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CHI St. Vincent Hospital – Joint Replacement

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The Arkansas Health Care Payment Improvement Initiative (AHCPII) is designed to improve the quality of care, improve patient outcomes, and control or reduce growth in healthcare costs. The AHCPII involves restructuring the system to incentivize quality outcomes. The state’s Episodes of Care (EOC) model is a primary strategy of this innovation. Design and implementation of the state’s EOC efforts have been led by Arkansas Medicaid, Arkansas Blue Cross and Blue Shield (ABCBS), and QualChoice (QC). This is part of a series of case studies spotlighting provider innovation under Alternative Payment Models (APMs). For more information and access to additional case studies, visit www.achi.net or www.paymentinitiative.org.

“Our physicians had already been operating under Arkansas’s joint-replacement episode payment model, which helped prepare us for the Medicare Bundled Payment for Care Improvement initiative. With strong physician leadership we’ve been able to succeed and take that experience and apply it to similar models.” – Kevin Cullinan, CHI St. Vincent

Background on Joint Replacements

Nationally, hip and knee replacements are the most common inpatient surgery for Medicare beneficiaries. In Arkansas, a substantial number of these procedures are also performed for beneficiaries of Arkansas Medicaid and private insurers. These procedures can require lengthy rehabilitation and recovery periods. While there is a high volume of these procedures, there is also a high level of variation in cost and quality outcomes across different providers. Post-operative complication rates may be higher at some facilities, while costs for all care associated with a procedure may also vary.



Kevin Cullinan, MHA, CHI St. Vincent, worked with physicians and their teams to help the hospital succeed under new alternative payment models.

Joint Replacement Alternative Payment Model Comparison

To support high quality care, improve outcomes, and control cost growth, payers have developed alternative payment models for procedures like joint replacements. As a national leader in alternative payment model development, Arkansas launched a unique hip and knee replacement episode in 2013. Later that year, Medicare launched the Bundled Payment for Care Improvement (BPCI) initiative, and in 2016 launched the Comprehensive Care Initiative for Joint Replacement (CJR). A new BPCI Advanced model will be launched in 2018.

While there are differences in these models, each one financially incentivizes providers to deliver high quality care and meet cost targets. Among many providers that gained experience in Arkansas’s model, CHI St. Vincent has now successfully participated in BPCI (model 2) and CJR. The chart below compares the three models.

	Ark. Episodes of Care (Medicaid, ABCBS, QC)	Medicare BPCI (Model 2)	Medicare CJR	BPCI Advanced
Years Active	2013-ongoing	2013-2018	2016-2020	2018-2023
Accountable Provider	Physician/Surgeon (mandatory)	Hospital or Physician Group (voluntary)	Hospital (mandatory)	Hospitals or Physician Groups (voluntary)
Episode Duration	120 days (30 pre-op; 90 post-op)	90 days (post-op)	90 days (post-op)	90 days (post-initiating event)
Quality Targets Tied to Payment	Yes	Yes	Yes	Yes
Retrospective Gain or Risk Share	Performance compared to statewide targets	Performance compared to facilities’ previous costs	Performance compared to hospital-specific and regional costs	Single retrospective bundled payment

Arkansas's Episodes of Care Model

Launched in 2012, Arkansas's Episodes of Care model is designed for conditions that require care coordination and intensive use of resources. In an Episode of Care (EOC), payers identify a principal accountable provider (PAP) to manage the quality and minimize treatment variations. Through identified opportunities to improve quality and reduce complications for the entire episode, pre-established performance expectations enable PAPs to benefit from system efficiencies. Quarterly reports detail individual performance metrics for each PAP. Providers are eligible to share in any savings that occur if they achieve quality targets. PAPs with average costs above an acceptable threshold are subject to share risks and excess costs. A full list of episode quality and financial impacts are available in the 2017 Statewide Tracking Report: <http://bit.ly/2rM7OCT>

CHI St. Vincent Experience: Outcomes and Utilization Impact

CHI St. Vincent Little Rock has voluntarily participated in BPCI, beginning in 2013. In 2016, the Centers for Medicare and Medicaid Services (CMS) selected St. Vincent's Hot Springs site for mandatory participation in CJR. Both hospitals perform approximately 1,500 joint replacements each year combined. With the onset of alternative payment models that reinforce management of inpatient care, acute care after discharge, and related services up to 90 days after discharge, CHI St. Vincent has taken steps to reinforce and coordinate their care delivery process. In the first year of BPCI, St. Vincent achieved significant savings. They have also reduced the average length of stay and have cut hospital readmissions in half.

Team-Based Coordinated Care

With multiple payers supporting similar models, providers like CHI St. Vincent have taken the opportunity to better integrate advanced practice providers into patient care. This has helped increase efficiency and reduce readmissions. "The biggest change as a system has been implementing care coordinators and nurse navigators," Cullinan said. "They meet the patients when they come in for Joint Academy, then see them post-op, and then follow up with phone calls."

Patients receive follow-up calls after two days and then intermittently up to 120 days after discharge. These models have also reinforced consistent messaging across physicians and hospital staff, who are collectively responsible for patient care throughout the course of an episode.

"We have improved the patient experience. We hear from those who had a knee replaced five or 10 years ago—when they come back now to have the other knee replaced they say, 'What happened?' Before, patients might stay five days, and then go to rehab. Our data has shown that is not necessary for a good outcome." – Kevin Cullinan

Patient Engagement Strategies: Joint Academy

While post-operative care is a focus of the episode models, pre-surgery readiness can greatly influence outcomes. CHI St. Vincent has implemented a "Joint Academy," a pre-operative educational course taught by a registered nurse that is used to set patient expectations and designed to reduce the chances of inconsistent outcomes. "We take very seriously the pre-operative care, and making sure our patients are ready for surgery," Cullinan said. "The expectations are that you will stay in the hospital one night and go home the next day; that you will use outpatient physical therapy; that you will not smoke; etc."

Using Data to Track Performance

A hallmark of Arkansas's episodes model is multi-payer reporting to providers. These tools display provider-specific quality and cost performance compared to average peer performance. While Medicare provides some data and performance reports to participants, the information may be several months old due to necessary claims processing and adjudication. To improve real-time episode management, many providers, including CHI St. Vincent, have developed their own internal analytic capacity and have partnered with outside firms to track progress and better manage care delivery.

Sustaining Progress

Arkansas providers are leading a national shift from fee-for-service to value-based payment models. While the state's EOC model has reduced variability and required mandatory participation, it is unclear to what extent CMS will require mandatory participation in models going forward. Cullinan said, "The problem is similar to having everyone insured or not. If you don't have everyone in the risk pool then who are you comparing yourself against?"

More about on Medicare CCJR and BPCI Model 2: <https://innovation.cms.gov/initiatives/cjr> and <https://innovation.cms.gov/initiatives/BPCI-Model-2/>

This case study was compiled using information obtained from CHI St. Vincent. ACHI was granted written permission to use this information.