Bundled Payments:
Market Trends and Markers of Success

Bundled payments have emerged as a reimbursement method that supports health care providers' efforts to redesign care and improve outcomes for specific patient populations and clinical episodes of care. Bundled payments are designed to provide hospitals, health systems and practitioners with financial incentives to work together and with patients to deliver care in a more coordinated manner.

Studies show that bundled payments can improve quality of care and provide cost savings. More studies on organizational capabilities, operational tactics and organizational strategies are needed. For hospital and health system leaders, it is important to consider the design of specific program models and their effect on outcomes and performance.

Key Takeaways

1. Bundled payments can be a promising way for hospitals and health systems to **1)** achieve internal improvements with respect to physician alignment and internal cost reduction and **2)** achieve external improvements with respect to overall episode savings and coordination with post-acute care providers such as skilled nursing facilities.
2. Hospitals must carefully consider the program and episode design, which can have a major effect on performance.
3. Overlap between bundled payments and other major payment models, such as accountable care organizations, highlights the need for hospitals and health systems to adopt clear and integrated contracting and care delivery strategies.

Programs, Participants and Services

In recent years, the Centers for Medicare & Medicaid Services (CMS) has scaled this payment method through national programs such as the Bundled Payment for Care Improvement (BPCI) initiative and the Comprehensive Care for Joint Replacement (CJR) model (see Table 1). CMS has expressed intent to continue to develop this type of payment model for more episodes of care.

Table 1: Overview of Bundles in Medicare

Programs	Start Year	Number of Participants	Outpatient and/or Inpatient Trigger	Services Covered	Conditions and Procedures
BPCI Model 2 (Voluntary)	2013	402 hospitals and physician group practices	Inpatient	Inpatient hospital and physician services, post-acute care, readmissions	48 clinical episodes (e.g., AMI, hip/knee joint replacements, coronary artery bypass graft)
CJR (Mandatory)	2016	67 MSAs*	Inpatient	Inpatient and outpatient hospital and physician services, post-acute care, readmissions	Hip and knee joint replacements
Oncology Care Model (Voluntary)	2016	178 practices, 13 payers	Outpatient	All Medicare Parts A, B, and certain Part D expenditures	Cancers not treated with surgery, radiation, topical chemotherapy
BPCI Advanced (Voluntary)	2018	832 hospitals, 715 physician group practices	Both	Inpatient and outpatient hospital and physician services, post-acute care, readmissions	29 inpatient clinical episodes (e.g., AMI) and three outpatient clinical episodes (e.g., percutaneous coronary intervention)

*Reduced to 34 mandated medical statistical areas (MSAs) in 2018, though hospitals in the remaining 33 MSAs may volunteer to continue participation.

Addressing Key Questions about Bundled Payments

As CMS and commercial insurers continue to introduce bundled payment models across the country, stakeholders are asking many questions that researchers are attempting to answer. At the forefront of these questions is whether or not bundled payments reduce the cost of care while preserving or improving patient outcomes. Research studies have examined the changes in the average per-episode cost and identified where savings are being achieved. Other questions focus on potential unintended consequences. For example, are hospitals that are participating in bundled payments increasing episode volume or contributing to equity concerns by shifting the types of patients who receive care under bundled payments?

Additionally, as health care delivery and payment continue to rapidly change, it is important to 1) identify the presence of positive or negative interactions with the emergence of other alternative payment models, such as accountable care organizations (ACOs) and population-based primary care programs, and 2) understand the implications of programs based on mandatory versus voluntary participation. Finally, how does the impact of bundled payments differ for medical versus surgical episodes? Table 2 summarizes some of the leading research addressing these key questions.

Table 2: Key Questions about Bundled Payments and What We Know

Impact on Cost and Quality

Surgical Procedures

- Using Medicare claims data and patient surveys to assess hip and knee replacement bundled programs, Dummit and colleagues (2016)[1] found that BCPI hospitals achieved savings over similar nonparticipating hospitals—the largest of which were in post-acute care.
- Navathe and colleagues (2017)[2] studied a five-hospital integrated system that participated in Medicare bundled payments for joint replacement surgery (including BPCI Model 2) and demonstrated that top-performing hospitals under bundled payments could achieve savings up to five times that of average effects.
- Focusing on the mandatory CJR program, Finkelstein and colleagues (2018)[3] observed savings in participating hospitals versus non-CJR hospitals, but more modest savings than observed in BPCI.
- Navathe and colleagues (2018)[4] evaluated hospitals within CJR that achieved savings versus those that did not, observing that hospitals experiencing savings were larger, had a higher volume for joint replacement procedures, and were more likely to be nonprofit or teaching hospitals.

Medical Conditions

- Joynt Maddox and colleagues (2018)[5] assessed and found no association between participation in five commonly selected medical episodes under BPCI Model 2 and episode cost and quality outcomes.

Volume Effect

- Evaluating market level volume of hip and knee replacements, Navathe and colleagues (2018)[6] observed volume increases in both BPCI and non-BPCI markets between 2011 and 2015, but no association between BPCI markets and procedural volume. Their findings suggest that hospital volume increases could result from shifts in market share.

Case Mix Effect

- Evaluating joint replacement episodes in BPCI Model 2, Navathe and colleagues (2018)[7] did not observe statistically significant differences in 20 characteristics—including comorbidities, demographics, socioeconomics and prior utilization—among patients undergoing joint replacement at BPCI hospitals compared to non-BPCI hospitals.

Overlap with Other Alternative Payment Models

- There is substantial and growing overlap between bundled payments and other alternative payment models such as ACO programs and Medicare Advantage.

Table 2 Continued: Key Questions about Bundled Payments and What We Know

Voluntary versus Mandatory

- Using data from Medicare and the American Hospital Association, Navathe and colleagues (2018)[8] found that BPCI and CJR hospitals were similar in terms of baseline cost and quality performance but still had a number of differences. For example, BPCI hospitals were more likely to be nonprofit and teaching intensive and have a higher patient volume than CJR hospitals.
- Liao and colleagues (working paper) compared hospitals in CJR markets with hospitals in other markets around the country, finding that hospitals in CJR and CJR-eligible markets (those that could have been selected for the program) were similar or had only minor differences, while hospitals in CJR markets differed from hospitals in other urban markets and less-populated micropolitan areas.

Where Savings Are Located

- Liao and colleagues (2017)[9] described approaches used by a high-performing health system in Medicare bundled payment programs, identifying principles and strategies that contributed to significant episode cost savings and stable to improved quality.
- Through a series of semistructured interviews with hospital executives participating in BCPI, Zhu and colleagues (2018)[10] highlighted hospital reactions to bundled payments and the primary focus areas for post-acute care savings, including referring patients to skilled nursing facilities (SNF), leveraging home care supports and enhancing coordination with predetermined networks of SNFs.

Standardization of Care

- Liao and colleagues (2018)[11] assessed the presence of and changes in physician practice variation under Medicare joint replacement episodes at a health system participating continuously in Medicare bundled payment programs over five years. The study demonstrated that although some organizational strategies achieved gains by reducing physician practice variation, variation reduction is not an absolute requisite for success in joint replacement episodes.

Early research showed Medicare savings under BPCI and CJR, but there is little evidence about organizational characteristics and capabilities that allow hospitals and payers to succeed under these programs, ultimately benefiting patients. Perhaps most importantly, there is insufficient data on the effectiveness of various strategies, operational tactics, and investments in capabilities that hospitals are using under bundled payments to guide the next waves of participants.

The AHA Center for Health Innovation, in collaboration with the University of Pennsylvania's Center for Health Incentives and Behavioral Economics (CHIBE), hosted a two-part introductory webinar series on bundled payments in late 2018. During the two sessions, Amol Navathe, M.D., associate director, CHIBE, and Joshua M. Liao, M.D., of UW Medicine, discussed core elements of bundled payment programs, evidence about the factors driving success among participants, and the impact of existing bundled payment programs on the cost and quality of care. This document summarizes the information shared during those webinars and highlights information from the October 2018 Leonard Davis Institute of Health Economics issue brief "The Current State of Evidence on Bundled Payments: Effects on cost, quality, access, and equity" by Aaron Glickman, Claire Dinh, and Amol Navathe.

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