

## PAYMENT MODEL PRIMER

# Bundled Payments

Bundled payments, also sometimes known as episode-based or episode of care (EOC) payments, involve providers receiving a single fee for the set of services they provide related to common procedures such as knee replacement, perinatal care, or coronary artery bypass graft.<sup>1</sup>

## HOW IS IT SUPPOSED TO WORK?

Bundled payments are calculated based on the expected costs for clinically defined episodes of care.<sup>1</sup> Payments under these models are meant to include the full spectrum of services needed to treat the patient during the episode of care, which may include multiple clinicians.<sup>1</sup> In addition, these bundled payments usually require participant providers to assume financial risk.<sup>1</sup> If they go beyond preset cost targets providers can face a penalty, if they stay below those targets they can be eligible for incentive payments.<sup>1</sup>

## WHAT IS THE GOAL?

Bundled payments are designed to promote efficiency of care and management of patient conditions by aligning providers toward a common goal achieved by the coordination of patient care among providers. Bundled payments attempt to control rising health care costs by reducing cost

variation including through reduction in low-value services or avoidable complications. These payment models encourage clinicians and hospitals to move away from a traditional fee-for-service (FFS) payment approach which incentivizes clinicians to bill for a large volume of services, and instead focus on the value, quality, and medical necessity of services offered.<sup>2</sup> Bundled payment models incentivize clinicians to implement care coordination as a way of improving the quality of care offered, while at the same time lowering costs.<sup>1</sup>

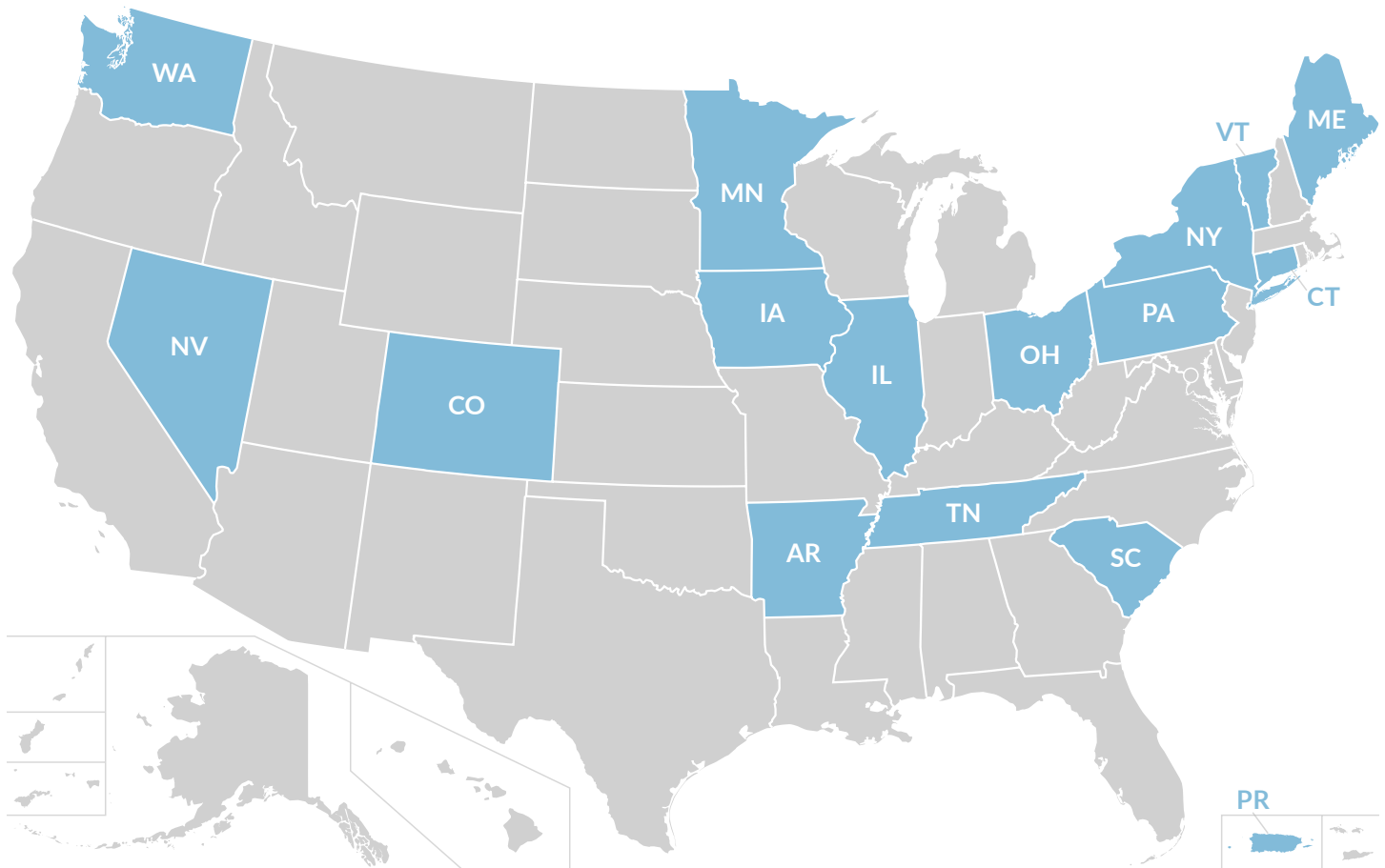
## HOW AND WHERE HAS IT BEEN USED?

Key components of payment structure

### Medicaid

Fifteen states and Puerto Rico have implemented episodes of care programs as of 2019 (Figure 1).

FIGURE 1  
States and territories with EOCs (2019)



Source: Altarum.<sup>3</sup>

Arkansas Medicaid is believed to be the first Medicaid agency to implement EOC payments starting in 2012.<sup>4</sup> The effort was launched as part of Arkansas' Health Care Payment Improvement Initiative, which aimed to control costs, and improve access to and quality of care.<sup>4</sup> Participation in the Arkansas EOC models was mandatory for Medicaid providers.<sup>4</sup> The first 2 Arkansas Medicaid EOCs targeted upper respiratory tract infections and perinatal care.<sup>4</sup> As of 2021, the Medicaid program had added EOCs that target coronary arterial bypass grafts, the treatment of asthma, cholecystectomies, chronic obstructive pulmonary disease, congestive heart failure, colonoscopies, tonsillectomies, and total joint replacements.<sup>5</sup>

Both Tennessee and Ohio Medicaid have had bundled payment or EOC models in place since

2014.<sup>6</sup> In the model used by both states, one provider is held responsible for spending and health outcomes for all the services needed to treat a patient with a specific condition, including services delivered by other providers.<sup>6</sup> In both states, clinicians operating under the models continue to receive traditional FFS payments upfront, and then there is a reconciliation process under which they receive bonus payments or penalties depending on how they perform on preset patient measures and cost targets.<sup>6</sup> Both states have EOC models that target numerous conditions including asthma acute exacerbation, colonoscopies, and perinatal care.<sup>6</sup>

In 2021, Pennsylvania Medicaid required its managed care organizations (MCOs) to launch perinatal EOC models.<sup>7</sup> MCOs were given discre-

tion as to the exact design specifications of these new models.<sup>7</sup> However, the EOCs were required to include prenatal care, birth, and postpartum care.<sup>7</sup> EOCs must also include incentive payments for clinicians who perform 6 or more collective prenatal visits and child wellness visits within the first 15 months of a child's life.<sup>7</sup>

### Medicare

In April 2016, the Centers for Medicare & Medicaid Services (CMS) launched the Comprehensive Care for Joint Replacement (CJR) program, which was initially a mandatory bundled payment initiative under the Obama administration before becoming largely voluntary under the Trump administration in 2018.<sup>8</sup> Under CJR, approximately 800 hospitals across the country accepted bundled payments for hospital, physician, and postacute care services for 90 days.<sup>8</sup> Medicare paid all providers using FFS until the end of the episode, when total spending is reconciled against a fixed target price and participating hospitals either receive a bonus payment for below-target episode spending or pay a recoupment amount if spending exceeds the target.<sup>8</sup> The CJR model was risk-adjusted to take into account a higher prevalence of some complications at certain hospitals including acute myocardial infarction and pneumonia.<sup>8</sup> Quality of care was measured by the unplanned readmission rate, emergency department use, and mortality.<sup>8</sup>

### Multipayer opportunities or past applications

The EOC models developed by the Medicaid agencies in Tennessee and Ohio were done as part of larger state wide multipayer efforts.<sup>6</sup> During the design phase of both of their EOC models, Ohio and Tennessee Medicaid invited commercial insurers to advisory committees to weigh in on how the episodes should be structured.<sup>9-12</sup> After the initiatives were launched, commercial payers in both states, including Aetna, Anthem, Cigna, and UnitedHealthcare, launched parallel EOC efforts, including ones that targeted

perinatal care.<sup>10-12</sup> However, these efforts are not identical to the Medicaid EOCs in those states.<sup>9,10</sup> The exact design deviations are not known as the officials from commercial plans deemed that information proprietary.<sup>10</sup> However, Ohio Medicaid officials were told by commercial plan staff that they were using "relevant quality metrics according to Ohio episode definitions."<sup>9</sup> Commercial EOC models in Tennessee differ from those in place for Medicaid enrollees in that they do not impose downside risk.<sup>9</sup> Arkansas' perinatal EOC is a multipayer effort covering the majority of births in the state.<sup>13</sup>

## WHAT HAVE BEEN THE RESULTS?

### Financial

#### Medicaid

Both Tennessee and Ohio have seen their EOC models produce savings.<sup>6</sup> Tennessee Medicaid has reported that, collectively, all its EOCs produced \$45.2 million in savings by 2019, the most recent year available.<sup>6</sup> However, individually not all the models have been successful.<sup>6</sup> For instance, Tennessee's skin and soft tissue infections episode, has not produced any savings, while its perinatal EOC has produced more than \$10 million in savings.<sup>6</sup> Ohio Medicaid reported a 0.9% annual decline in cost of care across 9 of its EOCs between 2015 and 2017, which is estimated to equal between \$31.6 million and \$92.4 million in savings over that period.<sup>6</sup> In addition, Ohio MCOs distributed \$4 million in rewards and collected \$4.2 million in penalties for the 2017 performance period.<sup>6</sup> However, Ohio's perinatal EOC did not produce savings.<sup>14</sup> If cost targets are too stringent, bundled payment models may fail to produce savings.<sup>15,16</sup> Ohio participating clinicians found it hard to maintain quality while meeting the cost threshold.<sup>15,16</sup> The cost threshold for the perinatal EOC was \$4,400 in 2016, and to receive gain-sharing that year, accountable providers would have to have kept EOC costs below \$3,210.<sup>15</sup> In

comparison, the threshold for TennCare's EOC perinatal model started at \$7,443 in 2014 and has increased every year since, with clinicians having to keep EOC cost at around \$6,000 to receive gainsharing.<sup>17,18</sup>

Tennessee Medicaid has not released exact data regarding rewards or penalties, other than stating it has paid out more incentive payments than it took back in penalties.<sup>6</sup>

### Medicare

The CJR model resulted in decreases in average payments for lower extremity joint replacements (LEJR) by \$1,511 over the first 4 years.<sup>19</sup> This reduction equates to a 5.2% decrease in average episode payments equaling an estimated \$76 million in savings for Medicare FFS.

### Multipayer

By 2014, Arkansas' EOC model decreased spending by 3.8%, or \$396 per perinatal episode.<sup>13</sup> That year, Arkansas Blue Cross Blue Shield paid approximately \$462,000 in gainsharing payments to 92 accountable providers and collected \$10,000 in risk-sharing payments from 9 providers.<sup>13</sup>

## Health outcomes

### Medicaid

It is unclear what impact Ohio and Tennessee Medicaid's EOC have had on patient outcomes.<sup>6</sup> Models in both states primarily hold clinicians responsible for process measures, which gauge whether providers took certain steps during care, rather than for patient outcomes.<sup>6</sup> Broadly, Tennessee Medicaid has found that its EOC models have decreased low value care in some instances.<sup>6</sup> Between 2015 and 2017, the number of oppositional defiant disorder episodes in which children receive unnecessary medication decreased from 24.6% to 3.7%.<sup>6</sup> In 2021, federal evaluators reviewed claims data from both states for patients in their asthma and perinatal EOCs, and compared those claims against other states that do not have EOC efforts.<sup>6</sup> Comparison states included

Kentucky, Kansas, and South Carolina.<sup>6</sup> Evaluators found that improvements in the EOC groups were mostly less than those in the comparison groups, which meant that patients fared either unfavorably or not statistically different compared to Medicaid enrollees receiving similar services in comparator states.<sup>6</sup> There were, however, some exceptions. The rate of Ohio Medicaid enrollees in the perinatal EOC receiving group B streptococcus screening was higher compared to enrollees in the comparator states.<sup>6</sup> In Tennessee, the percentage of perinatal episodes with a cesarean section (C-section) delivery was less, compared to the other states reviewed.<sup>6</sup>

### Medicare

During the first 4 years of the CJR model, the unplanned readmission rate decreased 3.5%. For elective LEJR episodes, there was a 7.9% reduction in the complication rate. There were no statistically significant changes in emergency department use or mortality.

## Model sustainability

The Arkansas legislature has noted it can be difficult to ascertain with surety what impact EOCs are having on Medicaid expenditures.<sup>20</sup> When EOCs began in 2012, they were quickly followed by the launch of a statewide medical home model and a private option for Medicaid expansion enrollees.<sup>20</sup> All of these efforts had the potential to impact Medicaid costs, making it difficult to isolate the impact of the EOC program.<sup>20</sup> In addition, the legislature found it is also possible that any savings associated with the models may be due to macroeconomic factors influencing Medicaid caseload and spending, such as more Medicaid enrollees exiting the program due to rising incomes.<sup>20</sup> Despite these concerns, the legislature believes that EOC models are overall having a positive impact on the quality of patient care in Arkansas.<sup>20</sup>

Tennessee and Ohio Medicaid both had their EOC efforts initially funded under a CMS' Center for

Innovation State Innovation Model (SIM) grant.<sup>6</sup> That program ended in 2019, after which both states obtained recognition of their Medicaid EOC models as alternative advanced payment models (APMs) allowing clinicians to have these efforts meet value based pay requirements outlined by Medicare.<sup>6</sup> Medicaid officials in both states said getting this designation may encourage Medicare-participating physicians to continue to participate in Medicaid EOC models.<sup>6</sup> Both Ohio and Tennessee Medicaid also made changes to their EOC models because of the COVID-19 pandemic.<sup>6</sup> In May 2020, Ohio Medicaid announced that it would stop imposing financial penalties under their EOC models.<sup>6</sup> In July 2020, Tennessee Medicaid changed their EOC models to upside risk only. However, both states would like to reimpose downside risk in the future.<sup>6</sup>

## Health equity and social determinants of health

Because bundled payments provide flexibility to deliver care that is designed to meet individual patient needs while lowering cost, they provide an opportunity for payers to reflect equity considerations when structuring EOC payments. For example, payers could consider rewarding providers that meet equity goals with higher levels of payment, by adding pay for performance incentives to bundled payments, or through stratified quality targets. Payers could also consider how to disincentivize discrimination against those patients that may be perceived as high-cost or high-risk, which could include people of color.

### Medicaid

Ohio Medicaid officials were planning to have clinicians track and report social determinants of health (SDOH) via Z codes under their EOC

## What works and what doesn't?

### Strengths and impacts

- Bundled payment models keep FFS frameworks in place, which can provide a level of payment certainty to clinicians.<sup>6,8</sup>
- Bundled payments provide financial incentives for clinicians and hospitals to increase quality while keeping their costs down, including by preventing avoidable complications.<sup>23</sup>
- Bundled payment models can inspire collaboration across diverse providers and institutions.<sup>23</sup>
- Unlike other APMs, bundled models can be used to target specialists, whose services have been less likely to be the focus of value-based payment arrangements.<sup>23</sup>

### Concerns and downsides

- Bundled models can penalize clinicians with higher risk patients, unless requirements related to SDOH or risk stratification are built in to the model.
- It is unclear whether bundled payments are ideal for patients with multiple chronic conditions, as there is a lack of clarity about whether the bundles should include the costs of caring for all ailments for a patient, or only those targeted by the bundle.<sup>23</sup> For instance, when a hip replacement patient has asthma and diabetes, some orthopedists may steer that patient to other providers not under a bundled arrangement, as there is a risk that the patient's overall care will surpass cost thresholds.<sup>23</sup>

initiatives, but those plans have been put on hold during the COVID-19 pandemic.<sup>21,22</sup> The changes planned in Ohio included adding new gainsharing measures tied to referrals for community-based services and behavioral health services or substance use disorder treatment.<sup>14</sup>

## Medicare

The CJR model resulted in larger payment reductions for patients who were Black than for White patients ( $-\$1,031$ ,  $P < .05$ ).<sup>8</sup> The penalties may have occurred, as Black patients are more likely to be released to an institutional postacute care following their LEJR than White patients, which increased the overall costs of care.<sup>8,19</sup> The CJR model was associated with a 0.41% decrease in all-cause mortality for Black patients, compared to no statistically significant change in all-cause mortality for White patients.<sup>8</sup> Federal evaluators found limited evidence of different impacts of the CJR model on quality of care, as measured by emergency department use, readmissions, and mortality for Black patients.<sup>8</sup>

## WHAT ARE THE OPERATIONAL CONSIDERATIONS?

### IT infrastructure and analytics

Generally, billing and payment systems must be modified to accommodate the receipt and distribution of bundled payments.<sup>24</sup> They may also need adjustment to enable reporting of progress on quality measures.<sup>24</sup>

For Medicaid EOCs, Tennessee Medicaid relied on existing information technology (IT) infrastructure already in place at their MCOs.<sup>25</sup> MCOs used their own systems to analyze claims, calculate payment, and generate performance reports.<sup>25</sup> MCOs also used their existing websites for providers to view their performance reports.<sup>25</sup> Colorado deployed an effective strategy that bypassed the significant technical lift of prospectively paid bundled payments, by modifying their model to use a backend analytics 'budget to actuals' reconciliation

process.<sup>26</sup> States that are interested in bundled payments, but that lack the IT infrastructure could consider this option.<sup>26</sup>

For Medicare's CJR model, participant hospitals collected and reported on a variety of data: patient characteristics, care process data (e.g., number of cases by physician), procedural data (e.g., surgical supplies), care outcomes data, and cost data (e.g., setting-specific, per-episode, and total cost of care).<sup>27</sup> Hospitals leveraged internal data sources such as tracking spreadsheets, electronic medical records, and business operations data, and integrated and reconciled the internal data with CMS claims data, when available.<sup>27</sup> Some hospitals configured their electronic medical records to output patient reports that help identify trends in patient process and outcome measures.<sup>27</sup> Others created dashboards that display outcome, quality, and cost data.<sup>27</sup>

For Medicare's Bundled Payments for Care Improvement (BPCI) initiative, participating clinicians and hospitals flag patients in electronic health record (EHR) systems when they are seen in the emergency department or admitted to the hospital, to ensure follow ups take place.<sup>28</sup> In addition, dashboard systems that were launched to track performance under BPCI collected a combination of quantitative data (e.g., claims, surveys, costs) and qualitative data (e.g., interviews, observations, document analysis) to understand patient care trends that were taking place.<sup>28</sup> Customized metrics and dashboards by clinician type (e.g., anesthesia, surgery, cardiology, inpatient, and postacute care providers) were also developed so that providers had access to information most relevant to them.<sup>28</sup>

### Stakeholder perspective

#### Clinicians

In Arkansas, some physicians have told federal auditors that they are concerned that the EOC models place them under too much financial risk.<sup>26</sup> They worry that the models hold them

accountable for things outside of their control, such as drug prices or unpredictable patient behavior.<sup>26</sup> To address this, some clinicians have started using diagnostic codes that are clinically valid, but do not trigger EOC payments.<sup>26</sup> Some have also considered reducing access to Medicaid beneficiaries.<sup>26</sup> Federal auditors said they could not determine how wide these sentiments were.<sup>26</sup>

A common concern raised by physicians in Ohio Medicaid's EOCs was that state officials did not adequately promote the efforts, so providers only became aware of the model once they were hit with financial penalties for not meeting spending and quality metric goals; some other providers that were aware of the model found the potential reward or penalty amounts too low to change the way they practiced medicine.<sup>6</sup> Clinicians also complained that the performance reports issued to them under the models were cumbersome to read or inaccurate in some instances, leading to mistrust of the documents.<sup>6</sup> In addition, Ohio clinicians raised the concern that EOC models did not include SDOH as factors to exclude patients from the model, which meant that some clinicians who had higher risk patients were more likely to face financial penalties.<sup>15,16</sup>

In Tennessee, clinicians in the Medicaid EOCs said they improved patient education and hired new staff to increase access to care.<sup>6</sup> Federal evaluators found that clinicians in Tennessee had a more positive response to the EOC models, as MCOs in the state were more active in communicating and in providing technical assistance compared to those in Ohio.<sup>6</sup>

### **Managed care organizations**

MCO representatives in Ohio said they are hopeful as more time progresses that there will be a greater effect on provider behavior.<sup>6</sup> In Ohio, Medicaid EOCs were implemented over time with financial incentives usually not starting until the second year of each EOC's operation.<sup>6</sup> MCOs in Tennessee took a hands on approach with clinicians implementing EOC models.<sup>26</sup> They provided

one-on-one training for individuals whose EOC costs exceed the thresholds or who miss the quality metrics.<sup>29</sup> They also offered peer-to-peer learning opportunities, including focus groups with clinicians performing well on costs and quality measures.<sup>9,29</sup> Tennessee MCOs were also allowed to set their own cost thresholds.<sup>6</sup>

### **Authorities (state and federal)**

Section 1115A of the Social Security Act allows the Center for Medicare & Medicaid (CMS) to test innovative payment models within Medicare, Medicaid, and Children's Health Insurance Program (CHIP) beneficiaries.<sup>30</sup> Under that authority, the federal agency launched The State Innovation Models (SIM) initiative.<sup>30</sup> Using SIM, CMS officials issued funds to Arkansas, Ohio and Tennessee to launch various pay initiatives, including their EOC models.<sup>31,32</sup> Arkansas, Ohio, and Tennessee were able to launch their efforts without either state plan amendments or section 1115 waivers, and instead relied on existing state authorities.<sup>31,32</sup>

### **State governance and project administration**

In Arkansas, the EOCs were launched under Arkansas Payment Improvement Initiative (APII).<sup>32</sup> APII is overseen by a team of staffers across various Arkansas' Department of Human Services offices including the state's Medicaid agency, Aging and Adult Services, Development Disabilities Services, Behavioral Health Services, and the Office of Long-Term Care.<sup>32</sup> In addition technical assistance was offered by the consulting firm McKinsey & Company (McKinsey).<sup>32</sup> McKinsey specifically assisted with data collection and claims data analyses for initial episode development and oversaw much of the stakeholder engagement processes.<sup>32</sup>

In Ohio and Tennessee, SIM initiatives are overseen by departments or offices of health care transformation, as well as their state Medicaid agencies.<sup>31</sup> Ohio officials also worked with McKinsey to perform data analysis as it developed its EOCs.<sup>31</sup> Tennessee contracted with various state-

based organizations to supplement the work of state staff on SIM initiatives, including the state's medical association, the local chapter of American Academy of Pediatrics, and 5 schools of public health.<sup>31</sup> These entities conducted outreach to physicians, assisted physician offices in conducting quality improvement projects, and developed regional, population health improvement plans.<sup>31</sup>

## Other briefs in this series

- [Capitated Payments](#)
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