined by summing the gross annual savings from the CPC and Episodes programs. In 2017, the CPC program resulted in $89.3M in gross annual savings and the Episodes program resulted in $31.8-92.2M in gross annual savings, for total cost avoidance across the two programs of $121.1-181.5M.

[9] In order to be eligible for shared savings payments, CPC practices must have at least sixty thousand member months in the performance period.

[10] Based on 2017 CPC Annual Reports. In program year 2017, 34 practices met the size criteria to be eligible for shared savings payments. ODM paid $619K in shared savings payments for total cost of care relative to peers. ODM and the MCPs paid a total of $10.6M in shared savings payments for total cost of care relative to self, for a total of $11.2M in shared savings payments.

[11] While spend trends for both the CPC group and non-CPC control group increased from 2015-2017, the rate of spend increase for CPC practices was lower than the rate of increase for the non-CPC control group. From 2015 to 2017, risk-adjusted total cost of care for Ohio CPC increased by an annual rate of only 4.6% compared an increase of 6.5% for the non-CPC control group. Non-CPC practice group includes CPC-eligible practices (i.e., CPC-eligible provider type/specialty codes) that did not enroll in the CPC program.

[12] Net savings calculation for CPC includes total cost of care, quarterly PMPM payments made to practices ($31.2M paid to practices by ODM in 2017), and savings shared back with practices through total cost of care shared savings payments ($11.2M for program year 2017 paid to practices by ODM and the five MCPs) as costs.

[13] 2017 performance reflects annualized change from 2015 to 2017, based on comparison to non-CPC group. Gross savings include total cost of care and quarterly PMPM payments made to practices ($31.2M paid to practices by ODM in 2017), before total cost of care shared savings payments were made to 2017 practices.

[14] Represents gross savings. Range of savings across all 9 episodes in payment for 2017 is using a lower bound estimate of 1.9% based on historical Medicaid spend trend benchmark and an upper bound estimate of 6.8% based on a claim type-weighted trend for each episode using claim type and values provided by Milliman, the state's actuary. The lower-bound benchmark trend is the average of the 2016 and 2017 SFY projected rates of PMPM growth, which were 1.6% and 2.2% respectively. These rates are sourced from the Ohio Joint Medicaid Oversite Committee's *State Fiscal Years 2016-2017 Biennial Projections – Iteration 2 Report.*

[15] Includes totals across FFS payments and four of the five Managed Care Plans. PAPs received $4.0M in positive incentive payments and incurred $4.2M in negative incentive payments.

streamline participation for providers. For example, CPC Referral Reports, launched in 2017, further align healthcare delivery in the state through the sharing of episode provider performance information with CPC program participants to inform referral patterns and promote cross-program integration. Further, through SIM, Ohio has pursued opportunities for leadership as a state pursuing transformation through federal alignment, including strong payer and provider participation in the CMS-led Comprehensive Primary Care Plus (CPC+) program, approval for Ohio Episodes as one of the first state programs designated as an Other Payer Advanced Alternative Payment Model (OP-AAPM) through Quality Payment Program (QPP) and work to pursue potential alignment with new CMS initiatives (e.g., Primary Care First). Other stakeholders also continue to build on the work under SIM. For example, Humana shared publicly that they are leveraging Ohio's definitions (available on the State's website) to implement episodes with Ohio providers.[16]

In the Episodes model, the state has developed opioid prescribing measures in support of state safe prescribing guidelines, to reduce unexpected variation in prescribing practices across clinicians. Having listened carefully to providers and patients over the course of these efforts, work is also underway to update the perinatal episode to make more information available to provide additional insights to clinicians about the highest risk mothers and infants who require adherence to more targeted interventions to drive improved birth outcomes. In CPC, the state is adding a quality metric focused on the care of members with Substance Use Disorder and is developing "CPC for Kids" to enhance the CPC program's role in promoting pediatric wellness. CPC for Kids will reward activities focused on increased screening, prevention and care coordination for children in Ohio and may address population health priorities such as lead screening and preventive behavioral health for children. CPC for Kids will launch on January 1, 2020.

Building on the foundation laid by the CPC and Episodes models, Ohio has also continued to expand on payment innovation work to date to serve more holistic population health goals for the state related to pediatric wellness, substance use disorder, and managing complex populations. For example, students across the state are experiencing health challenges that can prevent them from achieving academic success, which is one of the most important signs of adequate growth and development for youth.[17] In an effort to address this issue, in 2018, Ohio launched the School-Based Health Care Toolkit, a set of resources for schools and communities as they work together to address common health issues and keep students in class and ready to learn.

Ohio will continue to explore new ways to refine, adapt, and expand payment innovation models to improve outcomes for specific high-need populations such as youth with significant behavioral health conditions or those at risk for out of home placement, as well as to encompass additional high impact clinical areas such as palliative care. Broader engagement with commercial payers, large employers and non-traditional partners may yield additional insights that advance the health of all Ohioans, not only improving healthcare for Ohioans, but also rendering Ohio a better place to live, work, and play, which may attract additional economic growth. More broadly, the work under SIM serves as a powerful demonstration of multi-stakeholder collaboration around an ambitious shared goal, with potential applicability to other areas of state government.

Through SIM, ODM also gained experience working under the guidance and support of strong federal partners, who have the unique authority to improve healthcare delivery nationally. ODM will continue to pursue opportunities for federal partnership to achieve shared goals well beyond SIM, including through new CMS priorities related to primary care and rural health.

Reflecting on the SIM grant, Ohio is celebrating the important groundwork laid to date and is committed to ensuring that Ohio Medicaid continues to bring impact and innovation to the people we serve in new, important ways.

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[10] Source: Humana. https://www.humana.com/provider/news/value-based-care/payment-models (viewed on 5/14/2019).
[17] Source: National Academy of Medicine. *Vital Signs: Core Metrics for health and Health Care Progress*. 2015.

Detailed report[18]

1) **Vision, goals, and areas of focus for payment innovation in Ohio**

The United States has the highest per capita healthcare costs in the world, yet still performs poorly in terms of access and key outcome measures like infant mortality – and Ohio is no exception; when the state embarked on its healthcare transformation in 2013, it was ranked 17th in terms of cost per resident, yet in the bottom quartile for health outcomes.[19] Ohio set out to address this issue and remains committed to bringing impact and innovation to the people we serve.

In 2013, Ohio began a multi-year journey to transform the way healthcare is delivered and paid for statewide – shifting healthcare reimbursement from the FFS system, which rewards volume, to value-based payment, which rewards the triple aim of improving patient experience, improving quality and reducing cost growth.

As part of this transformation, Ohio participated in the State Innovation Models (SIM) initiative led by Center for Medicare and Medicaid Innovation (CMMI) to take the first step in implementing value-based payment across the state.

Ohio's health burden leading to SIM

When the state embarked on its healthcare transformation in 2013, Ohio's health burden was worse than the national average across multiple health indicators. Chronic diseases (heart disease, cancer, chronic lower respiratory disease, stroke, diabetes, and kidney disease) accounted for nearly two-thirds of all Ohio deaths. Ohio adults had a higher estimated prevalence of coronary heart disease, stroke, hypertension, diabetes, and cancer compared to the U.S. median. Nearly one-third of Ohio adults with clinically diagnosed hypertension failed to achieve blood pressure control, while one quarter of diabetic adults were not in adequate control of their diabetes.[20]

Several specific areas highlighted the severity of Ohio's health burden. Among states, Ohio ranked: 47 in infant mortality overall (7.7 per 1,000 births) with an over 2-fold disparity for African American babies; 38 for rates of obesity; 45 for diabetes; 37 for cardiovascular disease; and 42 for tobacco use. Similar to national trends, rates of heart disease, stroke, hypertension and diabetes in Ohio are higher among black adults and children, residents of Appalachian and rural counties, those with the lowest income and education, and those with disabilities. The average age of the first heart attack for black adults in Ohio (49 years) is more than seven years younger than the average age reported for white adults (56 years).[21]

Goals for the SIM program

In the state's original application to the SIM program, Ohio noted that "Our current health care payment system rewards medical care for individuals but neglects activities outside the doctor's office that contribute to better health where people live, learn, play and work. This systemic underrepresentation of population health in care delivery and coverage programs has contributed to the U.S. ranking below many countries in life expectancy, infant mortality, and other indicators of healthy life."

Ohio's goal for the SIM grant period was to reset the basic rules of healthcare competition to incentivize keeping people as healthy as possible by paying for what works to improve and maintain health, shifting Ohio away from FFS to population- and value-based payments that reward patient-centered care coordination and improved health outcomes.

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[18] Note that some language in detailed report aligns directly with executive summary.
[19] Source: Commonwealth Fund. *Scorecard on State health System Performance*, 2014.
[20] Source: HEDIS 2012.
[19] Source: Behavioral Risk Factor Surveillance Survey, 2012.

At the program outset, ODM aimed for the CPC and episodes model to cover 50-60% of state medical spend[22] and, at scale, 80% of medical spend and 80-90% of Ohio's total population. More broadly, the state committed to the goal of making value-based payment models a standard part of the care delivery model for Medicaid providers, and worked collaboratively across all of the Medicaid Managed Care Plans, as well as the largest commercial plans in Ohio to support and reinforce the statewide movement towards value-based payment.

Exhibit A. Initial five-year plan to launch SIM programs

Goal	**80-90%** of Ohio's population in some **value-based payment model** (combination of episodes- and population-based payment) within **5 years**	
State's role	• Shift rapidly to PCMH & episode model in Medicaid FFS • Require Medicaid MCO partners to participate / implement • Incorporate into contracts of MCOs for state employee benefit program	

	Patient centered medical homes	**Episode-based payments**
Year 1	• In 2014 **focus on CPCi** • Payers agree to participate in design for elements where standardization and / or alignment is critical • Multi-payer group begins enrollment strategy for one additional market	• State leads design of **5** episodes – perinatal, asthma (acute exacerbation), COPD exacerbation, PCI, and joint replacement • Payers agree to participate in design process, **launch reporting on at least 3 of 5 episodes in 2014** and tie to payment within year
Year 3	• Model rolled out to all major markets • **50%** of patients are enrolled	• **20** episodes defined and launched across payers
Year 5	• Scale achieved state-wide • **80%** of patients are enrolled	• **50+** episodes defined and launched across payers

Areas of focus for SIM

To lay the foundation for the bold vision for statewide health transformation, Ohio designed and launched two foundational value-based payment models statewide during the SIM grant period: a patient-centered medical home (PCMH) model – in Ohio referred to as the Comprehensive Primary Care (CPC) model – and an episode-based payment model.

Several stakeholders were key to the SIM vision from the start: Ohio's Medicaid Managed Care Plans (MCPs) (Buckeye, CareSource, Molina, Paramount, and UnitedHealthcare); an advisory council convened by the Governor's Office of Health Transformation including the five largest providers from across the state and several large employers; multiple provider working teams; and, a multi-payer coalition made up of Medicaid, the MCPs, and three private payers (Aetna, Anthem, and Medical Mutual) that combined, covered more than 80% of the state's population.[23]

Prior to SIM, Ohio was one of many states with a predominantly FFS system administered through managed care. FFS rewards providers for delivering more care rather than better care, anchored in face-to-face

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[22] Program vision assumed medical spend includes costs incurred by the Ohio Department of Medicaid for member medical claims with various programmatic exclusions.
[23] Ohio SIM Test Grant Application: Project Narrative.

requirements and burdensome provider documentation that may not directly improve patient outcomes. While many hypothesized that FFS should be abandoned, a compelling alternative had not yet been widely adopted in the US.

Through the SIM grant's launch of the Ohio CPC and Episodes programs, Ohio sought to lay the groundwork to achieve its bold vision of increasing the number of residents who are healthy at every stage of life and becoming the healthiest place to live, work, and raise a family. Further, the state sought to incorporate population health measures into regulatory and payment systems and use those measures to align population health priorities across clinical services, public health programs, and community-based initiatives.

Ohio's SIM grant period ended on March 14, 2019, marking a key milestone for the state in its broader journey for improvements in health outcomes and value. In the wake of SIM, Ohio Department of Medicaid is celebrating the successes of the CPC and Episodes programs to date and continuing to develop additional strategies to achieve Ohio's broader population health and wellness priorities.

2) **Progress and early results from Ohio CPC and Episodes to date**

Under SIM, Ohio Department of Medicaid – in collaboration with Managed Care Plans and commercial partners collectively responsible for ~80% of the state's population[24] – designed and launched two value-based payment programs: comprehensive primary care (CPC) and episode-based payment (Episodes). Together these models incentivize high-quality, coordinated care tailored to specific patient needs such as reducing health costs by managing chronic conditions and preventing unnecessary emergency department visits and admissions.

Ohio CPC Program

Ohio's CPC program provides financial incentives for primary care practices to provide more coordinated care with the goal of improving access to care, improving quality, and reducing the total cost of patient care in the short and long term (e.g., lowering the frequency of high-cost services such as inpatient stays and emergency services). The program launched for Ohio Medicaid on January 1, 2017 and now includes nearly 1.25M[25] members statewide (~40% of total Medicaid population)[26].
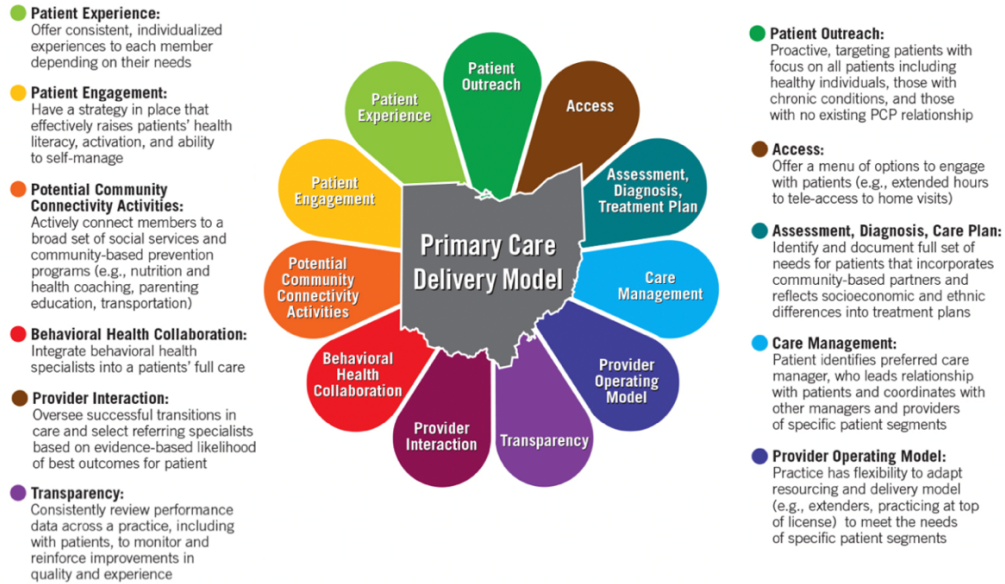
CPC is a patient-centered medical home program, which provides comprehensive patient-centric care by administering population health improvement activities, including team-based care, same day access to primary care services, and other evidence-based practices. Most medical costs occur outside of a primary care practice, but primary care practitioners can guide many decisions that impact those broader costs, improving cost efficiency and care quality. The goal of Ohio's CPC program is to incentivize and provide resources to primary care practices to deliver comprehensive care to their patients, with the outcome of improving quality of care and lowering the overall cost of care.

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[24] Source: Ohio SIM Test Grant Application: Project Narrative.
[25] As of Q1 2019, 1.2M members were attributed to the 250 practices enrolled in CPC for CY2019.
[26] Total state Medicaid population is 3.1M members, defined as average monthly members for CY2017 from the June 2018 caseload report.

Exhibit B. Vision for Ohio PCMH program

Patient Experience: Offer consistent, individualized experiences to each member depending on their needs

Patient Engagement: Have a strategy in place that effectively raises patients' health literacy, activation, and ability to self-manage

Potential Community Connectivity Activities: Actively connect members to a broad set of social services and community-based prevention programs (e.g., nutrition and health coaching, parenting education, transportation)

Behavioral Health Collaboration: Integrate behavioral health specialists into a patients' full care

Provider Interaction: Oversee successful transitions in care and select referring specialists based on evidence-based likelihood of best outcomes for patient

Transparency: Consistently review performance data across a practice, including with patients, to monitor and reinforce improvements in quality and experience

Patient Outreach: Proactive, targeting patients with focus on all patients including healthy individuals, those with chronic conditions, and those with no existing PCP relationship

Access: Offer a menu of options to engage with patients (e.g., extended hours to tele-access to home visits)

Assessment, Diagnosis, Care Plan: Identify and document full set of needs for patients that incorporates community-based partners and reflects socioeconomic and ethnic differences into treatment plans

Care Management: Patient identifies preferred care manager, who leads relationship with patients and coordinates with other managers and providers of specific patient segments

Provider Operating Model: Practice has flexibility to adapt resourcing and delivery model (e.g., extenders, practicing at top of license) to meet the needs of specific patient segments

CPC practices may be eligible for two payment streams (in addition to existing payment arrangements with the Ohio Department of Medicaid and the Medicaid Managed Care Plans), including (1) per-member-per-month (PMPM) payments from Medicaid to support activities required by the CPC program and (2) shared savings payments to reward practices for achieving total cost of care savings paid by Medicaid along with the five MCPs. Upon joining the program, practices must attest to meeting a set of program activity requirements. To be eligible to receive payment, practices must meet these requirements as well as 50% of applicable clinical quality metrics and 50% of program efficiency metrics.
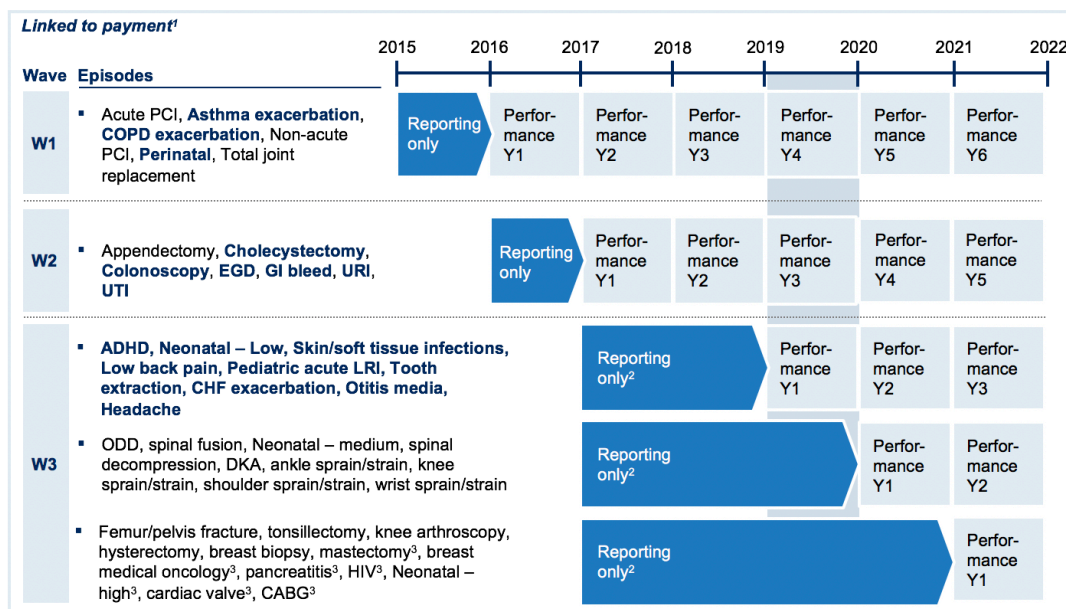
Exhibit C: 2019 Ohio CPC program requirements

Program requirements

8 activity requirements	20 Quality metrics	5 Efficiency metrics
• 24/7 and same-day access to care	• Clinical measures aligned with CMS/AHIP core standards for PCMH	• ED visits
• Risk stratification		• Inpatient admissions for ambulatory sensitive conditions
• Population management		• Generic dispensing rate of select classes
• Team-based care delivery		• Behavioral health related inpatient admits
• Care management plans		• Episodes-related metric
• Follow up after hospital discharge		
• Tracking follow up tests and specialist referrals		
• Patient experience		
Must pass 100%	**Must pass 50%**	**Must pass 50%**

Payment Streams

PMPM	All required
Shared Savings	All required

Additionally, joining the CPC program gives practices access to data and reports that provide detail about program performance, with opportunities to improve and enhance patient outreach, measure performance, and improve specialty care referrals. Through the prospective quarterly attribution process, members are attributed to a CPC practice based on their preference or, when member choice has not been expressed, their claims history and other non-claims factors like geography and age. Practices enrolled in CPC receive a quarterly CPC attribution and payment file that includes information to support outreach to current and new members attributed to the practice. CPC practices also receive a quarterly CPC practice report, which includes member-level data indicating quality metric performance and patient cost of care, as well as a quarterly CPC referral report, which can help to inform specialist referrals and better coordinate with other service providers. Finally, practices receive an annual CPC practice report, which includes annual performance data on quality, efficiency and total cost of care measures for the full program year, including eligibility for shared savings payments. ODM continues to collect feedback on program reporting in order to make actionable information available to practices.

Ohio Episodes of Care Program

Ohio's Episodes program provides financial incentives to providers (e.g., hospitals, surgeons, primary care providers, and specialists) that manage high-cost encounters and other specific conditions or acute events, in order to drive more efficient, higher quality care. The Episodes program was launched in 2015 with reporting on six episodes. In 2016, three of the initial six episodes were tied to payment and seven additional episodes launched for reporting and by the end of 2017, Ohio Medicaid's Episodes program included nine episodes linked to payment with an additional 34 in reporting. While the total number of episodes remains consistent since 2017 at 43, Medicaid is continuing to link additional episodes to payment, with 18 linked to payment as of performance year 2019, and additional episodes planned to link to payment in 2020 and 2021. As of performance year 2019, the Episodes program, including all 43 episodes are covering care for approximately 51% of the state Medicaid population.[27]

**Exhibit D. Phased approach to episodes inclusion**

In contrast to CPC, which is focused only on primary care, episodes of care cover a majority of acute or specialist-driven healthcare delivered during a specified time period to treat a physical or behavioral health

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[27] Projected population receiving care covered by the episodes program is 1.6M as of 2019. Total state Medicaid population is 3.1M members, defined as average monthly members for CY2017 from the June 2018 caseload report.

condition. Episodes are built from the perspective of a "patient journey" through the health system, providing a more comprehensive view of care involved in treating a condition for a patient. For a given episode type, a principal accountable provider (PAP) is defined and held accountable for the quality and cost of care delivered to the patient for the entire episode. An episode of care includes all of the care related to a defined medical event (e.g., a procedure or an acute condition), including the care for the event itself, any precursors to the event (such as diagnostic tests or pre-op visits), and follow-up care (such as medications, rehab, or readmission).

Episodes are designed to incentivize high-quality care, promote the use of clinical pathways and evidence-based guidelines, encourage coordination, and reduce ineffective or inappropriate care. In the episodes model, providers retain administrative and financial relationships with payers, but retrospective incentive payments based on PAP performance are structured to better promote high-quality and efficient care. Ohio's Episodes program is a retrospective payment model, meaning value-based payments occur after included services have already occurred and were paid for by existing payment arrangements.
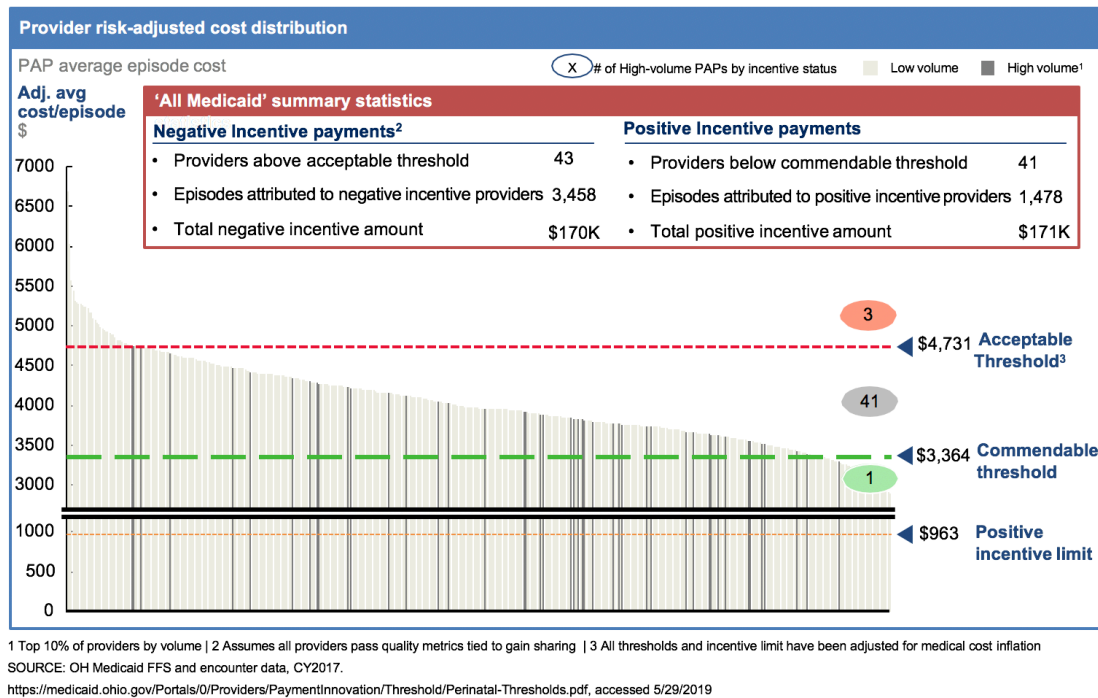
Exhibit E. Retrospective episodes-based payment model
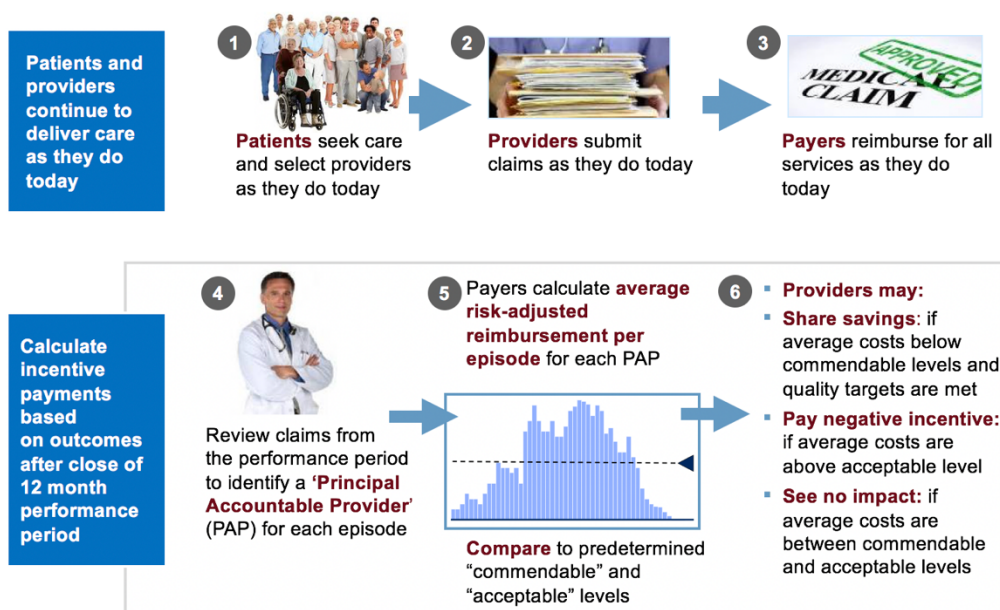
PAPs receive quarterly reports for each episode with quality and cost data. For some episodes, performance data is shared as informational-only, while for others, it is tied to incentive payments; for those episodes that are tied to financial incentives, quarterly reports provide important information to providers before financial incentives are assessed including member-level data indicating quality metric performance and average risk-adjusted episode spend.

In order to be eligible for a positive incentive payment, a PAP must have at least 5 valid episodes ending in the performance period, have an average risk-adjusted valid episode spend that falls below a set "commendable" threshold, and pass the threshold for all quality metrics linked to performance. To be eligible for a negative incentive payment, a PAP must have at least 5 valid episodes ending in the performance period and have a risk-adjusted valid episode spend that is above the "acceptable" threshold, regardless of quality metric performance.

Exhibit F. Example PAP curve

Provider risk-adjusted cost distribution

PAP average episode cost   (X) # of High-volume PAPs by incentive status   Low volume   ■ High volume[1]

'All Medicaid' summary statistics

Negative Incentive payments[2]		Positive Incentive payments	
• Providers above acceptable threshold	43	• Providers below commendable threshold	41
• Episodes attributed to negative incentive providers	3,458	• Episodes attributed to positive incentive providers	1,478
• Total negative incentive amount	$170K	• Total positive incentive amount	$171K

Acceptable Threshold[3] — $4,731
Commendable threshold — $3,364
Positive incentive limit — $963

1 Top 10% of providers by volume | 2 Assumes all providers pass quality metrics tied to gain sharing | 3 All thresholds and incentive limit have been adjusted for medical cost inflation
SOURCE: OH Medicaid FFS and encounter data, CY2017.
https://medicaid.ohio.gov/Portals/0/Providers/PaymentInnovation/Threshold/Perinatal-Thresholds.pdf, accessed 5/29/2019

Early results

Across CPC and Episodes, there is evidence of improvement on the goals for transformation in Ohio's healthcare delivery system. In 2017, total overall quality performance improved by 2.1%[28] and total estimated savings across the two programs was $121.1-181.5M.[29]

In 2017, approximately 2.0M unique members (~65% of total Medicaid) were included across both programs.[30] The combined programs covered ~35% of Medicaid spend in the 2017 program year; Ohio Medicaid had $20.1 billion in total program-eligible spend for 2017, with Ohio CPC covering $4.9 billion and episodes covering $2.9 billion, for a total of $7.0 billion unique dollars addressed across both programs.[31] In 2017, the CPC and Episodes programs included ~35% of clinical providers.[32]

Ohio CPC

Early results for the Ohio CPC program suggest a positive impact on both quality and cost. In the 2017 program year, 95% of CPC practices met all program requirements for activity, quality and efficiency – performing eight activity requirements as well as passing at least 50% of applicable clinical quality metrics and at least 50% of program efficiency metrics. Notably, all CPC practices met program quality requirements in

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[28] Average across all quality metrics used for payment, weighted evenly, with average quality metric rate (adjusted so higher is always better) for all quality metrics used for payment weighted evenly.
[29] Total cost avoidance is determined by summing the gross annual savings from the CPC and Episodes programs. In 2017, the CPC program resulted in $89.3M in gross annual savings and the Episodes program resulted in $31.8-92.2M in gross annual savings, for total cost avoidance across the two programs of $121.1-181.5M.
[30] Total Medicaid members defined as average monthly members for CY2017 from the June 2018 caseload report. CPC members defined as members with at least 6 member months attributed to a CPC practice in 2017 with exclusions applied. Episode members defined as members with at least one episode in 2017 across all 43 episodes with no exclusions applied. Members covered by episodes assumes consistent overlap with the CPC program from episodes linked to payment in 2017. See Appendix for additional methodology detail.
[31] Medicaid claims data CY2015-17. Note: Spend for CPC and Episodes is non risk-adjusted and includes all CPC members and all Episodes, with no exclusions. Program-eligible spend is restricted to just claims and encounters, and excludes non-medical spend such as outside payments to MCPs, Medicare, supplemental payments to providers, and administrative costs. Spend covered by episodes in reporting assumes stable member count and spend across 2016 and 2017. See Appendix for additional methodology detail.
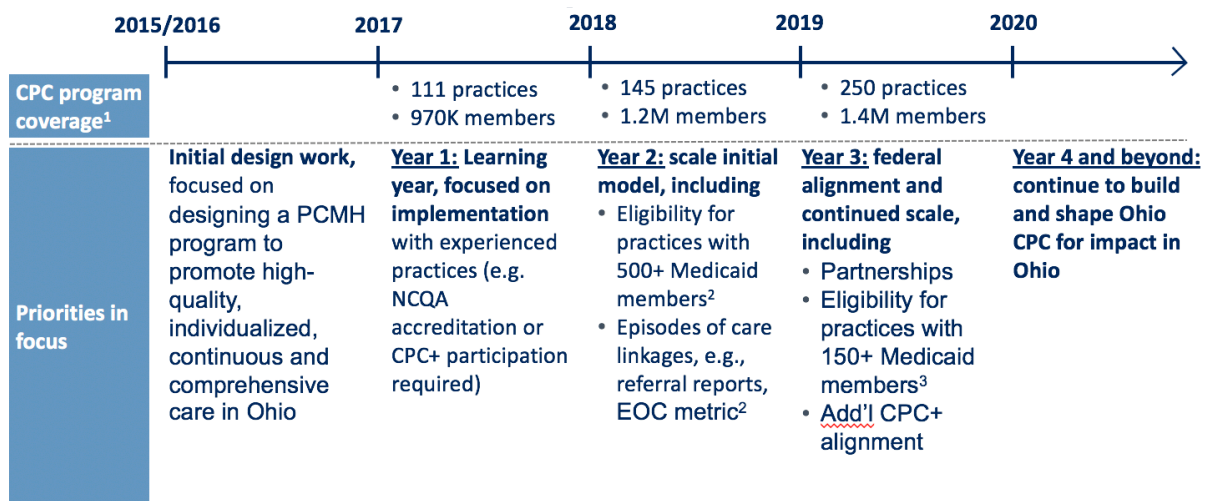[32] Medicaid claims data CY2015-17. Note: Clinical provider total count includes all billing providers with a claim in 2017, excluding those that would never be eligible for CPC or Episodes (e.g. labs, ancillary, DME, etc.).

2017, contributing to an increase of 2.2% in overall annualized quality performance for CPC practices from 2015 to 2017[33].

Four metrics were particularly notable in contributing to this overall improvement: well-child visits in the first 15 months of life (18.4 points improvement over two years); adult BMI assessment (15.2 points); weight assessment and counseling for nutrition for children / adolescents (19.7 points); and controlling high blood pressure (10.7 points).[34]

Meanwhile, Ohio CPC had a negative 1.9% cost trend compared with the non-CPC control group for risk-adjusted total cost of care per member per month (PMPM)[35] – resulting in $78.1M in net annual savings[36] and $89.3M in gross annual savings[37].

Exhibit G: Timeline of Ohio CPC program

	2015/2016	2017	2018	2019	2020
CPC program coverage[1]		• 111 practices • 970K members	• 145 practices • 1.2M members	• 250 practices • 1.4M members	
Priorities in focus	Initial design work, focused on designing a PCMH program to promote high-quality, individualized, continuous and comprehensive care in Ohio	**Year 1: Learning year, focused on implementation** with experienced practices (e.g. NCQA accreditation or CPC+ participation required)	**Year 2: scale initial model, including** • Eligibility for practices with 500+ Medicaid members[2] • Episodes of care linkages, e.g., referral reports, EOC metric[2]	**Year 3: federal alignment and continued scale, including** • Partnerships • Eligibility for practices with 150+ Medicaid members[3] • Add'l CPC+ alignment	**Year 4 and beyond:** continue to build and shape Ohio CPC for impact in Ohio

Source: program operational work to date.
1 Practices defined at the Medicaid Billing ID level. Point-in-time attribution as of June 1, 2018 for the practices enrolled in Ohio CPC for each program year respectively.
2 Information only in 2018
3 Claims-based attributed members. Practices with 150-500 members must participate through a practice partnership.

111 practices participated in Ohio CPC for the 2017 program year. Although 2017 was widely regarded as a "learning year" for practices in Ohio CPC, five CPC practices received a combined $11.2M of shared savings payments for program year 2017 out of a total of thirty-four practices meeting the sixty-thousand member month requirement to be eligible for shared savings payments.[38]

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[33] Represents composite view of performance of practices scored on each clinical quality measure, for all 20 clinical quality metrics in scope for CPC.
[34] Represents individual quality metric scores used to calculate composite view of practice performance on each of the 20 clinical quality metrics in scope for CPC. Only four metrics did not see improvement from 2016 to 2017: Follow-up after hospitalization for mental illness (-1 point); Anti-depressant medication management (-3 points); Medication management for people with asthma (-3 points); and Statin therapy for patients with cardiovascular disease (-5 points).
[35] While spend trends for both the CPC group and non-CPC control group increased from 2015-2017, the rate of spend increase for CPC practices was lower than the rate of increase for the non-CPC control group. From 2015 to 2017, risk-adjusted total cost of care for Ohio CPC increased by an annual rate of only 4.6% compared an increase of 6.5% for the non-CPC control group. Non-CPC practice group includes CPC-eligible practices (i.e., CPC-eligible provider type/specialty codes) that did not enroll in the CPC program.
[36] Net savings calculation for CPC includes total cost of care, quarterly PMPM payments made to practices ($31.2M paid to the practices by ODM for 2017), and savings shared back with practices through total cost of care shared savings payments ($11.2M paid to practices by ODM along with the five MCPs for program year 2017) as costs.
[37] 2017 performance reflects annualized change from 2015 to 2017, based on comparison to non-CPC group. Gross savings include total cost of care and quarterly PMPM payments made to practices ($31.2M paid to the practices by ODM for 2017), before total cost of care shared savings payments were made to practices based on 2017 performance.
[38] Based on 2017 CPC Annual Reports. ODM paid $619K in shared savings payments for total cost of care relative to peers. ODM and the MCPs paid a total of $10.6M in shared savings payments for total cost of care relative to self, for a total of $11.2M in shared savings payments.

Early program results also suggest initial integration across the CPC and episodes programs. For 2017 CPC members receiving care for select episodes, 30% received care from a highly efficient Episode PAP[39] in 2017 compared to 23% in 2015. CPC practices whose members receive care from highly efficient PAPs also have lower risk-adjusted total cost of care – correlation between lower risk-adjusted total cost of care and highly efficient PAPs is driven by other aspects of practice behavior as well, given that episode spend accounts for only a small portion of total cost of care – but early results show promise.

Ohio Episodes

Early results of the episodes program suggest a positive impact on cost with no adverse impact on quality. Average performance rates across all quality metrics held largely steady from 2015 to 2017. Many metrics showed improvement (e.g., screening rates in the perinatal episode, antibiotic fill rate[40] in upper respiratory infection); the consistent trend is in part due to low performance on the asthma exacerbation controller medication prescription fill-rate metric which prevented the quality trend from being positive overall. This metric is now being updated with additional codes as well as a longer time window to better capture patterns that reflect controller prescriptions filled more than 30 days after the initial exacerbation (due to members receiving a sample with care for the initial exacerbation. In both 2016 and 2017, the overwhelming majority of all PAPs met the quality thresholds. However, stricter threshold levels in the second performance year (2017) to encourage improvement resulted in the percentage of PAPs meeting quality thresholds for payment declining from 83% in 2016 to 74% in 2017.

For the nine episodes linked to payment in 2017, average cost per episode decreased (e.g., the annualized spend trend was negative) vs. average episode spend in prior years, without assuming any expected spend trend. The average non-risk-adjusted spend trend decreased by 0.9% annually from 2015 to 2017 and resulted in an estimated $31.8-92.2M[41] annual savings in 2017. In that same year, PAPs received $4M in positive incentive payments and incurred ~$4M in negative incentive payments[42]. The three episodes linked to payment starting in 2016 saw an even larger spend trend decrease with an annualized decrease of 2.4% from 2015 to 2017.

3) **Additional program detail, including key milestones, activities and learnings from program design and launch**

Through the SIM grant, Ohio designed and launched the CPC and Episodes programs. In addition to establishing and developing foundational programs for payment innovation in the state, the work to develop CPC and Episodes led to the development of new capabilities and a model for clinical stakeholder collaboration as well as several key learnings that are foundational to broader transformation in the state.

Ohio CPC

Design and development of the Ohio CPC program focused on improving quality, outcomes, and cost of care by holding the primary care practice accountable for care coordination, cost, and quality of care for patients. Specific sources of value identified in Ohio CPC include managing patients' overall care to ensure timely, high-quality, cost-effective care tailored to their specific needs, as well as engaging patients to maintain health and wellness, reduce health costs by managing chronic conditions, and prevent unnecessary emergency department visits and admissions.

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[39] Includes Principle Accountable Providers (PAPs) participating in asthma exacerbation, COPD exacerbation, and perinatal episodes with a minimum of five valid episodes ranking in the top 2 quintiles ($ and $$) of spend performance.
[40] Antibiotic fill rate in absence of a strep test.
[41] Represents gross savings. Range of savings across all 9 episodes in payment for 2017 is using a lower bound estimate of 1.9% based on historical Medicaid spend trend benchmark and an upper bound estimate of 6.8% based on a claim type-weighted trend for each episode using claim type and values provided by Milliman, the state's actuary. The lower-bound benchmark trend is the average of the 2016 and 2017 SFY projected rates of PMPM growth, which were 1.6% and 2.2% respectively. These rates are sourced from the Ohio Joint Medicaid Oversite Committee's *State Fiscal Years 2016-2017 Biennial Projections – Iteration 2 Report*.
[42] Includes totals across FFS payments and four of the five Managed Care Plans. PAPs received $4.0M in positive incentive payments and incurred $4.2M in negative incentive payments.
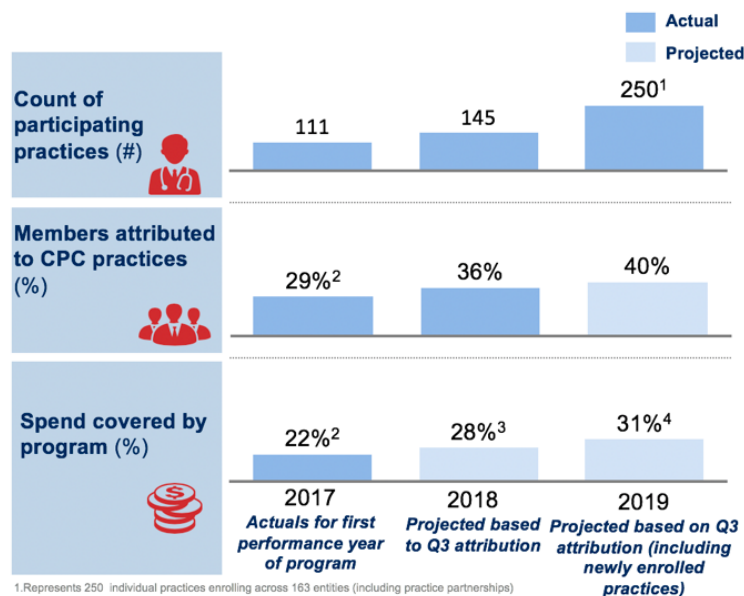
ODM launched the pilot year of the Ohio CPC program in January 2017, with participation from 111 practices across the state and nearly 1M Medicaid members.[43] 2017 was undertaken as a "learning year" focused on implementation of the CPC model with more experienced practices (e.g. NCQA accreditation or CPC+ participation required).

In its first year, Medicaid issued enhanced payments on a per member per month basis of $31.2M to CPC practices, produced and delivered quarterly reports, launched new cross-program reporting features, conducted 12 webinars and 2 in-person learning sessions, and created a bank of standardized FAQ materials for providers and payers to understand details of the CPC program. From the start, the CPC program was inclusive of a wide variety of providers with a large number of practices identifying as federally qualified health centers (57) in addition to independent (19) and hospital-affiliated practices (35). Engagement with the program was also high across Managed Care Plans with all MCPs working with nearly all of the CPC practices statewide.

2018 was the second program year for Ohio CPC; ODM focused on continuing to grow and embed the initial CPC model by expanding practice eligibility to all primary care practices with 500 or more Medicaid claims-only attributed members and by increasing linkages to the episodes model through quarterly CPC Referral Reports and the addition of the Episodes of Care efficiency metric (informational-only for 2018). 145 practices participated in Ohio CPC in the 2018 program year, with nearly 1.25M Medicaid members included in the model.

In 2019, ODM continued to scale the CPC program by promoting practice participation with increased federal alignment (e.g., aligning activity requirements with CPC+), the introduction of practice partnerships to allow greater participation in shared savings opportunities and modifying eligibility criteria to include all practices with at least 150 claims-only attributed Medicaid members[44]. 250 practices are participating in Ohio CPC in the 2019 program year[45], with nearly 1.25M[46] Medicaid members included in the model, representing ~40% of the state Medicaid population.[47]

Exhibit H. Growth of the Ohio CPC program

1. Represents 250 individual practices enrolling across 163 entities (including practice partnerships)
2 Based on actual data from 111 practices enrolled in 2017
3 Projected based on 2017 average spend for 145 practices enrolled in 2018
4 Projected based on current attribution for 2019 enrolled practices based on 2017 average spend
SOURCE: Ohio Medicaid claims data CY2015-17

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[43] As of 2017 there were 893K members attributed to CPC-enrolled practices.
[44] Practices with fewer than 500 claims-only attributed members are required to participate through practice partnerships to enroll in Ohio CPC.
[45] Of the 250 practices participating in CPC in 2019, 107 participated in the program through practice partnerships (20 total partnerships) and 143 practices participated independently.
[46] As of Q1 2019, 1.2M members were attributed to the 250 practices enrolled in CPC for CY2019.
[47] Total state Medicaid population is 3.1M members, defined as average monthly members for CY2017 from the June 2018 caseload report.

Through implementation of Ohio CPC and research into best practices from other state PCMH models, ODM identified several key factors for successful design and implementation of a PCMH model, including:

- Communicating progressively challenging transformation milestones early in program design to give providers a clear vision of the state's aspiration for practice improvement

- Engaging in early and frequent stakeholder engagement to ensure a robust forum for discussing potential design options – including a diverse set of providers (e.g., urban/rural, small/large) as well as nontraditional stakeholders (e.g., regional leaders)

- Encouraging risk stratification and team-based care delivery for managing high-risk patients to avoid acute events (e.g., avoid ED visits and inpatient admissions)

- Transparency into data via clear, concise, and visual reporting to enable full participation and meaningful improvement for all parties at the table

- Regularly revisiting program design to expand the program's reach and enable access following the initial year of the model (e.g., expanding the model to include practices with at least 150 patients in Year 3, relative to 500 patients in Year 1)

Ohio Episodes

Design and development of the episode-based payment model focused on encouraging high-quality, patient-centered, cost-effective care by holding a single provider or entity (Principle Accountable Provider, or PAP) accountable for care across all services in a specific episode. Specific levers of value include creating provider incentives to reinforce accountability and discourage under- or over-utilization, encouraging providers to coordinate patient care throughout the patient journey – rather than focusing on specific FFS visits or procedures, and sharing performance information relative to peers to provide additional insights and prompt discussions across providers involved in the patient journey. Episodes were selected and prioritized for implementation based on criteria that included size, relevance to Medicaid and other populations, and potential sources of value along the patient journey.

Ohio launched the episodes program in 2015 as a reporting year only. 2016 was the first performance period with the first three episodes linked to payment (asthma exacerbation, COPD exacerbation, and perinatal). Provider performance on valid episodes during that timeframe determined whether a provider was eligible for financial incentives. ODM and the MCPs were able to successfully calculate and process both positive and negative incentive payments for the 2016 performance period, as well as gain preliminary insights on cost and quality impact of the episode model. Across FFS and MCPs, aggregated across the three episodes, there were 254 provider payments totaling ~$2M positive incentive and 112 providers accountable for $~2M negative incentive payments.[48]

In 2017, six episodes – cholecystectomy, upper respiratory infection, GI bleed, urinary tract infection, colonoscopy, and esophagogastroduodenoscopy (EGD) – were linked to payment, raising the total to nine. Across these nine episodes for 2017, there were savings of $31.8-92.2M[49] with ~$4M in positive incentive payments to PAPs and ~$4M in negative incentive payments incurred by PAPs.[50] In addition, the number of total episodes was increased to 43 (9 linked to payment, 34 informational only), covering ~51% of the state's Medicaid members and 14% of Medicaid spend.[51]

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[48] In 2016, PAPs received $2.1M in positive incentive payments and incurred $1.8M in negative incentive payments.

[49] Represents gross savings. Range of savings across all 9 episodes in payment for 2017 is using a lower bound estimate of 1.9% based on historical Medicaid spend trend benchmark and an upper bound estimate of 6.8% based on a claim type-weighted trend for each episode using claim type and values provided by Milliman, the state's actuary. The lower-bound benchmark trend is the average of the 2016 and 2017 SFY projected rates of PMPM growth, which were 1.6% and 2.2% respectively. These rates are sourced from the Ohio Joint Medicaid Oversite Committee's *State Fiscal Years 2016-2017 Biennial Projections – Iteration 2 Report*.

[50] In 2017, PAPs received $4.0M in positive incentive payments and incurred $4.2M in negative incentive payments.

[51] Medicaid claims data CY2015-17. Total state Medicaid population is 3.1M members, defined as average monthly members for CY2017 from the June 2018 caseload report. Episode members defined as members with at least one episode in 2017 with no exclusions applied. Members covered by episodes assumes consistent overlap with the CPC

In 2019, nine new episodes were linked to payment, raising the total to 18 linked to payment and 25 informational only. This expansion raised the expected proportion of Medicaid spend covered by episodes tied to incentives from 6% in 2017 and 2018 to 11% in 2019 and the expected proportion of the population covered by episodes tied to payment from 32% in 2017 and 2018 to 48% in 2019.

Exhibit I. Growth of Ohio Episodes program
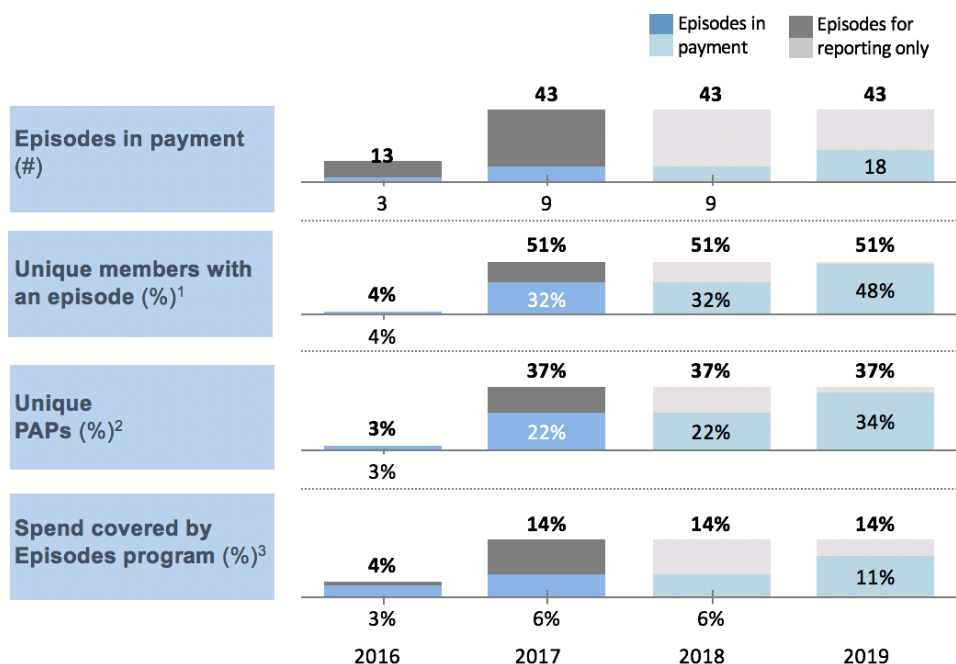
1 Denominator is total Medicaid members defined as avg monthly members for CY2017 from the June 2018 caseload report. Numerator is unique episode members defined as members with at least one episode in 2017 with no exclusions applied. 2 Denominator is all eligible providers, defined as Medicaid billing providers with a claim in 2017, excluding those that would never be eligible for CPC or Episodes (e.g. labs, ancillary, DME, etc.). Numerator is unique PAPs, defined by Medicaid billing ID. 3 Denominator is Medicaid program-eligible spend defined as total claims and encounters spend, which excludes outside payments to MCPs, off-claims Dept. of Aging, Medicare, supplemental payments to providers, and administrative costs. Numerator is spend for Episodes, which is non risk-adjusted and includes all Episodes with no exclusions.

SOURCE: Ohio Medicaid claims data CY2015-2017

Since the program's inception, ODM has now successfully completed the design and launch of more than 40 episodes. ODM also successfully launched referral reporting. This entails the sharing of provider performance information for episodes linked to payment where the PAP is a specialist or facility[52] with Ohio CPC practices that included attributed members within the episode to help inform referrals to high-quality, efficient providers.

The episodes model has also been used to address broader population health priorities in Ohio, such as children's health and opioid prescribing. Approximately 750,000 children have been included in the program and several episodes created specifically cover conditions common in the pediatric population (e.g., attention deficit hyperactivity disorder, oppositional defiant disorder, and asthma exacerbation). Opioid quality measures have been included in the orthopedic and dental episodes, and more opioid quality measures are planned for the future.

Through implementation of Ohio's Episodes program, ODM identified several key factors for successful design and implementation of an episodes model, including:

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program from episodes linked to payment in 2017. Spend for Episodes is non risk-adjusted and includes all Episodes with no exclusions. Program-eligible spend is restricted to just claims and encounters, and excludes non-medical spend such as outside payments to MCPs, Medicare, supplemental payments to providers, and administrative costs. Clinical provider total count includes all billing providers with a claim in 2017, excluding those that would never be eligible for CPC or Episodes (e.g. labs, ancillary, DME, etc.). See Appendix for further detail on methodology.

52 In 2017 referral reports were launched for three episodes: asthma exacerbation, COPD exacerbation, and perinatal. As of 2019, four additional episodes are included in referral reporting in addition to the three launched in 2017: colonoscopy, EGD, GI hemorrhage, cholecystectomy.

- Persistent provider engagement at key program time points, including provider input in initial design phase, as well as *after* reporting. For example, Ohio designed episodes early on with large provider advisory groups, but once the episode model was more established, sought input on the episode model after launching initial informational-only reports, so that providers could leverage their own data to give input on the episode definition.

- Proactive management of challenges related to provider participation, particularly from specialists (e.g., surgeons with dedicated Operating Room schedules) and PAPs for episodes with total episode spend that is insufficient to drive significant changes in hospital processes, to ensure broad engagement in the models. Ohio, where possible, considered alignment with other programs (e.g., Medicare) to support participation by aligning focus across payers even for episodes with smaller spend.

- Relentless focus on streamlining operations, to encourage continuous improvement of the model and ease administrative burden at scale. Early on, all Managed Care Plans were performing their own episode analytics and reporting. In 2016, Ohio shifted to a consolidated reporting approach to streamline the analytics and reporting and ensure providers received all episode reports from a single source. In 2019, the state shifted to a model with pooled performance across all MCPs and is also looking for opportunities to streamline reporting *across* episodes, e.g., for providers who are PAPs in multiple episodes.

- Ongoing focus on balancing engagement and consistency across public and commercial programs. Commercial plans (Aetna, Anthem, MedMutual) were at the table throughout the episode design process and committed to launching episode reporting for three of the first six episodes. At least one of the plans has transitioned to payment with select providers and additionally, Humana shared publicly that they are leveraging Ohio's definitions (available on the State's website) to implement episodes with Ohio providers.[53]

- Continued alignment of Episodes program design with broader population health priorities. Beyond use as a payment model, the episode construct enables the state to share information with providers themselves, and with referring providers. For example, in the design of the orthopedic episodes, Ohio developed quality measures to support the state guidelines that promoted safer prescribing of opioids. Currently, the state is refining the perinatal episode to enable increased transparency on neonatal outcomes with providers involved in perinatal care, such as OB-GYNs.

Key learnings

Through the development of the Episodes and CPC model, ODM observed several success factors to enable model design and implementation:

- *Organizational leadership statewide and within the Department of Medicaid.* To launch the work under SIM, leadership from the Governor's Office of Health Transformation played a critical role in convening and aligning relevant stakeholders across state agencies, in close collaboration with Ohio Department of Medicaid. Ohio Department of Medicaid continues to play a central role in integrating cross-agency priorities into innovative programs. Further, multiple teams within the Department of Medicaid remain engaged in and committed to committed to supporting external stakeholder and cross-agency collaborative work to further population health goals.

- *Creation of a dedicated team specifically focused on payment innovation.* During SIM, ODM created the payment innovation team to focus on ongoing management of payment innovation programs and priorities. The payment innovation team relies on involvement across nearly all areas within Medicaid (e.g., fiscal, managed care, quality). While cross-agency participation was critical for success, the amount of effort required to stand up the CPC and episodes program was an initial challenge when

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[53] Source: Humana. https://www.humana.com/provider/news/value-based-care/payment-models (viewed on 5/14/2019).

layered on top of current activities. A dedicated payment innovation team within Medicaid was critical to successfully coordinating between stakeholders, other agencies, and Medicaid staff to facilitate informed program design and administration. Putting a payment innovation team in place within Medicaid as well as streamlining involvement across departments were key efforts to support long-term sustainability, and efforts to continue development of a longer term operational model are ongoing.

- *Cross-agency coordination and alignment*. During the SIM period, ODM participation in the ODH-led State Health Assessment (SHA) and State Health Improvement Plan (SHIP) helped ensure alignment of metrics across both models with state priorities more broadly where possible, in addition to alignment across national measures. In future design phases to further develop the models, cross-agency coordination and alignment will continue to be important.

- *Stakeholder engagement to embed payment innovation programs and capabilities in the Ohio healthcare ecosystem*. Through continued engagement with providers, ODM has promoted understanding of the models and provided opportunities for feedback for continuous improvement. Through engagement of payers, including MCPs and commercial payers, ODM has built up awareness of and support for payment innovation models.

- *Practice transformation.* Throughout the payment innovation journey, ODM observed and heard from stakeholders of the importance of effective resource allocation for practice transformation. One lesson learned for the model is that, in future models, we would recommend increased resourcing for, and attention given to, practice transformation support for transforming care.

Through design and implementation of the Ohio CPC and Episodes programs, ODM also had to address a series of challenges:

- *Data quality*. Real progress has been made on data quality, in part due to the state choosing to leverage encounter data across most of its lines of business, including for rate setting, quality metrics, analytics and reporting. Along with the decision to centralize reporting for the CPC and Episodes programs, the state undertook an encounter data reconciliation effort with the MCPs. While there have been several challenges around alignment on activities and the timeline collection and compilation of claims data relevant to the CPC and Episodes programs, ODM has worked with vendors and the MCPs to correct data issues and develop processes to prevent, identify, and solve similar issues more quickly in the future. ODM is focused on ongoing efforts to continue to improve data quality and also maintain and update codes and algorithms for key analytics given its importance in ongoing operations for program reporting.

- *Aligned collaboration and greater engagement from Managed Care Plans as well as private sector payers and other stakeholders*. The MCPs play a critical role in implementing Ohio's core programs. During design and implementation of both programs, challenges arose on alignment across Medicaid and its MCPs. The state continues to engage the MCPs in decisions on a regular basis to ensure collaboration necessary for overarching success. While commercial payers participated in the design of CPC and Episodes and joined monthly meetings for updates on topics like alignment with federal initiatives, private payers can be more deeply engaged to help shift the state healthcare ecosystem to one with better care and lower costs. Leveraging further engagement from other payer partners has been beneficial. For example, ODM worked collaboratively with the Department of Administrative Services to demonstrate the potential for value-based payment in the state employee population and involved payers made a commitment to align with the state's efforts. Further, ODM has begun work to incorporate insights from non-traditional stakeholders with access to novel data sources or information to improve outcomes (e.g., social determinants of health data sources and indicators).

- *Vendor transition and capability building*. ODM transitioned to vendors to ensure long-term reporting capabilities that are embedded in ODM standard operations, in order to progress from the design state to a steady state. ODM began the transition before the end of the grant period, to ensure a

collaborative hand-off with significant time to address any emergent issues and to embed new capabilities within the ODM team to ensure the long-term sustainability of Ohio CPC and Episodes reporting. Even so, the 'lesson learned' is that even earlier ownership (including understanding, awareness, and a sense of responsibility) from state staff is paramount to ensuring continuity in processes, content, and implementation over time. Going forward, ODM will aim to internally build greater capacity and capabilities for innovation building on our lessons learned

4) **Sustainability**

Through SIM, ODM has embedded the core payment innovation models required for Ohio's health value work into the ongoing operations of the department and its long-term planning for achieving project goals. This strong foundation during the grant period created a platform to scale and build on the work after the end of the grant period. As the SIM grant period ends, the Payment Innovation team has identified a number of strategies to ensure the sustainability of the CPC and Episodes programs and continue to embed the programs in the state healthcare ecosystem. For example, ODM continues to convene payment innovation working group meetings to ensure ongoing engagement of cross-agency leadership in payment innovation work and to encourage integration with broader agency priorities.

Strategies for Sustainability

Strong leadership and ownership of the outcome of programs on the part of the payment innovation team. Over the past five years, ODM leaders have contributed immeasurably to the vision, design, and implementation of the SIM models. Going forward, their ownership over the program's future directions will enable the program's ongoing success. Innovation is one of ODM's core values, and it is therefore critical that the program is responsive to the changing needs and priorities of the state. This is only possible in an environment where innovation is everyone's responsibility, including all ODM departments (i.e., policy, fiscal, data, quality measurement, managed care, legal, analytics, and communications.) To this end, it will be important to continue to grow the capabilities not only of the payment innovation team, but of innovation as a priority across ODM leadership.

Strong alignment with federal programs. ODM has been working towards alignment of CPC with the federal CPC+ program and has pursed other opportunities for alignment including participation in QPP under MACRA and initial research into requirements for alignment with PCF. Ohio/Northern Kentucky is one of 18 regions selected to participate in the CPC+ program, accounting for ~20% of all participating primary care practices.[54] In 2019, Ohio Episodes was approved for QPP as an Other Payer Advanced APM and is among the first state Medicaid agencies to have an approved program. In the future, remaining abreast of key developments in payment innovation at the federal level will be imperative to the long-term success of programs like CPC and Episodes. ODM continues to participate in learning opportunities at the national level and to engage with federal partners to identify potential areas for additional alignment as federal priorities and programs evolve, as well as to embed capabilities for alignment within regular ODM workflows and processes.

Stakeholder engagement. ODM will continue to engage providers and practices, Managed Care Plans, and other stakeholders on questions of program design and implementation, ecosystem coordination on specific activities (e.g., attribution), and will consider opportunities to include nontraditional stakeholders in the payment innovation ecosystem (e.g., large employers). ODM is aware of its unique position as a convener to accelerate statewide health transformation and will continue to prioritize ensuring both a sufficient number and representation of stakeholders committed to its healthcare priorities.

Infrastructure and operational capacity, including HIT. Ohio's approach seamlessly integrates HIT into the SIM programs rather than treating it as a standalone system. However, further growth requires continued work to connect existing, yet disparate systems and datasets to improve the overall healthcare environment. ODM plans to build on experiences to date using analytics capabilities to identify and address emerging issues such as behavioral health as well as opioid use and prevention given the impact of these conditions on the lives of

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[54] Source: https://innovation.cms.gov/Files/reports/cpcplus-2018-review.pdf, 2018 program year review.

families, in addition to costs. So far, practice-level EHR requirements have been excluded from program eligibility requirements to allow a wider pool of practices to participate but will be discussed in future years especially in tandem with movement towards federal alignment (e.g., CPC+ or PCF alignment). EHR data offers the potential to increase timeliness of information sharing and enrich current analytics with the detail of clinical data. ODM also plans to replace components of administrative data with clinical data as clinical data capabilities advance department-wide. Work is also currently underway to incorporate payment innovation data into the state's Enterprise Data Warehouse for further integration of payment innovation into other state activities and to ensure the sustainability of data infrastructure over time.

Commitment to program evolution and growth. As shown through the recent transition across gubernatorial administrations, building continued support for payment innovation programs is possible through the collection of outcomes data to demonstrate value, and engagement of leadership in design efforts to best understand how CPC and Episodes can be used in pursuit of the new Governor's priorities.

Broad linkages to statewide health transformation goals. ODM will continue to use the CPC and Episodes programs as a basis upon which to build towards broader population health and health and wellness goals. Ohio has been proactive on this work to date, seeing opportunities to more closely link how the state pays for healthcare with public health priorities such as preterm birth, infant mortality, neonatal abstinence syndrome and opioid use disorder, and will continue to seek out opportunities to support state health priorities through innovative approaches.

Beyond SIM

The Ohio CPC and Episodes programs served as a foundation for broader statewide improvements in health outcomes and value. Through the SIM grant, Ohio has established capabilities and a model for collaboration with clinical and other stakeholders across the state, including within ODM, other agencies, providers, Medicaid Managed Care Plans, and commercial payers. This method of engagement has been used to continue to refine the CPC and Episodes programs over time to more precisely meet the needs of patients and providers with more timely and relevant feedback, keeping up with best evidenced-care and forging more effective payer partnerships. The state has already successfully leveraged their cornerstone programs for new initiatives to further Ohio's priorities, including the desire for better transparency that drives deeper insights and alignment with other federal and payer programs to streamline participation from the provider perspective, irrespective of payer. For example, CPC Referral Reports, launched in 2017, further align healthcare delivery in the state through the sharing of episode reporting information with CPC program participants to inform referral patterns and promote cross-program integration. Further, through SIM, Ohio has pursued opportunities for leadership as a state pursuing transformation through federal alignment, including strong payer and provider participation in the CMS-led Comprehensive Primary Care Plus (CPC+) program, approval for Ohio Episodes as one of the first state programs designated as an Other Payer Alternative Advanced Payment Model (OP-AAPM) through Quality Payment Program (QPP) and work to pursue potential alignment with new CMS initiatives (e.g., Primary Care First). Other stakeholders also continue to build on the work under SIM. For example, Humana shared publicly that they are leveraging Ohio's definitions (available on the state's website) to implement episodes with Ohio providers.[55]

In the Episodes model, the state has developed opioid prescribing measures in support of state safe prescribing guidelines, to reduce unexpected variation in prescribing practices across clinicians. Having listened carefully to providers and patients over the course of these efforts, work is also underway to update the perinatal episode to make more information available to provide additional insights to clinicians about the highest risk mothers and infants who require adherence to more targeted interventions to drive improved birth outcomes.

In CPC, the state is adding a quality metric focused on the care of members with Substance Use Disorder and is developing "CPC for Kids" to enhance the CPC program's role in promoting pediatric wellness. CPC for Kids will reward activities focused on increased screening, prevention and care coordination for children in Ohio and

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[52] Source: Humana. https://www.humana.com/provider/news/value-based-care/payment-models (viewed on 5/14/2019).

may address population health priorities such as lead screening and preventive behavioral health for children. CPC for Kids will launch on January 1, 2020.

Building on the foundation laid by the CPC and Episodes models, Ohio has also continued to expand on Ohio's payment innovation work to date to serve more holistic population health goals for the state related to pediatric wellness, substance use disorder, and managing complex populations. For example, students across the state are experiencing health challenges that can prevent them from achieving academic success, which is one of the most important signs of adequate growth and development for youth.[56] In an effort to address this issue, Ohio launched the School-Based Health Care Toolkit, a set of resources for schools and communities as they work together to address common health issues and keep students in class and ready to learn.

Ohio will continue to explore new ways to refine, adapt, and expand innovative models to improve outcomes for specific high-need populations such as youth with significant behavioral health conditions or those at risk for out of home placement, as well as to encompass additional high impact clinical areas such as palliative care. Broader engagement with commercial payers, large employers and non-traditional partners may yield additional insights that advance the health of all Ohioans, not only improving healthcare for Ohioans, but also rendering Ohio a better place to live, work, and play, which may attract additional economic growth. More broadly, the work under SIM serves as a powerful demonstration of multi-stakeholder collaboration around an ambitious shared goal, with potential applicability to other areas of state government.

Through SIM, ODM also gained experience working under the guidance and support of strong federal partners, who have the unique authority to improve healthcare delivery nationally. ODM will continue to pursue opportunities for federal partnership to achieve shared goals well beyond SIM, including through new CMS priorities related to primary care and rural health.

Reflecting on the SIM grant, Ohio is celebrating the important groundwork laid to date and is continuing to build on this work to achieve Ohio's broader population health and wellness priorities.

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[56] Source: National Academy of Medicine. *Vital Signs: Core Metrics for health and Health Care Progress*. 2015.

APPENDIX - Methodology

The report contains a number of performance measures and outputs regarding the CPC and Episodes programs. This includes measures that assess program coverage (e.g., population enrolled and providers participating in each model), quality (i.e., provider performance on quality metrics), and spend (e.g., cost trend, net annual savings). The purpose of this appendix is to detail the methodologies used to perform the calculations that are included in the report.

The evaluation is limited exclusively to ODM claim and encounter data (2013 – 2017) as well as outputs from CPC and Episodes program analytics, as defined in the business requirements documents that are posted publicly.

Relevant program years are included in both the report and the methodology appendix. Years for CPC are defined by claim service start date for all post-exclusion claims, for all post-exclusion members affiliated with a CPC-enrolled practice for that calendar year. Note that data for 2015 and 2016 are reported for members attributed to practices enrolled in the CPC program beginning in 2017. Years for Episodes are defined by the episode end date, to align with the definition used for reporting and payment. Note that this means that claims with service dates in the prior calendar year may be included in the current year's episodes results.

Additional detail on program requirements and evaluation methodology can be found on the payment innovation section of the Ohio Department of Medicaid's website.[57] Please send any further questions to Ohio_CPC@medicaid.ohio.gov or EpisodeReports@medicaid.ohio.gov.

Coverage
Measures that assess coverage capture the extent to which the payment innovation programs have scaled across the state for the Medicaid population specifically. These measures assess the proportion of members, providers, and spend that are covered by CPC, Episodes, or both programs. Continuing to capture these measures in future program years will be integral to understanding how the programs are growing over time.

Members
Overall Medicaid population is defined as the average monthly membership count for Ohio Medicaid enrollment in the previous year. Using this methodology, in 2017, there were 3.1M total Medicaid members. This number was used as the denominator in calculations regarding percentage of population covered by the programs.[58]

Overall cross-program members displays the total number of unique members enrolled in a CPC practice in December of the previous year or who had at least one instance of an episode ending in a given calendar year. It is calculated by counting unique Member IDs from a distinct list of Medicaid member IDs with at least 6 months of enrollment from the CPC attribution table fully joined with a distinct list of members from the union of all episode output tables for all episode definitions. In 2017, there were 2.0M members involved across both programs, or 64% of the overall Medicaid population.[59] In 2019, with additional practices enrolled in CPC, this number is projected to be 2.4M members, or 77% of the overall Medicaid population.[60]

Overall Episodes members displays the total number of unique members who had at least one instance of an episode (valid or non-valid) ending in the previous year. It is calculated by counting all distinct member IDs from the union of all episode output tables for all episode definitions (with no exclusions applied). In CY2017, there were an estimated 1.6M members with at least one episode.[61]

Overall CPC members displays the total number of Medicaid members attributed to CPC-enrolled practices after CPC standard member exclusions are applied to total Medicaid enrollment for the relevant reporting and performance years. Members are attributed prospectively each quarter to one of the state Medicaid primary care providers, based on their expressed preference. When members have not identified their preferred provider, members are attributed based on their recent claims history. When claims history is unavailable, members are attributed based on non-claims factors such as geography and age. The overall CPC population is determined by a count of distinct recipient IDs attributed to a CPC-enrolled practice. Standard member exclusions include duals (included as operationally feasible, priority for MyCare), members with limited benefits (e.g., family planning), and all other members with third-party liability coverage. In 2017,

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[57] Medicaid.ohio.gov/provider/paymentinnovation
[58] Includes duals population
[59] For CY2017, there were 2.0M unique members across the CPC and Episodes programs. Members covered by episodes assumes consistent overlap with the CPC program from episodes linked to payment in 2017.
[60] Projections for future cross-program member count assumes stable member count in episodes, uses program year CPC member count based on 2019 enrollment, and assumes consistent overlap between CPC and episodes.
[61] For CY2017, there were 974k unique members across the nine episodes linked to payment.

there were 893K attributed to one of the 111 practices enrolled in Ohio CPC. As of January 2019, there were 1.2M members attributed to the 250 practices enrolled in CPC.

Providers
Total Medicaid providers used for the calculations in this report represents the total number of Medicaid providers who were potentially eligible to be a CPC practice and/or an episode principal accountable provider (PAP) for the calendar year. This number includes all billing providers with a claim in 2017, excluding those that would never be eligible for CPC or Episodes (e.g., labs, ancillary, DME, etc.). In 2017, there were 47,615 Medicaid billing providers potentially eligible to become a PAP or CPC practice.[62]

Total cross-program providers represents the total unique billing provider IDs who were either practices enrolled in CPC or episode PAPs for at least one instance of one episode definition for the calendar year (with no exclusions applied). Note that nearly all CPC providers are also an episodes PAP as well due to the upper respiratory infection (URI) and urinary tract infection episodes, where the PAP is a primary care physician.[63]

Total CPC providers represents the total practices enrolled in CPC for the calendar year in question. This is calculated as a count of distinct Medicaid billing IDs for enrolled CPC practices for the calendar year.

Total Episodes providers represents the total de-duplicated count of Medicaid billing IDs who were episode PAPs for at least one instance of one episode definition for the calendar year (with no exclusions applied).

Quality

Measures that assess quality capture provider performance and improvement on key quality measures included in the CPC and Episodes programs. These measures assess provider performance on the program requirements, as well as performance on key quality metrics in each program.

In the CPC program, practices must meet all eight activity requirements and pass 50% of the clinical quality and efficiency metrics for which their practice is eligible. In 2017, there were 20 clinical quality metrics and 4 efficiency metrics (see below). Each metric defines the members that fall into the numerator and denominator, and practices are only eligible for the metrics for which they have at least 30 members in the denominator. More detail on the CPC quality and efficiency metrics, as well as the activity requirements, can be found on the Ohio CPC website.[64]

In the Episodes program, there are quality metrics tied to incentive payments and quality metrics for information only. In order to qualify for positive incentive payments, principal accountable providers (PAPs) must meet all quality metrics tied to payment for that particular episode and have an average risk-adjusted episode cost lower than the "commendable" threshold. In 2017, there were nine episodes linked to payment. Among those episodes, there were 13 quality metrics linked to payment. More detail on the quality metrics in the Episodes program can be found on the Ohio Episodes website.[65]

Program requirements

Total number of CPC providers meeting all program requirements refers to the total number of CPC-enrolled practices meeting all activity requirements and passing at least 50% of eligible clinical quality and efficiency metrics. Practices were considered eligible for a quality metric if they had at least 30 members in the denominator. In 2017, 106 providers met all program requirements, and all 111 providers met the subset of quality requirements.

Total number of Episode PAPs meeting quality requirements refers to the total number of Episodes providers meeting thresholds for all quality metrics linked to payment within an episode for all episodes linked to payment. In 2017, nine episodes were linked to payment, and across those nine episodes, 74% of PAPs met all quality thresholds.

Quality metric performance

Overall quality performance represents the absolute percentage point change in the unweighted average of quality metric performance rates across all CPC practices year-over-year, calculated as the sum of the episodes and CPC total

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[62] Includes all specialties; does not account for fact that all specialties are not traditionally an episodes PAP.
[63] Overlap excludes FQHCs and RHCs that can be CPC practices but not eligible to be a PAP.
[64] https://medicaid.ohio.gov/provider/PaymentInnovation/CPC#1657109-cpc-requirements.
[65] https://medicaid.ohio.gov/provider/PaymentInnovation/Episodes.

quality performance, where the episodes quality performance is based on episodes linked to payment (i.e., nine episodes for 2017). In 2017, CPC providers improved overall quality performance by 2.2% and Episodes providers' performance changed by -0.1%, resulting in a 2.1% overall quality performance improvement.

Annualized quality performance for CPC is displayed as the absolute percentage point change in the unweighted average of quality metric performance rates across all CPC practices year-over-year. This was calculated in two steps: First, the percentage point change was calculated for each of the 20 quality metrics by subtracting the CY2016 program-wide quality metric rate from the CY2017 program-wide quality metric rate, and multiplying the difference by 1 if the metric required a score at or above the threshold to pass, and by -1 if the metric required a score at or below the threshold to pass. Second, the unweighted average change across all quality metrics was calculated by dividing the sum of each individual metric's improvement percentage by the total number of quality metrics. Practices were scored on each of the following 20 quality metrics[66] for which they had at least 30 members in the denominator:

- Well-child visits in the first 15 months of life
- Well-child visits in the 3rd, 4th, 5th, and 5th years of life
- Adolescent well-care visits
- Weight assessment and counseling for nutrition and physical activity for children / adolescents: BMI assessment for children / adolescents
- Timeliness of prenatal care
- Live births weighing less than 2,000 grams
- Postpartum care
- Breast cancer screening
- Cervical cancer screening
- Adult BMI assessment
- Controlling high blood pressure
- Medication management for people with asthma
- Statin therapy for patients with cardiovascular disease
- Comprehensive diabetes care: HgA1c poor control (>9.0%)
- Comprehensive diabetes care: HbA1c testing
- Comprehensive diabetes care: eye exam
- Antidepressant medication management
- Follow-up after hospitalization for mental illness
- Preventive care and screening: tobacco use: screening and cessation intervention
- Initiation of alcohol and other drug dependence treatment

Annualized quality performance for Episodes is displayed as the absolute percentage point change in the unweighted average of quality metric performance rates for the quality metrics linked to payment in episodes linked to payment for the year in question (i.e., in CY2017 there were 9 episodes linked to payment). This was calculated in two steps: First, the percentage point improvement was calculated for each quality metric by subtracting the CY2016 program-wide quality metric rate from the CY2017 program-wide quality metric rate, and multiplying the difference by 1 if the metric required a score at or above the threshold to pass, and by -1 if the metric required a score at or below the threshold to pass. Second, the unweighted average improvement across all quality metrics was calculated by dividing the sum of each individual metric's improvement percentage by the total number of quality metrics.

CPC members receiving care from efficient PAPs for select episodes is determined by the percent of episodes by CPC members going to highly efficient PAPs for asthma exacerbation, perinatal, and COPD exacerbation episodes by year. A PAP is defined as highly efficient if their average risk-adjusted spend is in the top 40% of all PAPs in the episode.[67] This is calculated as the count of episodes by CPC members at highly efficient PAPs, in the top two quintiles based on lowest average risk-adjusted cost, as a percent of all episodes by CPC members for asthma exacerbation, perinatal, and COPD exacerbation episodes. In 2017, 30% of CPC members received care from a highlight efficient PAP, compared to 23% in 2015.

Spend (or costs)

Measures that assess spend, or cost of care, capture provider performance and improvement on total cost of care and episode-specific spend in the CPC and Episodes programs. Given the payment innovation programs' twofold goal of improving quality and decreasing cost, this is an important dimension to assess both now and in future program years.

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[66] Further detail on the Ohio CPC quality metrics can be found at https://medicaid.ohio.gov/Portals/0/Providers/PaymentInnovation/CPC/qualityMetricSpecs.pdf.
[67] To be included, each PAP must have a minimum of five valid episodes.

Total spend

Total Medicaid spend is the total claims and encounter spend for the previous year, calculated as the sum of the paid amount for all claims and encounters. Note that this is not equivalent to the total Medicaid budget, and for purposes of coverage calculations, includes only program-eligible spend (i.e., spend restricted to claims and encounters, excludes non-medical spend such as outside payments to MCPs, Medicare, or supplemental payments to providers, and administrative costs). In 2017, total Medicaid program-eligible spend calculated using this methodology was $20.1B.

Total cross-program spend is the total de-duplicated spend covered by the CPC and Episodes programs combined. This calculation uses CPC total spend as described below and uses Episodes total spend as described below and unique claims that are included in both the CPC and Episodes program spend calculations.[68] In 2017, $7.0B of Medicaid spend was covered across the CPC and Episodes programs, which amounts to 35% of total program-eligible Medicaid spend.

Total CPC spend is the total spend covered by the CPC program, calculated as the sum of spend for all members with 6+ months of enrollment through CPC attribution. In 2017, CPC covered $4.9B in spend.

Total Episodes spend is the total sum of the spend on unique claims across all episodes covered by the Episodes program in the program year. This calculation includes episodes linked to payment and those that are informational only. In 2017, Episodes covered approximately $2.9B in spend.[69]

Cost avoidance

Total cost avoidance is determined by adding the cost avoidance from the CPC and Episodes programs. In 2017, the CPC program resulted in $89.3M in gross annual savings[70] and the Episodes program resulted in $31.8-92.2M in gross annual savings, which is $121.1-181.5M in total overall cost avoidance across the two programs.

CPC gross annual savings is determined by comparing the total cost of care for CPC-enrolled practices to a non-CPC enrolled control group. This calculation is performed by normalizing the CY CPC spend to spend for the population in absence of CPC and takes into account the PMPM payments made by Medicaid to CPC-enrolled practices. While the spend trends for both the CPC group and non-CPC enrolled control group increased from 2015 to 2017, the rate of spend increase for CPC practices was lower than the rate of increase for the non-CPC control group. From 2015 to 2017, risk-adjusted total cost of care for Ohio CPC increased by an annual rate of only 4.6% compared to an increase of 6.5% for the non-CPC control group. Non-CPC practice group includes CPC-eligible practices (i.e., CPC-eligible provider type / specialty codes) that did not enroll in the CPC program.

CPC net savings is calculated by subtracting total shared savings paid to practices by ODM and the MCPs from the gross annual savings. In 2017, shared savings payments totaled $11.2M and gross annual savings were $89.3M, resulting in $78.1M net savings.

Episodes gross annual savings displays the range of savings across all nine episodes in payment for 2017, calculated using a lower-bound estimate based on a historical Medicaid spend trend benchmark and an upper-bound estimate based on a claim type-weighted trend for each episode using claim type trend values provided by the state's actuary, Milliman. Savings is calculated by multiplying the savings vs benchmark trend by the total unadjusted spend on episodes in the year in question. The savings vs benchmark trend is determined by subtracting the benchmark trend from the annualized episode spend trend. In 2017, the annualized episode spend trend was -0.9% and the upper-bound benchmark trend was 6.8%, result in a 7.7% savings vs. upper-bound benchmark trend. Total spend across the nine episodes linked to payment was $1.1B, adjusted using the savings vs benchmark to account for episode impact resulting in $1.2B total expected spend on episodes.[71] The savings v. benchmark trend is then multiplied by the total adjusted spend on episodes, which

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[68] Calculation is based on the sum of the actual unique spend across the CPC program and the nine episodes linked to payment and the estimated additional, unique spend in the 34 episodes for reporting, estimated by assuming consistent overlap with the CPC program and the nine episodes linked to payment.
[69] Shared savings payments are the sum of payments for shared savings relative to peers and savings relative to self. For 2017, three practices received payment for savings relative-to-peers, totaling $619K and paid directly by Medicaid. Two practices received payment for savings relative-to-self, totaling $10.6K, of which the MCPs paid $9.1M and Medicaid paid $1.4M. The amount paid by MCPs and Medicaid do not appear to add up to the total because of rounding only.
[70] Includes PMPM payments in calculation of CPC spend trend, which is compared to the non-CPC control group to determine estimated savings.
[71] Expected total is calculated by dividing the total spend ($1.1B) by one minus the savings vs. benchmark trend.

shows a gross annual savings of \$92.2M. This calculation was repeated using the lower-bound benchmark trend (1.9%)[72], resulting in gross annual savings of \$31.8M.

Episode net savings is calculated by subtracting the net incentive payments from the gross annual savings. For performance in CY2017, there were \$4.0M in positive incentive payments and \$-4.2M in negative incentive payments, resulting in -\$0.2M in net incentive payments. Adding \$0.2M to total gross savings of \$92.2M and \$32.8M for the upper- and lower-bound respectively results in a rounded net savings range of \$32.1 – 92.5M.

Episodes cost trend displays the average percent difference in average episode spend across all episodes linked to payment for the Episode program for the current year compared to the previous year. Average percent change is defined as the average of the % difference between the current year's average episodes spend over the previous year across all episode definitions in payment, weighted by total non-risk adjusted spend. Based on performance in CY2017, the annualized trend for episodes on average non risk-adjusted spend was -0.9%, not accounting for any expected spend trend.

Shared savings and incentive payments

Total Episodes positive incentive payments is calculated by summing the positive incentive payments made across the nine episodes linked to payment in 2017, across the MCPs and FFS. To be eligible for a positive incentive payment, a PAP must have at least 5 valid episodes ending in the performance period, have an average risk-adjusted valid episode spend that falls below the commendable threshold, and pass all quality metrics linked to performance. For performance in CY2017, the total Episodes positive incentive payment was \$4.0M across Medicaid FFS and four of the five MCPs.

Total Episodes negative incentive payments is calculated by summing the negative incentive payments made across the nine episodes linked to payment in 2017, across the MCPs and FFS. To be eligible for a negative incentive payment, a PAP must have at least 5 valid episodes ending in the performance period and have an average risk-adjusted valid episode spend that is above the acceptable threshold, regardless of quality metric performance. For performance in CY2017, the total Episodes negative incentive payments was \$4.2M across Medicaid FFS and four of the five MCPs.

CPC total shared savings payments is calculated by summing the two types of shared savings payments in the CPC program: payments made to practices for savings relative-to-self and payments made to practices for savings relative-to-peers.

Payment relative to peers is assessed to practices with the 10% lowest TCOC across all enrolled Ohio CPC practices who are also meeting shared savings requirements (i.e., passing quality and efficiency metrics and meeting the size requirement). The payment is calculated as a \$5 per-member, per-year bonus, capped at \$1M. In 2017, 3 of the practices in the bottom decile of total cost of care were eligible for shared savings, receiving a total of 619K for savings relative-to-peers, paid directly by Medicaid.

Payment relative to self is assessed to practices that improved their total cost of care compared to their own baseline. The baseline is 2 years prior to the performance year, and is calculated as the total cost of care, risk-adjusted for the patient panel and programmatic factors. The performance year total cost of care is risk-adjusted for the patient panel and includes the PMPM payments made to practices. Practices receiving payment must save at least 1% savings compared to their baseline year. Shared savings payments are calculated as the savings percent multiplied by the total cost of care across the practice multiplied by the gain-sharing rate. The default gain-sharing rate is 50%, or 65% for CPC+ Track 2 practices or practices with baseline TCOC below a pre-set threshold. While the determination of the baseline risk-adjusted TCOC includes both FFS and managed care enrollees, the payment that ODM makes to CPC entities for its FFS members will be the share of the shared savings payment described above, pro-rated based on member months for FFS members. Similarly, each MCP is responsible for making payments based on the shared savings payments achieved by CPC practices, for their members, pro-rated based on member months for members enrolled with the MCP. In 2017, 2 practices received payments for shared savings relative to self, which totaled \$10.6M. Of that, the MCPs collectively paid \$9.1M to practices for shared savings relative to self, and Medicaid paid \$1.4M.[73]

CPC practices outperforming their baseline is calculated as a percentage of total CPC practices in the program year. This is calculated by comparing each provider's total cost of care in the performance year to their total cost of care in the

baseline year, which is 2 years prior to the performance year (i.e., for performance year 2017, the baseline year is 2015). A provider's total cost of care is defined as the sum of all non-excluded payments made by ODM or MCPs for the Medicaid members attributed to that provider, including total fee-for-service claims and managed care encounters during the relevant period (i.e. baseline year or performance period). Total cost of care for the performance year includes PMPM payments made to the CPC provider as part of the CPC program. Total cost of care is risk-adjusted by dividing the CPC entity's total cost of care by the average risk score of the members attributed to the CPC entity, as determined through 3m CRG's proprietary risk-adjustment tool. Expenditures not included in the baseline year and performance period TCOC are waiver services, underutilized services as determined by the state (initially dental, vision, and transportation), all expenditures for members with a Neonatal Intensive Care Unit (NICU) stay (Nursery 3 or 4), all expenditures for members that are outliers within each risk band (top and bottom 1%), and all expenditures for members with at least 90 consecutive days of LTC claims. Each practice's baseline for performance year 2017 is determined by multiplying the risk-adjusted per-member, per-month TCOC for attributed patients in 2015 by (1 + a practice-specific adjustment factor) squared. Performance year total cost of care is the per-member per-month risk-adjusted total cost of care for attributed members in program year 2017, including PMPMs paid to providers. Practices who kept their performance year total cost of care below their baseline total cost of care were considered to have outperformed their risk-adjusted total cost of care baseline.