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CMS Bundled Payments for Care Improvement Advanced Model

Sixth Annual Evaluation Report

Prepared for: **Centers for Medicare & Medicaid Services**

Submitted by: **The Lewin Group, Inc., with our partners Abt Associates, GDIT, and Telligen**

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CMS Bundled Payments for Care Improvement Advanced Model: Sixth Annual Evaluation Report

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I. Introduction

The Bundled Payments for Care Improvement Advanced (BPCI Advanced) Model is a voluntary Advanced Alternative Payment Model (APM) designed to test whether holding participants responsible for Medicare payments for an episode of care can reduce Medicare expenditures while improving or maintaining quality of care. The Centers for Medicare & Medicaid Services (CMS) Center for Medicare and Medicaid Innovation (Innovation Center) launched BPCI Advanced in October 2018, and the model will continue through December 2025.

CMS funded The Lewin Group, with partners Abt Global, Inc., General Dynamics Information Technology (GDIT), and Telligen, to conduct an independent evaluation of the BPCI Advanced Model. This Sixth Evaluation Report examines the BPCI Advanced Model's impact on health care expenditures, patient outcomes, and health system transformation in Model Year 5 (2022). Previously, in the BPCI Advanced Fifth Evaluation Report, we assessed the same criteria with a focus on Model Year 4 (2021).[1] Model Year 4 was the first year after CMS introduced design changes to improve the model's likelihood of achieving Medicare program savings and to expand care redesign activities to more patients. In that report, we found that BPCI Advanced reduced total episode payments relative to the comparison group by $930 per episode, driven by reductions in post-acute care use and spending. Further, after accounting for financial incentives, we found that the model achieved net savings to Medicare for the first time since the model's inception. CMS maintained Model Year 4 design changes in Model Year 5, and about a third of participants voluntarily exited the model. Thus, in Model Year 5, we expected a similar reduction in total episode payments but less Medicare savings due to reduced episode volume.

The current report provides in-depth findings from Model Year 5, including the characteristics of organizations that continued to participate; the reach of the model to hospitals, clinicians, and patients; the model's impact on expenditures and quality; and the care redesign approaches that participants applied to achieve these outcomes. The fifth chapter explores the impact of the BPCI Advanced Model on accountable care relationships, strengthening primary care, and care for patients dually eligible for Medicare and Medicaid. We consider impacts on these outcomes as additional benefits and consequences of BPCI Advanced because CMS did not design the model to explicitly address them.

A. The BPCI Advanced Model

BPCI Advanced is a voluntary episode-based payment model designed to reduce expenditures while improving or maintaining quality of care for Medicare fee-for-service (FFS) beneficiaries. The design of BPCI Advanced draws on lessons learned from the Bundled Payments for Care Improvement (BPCI) Initiative.[2] CMS is scheduled to launch the Transforming Episode Accountability Model (TEAM) in January 2026, building on lessons learned from BPCI Advanced and other Innovation Center episode-based payment models.[3]

[1] The BPCI Advanced Fifth Evaluation Report is available for download at https://www.cms.gov/priorities/innovation/innovation-models/bpci-advanced.
[2] See the CMS BPCI website: https://innovation.cms.gov/innovation-models/bundled-payments.
[3] See the CMS TEAM website: https://www.cms.gov/priorities/innovation/innovation-models/team-model.

Under the BPCI Advanced Model, participants enter into agreements with CMS to be accountable for Medicare FFS Part A and B expenditures and quality during an episode of care. The episode of care begins with a hospital stay or outpatient procedure and lasts 90 days from the date of discharge. Only certain medical and surgical hospitalizations and procedures can trigger episodes. In Model Years 1 through 3 (October 2018–December 2020), participants chose from a list of individual clinical episodes for participation. Starting in Model Year 4, CMS required participants to select groupings of clinical episodes (clinical episode service line groups, or CESLGs). Participants continue to be paid under the FFS payment system and are subject to a reconciliation process in which CMS compares total FFS payments for a participant's episodes with a target price. A participant may receive or owe reconciliation payments from or to CMS if its total episode payments are below or above the target price after adjusting for quality performance.[4]

Key Components of BPCI Advanced

Defining Characteristics of the Model

- BPCI Advanced is a voluntary Advanced Alternative Payment Model.
- Participants are responsible for the total cost and quality of eligible episodes of care, beginning with an initial anchor stay or procedure and lasting for a 90-day period after discharge. If episode expenditures are above a target price set by CMS, participants must pay a repayment amount to CMS. If expenditures are below the target price, participants receive a reconciliation payment from CMS.
- Hospitals and physician group practices can initiate episodes as a participant or under a convener organization that holds the agreement for financial risk with CMS.
- The model includes inpatient stays and outpatient procedures for specific conditions grouped into eight clinical episode service line groups.

Target Prices and Reconciliation

- Preliminary target prices are made available prior to each model year for use in participation decisions.
- Target prices are based on historical payments, patient case mix, peer group historical payments, and a prospective peer group trend factor and were discounted by 3% in Model Year 5 (2022). Final target prices reflect a realized peer group trend and a realized patient case mix.
- Reconciliation payments are adjusted for participants' performance on quality and stop-loss/-gain limits.

Entry and Withdrawal Rules

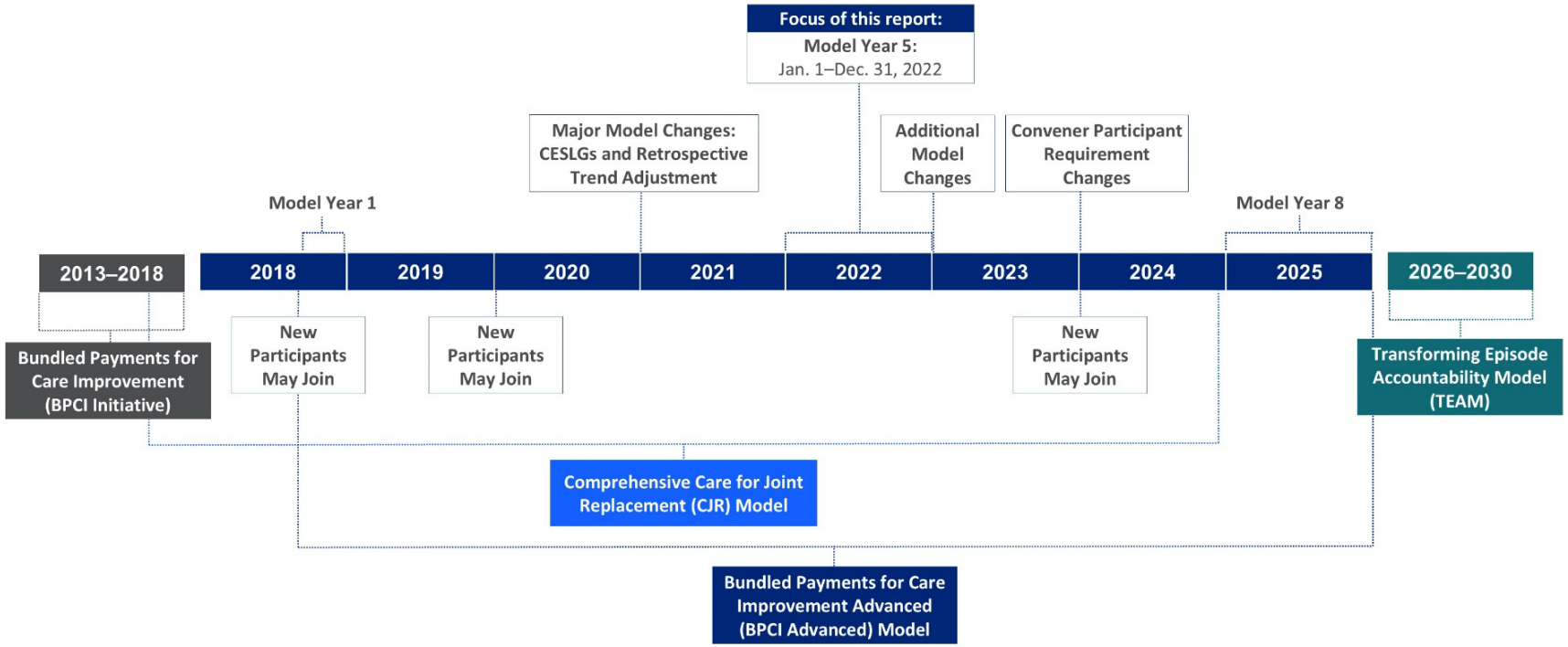
- Participants could join the model at the start of Model Year 1 (October 1, 2018), Model Year 3 (January 1, 2020), or Model Year 7 (January 1, 2024).
- Participants can withdraw from the model with 90-day advance written notice.
- CMS may terminate participants that do not meet the requirements of the participation agreement.

[4] See the CMS BPCI Advanced website for more information on the Model Year 5 reconciliation specifications: https://www.cms.gov/priorities/innovation/media/document/bpci-advanced-my5-recon-specs.

1. Model Timeline

The BPCI Advanced Model began October 1, 2018 (Model Year 1)[5] and is scheduled to end December 31, 2025 (Model Year 8) (Exhibit 1). Hospitals and physician group practices (PGPs) had three opportunities to join the model: at the start of Model Year 1 (October 2018), Model Year 3 (January 2020), and Model Year 7 (January 2024).

Exhibit 1: Timeline of BPCI Initiative, BPCI Advanced, CJR, and TEAM



Note: The analyses in this evaluation report primarily cover Model Year 5. The exhibit highlights major model changes made in Model Year 4, and additional changes to the pricing methodology occurred in Model Year 6. Additionally, to participate in Model Year 7 (2024), new convener participants had to be Medicare-enrolled providers or suppliers, or Medicare Accountable Care Organizations. CESLG = clinical episode service line group; CJR = Comprehensive Care for Joint Replacement; TEAM = Transforming Episode Accountability Model.

Source: Centers for Medicare & Medicaid Services. (2018). *BPCI Advanced Model timeline*. https://innovation.cms.gov/Files/x/bpci-advanced-timeline.pdf; Centers for Medicare & Medicaid Services. (2022). *Model overview fact sheet – Model Year 6 (2023)*. https://www.cms.gov/priorities/innovation/media/document/bpcia-model-overview-fact-sheet-my6.

[5] Model Year 1 is only one quarter of the year (October 1, 2018–December 31, 2018).

2. Participants and Episode Initiators

Each BPCI Advanced participant, which may be a hospital, PGP, or other eligible entity serving as a convener, enters into an agreement with CMS to be held accountable for performance on quality measures and episode payments relative to their target prices for the episodes under their selected CESLGs.

Participants are either a *convener participant* (convener) or a *non-convener participant*.[6] Conveners are generally health systems, value-based care consultants, Accountable Care Organizations (ACO), clinically integrated networks, PGP-led organizations, or health plans. A convener has at least one downstream *episode initiator*, which is a hospital or a PGP that treats the patient and thus initiates an episode. A convener bears financial risk on behalf of its downstream episode initiators and may provide services (such as data analysis, guidance on CESLG selection, guidance on care redesign, or case management services) to help episode initiators succeed in the model. A non-convener participant is a hospital or PGP episode initiator that bears financial risk only for itself.

3. BPCI Advanced Episodes

A BPCI Advanced episode can begin with a hospitalization or hospital outpatient procedure at a participating hospital. A BPCI Advanced episode can also begin when the attending or operating clinician for the hospitalization or hospital outpatient procedure is affiliated with a participating PGP. Inpatient episodes start when a Medicare patient is admitted to a hospital (anchor stay) and the resulting Medicare Severity-Diagnosis Related Group (MS-DRG) is in one of the participating episode initiator's selected clinical episodes (in Model Years 1–3) or CESLGs (starting in Model Year 4). Outpatient episodes begin when a patient has an outpatient procedure (anchor procedure) in a hospital outpatient department, and the Healthcare Common Procedure Coding System (HCPCS) code identifies the procedure as one of the participating episode initiator's selected clinical episodes or CESLGs. The episode includes all FFS Medicare-covered items and professional services, with certain exclusions, furnished during the anchor stay or the anchor procedure through the following 90 days, including the day of discharge.[7,8]

4. Target Prices and Reconciliation

CMS calculates a target price for each hospital and clinical episode combination. A hospital's target price reflects its historical Medicare FFS episode payments during a defined baseline period, adjusted for its historical patient mix and its payments relative to national historical payments, which are updated based on its patient mix during the performance period and the performance period spending trends of its hospital peers (referred to as the *retrospective trend adjustment* or the *peer group trend factor adjustment*). Target prices incorporate a discount, which is intended to be the savings to Medicare.[9] A PGP's target price is based on the target price of the hospital where the

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6 For more details on the types of organizations that can participate in BPCI Advanced, see https://www.cms.gov/priorities/innovation/media/document/bpci-advanced-generalfaq.

7 The lists of exclusions are available for download from the Technical Resources on the Participant Resources page of the BPCI Advanced website: https://innovation.cms.gov/innovation-models/bpci-advanced/participant-resources.

8 For more details of how clinical episodes are constructed, see https://www.cms.gov/priorities/innovation/media/document/bpci-adv-clinep-constr-specs-my5-v2.

9 Target prices for all episodes incorporate a 3% discount in Model Years 1 through 5. Beginning in Model Year 6, target prices for medical episodes incorporate a 2% discount, and surgical episodes continue with a 3% discount.

hospitalization or procedure occurred and adjusted to account for the PGP's patient case mix. Because a PGP may initiate episodes in different hospitals, it may have multiple target prices for the same clinical episode, depending on where the episode was initiated.

The target price calculation method was designed to account for factors that contribute to payment differences that are beyond the control of the hospital or PGP. The use of hospital-specific historical payments, adjusted for peer group spending levels and trends, is intended to encourage participation from a variety of providers, including those with historically high and those with historically low episode payments.[10] The patient case-mix adjustment accounts for variations in payments due to differences in patient medical needs.

Under the model, providers and suppliers continue to receive Medicare FFS payments for providing Medicare-covered items and services. At the end of each 6-month performance period, CMS compares Medicare payments during the episode with the target price for each episode initiator for each of its clinical episodes. When the episode payments for a participant, aggregated across all its episode initiators and clinical episodes, are below its target amount, the participant receives a payment in the form of a Net Payment Reconciliation Amount (NPRA) from CMS. When the aggregated episode payments are above the target amount, the participant owes a repayment amount to CMS. The NPRA or repayment amount includes adjustments for the episode initiator's performance on quality and for the stop-loss or stop-gain limits of the BPCI Advanced Model.[11,12] In this report, we refer to the NPRA or repayment amounts collectively as *reconciliation payments*.

The BPCI Advanced Model qualifies as an Advanced APM under the Quality Payment Program in part because participant performance on quality measures is factored into the determination of reconciliation payments through the Composite Quality Score.[13] In the first three model years, CMS assessed participants on seven claims-based quality measures in the Administrative Quality Measures Set. Beginning in Model Year 4, participants had the option to be assessed on quality measures from the Administrative Quality Measures Set or the Alternate Quality Measures Set, which included 23 claims-based and registry-based measures.[14] Quality measure selection occurs at the clinical episode level, and episode initiators may select different quality measure sets for different clinical episodes.

5. Clinical Episodes and Clinical Episode Service Line Groups

BPCI Advanced participants elect to participate in specific clinical episodes (in Model Years 1–3) or CESLGs (starting in Model Year 4), which are groups of related clinical conditions or

[10] Centers for Medicare & Medicaid Services. (2022, November). *Pricing target price specifications Model Year 5* https://www.cms.gov/priorities/innovation/media/document/bpci-adv-targetprice-specs-my5-v2.

[11] The reconciliation payment has a 20% stop loss/gain applied at the episode initiator level.

[12] The Composite Quality Score adjustment amount cannot change the reconciliation payment by more than 10%.

[13] The Advanced APM designation of the BPCI Advanced Model can help incentivize model participation as participants can qualify as a "Qualifying APM Participant" (QP) if they meet certain Medicare patient and payment thresholds. QPs are exempt from Merit-based Incentive Payment System (MIPS) reporting requirements under the Quality Payment Program and are eligible for incentive payments (prior to 2024) or a higher physician fee schedule update (2024 and beyond). For more information, see https://qpp.cms.gov/apms/overview.

[14] More information about BPCI Advanced quality measures is available at https://www.cms.gov/priorities/innovation/innovation-models/bpci-advanced/quality-measures.

procedures defined by MS-DRGs and HCPCS codes. There are 34 clinical episodes, such as sepsis, congestive heart failure, and major joint replacement of the lower extremity. These clinical episodes are grouped into eight CESLGs: *cardiac care*, *cardiac procedures*, *gastrointestinal surgery*, *gastrointestinal care*, *neurological care*, *medical and critical care*, *spinal procedures*, and *orthopedics*. During the first three model years (October 2018–2020), participants could select one or more clinical episodes. Beginning in Model Year 4, participants were required to select one or more CESLGs, instead of individual clinical episodes, and participate in all clinical episodes under the selected CESLGs. See **Appendix B** for a list of the BPCI Advanced clinical episodes, CESLGs, and associated MS-DRGs and HCPCS codes.

B. Evaluation

This report presents an evaluation of the BPCI Advanced Model with a focus on Model Year 5 (2022). This report also includes qualitative findings on Model Years 4 through 7 (2021–2024) and patient-reported outcomes for Model Years 4 through 6 (2021–2023). Five research questions provide the framework for this report and are answered in the chapters that follow. We describe the BPCI Advanced Model participants, the model's reach, the model's impact on expenditures and Medicare program savings, the model's impact on quality of care, and the additional benefits and consequences of the model, including engagement with ACOs, the impact on primary care visits, and the impact on quality outcomes for patients dually eligible for Medicare and Medicaid.

1. Research Questions

The major research questions that shape this report, and the chapters where they are answered, are as follows:

- *How did hospitals and PGPs that participated in BPCI Advanced in Model Year 5 differ from those that exited the model?*
    - **Chapter II. Participant Characteristics**
- *How did the reach of BPCI Advanced to hospitals or PGPs and Medicare beneficiaries change in Model Year 5 compared with Model Year 4?*
    - **Chapter II. Participant Characteristics**
- *What is the impact of BPCI Advanced on expenditures and Medicare program savings?*
    - **Chapter III. Impacts on Expenditures**
- *What is the impact of BPCI Advanced on quality of care, including hospital readmissions, mortality, and patient-reported outcomes?*
    - **Chapter IV. Impacts on Quality**
- *What are the additional benefits and consequences of BPCI Advanced?*
    - **Chapter V. Additional Benefits and Consequences of BPCI Advanced**

2. Methods

This evaluation relied on multiple primary and secondary data sources (Exhibit 2). Site visits and key informant interviews with participants provided context for quantitative findings and insights into how hospitals, PGPs, and conveners approached BPCI Advanced participation and care

redesign. We explored emerging themes within site visits and key informant interviews, including relationships with Medicare ACOs and primary care. The evaluation team conducted a patient survey to investigate differences in functional outcomes and patient care experiences between Medicare FFS patients cared for by BPCI Advanced hospitals and PGPs and similar patients whose providers did not participate in BPCI Advanced. We used secondary data sources to conduct descriptive analyses and estimate impacts on claims-based patient outcomes. Secondary data sources included the CMS BPCI Advanced Database, Provider of Services (POS) files, Medicare FFS claims and enrollment data, the Shared Savings Program Provider-Level Research Identifiable Files (RIF), and the CMS Master Data Management (MDM).

Exhibit 2: BPCI Advanced Evaluation Methods

To estimate the causal impact of the model on patient outcomes, we constructed episodes for hospitalizations and outpatient procedures and the 90 days of care afterward for all eligible discharges and procedures across all clinical episodes. We used claims data to create outcome measures and patient risk factors associated with the outcomes. We estimated the impact of BPCI Advanced on risk-adjusted episode payments, utilization of services, and claims-based quality of care, measured by readmission and mortality rates in Model Year 5 using a difference-in-differences (DiD) approach. We calculated changes in the patient-reported measures from the patient survey as the risk-adjusted differences between BPCI Advanced and comparison respondents sampled during Model Years 4, 5, and 6. Additionally, we conducted these analyses for patients with dual eligibility for Medicare and Medicaid because these higher-risk patients may be vulnerable to the reduced intensity of post-discharge care that is incentivized by the model. We also analyzed impacts on claims-based outcomes for patients aligned to a Shared Savings Program ACO and those not aligned to any Medicare ACO initiative to estimate the additional benefit of BPCI Advanced overlap with ACO initiatives.

We evaluated net savings to Medicare due to BPCI Advanced in Model Year 5 as the change in payments to hospitals or PGPs minus net reconciliation payments. We estimated savings for clinical episodes with sufficient volume based on the estimated impact of BPCI Advanced on Medicare FFS episode payments, adjusted by reconciliation payments made to or received from model participants. We calculated net Medicare savings (or losses) for all episodes pooled across

the clinical episodes evaluated, for the medical and surgical episodes evaluated, for the medical and surgical episodes evaluated by episode initiator type (hospital or PGP), and for the episodes evaluated by CESLG by episode initiator type.

We examined outcomes separately for medical and surgical episodes. We did this because the patient population and corresponding care redesign strategies differ for medical episodes, which are generally unplanned, versus surgical episodes, which may include planned procedures.

Our evaluation results should be interpreted in the context of the following limitations. We collected patient surveys only during the intervention period; therefore, we cannot determine whether differences existed during the baseline period or whether they were due to the model. To estimate the impact of the model on outcomes, we used a DiD design, which is dependent on a comparison group that represents what may have happened to episodes treated by BPCI Advanced hospitals and PGPs if the model had never existed. We excluded some participating hospitals and PGPs from the evaluation because they did not have adequate matches in the comparison group, and we excluded some participating PGPs because they did not have episodes in the baseline. We assessed the impact of BPCI Advanced on only a subset of clinical episodes due to limited sample size or difficulty identifying a suitable matched comparison sample. See **Appendix C** for more information on our primary and secondary data sources and other methodological details.

A key strength of our methodological approach is the construction of our comparison group, which considers the multiple model entry points, selection of clinical episodes, and contamination from exposure to the model. We designed the patient survey to be representative of the broader BPCI Advanced population of episodes. We used nonresponse and sample weights to ensure representativeness, and we oversampled patients from select groups to facilitate sub-sample analysis. Estimates of the impact of the model were robust to a series of sensitivity analyses, indicating they are reliable despite the limitations of a DiD design. Although we could not evaluate all episodes in the model, the clinical episodes included in the analyses represented 98.1% of all BPCI Advanced Model Year 5 episodes. Finally, we included both hospital- and PGP-initiated episodes in our comprehensive analyses of the impact of the model on outcomes and on Medicare program savings.

II. Participant Characteristics

BPCI Advanced is a national and voluntary model. The number of hospitals and physician group practices (PGPs) participating in the model, as well as the number of clinical episodes service line groups (CESLGs) selected, affects the number of patients who receive care under BPCI Advanced. More patients reached by the model implies more opportunity to bring actors from across the health care industry into value-based care, achieve goals of the model, and achieve broader goals of the CMS Innovation Center. Examining changes in participation and in the reach of BPCI Advanced are also important for contextualizing impact estimates and other analyses in this report.

In BPCI Advanced, hospitals and PGPs could participate under a variety of arrangements. Hospitals and PGPs could join as non-convener participants, entering into an agreement directly with CMS; as downstream episode initiators, entering into an agreement with a convener participant; or as a convener participant, where they bear risk for at least one other hospital or PGP in the model.[15]

Participating hospitals and PGPs select the clinical episodes or CESLGs within the model for which they are responsible. Hospitals and PGPs could join and select clinical episodes in Model Year 1 (October 2018) and Model Year 3 (January 2020) (Exhibit 3). Hospitals and PGPs that continued to Model Year 4 (2021) were required to select from eight CESLGs. After their initial selection of CESLGs, hospitals and PGPs could not adjust their participation, unless they exited the model completely, until the model extension in Model Year 7 (2024). Downstream episode initiators must exit the model if the convener or CMS terminates the agreement under which the hospitals and PGPs are participating.

This report focuses primarily on Model Year 5 (2022), a year when providers could not join the model or change the parameters of their participation in terms of the CESLGs selected. However, participants could exit the model with advance notice. The analyses in this chapter measure changes in sample characteristics and reach due to hospitals and PGPs exiting the model from Model Year 4 through Model Year 5. We also assess participation in the model going into Model Year 6 (2023) to provide context for the patient survey findings, which include Model Years 4 through 6.

Exhibit 3: Selection Decisions Available Each Model Year

BPCI Advanced Participants Can:	Model Years 1&2 (Q4 2018–2019)	Model Year 3 (2020)	Model Year 4 (2021)	Model Year 5 (2022)	Model Year 6 (2023)	Model Year 7 (2024)	Model Year 8 (2025)
Join the Model	✓	✓	✗	✗	✗	✓	✗
Select Clinical Episodes	✓	✓	✗	✗	✗	✗	✗
Select CESLGs	✗	✗	✓	✗	✗	✓	✗
Exit	✓	✓	✓	✓	✓	✓	✓

Note: CESLG = clinical episode service line group; Q = quarter.

Source: The BPCI Advanced Model Overview Fact Sheets.

[15] Entities that do not initiate episodes can also be convener participants, including Accountable Care Organizations and health systems.

A. Key Findings

Changes in Participation and Reach of the Model

- The number of BPCI Advanced participating hospitals and physician group practices (PGPs) declined 30.8% from Model Year 4 (2021) to Model Year 5 (2022).
- BPCI Advanced hospitals and PGPs that continued participation into Model Year 5 were more engaged with the model on average, having selected more clinical episode service line groups and having more episode volume under the model than those that left. Those that stayed also had better financial performance under the model, as indicated by average per-episode reconciliation payments.
- The reach of the model (defined by the share of eligible hospitals, discharges, and clinicians engaged in BPCI Advanced activity) declined in Model Year 5 compared with Model Year 4. There was a 39.9% reduction in the reach to all eligible medical episodes and a 21.2% reduction in the reach to surgical episodes.
- As in prior model years, the reach to dually eligible patients was higher for medical episodes and lower for surgical episodes.
- Despite participation declines, most states had active participants in Model Year 5.

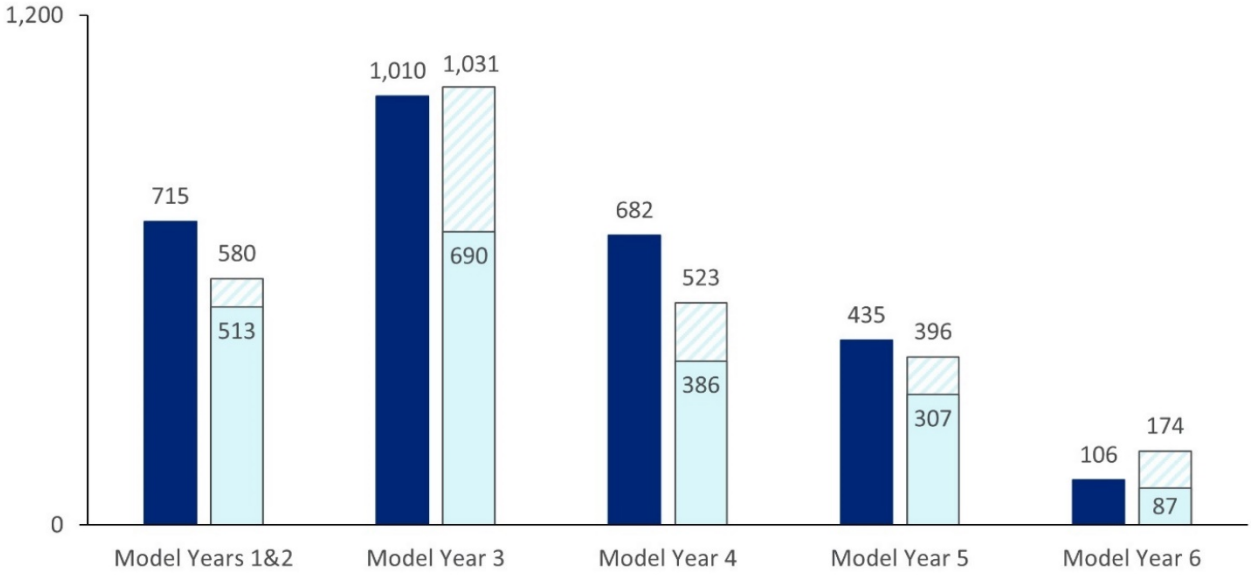
B. Changes in BPCI Advanced Participating Hospitals and PGPs

Participation in BPCI Advanced has changed over time. Model Year 3 had the greatest number of participating hospitals and PGPs, with declines in participation in subsequent years (Exhibit 4). We conducted descriptive analyses to characterize the sample and understand how changes in participation affected the characteristics of BPCI Advanced participating hospitals and PGPs, as well as identify any patterns among those that chose to exit.

In Exhibit 4, we separate BPCI Advanced PGPs into "active" and "inactive" groupings. Unlike hospitals, newly created PGPs could join BPCI Advanced. Some PGPs did not have any episode volume in the model year or preceding years going back to 2013.[16] We consider these PGPs to be inactive as they are not actively engaged in the model; thus, we excluded them from the rest of the analyses in this report. For example, of the 396 PGPs listed as model participants in Model Year 5, 307 were active PGPs, while the remaining 89 PGPs were inactive PGPs. After excluding inactive PGPs, we found that 30.8% of hospitals and PGPs that participated in BPCI Advanced during Model Year 4 left prior to Model Year 5.

[16] In BPCI Advanced, PGPs are defined by a Taxpayer Identification Number (TIN). See the BPCI Advanced Fifth Evaluation Report for more discussion on inactive PGPs and conveners that include inactive PGPs on their participation agreements. The BPCI Advanced Fifth Evaluation Report is available for download at https://www.cms.gov/priorities/innovation/innovation-models/bpci-advanced.

Exhibit 4: Counts of BPCI Advanced Participating Hospitals and PGPs, Model Years 1–6



Note: Episode initiators include hospitals and PGPs that can trigger BPCI Advanced episodes and either have a participation agreement with CMS or are included as a downstream episode initiator on a participant agreement between a convener and CMS. The dark blue bars indicate the number of hospitals, while the solid light blue bars indicate the number of active PGPs. The patterned light blue areas indicate PGPs that were in the model but not active. Active PGPs indicate PGPs that had at least one discharge between January 1, 2013, and the end of the model year (December 31, 2019, for Model Year 1 and 2 PGPs; December 31, 2020, for Model Year 3 PGPs; December 31, 2021, for Model Year 4 PGPs; and December 31, 2022, for Model Year 5 and Model Year 6 PGPs, as claims data were not available for Model Year 6 at the time of analysis). An "inactive" PGP may become "active" in subsequent years if they initiate episodes. PGP = physician group practice.

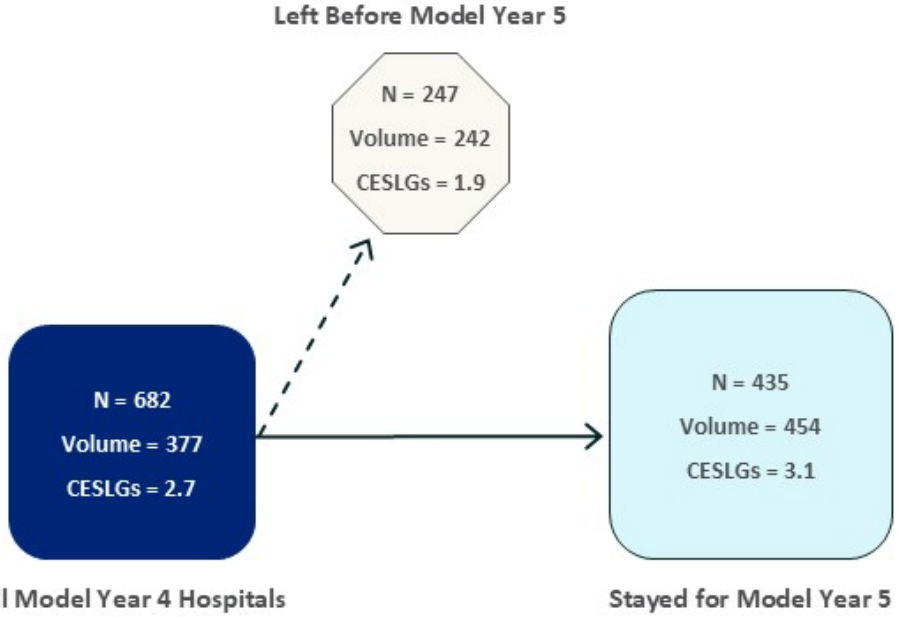
Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2013, and ending on or before December 31, 2022, and the CMS BPCI Advanced Database as of December 29, 2023.

1. Hospitals That Stayed for Model Year 5 Tended to Serve More Patients in the Model Than Those That Left Before Model Year 5

At the start of Model Year 4, 682 hospitals were participating in BPCI Advanced, and those hospitals selected 2.7 CESLGs on average (Exhibit 5). Among those Model Year 4 hospitals, 247 (or 36.2%) left prior to Model Year 5 ("leavers"). Leaver hospitals tended to be smaller in terms of average episode volume, and they selected fewer CESLGs, than those that stayed for Model Year 5 ("stayers"). Leavers tended to be less involved in the model, with a larger share focusing on a single CESLG. About 46.2% of leaver hospitals participated in only one of eight CESLGs, compared with 17.2% of stayers.[17]

[17] A little more than half of leaver hospitals that were in a single CESLG were participating in *medical and critical care*.

Exhibit 5: Participation Statistics for Model Year 4 Hospitals That Stayed in BPCI Advanced in Model Year 5 and for Those That Left Before Model Year 5 (2022)



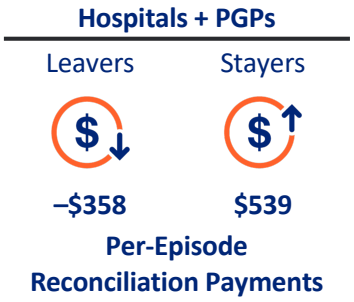
Note: Shape size approximates relative size of the average reconciled episode volume. N indicates the count of hospitals; volume indicates the average reconciled episode volume per hospitals, which has been annualized to account for hospitals that left prior to the end of the model year; and the CESLGs value indicates the average number of CESLGs selected. CESLG = clinical episode service line group.

Source: The BPCI Advanced evaluation team's analysis of the CMS BPCI Advanced Database as of December 29, 2023, and CMS reconciliation data for BPCI Advanced hospitals from Model Years 1–5. Second True-Up for Performance Periods 1–9.

As BPCI Advanced is voluntary, a hospital or PGP's financial performance under the model is a key consideration for continued participation and is likely to vary for leavers and stayers (Exhibit 6).

Model Year 4 Reconciliation Payments for Hospitals and PGPs Combined

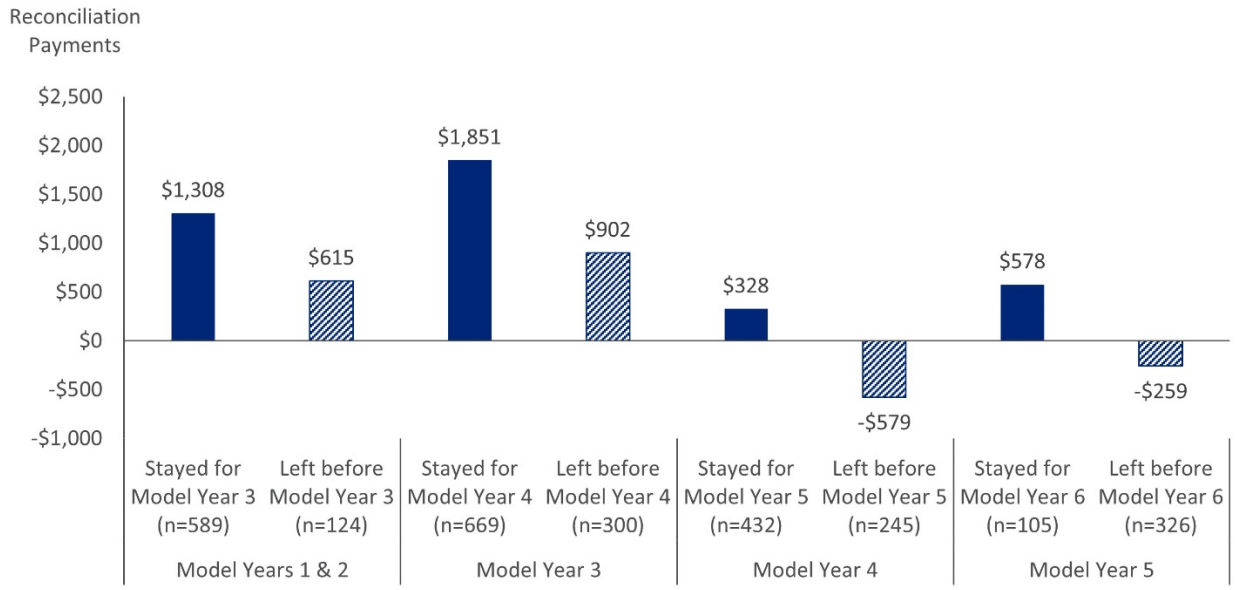
Hospitals and PGPs that participated in Model Year 4 but exited before Model Year 5 had a lower per-episode reconciliation payment on average than those that continued to participate in Model Year 5.



Participants in BPCI Advanced aim to reduce total episode payments below target prices. CMS calculates target prices to include a 3% discount, which is intended to be savings to Medicare. If the participant does not achieve reductions in payments that are greater or equal to the discount, then the participant may owe a payment to Medicare. As seen in prior evaluation reports, hospitals that left the model performed worse financially than those that continued into the following year. In Model Year 4, hospital leavers owed CMS $579 on average per episode in reconciliation payments, while hospital stayers earned $328 on average per episode. Hospitals that were in Model Year 5 but left prior to Model Year 6 owed CMS $259 on average per episode in reconciliation payments, while hospitals that

stayed earned $578 on average per episode. We discuss Model Year 5 leavers and stayers in more detail below.

Exhibit 6: Average Per-Episode Reconciliation Payments for Hospitals That Stayed in the Model and Those That Exited, Model Years 1–5



Note: The number of BPCI Advanced hospitals is limited to the BPCI Advanced hospitals with reconciled episode volume during the intervention period for each model year. For Model Years 1 and 2 (October 1, 2018–December 31, 2019), Model Year 3 (January 1, 2020–December 31, 2020), Model Year 4 (January 1, 2021–December 31, 2021), and Model Year 5 (January 1, 2022–December 31, 2022), average reconciliation payments are shown for hospitals that either continued into or left before the next model year. Reconciliation payments for each model year only include episodes in that model year. See **Appendix F** for more detailed results.

Source: The BPCI Advanced evaluation team's analysis of the CMS BPCI Advanced Database as of December 29, 2023, and CMS reconciliation data for BPCI Advanced hospitals from Model Years 1–5. Second True-Up for Performance Periods 1–9.

Participating under a convener might influence the decision to stay in the model. Conveners are accountable for all downstream episode initiators that they identified when they signed the participation agreement with CMS. The conveners, rather than their downstream hospital(s), carry the financial risk of the model. Convener agreements with downstream episode initiators are not required to include any risk, so we might expect a higher share of hospitals participating under conveners to stay in the model. However, we did not find any difference in the share of leavers under conveners compared with stayers under conveners: 85.0% of both hospital leavers and stayers were participating as downstream episode initiators (see **Appendix F**).

Another factor that may influence the decision to remain in BPCI Advanced is participation in a Medicare Accountable Care Organization (ACO) initiative, as there may be perceived synergies or frictions from participating in both. Medicare ACOs, such as Shared Savings Program ACOs, are widely adopted Alternative Payment Models serving the Medicare fee-for-service (FFS) population. Both BPCI Advanced and Medicare ACOs aim to reduce expenditures while maintaining or improving quality of care and health outcomes for Medicare beneficiaries. Stayers were more likely than leavers to concurrently participate in the Shared Savings Program during Model Year 4 (29.0% vs. 21.5%, respectively), possibly indicating that for hospitals,

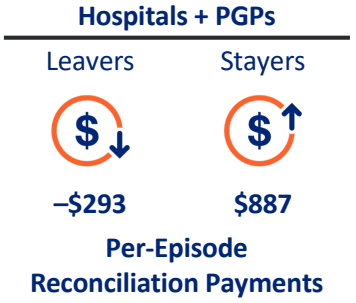
there may be some synergies to participating in both the Shared Savings Program and BPCI Advanced (see **Appendix F**).

2. Hospitals That Stayed for Model Year 6 Differed on Key Characteristics

We examined how hospital participation and characteristics shifted for Model Year 6. Hospital participation in Model Year 6 was lower than in prior model years. Three quarters (75.6%) of hospitals in Model Year 5 left before Model Year 6. Unlike the previous year, hospital stayers were slightly smaller than leavers in terms of average episode volume and participated in fewer CESLGs on average (2.6 for stayers vs. 3.3 for leavers). Like in prior years, hospitals that left BPCI Advanced performed worse financially under the model, with hospitals that left prior to Model Year 6 owing CMS $259 per episode on average and those that stayed for Model Year 6 earning $578 per episode on average (Exhibit 6). We could not examine average volume because reconciliation data were not available for Model Year 6 at the time of analysis.

Model Year 5 Reconciliation Payments for Hospitals and PGPs Combined

Hospitals and PGPs that participated in Model Year 5 but exited before Model Year 6 had a lower per-episode reconciliation payment on average than those that continued to participate in Model Year 6.



Given the sizable decline in hospitals participating in Model Year 6, we compared the hospital and market characteristics of stayers versus leavers to assess potential contextual factors related to the decline. We found that the characteristics of hospitals that stayed for Model Year 6 differed notably from those of the broader group of hospitals participating in Model Year 5. For example, among the 105 Model Year 6 hospitals analyzed, 39 (or 38.1%) were considered a safety-net hospital, compared with 93 (or 21.6%) in Model Year 5.[18] A larger share of hospitals in Model Year 6 were in the South (45.6% vs. 39.1%), and a larger share were either nonprofit or government owned (46.7% vs. 28.3%). Given these changes, the populations reached and impacted by the model may differ in Model Year 6 compared with prior years. See **Appendix F** for comparisons of hospital characteristics over time.

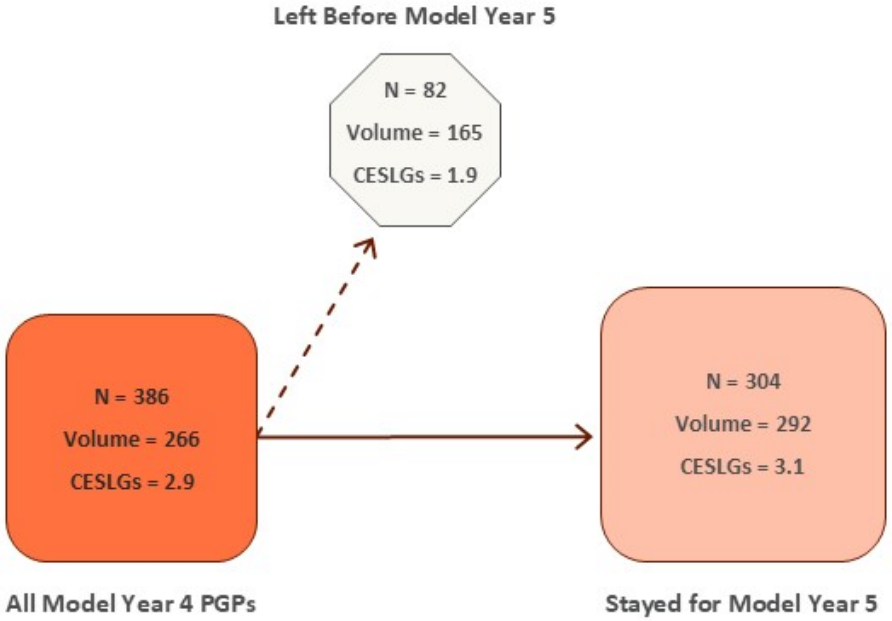
3. PGPs That Stayed for Model Year 5 Tended to Serve More Patients in the Model Than Those That Left Before Model Year 5

At the start of Model Year 4, 386 active PGPs were participating in BPCI Advanced, and these PGPs selected 2.9 CESLGs on average (Exhibit 7). Among these PGPs, 82 (21.2%) did not continue into Model Year 5. PGP leavers tended to be smaller than stayers in terms of the average episode volume per PGP. Leavers also selected fewer CESLGs than stayers (1.9 vs. 3.1 on average), and 69.5% of leavers participated in a single CESLG. This finding may indicate that PGP

[18] For this analysis, we use the CMS definition of safety-net hospitals proposed for TEAM, which defines facilities with a high proportion of patients with dual eligibility or Part D Low Income Subsidy (see **Appendix C** for details). Note that this definition of safety net is different from the definition used for peer group adjustments in the target pricing specification found at https://www.cms.gov/priorities/innovation/media/document/bpci-adv-targetprice-specs-my5-v2.

leavers were less involved in the model, or it may suggest that they were more likely to be specialist groups.[19]

Exhibit 7: Participation Statistics for Model Year 4 PGPs That Stayed in BPCI Advanced in Model Year 5 and for Those That Left Before Model Year 5 (2022)



Note: Shape size approximates relative size of the average reconciled episode volume. N indicates the count of PGPs; volume indicates the average reconciled episode volume per PGP, which has been annualized to account for PGPs that left prior to the end of the model year; and the CESLGs value indicates the average number of CESLGs selected. CESLG = clinical episode service line group; PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of the CMS BPCI Advanced Database as of December 29, 2023, and CMS reconciliation data for BPCI Advanced hospitals from Model Years 1–5. Second True-Up for Performance Periods 1–9.

PGPs that left the model performed worse financially than those that chose to continue into the following year, as measured through average per-episode reconciliation payments (Exhibit 8). However, in contrast to hospitals, Model Year 4 PGP leavers still earned reconciliation payments from CMS. Model Year 4 PGP leavers earned $415 on average per episode, while PGP stayers earned $869 on average per episode. In Model Year 5, PGP leavers had to repay CMS for the first time.

[19] Most Model Year 4 leavers that participated in a single CESLG participated in a surgical CESLG, with 22 of the PGPs participating in *orthopedic surgery*, 15 in *spinal procedures*, and 12 in *gastrointestinal procedures*.

Exhibit 8: Average Per-Episode Reconciliation Payments for PGPs That Stayed in the Model and Those That Exited in Model Years 1–5

Note: The number of BPCI Advanced PGPs is limited to the BPCI Advanced PGPs with reconciled episode volume during the intervention period for each model year. For Model Years 1 and 2 (October 1, 2018–December 31, 2019), Model Year 3 (January 1, 2020–December 31, 2020), Model Year 4 (January 1, 2021–December 31, 2021), and Model Year 5 (January 1, 2022–December 31, 2022), average reconciliation payments are shown for PGPs that either continued into or left before the next model year. Reconciliation payments for each model year only include episodes in that model year. See Appendix F for more detailed results. PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of the CMS BPCI Advanced Database as of December 29, 2023, and CMS reconciliation data for BPCI Advanced hospitals from Model Years 1–5. Second True-Up for Performance Periods 1–9.

Around half (55.2%) of PGPs in Model Year 4 participated as downstream episode initiators (see **Appendix F**). Among the 82 PGPs that left prior to Model Year 5, 91.5% were under conveners, possibly indicating that exit decisions were made strategically by the conveners rather than the PGPs. Participation in other initiatives may have also factored into the decision, as a larger share of PGPs that left the model prior to Model Year 5 were also in a Shared Savings Program ACO (17.1% of leavers vs. 6.3% of stayers).[20]

4. PGP Participation Dropped Substantially in Model Year 6

Additionally, we examined how PGP participation and characteristics shifted for Model Year 6. PGP participation in Model Year 6 was notably lower than in prior model years, after 71.7% of PGPs participating in Model Year 5 left before Model Year 6 (see **Appendix F**). The remaining PGPs tended to participate in more than twice as many CESLGs but were similar to leavers in average episode volume. This finding illustrates the flexibilities that PGPs have in participation. PGPs can opt to participate in multiple CESLGs, including those outside of their specialty, because there is no baseline episode requirement. Therefore, it is possible for them to have no volume in any one CESLG. PGPs can also be strategic in their billing decisions, as episode attribution to a PGP is based on the Taxpayer Identification Number (TIN) on the claim. PGPs and physicians can

[20] Overall, a lower share of BPCI Advanced PGPs participate in the Shared Savings Program compared with BPCI Advanced hospitals (8.5% in Model Year 4 for PGPs, compared with 26.2% for hospitals).

bill to multiple TINs and may choose to bill to BPCI Advanced TINs only when it is advantageous for them to do so.[21] PGPs that left the model also tended to perform worse than PGPs that chose to stay in the model. PGP leavers owed CMS $357 per episode on average, while PGP stayers earned $1,313 per episode on average. By Model Year 6, most PGPs that focused only on medical clinical episodes left the model.

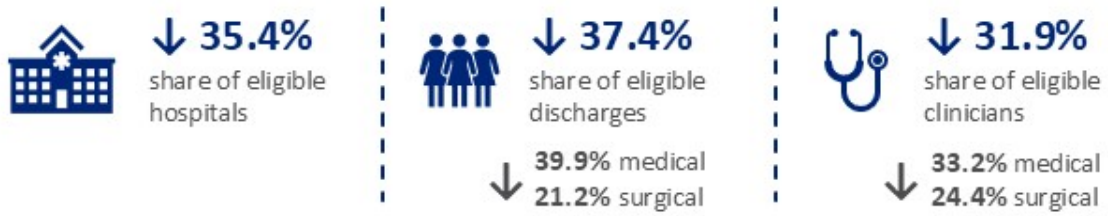
C. Changes in Reach to Providers and Patients From Model Year 4 to Model Year 5

As a national, voluntary model, the reach of BPCI Advanced has changed over time, corresponding to changes in participation. The wide reach of value-based payment models such as BPCI Advanced is important for achieving CMS goals, such as improving access to care by addressing affordability through reduced spending on duplicative or unnecessary care and associated cost sharing. Broader participation in such models may also support a culture that encourages innovation and fosters partnerships to achieve care transformation. In this section, we assess how the reach of BPCI Advanced declined from Model Year 4 to Model Year 5 as participation declined. To assess the reach of BPCI Advanced, we calculated the proportion of BPCI Advanced hospitals, discharges, and clinicians among all eligible hospitals, discharges, and clinicians in Model Year 5 and compared the shares reached by BPCI Advanced with those calculated for Model Year 4.[22]

1. Model Reach Declined From Model Year 4 to Model Year 5, but Most States Had BPCI Advanced Activity

In Model Year 5, roughly 1 in 8 BPCI Advanced eligible hospitals participated in at least one clinical episode, down from 1 in 5 in Model Year 4. The reach of BPCI Advanced to eligible discharges also declined, with a larger decline in medical episodes than in surgical episodes. In Model Year 5, BPCI Advanced reached about 1 in 8 medical episodes, a 39.9% decrease from the prior year, and around 1 in 13 surgical episodes, a 21.2% decrease from the prior year (Exhibit 9). Participation changes also resulted in a decline in the share of clinicians with an eligible discharge, from around 1 in 4 eligible clinicians in BPCI Advanced in Model Year 4 to about 1 in 5 in Model Year 5 (a decline of 31.9%).

Exhibit 9: BPCI Advanced Reach to Hospitals, Discharges, and Clinicians, Model Year 5 Compared With Model Year 4



Note: Eligible hospitals were limited to those with at least one clinical episode that meets the minimum baseline volume criterion. For example, this analysis excluded Inpatient Prospective Payment System-exempt cancer hospitals and hospitals located in Maryland. For more detail on the methods, see **Appendix C**. Eligible discharges and procedures include hospital discharges and outpatient procedures that met the model eligibility requirements, including having a BPCI Advanced Medicare Severity-Diagnosis Related Group or Healthcare Common Procedure Coding System code, being at a hospital eligible to be in BPCI Advanced, and meeting other patient inclusion criteria. We did not apply the minimum hospital baseline volume criterion for the reach to eligible discharges and clinicians.

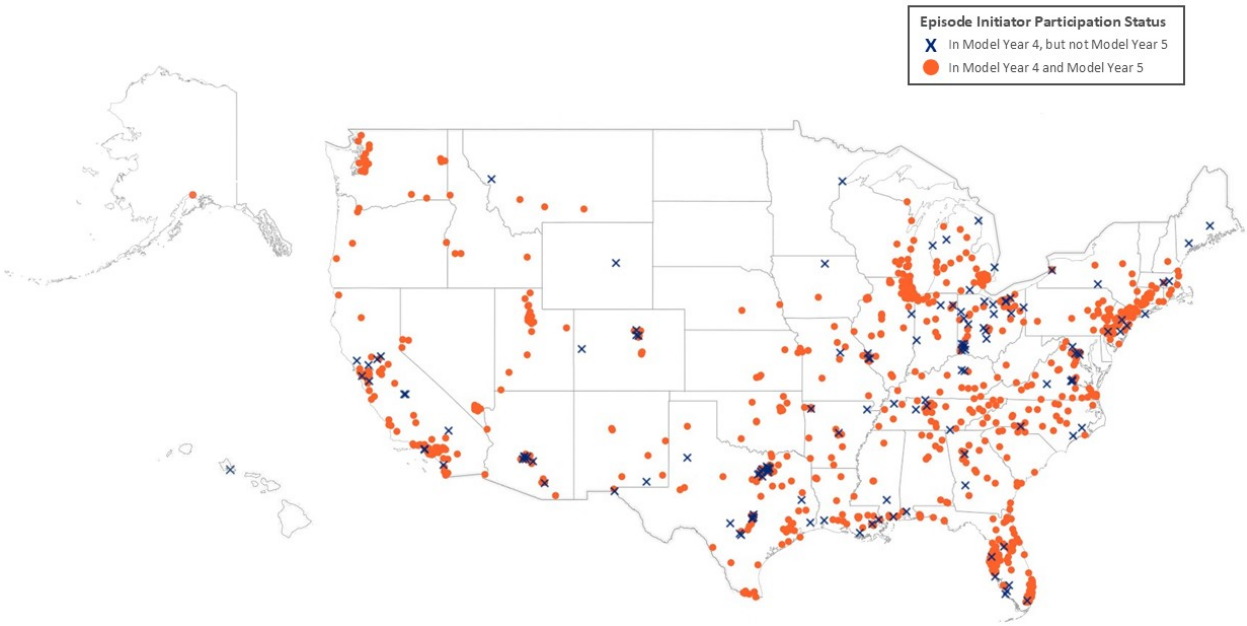
[21] This differs from hospitals, which participate under the associated CMS Certification Number (CCN). There will be only one active CCN for the hospital at a time.

[22] We relied on the CMS BPCI Advanced Database of participants to identify BPCI Advanced hospitals and PGPs and the clinical episodes in which they participated, the BPCI Advanced list of preliminary target prices for Model Year 5 to identify all eligible hospitals, and Medicare FFS claims to identify eligible clinicians, discharges, and procedures.

Source: The BPCI Advanced evaluation team's analysis of the BPCI Advanced Preliminary Target Pricing File; Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2021, and ending on or before December 31, 2022; and the CMS BPCI Advanced Database.

Even though roughly 31.0% of participating hospitals and PGPs left the model prior to Model Year 5, BPCI Advanced continued to have episodes in most states. In Model Year 5, BPCI Advanced had activity in 41 states and the District of Columbia, compared with 46 states and the District of Columbia in Model Year 4 (Exhibit 10). The five states that no longer had BPCI Advanced hospital or PGP activity in Model Year 5 compared to Model Year 4 were Delaware, Hawaii, Maine, Minnesota, and Wyoming.

Exhibit 10: Locations With BPCI Advanced Activity, Model Years 4 (2021) and 5 (2022)



Note: The symbols represent the locations of either participating hospitals or hospitals where a participating physician group practice had at least 10 episodes during the year. Episode initiators are designated by an orange circle if they participated in both Model Years 4 (2021) and 5 (2022) and a blue "X" if they did not continue into Model Year 5.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data from 2021 through 2022; the CMS BPCI Advanced Database as of January 20, 2023; and the 2021 Provider of Services (POS) file.

2. Representativeness Was Similar in Model Years 4 and 5 for Patients Who Are Dually Eligible for Medicare and Medicaid

To understand how changes in participation in Model Year 5 may have affected the representativeness of the BPCI Advanced Model, we assessed the share of patients from who are dually eligible for Medicare and Medicaid who had a BPCI Advanced episode in Model Year 5. While changes in participation could affect the reach of the model, the findings in Model Year 5 were similar to those in Model Year 4 for patients who are dually eligible (Exhibit 11). Representation among patients who are dually eligible was higher for medical episodes than for surgical episodes.

Exhibit 11: Patient Shares for those Dually Eligible for Medicare and Medicaid, Model Years 4 (2021) and 5 (2022)

Clinical Episode Type		Percentage of Patients With BPCI Advanced Reconciled Episodes Who Are Dually Eligible for Medicare and Medicaid
Medical	Model Year 4	24.1
	Model Year 5	24.9
Surgical	Model Year 4	9.1
	Model Year 5	8.2

Note: BPCI Advanced episodes are episodes attributed to participants during the financial reconciliation process. For more detail on the methods, see **Appendix C**.

Source: The set of BPCI Advanced episodes during January 1, 2021–December 31, 2021 (Model Year 4) or January 1, 2022–December 31, 2022 (Model Year 5); and CMS reconciliation data from the same period, in addition to the Master Beneficiary Summary File (MBSF) 2020-2022.

D. Discussion

We examined changes in BPCI Advanced participation and reach from Model Year 4 to Model Year 5 to provide context for impact estimates and other analyses in this report. We found a decline in participation by hospitals and PGPs and a decline in model volume. These reductions have implications for achieving model aims, including reducing expenditures and increasing provider engagement.

1. What Are the Model Year 5 Findings?

At the start of Model Year 4, 682 hospitals and 386 PGPs were participating in the model. About 30.8% of hospitals and PGPs left before the start of Model Year 5. Hospitals and PGPs that left prior to Model Year 5 tended to be smaller in terms of reconciled volume and possibly less involved in the model, as they selected fewer CESLGs. Nearly half (46.2%) of hospitals and more than two-thirds (69.5%) of PGPs that left before Model Year 5 participated in a single CESLG. Additionally, hospitals and PGPs that left tended to perform worse financially in the model, in terms of reconciliation payments, compared with those that stayed into the following year.

The share of hospitals, discharges, and clinicians reached by BPCI Advanced also decreased. Despite the decline in participation, most states still had BPCI Advanced activity in Model Year 5. Representation among patients who are dually eligible was higher for medical episodes than for surgical episodes. This finding aligns with results for prior years with similar representation to Model Year 4.

2. How Do These Findings Compare With Model Year 4 Results?

In Model Year 4, CMS made substantial changes to the model design, which led some participants to withdraw (41.0% decrease in participating hospitals and PGPs from Model Year 3 to Model Year 4), but those that continued took on accountability for an expanded patient population, effectively doubling the number of clinical episodes for which they were responsible. While the reach of Model Year 5 participants declined (rather than expanded, as it had in Model Year 4), the participants that continued into Model Year 5 were more engaged in the model than those that left, as stayers tended to participate in a greater number of CESLGs than those that left.

3. What Do These Findings Mean for CMS Objectives?

Wide adoption of models such as BPCI Advanced may accelerate care transformation. Lower volume as well as selection out of the model when it is not as financially advantageous for providers may inhibit progress toward these goals. Additionally, the Innovation Center is tasked with developing and testing models to identify ways to improve health care payment and service delivery; however, given selection out of the model, resulting impact estimates may not generalize to a national expansion of episode-based payment models. Mandatory models may be helpful for ensuring continued broader participation in value-based care and may allow for more generalizable impact estimates. The mandatory Transforming Episode Accountability Model builds on lessons learned from BPCI Advanced and the Comprehensive Care for Joint Replacement (CJR) model. CMS is scheduled to launch this episode-based alternative payment model in January 2026.

Our analyses revealed challenges with including PGPs as participants, as some BPCI Advanced participating PGPs have little to no episode volume and may have engaged in strategic billing. As discussed in prior evaluation reports, conveners or non-convener consultants may have enrolled a PGP in the model using a TIN that previously did not exist or had no providers billing to it. This strategy allows the convener or non-convener consultant to use the TIN at a later point should they want to engage potentially high-performing providers to participate. For CMS, this means that PGPs may be able to optimize their financial success in the model in a way that is not intended, thus achieving high reconciliation payments, like those for Model Year 5 stayers. Such selective billing is unlikely to support the goals of reducing expenditures and providing higher-quality care, and findings based on the sample are potentially less generalizable.

III. Impacts on Expenditures

In line with CMS' goal to increase health care affordability, a primary objective of the BPCI Advanced Model is to reduce unnecessary health care expenditures in the post-acute care (PAC) period. In the first four model years, BPCI Advanced was successful at reducing episode payments. In Model Year 5 (2022) significant attrition from the model and broader trends in reduced PAC use over time, including among comparison hospitals and physician group practices (PGPs), reduced the likelihood of episode payment reductions continuing at the same pace seen in previous model years.

Methods Overview: Impact Estimates

We estimated the impact of BPCI Advanced on payment outcomes using a difference-in-differences (DiD) approach. Analyses used Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (evaluation baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (Model Year 5) for BPCI Advanced participants and similar hospitals and PGPs in the comparison group.

In this chapter, we describe the impact of BPCI Advanced on payments from Medicare claims in Model Year 5 relative to a comparison group. We provide context using findings from site visits and interviews with participants. Finally, we factor in reconciliation payments made to or received from participants to calculate overall savings to the Medicare program.

A. Key Findings

Impacts on Expenditures

- BPCI Advanced reduced total episode payments relative to the comparison group by $1,014 per episode, or 3.8% of the baseline mean, in Model Year 5.
  - Episode payments decreased for both medical and surgical episodes, with a smaller reduction for medical episodes ($745 vs. $1,694). This pattern persisted for both hospitals and physician group practices.
- Similar to prior years, reductions in total episode payments were driven by decreases in post-acute-care (PAC) spending.
  - For medical episodes, skilled nursing facility (SNF) payment reductions were generally a larger driver than reductions in inpatient rehabilitation facility (IRF) payments.
  - For surgical episodes, IRF payment reductions were a larger driver than reductions in SNF payments.
- BPCI Advanced participants reported implementing a "Why Not Home" approach by discharging more patients home, which reduced discharges to SNFs and IRFs and decreased PAC spending.
- The BPCI Advanced Model resulted in an estimated $344.1 million in savings to Medicare, or 3.9% of the estimated payments under the counterfactual. Expenditures were reduced by $317.8 million. Reconciliation payments amounted to $26.3 million paid to CMS.

B. Impact of BPCI Advanced on Expenditures

We assessed the impact of the model on expenditures overall and by episode type (medical and surgical). We provide additional results for hospitals and PGPs and by clinical episode service line group (CESLG) in **Appendix H** and results for select surgical clinical episodes included in the Transforming Episode Accountability Model (TEAM) in **Appendix P**. We measured total episode payments as Medicare Part A and B allowed payments, which includes patient cost sharing, during the anchor stay and 90-day post-discharge period (PDP). To assess the drivers of change, we measured model effects on PAC spending during the 90-day PDP, including skilled nursing facility (SNF) payments, inpatient rehabilitation facility (IRF) payments, and home health (HH) payments, as well as hospital readmission payments. All payments were standardized to remove geographic and other adjustments.

1. BPCI Advanced Led to Decreased Total Episode Payments

One of the primary goals of BPCI Advanced was to reduce episode payments while maintaining or improving quality of care. The BPCI Advanced Model reduced total episode payments in Model Year 5, with reductions in payments overall, by clinical episode type, and by hospitals and PGPs relative to the comparison group.

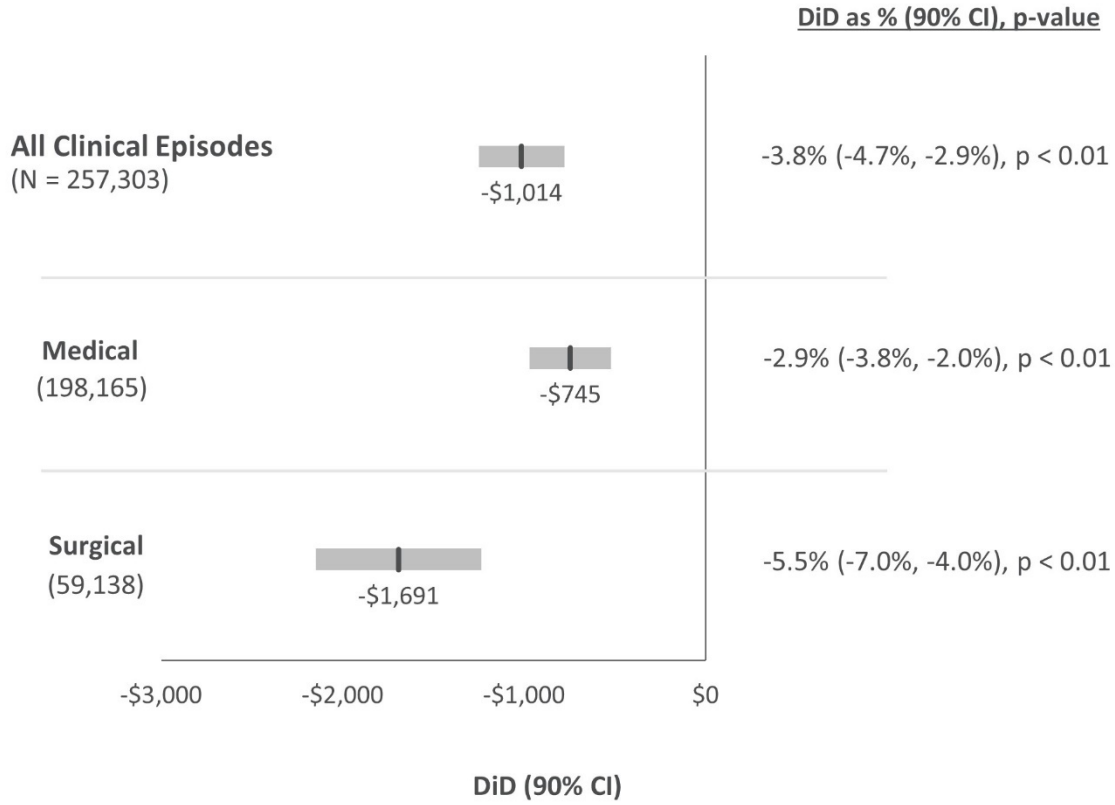
Overall, the BPCI Advanced Model reduced episode payments by $1,014 per episode, or 3.8% of the baseline mean, relative to comparison hospitals and PGPs (90% confidence interval [CI]: –$1,250, –$777; $p < 0.01$) (Exhibit 12). When estimated by episode type, the relative reduction in per-episode payments was twice as large for surgical episodes as it was for medical episodes. For medical episodes, episode payments declined by $745 per episode, or 2.9% (90% CI: –$969, –$522; $p < 0.01$). For surgical episodes, episode payments declined by $1,694 per episode, or 5.5% (90% CI: –$2,154, –$1,235; $p < 0.01$). Within both episode types, BPCI Advanced hospitals and PGPs reduced per-episode payments relative to the comparison group, with larger reductions for hospitals compared with PGPs in medical episodes and similar reductions for hospitals and PGPs in surgical episodes (see **Appendix H**).

Care Redesign Spotlight

BPCI Advanced participants reported using multiple strategies to reduce Medicare expenditures:

- Optimizing patients for planned surgical procedures
- Standardizing care pathways and devices to reduce variation in outcomes
- Avoiding discharges to costly post-acute care facilities when medically appropriate
- Having staff conduct rounds at preferred skilled nursing facilities to ensure adherence to care protocols, identify obstacles to discharge, and shorten length of stay in these facilities

Exhibit 12: Impact of BPCI Advanced on Total Per-Episode Payments, Hospitals and PGPs, Model Year 5 (2022)



Note: Total payments represent Part A and B fee-for-service payments for the anchor stay or procedure and the 90-day PDP. The grey bars indicate the 90% CI of the DiD estimate. The estimates in this exhibit are the results of a DiD model. The DiD estimates represent the relative change in dollars. Results are also presented as a percentage of the BPCI Advanced average during the baseline. This payment outcome is standardized to remove the effect of geographic and other payment adjustments. See **Appendix C** for details of the DiD methodology, outcome definitions, and additional information on methods. See **Appendix H** for more detailed results. CI = confidence interval; DiD = difference-in-differences; PDP = post-discharge period; PGP = physician group practice.

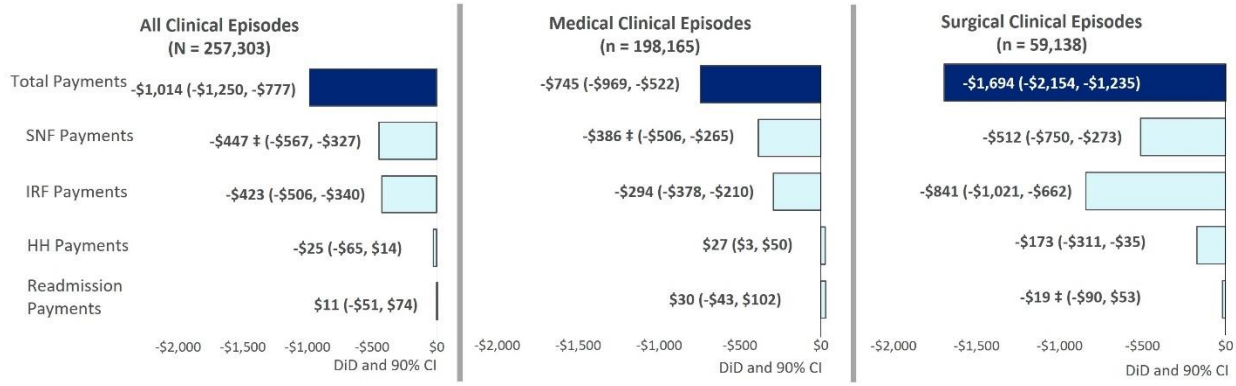
Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced hospitals or PGPs and matched comparison hospitals or PGPs.

2. Decreased SNF and IRF Spending Contributed to Total Episode Payment Reductions

Similar to previous model years, reductions in episode payments largely came from reductions in PAC spending. To quantify how BPCI Advanced led to shifts in PAC use, we estimated the impact on PAC payments for SNFs, IRFs, and HH agencies during the 90-day PDP. Additionally, we estimated the impact on payments for readmissions occurring during the 90-day PDP.

During Model Year 5, across all clinical episodes evaluated, the BPCI Advanced Model reduced SNF payments by $447 per episode, or 9.2% of the baseline mean SNF payment (90% CI: –$567, –$327; $p < 0.01$) relative to the comparison group; however, our ability to estimate the causal impact of the model on SNF payments may be limited because this outcome failed our parallel trends test.[23] IRF payments declined by $423 per episode, or 42.2% of the baseline mean IRF payment relative to the comparison group (90% CI: –$506, –$340; $p < 0.01$) (Exhibit 13). The overall reduction in PAC facility spending due to the model corresponds with the 1.8% reduction in discharges to institutional PAC facilities across all episodes (see **Appendix H**). Surgical episodes drove the reductions in PAC spending. BPCI Advanced participants reported in interviews that they invested time in reviewing CMS data to understand discharge and referral patterns compared with peers and to identify inefficiencies and areas for improvement. These activities could be contributing to the reductions in PAC spending. Across all episodes evaluated, the impacts of BPCI Advanced on HH and readmission payments were not statistically significant.

Exhibit 13: Impact of BPCI Advanced on Per-Episode SNF, IRF, HH, and Readmission Payments Through the 90-Day PDP, Hospitals and PGPs, Model Year 5 (2022)



Note: The estimates in this exhibit are the results of DiD models. The DiD estimates represent the relative change in dollars. Payment outcomes were standardized to remove the effect of geographic and other payment adjustments. See **Appendix C** for details of the DiD methodology, outcome definitions, and additional information on methods. See **Appendix H** for more detailed results. ‡ We rejected the null hypothesis that BPCI Advanced and matched comparison hospitals and PGPs had parallel trends for this outcome in the baseline period (with 90% confidence). This may indicate the impact estimate partially reflects a continuation of preexisting trends and does not solely reflect the impact of the BPCI Advanced Model. CI = confidence interval; DiD = difference-in-differences; HH = home health; IRF = inpatient rehabilitation facility; PDP = post-discharge period; PGP = physician group practice; SNF = skilled nursing facility.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced hospitals or PGPs and matched comparison hospitals or PGPs.

[23] A failure of the parallel trends test indicates that BPCI Advanced and matched comparison hospitals and PGPs did not have the same trends for that outcome in the baseline period, suggesting that BPCI Advanced and comparison hospitals and PGPs could be on different trends in the intervention period. This may indicate that the impact estimate partially reflects a continuation of preexisting trends and does not solely reflect the impact of BPCI Advanced.

The BPCI Advanced Model reduced SNF payments for medical episodes by $386 per episode (90% CI: –$506, –$265; $p < 0.01$), or 8.1% of the baseline mean SNF payment; however, our ability to estimate the causal impact of the model on SNF payments may be limited because this outcome failed our parallel trends test. IRF payments decreased by $294 per episode (90% CI: –$378, –$210; $p < 0.01$), or 33.7% of the baseline mean IRF payment. The BPCI Advanced Model increased HH payments for medical episodes by $27 per episode (90% CI: $3, $50; $p = 0.06$), or 2.1% of the baseline mean HH payment and had no impact on readmission payments.

For surgical episodes, the reduction in IRF payments was a larger driver of the change in total episode payments than the reduction in SNF payments in Model Year 5 ($841 vs. $512). This difference was more pronounced than it was in Model Year 4 (2021) ($745 vs. $624). In Model Year 5, the BPCI Advanced Model reduced IRF payments by $841 per episode (90% CI: –$1,021, –$662; $p < 0.01$), or 54.0% of the baseline mean IRF payment, and SNF payments by $512 per episode (90% CI: –$750, –$273; $p < 0.01$), or 10.2% of the baseline mean SNF payment. The BPCI Advanced Model decreased HH payments for surgical episodes by $173 per episode (90% CI: –$311, –$35; $p = 0.04$), or 9.6% of the baseline mean HH payment and had no impact on readmission payments. To view these impacts separated by hospital and PGP episodes, please see **Appendix H**.

Hospitals and PGPs achieved these expenditure reductions in large part by transforming the culture at participant organizations. Notably, we learned through interviews and site visits that the "Why Not Home" approach to discharge planning appeared to be the key mechanism underlying payment reductions. Participants reshaped providers' mindset about appropriate discharge destinations, encouraging patient discharges to home whenever medically possible. For planned surgeries, some participants administered risk prediction tools to determine the optimal discharge destination after surgery. Participants also addressed and managed patient expectations for what discharge setting is needed after surgery. In cases where patients cannot be discharged home and require the level of care provided by PAC facilities, BPCI Advanced participants emphasized the importance of care navigators monitoring patients in PAC facilities. In some instances, they performed rounds on patients in PAC facilities to reduce PAC length of stay and identify obstacles to discharge from the facility. See **Appendix H** for the results of the impact on the number of days in a SNF during the 90-day PDP.

Care Redesign Spotlight

During a virtual site visit in 2022, interviewees from one hospital that participated in both BPCI Advanced and a Medicare Accountable Care Organization (ACO) shared that they decreased expenditures by reducing discharges to skilled nursing facilities (SNFs), reducing SNF length of stay, and increasing patient monitoring and treatment at the patient's home.

Taking a "Why Not Home" Approach to Discharge Planning | Hospital interviewees said that the BPCI Advanced data helped them recognize that the hospital was overutilizing SNFs. As a result, the hospital implemented a "Why Not Home" program to help its clinical team realize that discharging patients home may be preferable to discharging patients to a SNF. The hospital's "Why Not Home" approach entailed:

- Providing guidance to clinical teams to educate patients and their families about why being discharged home was more beneficial than being discharged to a post-acute care (PAC) facility
- Case managers identifying resources required to prevent readmissions and connecting patients with physical and occupational therapists who would visit patients at their home the day after discharge
- Using the "6-Clicks" tool, a functional measurement tool that evaluated six functional status activities and provided a score that physical therapy and occupational therapy teams used to determine discharge destination
- Implementing nurse-driven early mobility protocols to get patients to walk while they were still in the hospital, as patients who were mobile in the hospital were more likely to be successful at home

The **6-Clicks tool** evaluates (1) turning from the patient's back to their side in a flat bed, (2) moving from lying on the patient's back to sitting on the side of a flat bed, (3) moving to and from a bed to a chair, (4) standing up from a chair, (5) walking in a hospital room, and (6) climbing three to five stairs with a railing.

By implementing this "Why Not Home" approach and increasing discharges to patients' homes, the hospital was able to reduce costly PAC spending.

Reducing SNF Length of Stay | The hospital implemented strategies to reduce SNF length of stay for patients discharged to a SNF, which in turn reduced total episode expenditures. Hospital interviewees reported holding weekly conference calls with SNFs. SNFs filled out patient assessment forms and uploaded them to the patient's electronic medical record. These efforts allowed care coordinators to track how the patient was doing in the SNF and to help with care transitions if the patient returned to the hospital. The hospital also used a PAC surveillance team to ensure its SNF patients followed up with their primary care provider. The hospital estimated a goal or anticipated discharge date from the SNF, and they scheduled primary care appointments within 7 to 14 days of this anticipated discharge date. Hospital interviewees reported that SNF length of stay declined after the hospital joined BPCI Advanced. The hospital reported that the average length of stay in preferred SNFs for patients in BPCI Advanced and a Medicare ACO fell from more than 35 days to about 19 days.

Monitoring and Treating Patients in the Home | The hospital also coordinated additional resources to improve patients' transition into the community, such as scheduling home health care or scheduling primary care appointments and supporting patients in attending these appointments. A particularly innovative initiative was the hospital's mobile integrated health team. This team's goal was to prevent patients from unnecessarily returning to the emergency department. The team consisted of paramedics who visited patients in their home after discharge and communicated with primary care providers if patients required follow-up appointments. The paramedic ensured that patients were stable after returning home. If the patient was not stable enough to wait for their primary care follow-up appointment, the paramedic could facilitate virtual primary care visits. The hospital also had a comprehensive care clinic for medically complex patients, which had its own social workers and coordinated with the hospital's mobile integrated health team. The hospital credited these strategies with preventing hospital readmissions and reducing expenditures.

C. Medicare Program Savings

Achieving Medicare program savings is a critical objective of the BPCI Advanced Model. For the model to generate savings, the reconciliation payments CMS provides model participants, netted across all participants, should not exceed the reduction in episode expenditures from CMS due to the model. "Episode expenditures from CMS" refers to nonstandardized fee-for-service payments made by CMS for services provided during the episode, excluding patient cost sharing.[24] In Model Years 1 through 3, BPCI Advanced resulted in a net loss to Medicare because reconciliation payments to participants were greater than reductions in episode expenditures from CMS. Beginning in Model Year 4, CMS made significant changes to the design of the model and was successful at achieving savings for the first time. These savings persisted in Model Year 5.

Methods Overview: Medicare Savings

We conceptualized Medicare program savings as the savings to Medicare due to model participants reducing episode expenditures from CMS (that is, without beneficiary cost sharing and with geographic and other payment adjustments) minus (or plus) what Medicare paid to (or received from) model participants in financial reconciliation payments.

To compare the savings estimates across episode types, we expressed estimates as a percentage of the "counterfactual." The counterfactual estimates what episode expenditures from CMS for services furnished by BPCI Advanced participants would have been had the model not existed. See **Appendix I** for additional details on the definitions and calculations of savings.

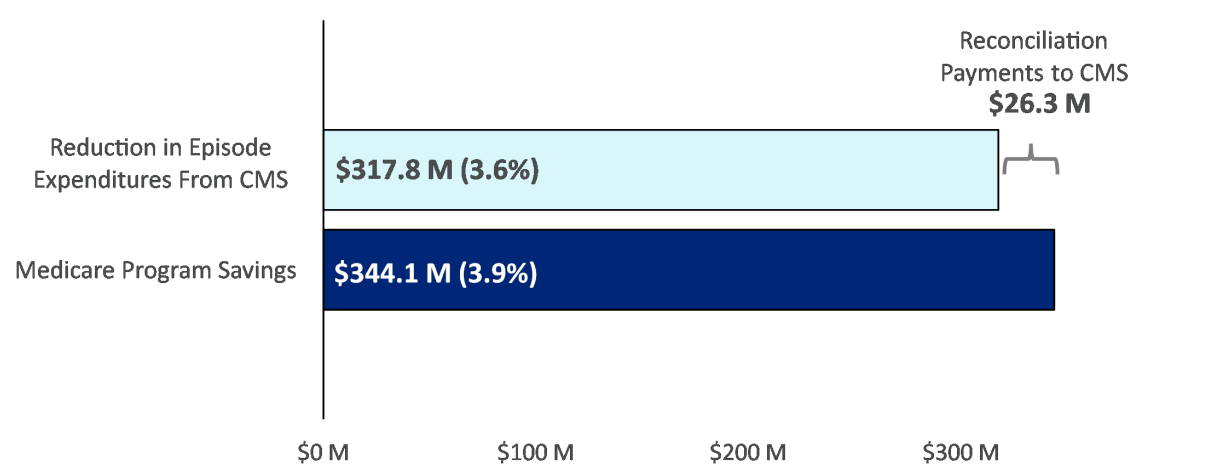
We present savings for episodes pooled across all clinical episodes evaluated, as well as across medical and surgical episodes, to provide a high-level overview of whether the model is achieving the objective of savings. In **Appendix I**, we present savings separately for hospitals and PGPs and by CESLG.

1. BPCI Advanced Led to Medicare Program Savings in Model Year 5

The evaluation found that the model resulted in savings to Medicare in Model Year 5 for the second consecutive year. During Model Year 5, the BPCI Advanced Model resulted in $344.1 million in savings, or 3.9% of estimated expenditures from CMS under the counterfactual (Exhibit 14). These savings resulted from a reduction in episode expenditures from CMS by an estimated $317.8 million, or about 3.6%, and from the $26.3 million in reconciliation payments that CMS received from participants. When accounting for the 90% CI of the difference-in-differences (DiD) impact estimate, savings may have ranged from $263.5 million to $424.6 million. See **Appendix I** for more details.

[24] Nonstandardized Medicare fee-for-service payments reflect actual payments made from Medicare to hospitals or PGPs because they include adjustments for wages, practice expenses, and other initiatives (such as medical education). See **Appendix I** for additional details on the definitions and calculations of savings.

Exhibit 14: Medicare Savings due to BPCI Advanced, Model Year 5 (2022)



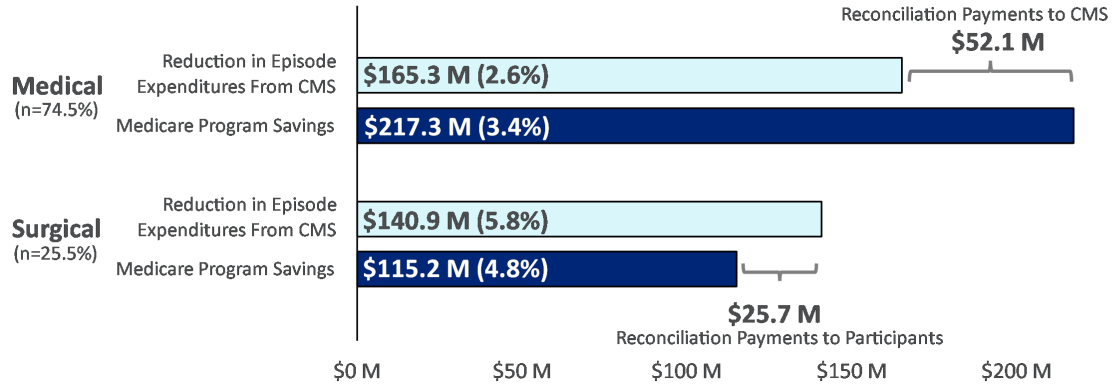
Note: The estimated reduction in expenditures from CMS is based on a DiD model of standardized Medicare paid amounts that was adjusted as described in **Appendix H**. We calculated the savings to Medicare as the estimated reduction in episode expenditures from CMS minus reconciliation payments. The estimates are also presented as a percentage of the counterfactual, or an estimate of what episode expenditures from CMS would have been if the BPCI Advanced Model had not occurred. See **Appendix C** for details of the DiD methodology, reconciliation adjustment methodology, outcome definitions, and additional information on methods.
DiD = difference-in-differences; M = million.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced hospitals and PGPs and matched comparison hospitals and PGPs, as well as CMS reconciliation data from the same period.

The savings from medical episodes, which make up 74.5% of the evaluated sample, were a large driver of the estimated savings overall. Medical episodes show an estimated reduction in episode expenditures from CMS, coupled with hospitals and PGPs making reconciliation payments to Medicare—both factors that increase total savings. For medical episodes, BPCI Advanced reduced episode expenditures from CMS by an estimated $165.3 million, or 2.6% of payments under the counterfactual (Exhibit 17). After accounting for the $52.1 million in reconciliation payments that CMS received from participants, we found that the model resulted in an estimated savings of $217.3 million, or 3.4%, for medical episodes, with a per-episode savings of $927. Estimated net Medicare savings for medical episodes may have ranged from $164.6 million to $270.1 million (based on the 90% CI of the DiD impact estimate).

For surgical episodes, the BPCI Advanced Model reduced episode expenditures from CMS by an estimated $140.9 million, or about 5.8% of payments under the counterfactual (Exhibit 15). After accounting for the $25.7 million in reconciliation payments that CMS paid to participants, we found that Medicare saved an estimated $115.2 million, or 4.8%, with per-episode savings of $1,436. The savings estimated for surgical episodes may have ranged from $73.6 million to $156.7 million (based on the 90% CI). In contrast to medical episodes, CMS made reconciliation payments to participants for surgical episodes. However, surgical episodes still resulted in savings because the reduction in surgical episode expenditures from CMS exceeded the reconciliation payments made to participants. We present savings for hospitals and PGPs and by CESLG in **Appendix I**.

Exhibit 15: Medicare Savings due to BPCI Advanced, Medical and Surgical Episodes, Model Year 5 (2022)



Note: The estimated reductions in episode expenditures from CMS are based on DiD models of standardized Medicare paid amounts that were adjusted as described in **Appendix H**. We calculated the savings to Medicare as the estimated reduction in episode expenditures from CMS minus reconciliation payments. The estimates are also presented as a percentage of the counterfactual, or an estimate of what episode expenditures from CMS would have been if the BPCI Advanced Model had not occurred. See **Appendix C** for details of the DiD methodology, reconciliation adjustment methodology, outcome definitions, and additional information on methods. DiD = difference-in-differences; M = million.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2021, and ending on or before December 31, 2021 (intervention period) for BPCI Advanced hospitals or PGPs and matched comparison hospitals or PGPs, as well as CMS reconciliation data from the same period.

2. Medicare Program Savings Were Similar in Model Years 4 and 5

Beginning in Model Year 4 and continuing in Model Year 5, both medical and surgical episodes resulted in estimated savings to Medicare. In Model Years 1 through 3, only surgical episodes resulted in savings to Medicare (see **Appendix I**).

Medicare program savings were similar in Model Years 4 and 5. Both years show an aggregate reduction in episode expenditures from CMS that was bolstered by participants, in aggregate, making reconciliation payments to CMS. Although similar, the total amount of savings to Medicare was lower in Model Year 5 than Model Year 4, because there were fewer episodes in Model Year 5 as participants exited the model (see **Chapter II. Participant Characteristics**). The number of episodes from Model Year 4 to Model Year 5 decreased by around 36%, while savings to Medicare decreased by about 26%.

Savings decreased to a lesser extent than the decrease in episodes because per-episode savings estimates increased from Model Year 4 to Model Year 5, from $944 to $1,094 (Exhibit 16). Through the model years, surgical episodes have had higher per-episode savings than medical episodes, and the share of surgical episodes increased from around 18% in Model Year 4 to about 25% in Model Year 5. The per-episode savings increase was driven, in part, by the growth in the share of surgical episodes.

Exhibit 16: Medicare Savings and Episode Share, BPCI Advanced Hospitals and PGPs, Model Year 4 (2021) Versus Model Year 5 (2022)

Model Year	Clinical Episodes	Annual Share of Episode Volume (%)	Savings to Medicare	
			Total (M)	Per Episode
Model Year 4	All Evaluated	100.0	$464.7	$944
	Medical	81.6	$306.0	$762
	Surgical	18.4	$147.1	$1,624
Model Year 5	All Evaluated	100.0	$344.1	$1,094
	Medical	74.5	$217.3	$927
	Surgical	25.5	$115.2	$1,436

Note: The estimates for medical and surgical do not sum to the estimate for all evaluated clinical episodes because each estimate is derived from a unique DiD model that estimates the reduction in episode expenditures from CMS. We calculated the savings to Medicare as the estimated reduction in episode expenditures from CMS minus reconciliation payments. See **Appendix C** for details of the DiD methodology, outcome definitions, and additional information on methods. See **Appendix I** for detailed results of Medicare savings. DiD = difference-in-differences; M = million; PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2021, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced hospitals or PGPs and matched comparison hospitals or PGPs, as well as CMS reconciliation data from the same period. Model Year 4 results are reported in the BPCI Advanced Fifth Evaluation Report, available for download at https://innovation.cms.gov/innovation-models/bpci-advanced.

D. Discussion

1. What Are the Model Year 5 Findings?

The BPCI Advanced Model reduced total episode payments relative to comparison hospitals and PGPs in Model Year 5. Surgical episodes had a larger decrease in total spending per episode than medical episodes. Reduced payments were driven mainly by reductions in SNF and IRF payments. For medical episodes, SNF payment reductions were the largest driver, while for surgical episodes, IRF payments were the largest driver. Furthermore, BPCI Advanced resulted in savings to Medicare, due to a reduction in episode expenditures from CMS and from reconciliation payments that CMS received from participants. Reconciliation payments from CMS to participants did not cancel out savings created by reduced payments. The model generated savings in Model Year 5 ($344.1 million) across both medical and surgical episodes.

These findings align with what we heard in interviews. BPCI Advanced participants reported reducing discharges to PAC facilities in favor of implementing a "Why Not Home" approach. We observed small increases in HH payments for medical episodes and small decreases in HH payments for surgical episodes. For surgical episodes, participants appeared to reduce total episode payments by decreasing PAC facility and HH expenditures, while for medical episodes, participants appeared to substitute some expenditures from institutional PAC use for an increase in HH expenditures.

2. How Do Model Year 5 Findings Compare With Model Year 4 Results?

The Model Year 5 reduction in total episode payments for BPCI Advanced hospitals and PGPs relative to the comparison group was similar to the reduction in total episode payments estimated for Model Year 4. The decline in episode volume from Model Year 4 to Model Year 5 was, in part,

offset by larger per-episode savings. In both model years, reductions to SNF and IRF payments drove the total episode payment reduction. In addition, Medicare achieved savings through BPCI Advanced in both model years, in part because reconciliation payments from CMS to participants did not outpace savings created by reduced payments.

3. What Do These Findings Mean for CMS Objectives?

Despite participant attrition from Model Year 4 to Model Year 5, the estimated reductions for total episode payments and PAC payments largely remained consistent. These findings suggest that BPCI Advanced continues to achieve CMS' objective of improving health care affordability by reducing spending on duplicative or unnecessary care.

The second consecutive year of savings also supports the CMS Innovation Center's strategic objectives to drive accountable care for episodes and address affordability of care. Medical and surgical episode types showed statistically significant savings to Medicare that were primarily driven by reductions in episode expenditures from CMS, but participants paid reconciliation payments to CMS for medical episodes, whereas they received reconciliation payments from CMS for surgical episodes. These results highlight that Medicare can achieve savings from bundled payments under various types of episodes, though the source of savings may vary.

Maintaining savings in future model years while also maintaining participation may become more challenging. Participants that performed worse financially under the model were less likely to continue into future model years, and most hospitals and PGPs participating in Model Year 5 left the model prior to Model Year 6 (2023) (see **Chapter II. Participant Characteristics**). Future evaluation reports will continue to estimate net savings to Medicare to determine how attrition in later model years and the addition of new participants affect savings.

IV. Impacts on Quality

Improving or maintaining quality is an important goal of the BPCI Advanced Model. This chapter describes how BPCI Advanced has affected the quality of care delivered during the episode. As discussed in **Chapter III. Impacts on Expenditures**, the model resulted in about a 4% reduction in episode payments in Model Year 5 (2022) through reduced post-acute care (PAC) spending and use. Reduced PAC utilization could result in patients having a longer recovery or result in serious medical complications and issues. Thus, we evaluate whether the model also improved or maintained quality or whether these reductions resulted in diminished quality.

Drawing from analyses of claims-based outcomes, patient surveys, and interviews with model participants, we found that despite the reduction in episode spending and lower institutional PAC utilization, the BPCI Advanced Model maintained quality-related health outcomes during Model Year 5. However, BPCI Advanced patients reported less favorable care experiences and satisfaction with care than comparison patients. Importantly, BPCI Advanced patients were less likely to agree that medical staff accounted for their preferences in deciding post-discharge services and were less likely to report that medical staff discussed whether they would have the help they would need when they got home. This finding suggests that there is room for improvement under the model in shared decision-making with patients in discussions related to PAC services.

A. Key Findings

Impacts on Quality

- In Model Year 5, BPCI Advanced hospitals and physician group practices maintained quality of care. BPCI Advanced did not have an impact on the readmission rate during the 90-day post-discharge period (PDP) or on the mortality rate during the anchor stay and 90-day PDP.
- Analysis of the patient survey results did not find a strong or consistent relationship between the BPCI Advanced Model and patients' functional status improvement in Model Years 4 through 6 (2021–2023).
- Results from the patient survey suggest that BPCI Advanced respondents in Model Years 4 through 6 had slightly less favorable care experiences and satisfaction with care than comparison respondents, for both medical and surgical episodes.

B. Readmissions and Mortality

To assess quality of care for health outcomes, we evaluated the model's impact on two claims-based measures: readmission rate in the 90-day post-discharge period (PDP)[25] and mortality rate during the anchor stay or procedure through the 90-day PDP. We used a difference-in-differences (DiD) approach to compare the change from baseline (January 1, 2015–September 30, 2018) to Model Year

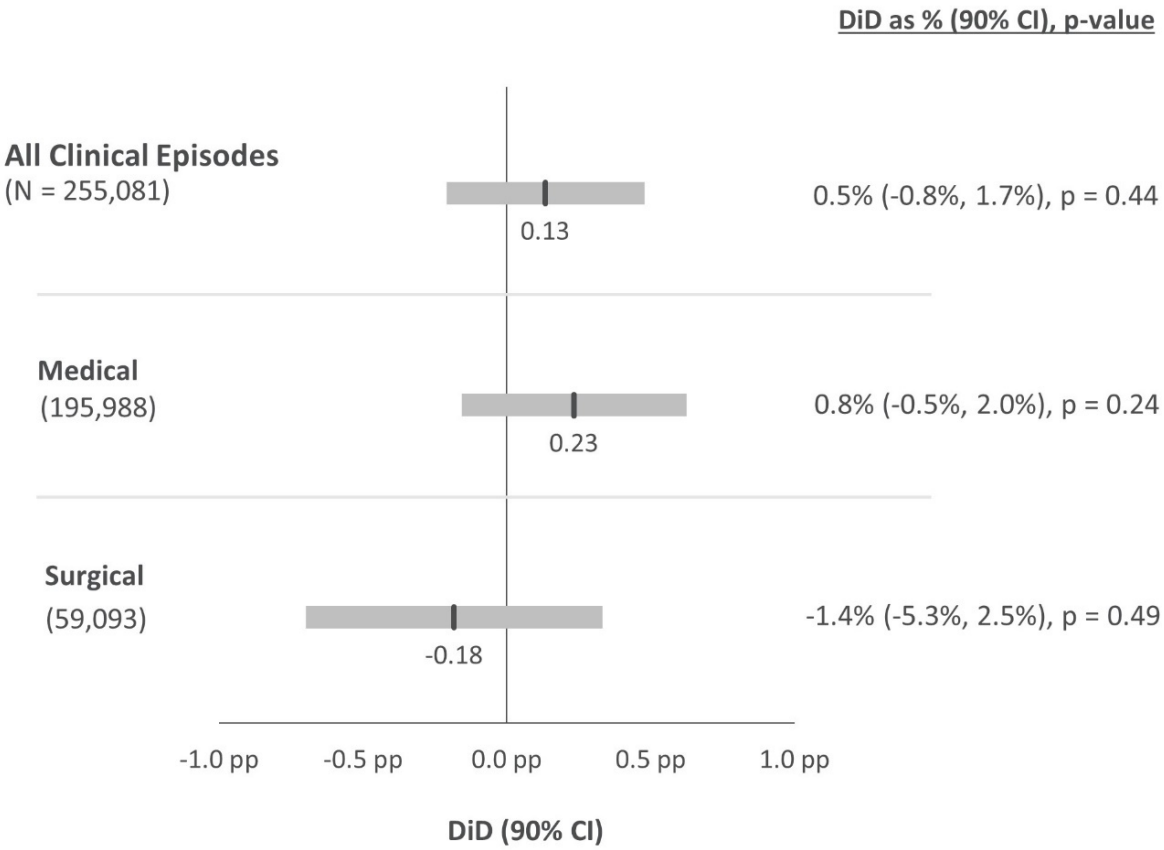
[25] We also evaluated the impact of BPCI Advanced on unplanned readmissions, which is a more restricted measure and therefore may be more sensitive to changes in quality of care. The impact on unplanned readmissions was small in magnitude and not statistically significant. We conclude that BPCI Advanced did not have an impact on the unplanned readmission rate during the 90-day PDP during Model Year 5. See **Appendix J** for these results.

5 (January 1, 2022–December 31, 2022) among episodes for BPCI Advanced hospitals and physician group practices (PGPs) with the change for episodes at matched comparison providers.

1. BPCI Advanced Did Not Have an Impact on Readmission Rates

In Model Year 5, readmission rates for both BPCI Advanced episodes and episodes in the comparison group decreased from the baseline by a similar amount. Thus, we conclude that despite reducing institutional PAC use, the model did not have an impact on readmission rates in the 90-day PDP. This was the case when examining readmission rates across all clinical episodes evaluated and separately for medical and surgical episodes (Exhibit 17).[26] See **Appendix J** for additional results for hospitals and PGPs and by clinical episode service line group (CESLG) and **Appendix P** for additional results for select surgical clinical episodes included in TEAM.

Exhibit 17: Impact of BPCI Advanced on the Readmission Rate During the 90-Day PDP, Hospitals and PGPs, Model Year 5 (2022)



Note: The estimates in this exhibit are the results of a DiD model. The grey bars indicate the 90% CI of the DiD estimate. The DiD estimates represent the relative change in percentage points. Results are also listed as a percentage of the BPCI Advanced average during the baseline. See **Appendix C** for details of the DiD methodology, parallel trends, outcome definitions, and additional information on methods. See **Appendix J** for detailed results. CI = confidence interval; DiD = difference-in-differences; PDP = post-discharge period; PGP = physician group practice; pp = percentage point.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced hospitals and PGPs and matched comparison providers.

[26] For reference, during Model Year 5, BPCI Advanced episodes had a risk-adjusted mean readmission rate of 27.3% (30.7% for medical episodes and 12.3% for surgical episodes). See **Appendix J** for additional detailed results.

BPCI Advanced participants reported in interviews that they implemented care redesign strategies to prevent readmissions in combination with discharging patients directly home. These reports are consistent with claims analyses that found BPCI Advanced did not increase readmissions despite reducing institutional PAC use. One strategy that participants used to enhance patient recovery is scheduling follow-up appointments with specialists and primary care providers *prior to discharge*. According to participants, patients who are linked to primary care physicians can better manage their health conditions and thus have a lower likelihood of readmissions. Further, participants noted using care coordinators to monitor patients in the PDP to reduce hospital readmissions. Care coordinators are responsible for a variety of activities to facilitate patient recovery, such as ensuring that patients have follow-up appointments with their primary care provider, transportation to follow-up appointments, and access to their prescribed medications and refills.

Care Redesign Spotlight

BPCI Advanced participants have redesigned care in multiple ways to reduce readmissions. One hospital reported that it used BPCI Advanced data and conducted readmission reviews to understand and address readmission rates:

Harnessed BPCI Advanced Data | The hospital reviewed the BPCI Advanced data it received from CMS and identified increased mortality rates and higher readmissions associated with the use of inpatient rehabilitation facilities. This hospital shared the data with its hospitalists, specialists, and medical officers and explored the causes for these negative outcomes.

Reviewed Readmissions With Post-Acute Care (PAC) Providers | The hospital also conducted readmissions reviews with PAC providers to understand causes for negative outcomes and was able to reduce readmissions through this review process.

Another hospital reported challenges in reducing hospital readmissions for Medicare patients admitted for congestive heart failure, with more than 1 in 3 heart failure patients experiencing a hospital readmission. To improve outcomes for heart failure patients, the hospital made several changes to care delivery:

Started a Heart Failure Telemonitoring Program | A care coordinator began meeting daily with cardiologists to identify Medicare fee-for-service patients with heart failure on each floor of the hospital. The care coordination team would then visit the patients at their bedside and recommend a telemonitoring program that would enable the hospital to monitor their health during their recovery at home, providing an extra line of communication for patients recovering at home instead of in a PAC facility.

Created Heart Failure PAC Order Sets | The hospital adopted specific PAC treatment protocols for heart failure patients and followed these patients closely as they were recovering from their hospitalization.

Connected Patients to a Heart Failure Clinic | The care coordination staff also made sure to connect every heart failure patient with an outpatient heart failure clinic within 48 hours of discharge.

After implementing these care redesign initiatives, the hospital reported that the readmission rate for heart failure patients fell from 36% to 18%. This reduction had a financial impact on the hospital's performance in BPCI Advanced, as it went from having to submit a repayment of $400,000 during one performance period to gaining that same amount as reconciliation payments 6 months later.

Despite the potential shown in these examples for BPCI Advanced care transformation to reduce readmissions, the evaluation did not detect a consistent reduction in the readmission rate relative to the comparison group. In some cases, participants had to pause their BPCI Advanced care redesign strategies during the COVID-19 public health emergency due to factors related to the pandemic, which began in 2020 and continued during the Omicron strain in 2021 and 2022. Participants also noted that, after the early stages of the pandemic, patients who were admitted to the hospital had higher acuity because they had delayed care to avoid possible COVID-19 infection. These factors, in combination with the model's emphasis on reducing institutional PAC use, might explain why BPCI Advanced did not have an impact on readmission rates in Model Year 5.

Another measure that may be sensitive to care transitions is emergency department (ED) visits. An increase in ED visits may indicate that BPCI Advanced patients were not fully prepared for discharge, that the discharge setting was not appropriate, or that there was inadequate transitional care after discharge. To determine whether BPCI Advanced affected ED visits, we evaluated the impact of the model on the share of episodes with one or more ED visits during the 90-day PDP.[27] We found that the BPCI Advanced Model did not affect ED use during Model Year 5; however, many of these results failed our test of parallel trends in the baseline period.[28] See **Appendix J** for these results.

Lastly, we also evaluated the impact of BPCI Advanced on the rate of revision surgeries for major joint replacement of the lower extremity (MJRLE) episodes and found no impact. Revisions are sometimes required for MJRLE surgeries to address complications that arose after the surgery. Changes in the quality of care during the surgery could result in higher rates of revisions during the episode, which may not be detected by our measures of readmission rates. We found that BPCI Advanced hospital and PGP MJRLE episodes saw a reduction in the revision rates from the baseline to Model Year 5 and that MJRLE episodes in the comparison group experienced similar reductions. See **Appendix J** for these results.

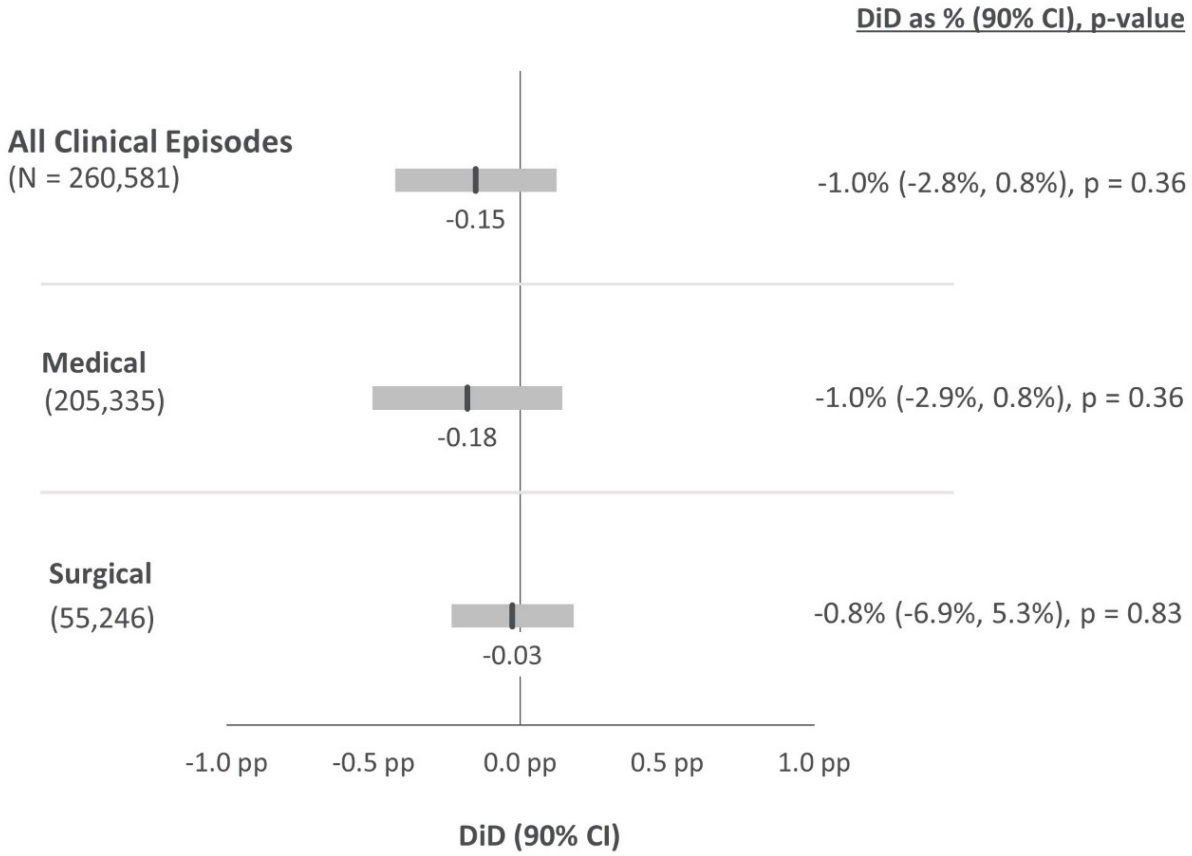
2. BPCI Advanced Did Not Affect Mortality Rates

BPCI Advanced did not have an impact on the mortality rate during the anchor stay and 90-day PDP relative to the comparison group in Model Year 5. As was the case for readmission rates, we found that the mortality rate for episodes at both BPCI Advanced providers and matched comparison providers decreased by similar amounts in Model Year 5. Separately for medical episodes and surgical episodes, we also did not find an impact of the BPCI Advanced Model on mortality rates during Model Year 5 (Exhibit 18). See **Appendix J** for additional results and details, including results for hospitals and PGPs and by specific CESLGs.

[27] Our measure of ED use only considers ED visits for which the patient required medical treatment but was not admitted to the hospital.

[28] A failure of the parallel trends test indicates that BPCI Advanced and matched comparison hospitals and PGPs did not have the same trends for that outcome in the baseline period, suggesting that BPCI Advanced and comparison hospitals and PGPs could be on different trends in the intervention period. This may indicate that the impact estimate partially reflects a continuation of preexisting trends and does not solely reflect the impact of BPCI Advanced.

Exhibit 18: Impact of BPCI Advanced on the Mortality Rate During the Anchor Stay and 90-Day PDP, Hospitals and PGPs, Model Year 5 (2022)



Note: The estimates in this exhibit are the results of a DiD model. The grey bars indicate the 90% CI of the DiD estimate. The DiD estimates represent the relative change in percentage points. Results are also listed as a percentage of the BPCI Advanced average during the baseline. See **Appendix C** for details of the DiD methodology, parallel trends, outcome definitions, and additional information on methods. See **Appendix J** for more detailed results. CI = confidence interval; DiD = difference-in-differences; PDP = post-discharge period; PGP = physician group practice; pp = percentage point.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced hospitals and PGPs and matched comparison providers.

C. Patient-Reported Functional Status, Care Experiences, and Satisfaction with Care

With the goal to reduce payments and improve care coordination and care transitions for patients, BPCI Advanced participants may have made changes that affected patients' functional status, care experiences, and satisfaction with care. To measure these outcomes from the patient's perspective, we administered a modified version of the patient survey instrument developed for the BPCI Initiative evaluation, which focuses on questions related to care transitions. (See **Appendix C** for details of the survey design and methods and **Appendix D** for the survey instrument.) The patient survey may uncover unintended consequences that cannot be captured by other data sources. This is particularly important because the model reduced institutional PAC use. Reducing PAC utilization excessively could impede patient functional recovery and adversely affect patient satisfaction if reductions are inconsistent with patient expectations or increase caregiver burden.

This section presents changes in patient-reported functional status, care experiences, and satisfaction with care from the patient survey for episodes initiated in Model Years 4 through 6 (2021–2023). The survey measures differences between Medicare patients cared for by BPCI Advanced hospitals and PGPs and similar patients whose providers did not participate in BPCI Advanced. See **Appendix K** for additional results and details, including results for hospitals and PGPs and by CESLG when samples were large enough for statistical analysis and inference.

1. Survey Sample

We collected survey data from all clinical episodes in which hospitals and PGPs participated.[29] We mailed surveys to 42% of all patients with a BPCI Advanced episode during the 10 months covered by our survey sample, which included July and August 2021, July and August 2022, and April through September 2023. Survey response rates were roughly 30%, with response rates for medical and surgical episodes of about 24% and 44%, respectively (see **Appendix C**).[30] Survey results presented in this chapter are based on 16,494 responses from BPCI Advanced patients and 16,787 responses from comparison patients.

2. There Was No Consistent Relationship Between BPCI Advanced and Patient-Reported Functional Status Measures

The survey asked patients to recall their functional status both before and after their hospitalization or procedure. For each respondent and for each of the seven functional status measures, we calculated whether the patient's functional status improved, declined, or stayed the same. Exhibit 21 presents the difference in the seven patient-reported functional status measures between BPCI Advanced and comparison respondents.

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[29] In Model Year 6, PGPs generated a very small number of episodes in the *cardiac care*, *cardiac procedures*, *gastrointestinal surgery*, and *medical and critical care* CESLGs. We did not sample patients from these CESLGs because the potential number of completed surveys was too small.

[30] For additional context, the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, a standardized national survey that measures patient experience of hospital admissions, had an average response rate of 26% in 2017. Salzberg, C. A., Kahn III, C. N., Foster, N. E., Demehin, A. A., Guinan, M. E., Ramsey, P., Lee, G., Gillooley, C. E., & Curran, K. A. (2019). *Modernizing the HCAHPS Survey: Recommendations from Patient Experience Leaders* (White Paper). American Hospital Association. https://www.aha.org/guidesreports/2019-07-24-modernizing-hcahps-survey

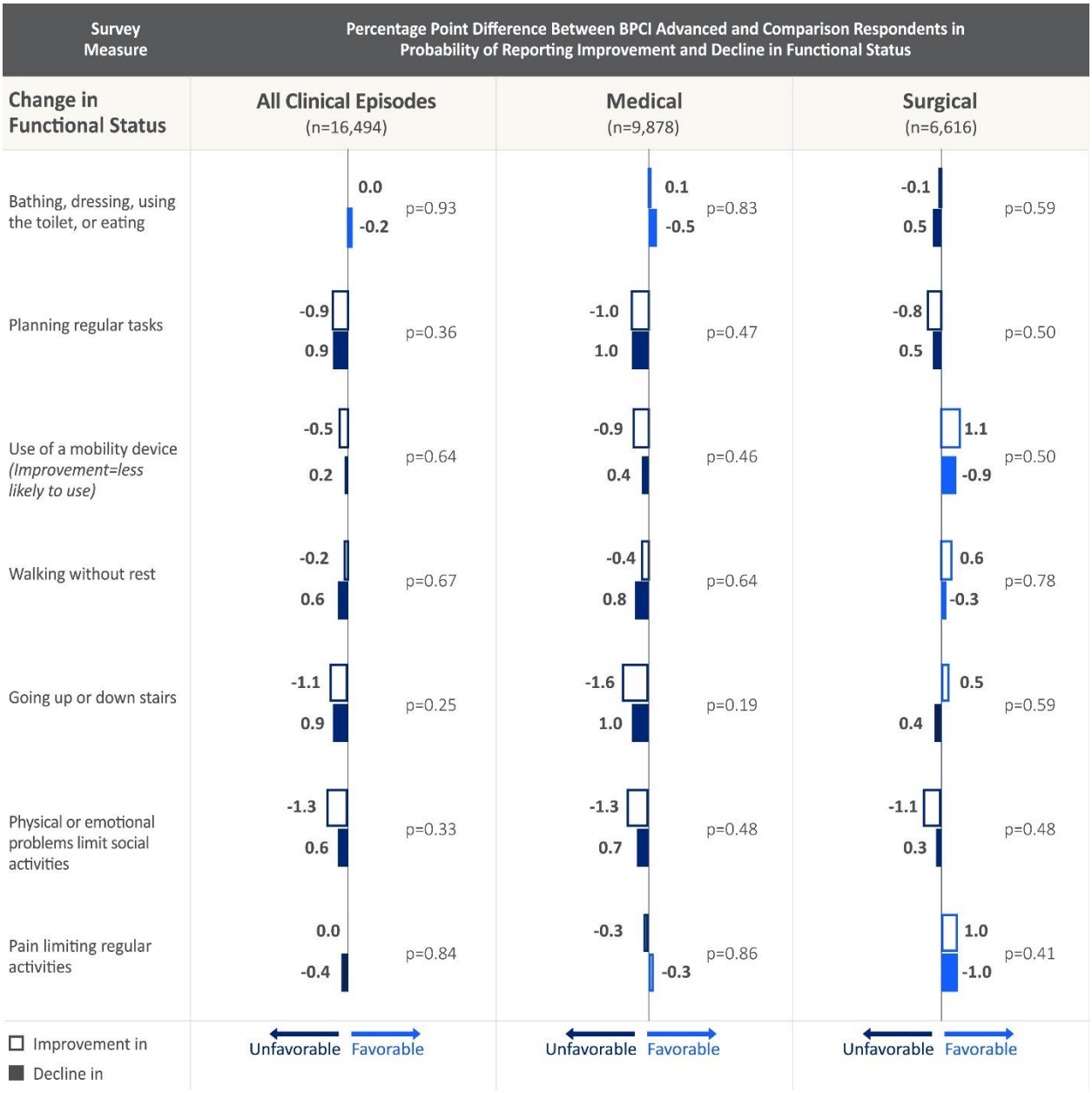
In the exhibits, values to the left of zero indicate unfavorable results, and values to the right of zero indicate favorable results. For example, when BPCI Advanced respondents were more likely to report a decline in the functional status measure (unfavorable), the result is displayed on the left. When BPCI Advanced respondents were less likely to report a decline (favorable), the result is displayed on the right. For each functional status measure, we report a single p-value that jointly indicates statistical significance for three categories of the differences in the proportion of patients: improvement in (or maintained highest function), decline in (or maintained lowest function), or stayed the same (not shown in figure). The difference between BPCI Advanced and comparison respondents in the category "stayed the same" is the sum of the "improvement in" and "decline in" categories for each measure in the figure. See **Appendix K** for more detailed results, including estimates for all three categories. See **Appendix C** for details of the risk-adjustment methodology, outcome definitions, and additional information on methods.

Among patient-reported functional status measures in Model Years 4 through 6, there were no statistically significant differences between BPCI Advanced and comparison respondents when examining hospitals and PGPs together (Exhibit 19). Differences were generally less than 1.0 pp in magnitude, with the largest difference being 1.6 pp.

We also examined findings from respondents with hospital- and PGP-initiated medical and surgical episodes separately. Results for medical episodes were small and not statistically significant. However, for surgical episodes, we found that episodes initiated by a hospital yielded less favorable changes in functional status for BPCI Advanced respondents relative to comparison respondents, while surgical episodes initiated by PGPs yielded more favorable changes in functional status. For hospital-initiated surgical episodes, six of seven measures indicated less favorable outcomes for BPCI Advanced respondents, including one statistically significant difference: BPCI Advanced respondents were 2.6 pp less likely to report *improvement in planning regular tasks* and 1.9 pp more likely to report a *decline in planning regular tasks* ($p < 0.01$) relative to comparison respondents. Differences for PGP-initiated surgical episodes were not statistically significant, but all seven measures indicated more favorable outcomes for BPCI Advanced respondents, and differences tended to be larger than those for hospital-initiated episodes (see **Appendix K**).

The contrasting results for hospital- versus PGP-initiated episodes may stem from the greater ability of PGPs to consistently implement standardized protocols and care pathways to facilitate patient functional recovery after surgery. During interviews, many BPCI Advanced PGPs reported using standardized protocols and care pathways before hospitalization to educate and prepare patients for surgery. PGP staff often did rounds in the hospital to ensure the care protocols were followed. While hospitals reported similar care redesign strategies, they may not have been as successful in implementing standardized protocols and care pathways because they require physician engagement. There may be various contractual relationships across a service line, and physicians may not be directly employed by the hospital, which could limit engagement and agreement across providers regarding standardized care pathways. This could hinder adoption of standardized protocols and result in inadequate transitions to PAC settings after surgery for hospital-initiated episodes.

Exhibit 19: Differences in Patient-Reported Change in Functional Status Between BPCI Advanced and Comparison Respondents, Hospitals and PGPs, Model Years 4–6 (2021–2023)



Note: The estimates in this exhibit are the result of a cross-sectional, risk-adjusted multinomial logistic regression model for trinary indicators. All responses were weighted for nonresponse and sampling design. Reported sample sizes reflect the number of BPCI Advanced survey respondents. Comparison sample sizes were roughly similar. Values to the left of zero indicate unfavorable results. Values to the right of zero indicate favorable results. The p-values for functional status results indicate joint statistical significance for differences in the proportion of patients indicating one of three categories: improvement in (or maintained highest function), decline in (or maintained lowest function), or stayed the same (not shown in figure). The difference between BPCI Advanced and comparison respondents in the category "stayed the same" is the sum of the "improvement in" and "decline in" categories for each measure in the figure. Results are reported in percentage point terms. See **Appendix K** for more detailed results. PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of survey responses paired with Medicare claims and enrollment data for episodes with anchor stays or procedures that occurred in July or August 2021 (during Model Year 4), July or August 2022 (during Model Year 5), or April, May, June, July, August, or September 2023 (during Model Year 6).

3. BPCI Advanced Patients Reported Slightly Less Favorable Care Experiences and Satisfaction Than Comparison Patients

Across all episodes, BPCI Advanced respondents were slightly less likely to report favorable care experiences than comparison respondents for six of eight care experience measures, and three of the differences were statistically significant. BPCI Advanced respondents were:

- 1.7 pp less likely to agree that *medical staff took their preferences into account in deciding what health care services they should have after leaving the hospital* (90% CI: –2.9, –0.5; p = 0.02)
- 1.2 pp less likely to agree that *medical staff talked with them about whether they would have the help needed when they got home* (90% CI: –2.4, –0.0; p = 0.09)
- 1.0 pp less likely to say *they felt prepared to leave the hospital* (90% CI: –2.0, –0.0; p = 0.10) (Exhibit 20)

Differences in care experience were primarily driven by medical episodes, particularly those initiated by hospitals. Differences in care experience for surgical episodes, although mostly in an unfavorable direction, were all small (less than 1.0 pp) and not statistically significant, while differences for medical episodes initiated by a PGP were mostly in a favorable direction.

BPCI Advanced respondents were slightly less likely than comparison respondents to report the highest level of satisfaction with care. BPCI Advanced respondents were 2.1 pp less likely to provide a rating of 9 or 10 for all care received after leaving the hospital (90% CI: –3.7, –0.5; p = 0.03). BPCI Advanced respondents in both medical and surgical episodes were statistically significantly less likely to provide a rating of 9 or 10 for all care received after leaving the hospital, with differences of –2.0 pp (90% CI: –4.0, –0.1; p = 0.05) and –2.1 pp (90% CI: –3.6, –0.5; p = 0.09), respectively. BPCI Advanced respondents with surgical episodes were also 1.8 pp less likely than comparison respondents to report the highest levels of satisfaction with recovery since leaving the hospital (90% CI: –3.3, –0.3; p = 0.05).

In understanding why BPCI Advanced respondents reported lower rates on the care experience survey measures than comparison survey respondents, it is important to note that most BPCI Advanced survey respondents reported positive care experiences (72.1% for the lowest measure to 93.9% for the highest, see **Appendix K**). During site visits, we heard that BPCI Advanced participants implemented changes aimed to improve care coordination and discharge planning, which could lead to improved patient experiences. For example, providers reported increasing patient and caregiver education about their health conditions, particularly for chronic health conditions, and helped set expectations for recovery after discharge. Participants also increased efforts to engage patients and their caregivers in discharge planning and reached out to patients after discharge from the hospital to address any obstacles to recovery. During interviews with patients treated by BPCI Advanced participating hospitals and PGPs in 2022, most reported positive experiences with care navigators and satisfaction with enhanced medical management. Only one interviewee reported a negative care experience. Despite participants' efforts to enhance patient education and communication, patients in the comparison group consistently reported more favorable care experiences than patients in the model. Future evaluation reports will include findings from an analysis of an open-ended question on the survey that was added to try to better understand the details of patients' care experiences under the model.

Exhibit 20: Differences in Patient-Reported Care Experiences and Satisfaction With Care Between BPCI Advanced and Comparison Respondents, Hospitals and PGPs, Model Years 4–6 (2021–2023)

Note: The estimates in this exhibit are the result of a cross-sectional, risk-adjusted multinomial logistic regression model for binary indicators. All responses were weighted for nonresponse and sampling design. Reported sample sizes reflect the number of BPCI Advanced survey respondents. Comparison sample sizes were roughly similar. Values to the left of zero indicate unfavorable results. Values to the right of zero indicate favorable results. The p-value for satisfaction with post-discharge care indicates joint statistical significance for differences in the proportion of patients indicating one of three categories: 9–10 rating, 7–8 rating, or 0–6 rating. Results are reported in percentage point terms. See **Appendix K** for more detailed results. PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of survey responses paired with Medicare claims and enrollment data for episodes with anchor stays or procedures that occurred in July or August 2021 (during Model Year 4), July or August 2022 (during Model Year 5), or April, May, June, July, August, or September 2023 (during Model Year 6).

D. Discussion

1. What Are the Model Year 5 Findings?

This evaluation found that BPCI Advanced largely continued to maintain quality of care. The model did not have an impact on readmission or mortality rates in Model Year 5, and BPCI Advanced patients reported similar changes in functional status to patients in a matched comparison group in surveys conducted during Model Years 4 through 6 (2021–2023). While most BPCI Advanced survey respondents reported positive care experiences, BPCI Advanced patients reported being less satisfied and having less favorable care experiences than comparison patients. In particular, BPCI Advanced patients were less likely to report that medical staff took their preferences into account in deciding post-discharge services and that medical staff inquired about whether they would have the help they needed when returning home.

2. How Do Model Year 5 Findings Compare With Results From Previous Model Years?

The impacts of BPCI Advanced on readmissions and mortality during Model Year 5 were similar to those in Model Year 4 (2021). Additionally, the lack of a relationship between BPCI Advanced and patient-reported functional status is consistent with results from earlier model years.

There continue to be less favorable results related to patient care experiences and satisfaction under the model during Model Years 4 through 6 (2021–2023). Earlier survey results for BPCI Advanced (Model Year 2, 2019) and BPCI Initiative Model 2 (2017) also found less favorable satisfaction and care experiences.

3. What Do These Findings Mean for CMS Objectives?

Our findings provide evidence that the BPCI Advanced Model achieved a reduction in episode spending and institutional PAC utilization while still maintaining health outcomes, as measured by readmissions, mortality, and patient-reported functional status. There is evidence, however, that BPCI Advanced patients were less satisfied and had less favorable care experiences than comparison patients during Model Years 4 through 6. This finding suggests that there is room for improvement under future bundled payment models, such as by strengthening and improving patient communication, education, and shared decision-making.

As participants redesign care—in particular, adjusting patterns of PAC utilization—they may need to be more intentional about communicating with patients and setting appropriate expectations. Patients' expectations may take time to adjust as model participants are changing their PAC pathway, in which case these results may be expected to some degree. However, these findings warrant further study, as they could indicate that BPCI Advanced providers are not appropriately communicating with patients or considering their perspectives and preferences. We will continue to study these possible changes in future evaluation reports.

V. Additional Benefits and Consequences of BPCI Advanced

When CMS announced the BPCI Advanced Model in January of 2018, the goal of the model was to test whether linking payments for an episode of care incentivized health care providers to reduce expenditures while maintaining or improving quality of care for patients. The evaluation has found evidence that the model achieved these goals through reductions in total allowed payments, primarily due to decreased utilization of costly post-acute care (PAC) facilities, without harming quality of care for patients. BPCI Advanced has also achieved savings to the Medicare program, even after accounting for reconciliation payments that CMS made to participants. Achieving savings without compromising quality of care for patients is a success but bundled payment models have the potential to drive health system transformation even beyond their stated objectives.

Identifying the additional benefits and consequences of BPCI Advanced can help the Innovation Center monitor progress toward its strategic objectives, understand the impact of its policies, and inform future models and rulemaking. In the sections that follow, we explore the impact of the model on factors that BPCI Advanced was not explicitly designed to achieve but may contribute to the CMS Innovation Center's goals of reducing costs while maintaining or improving quality. First, we describe how BPCI Advanced interacts with Medicare Accountable Care Organization (ACO) initiatives. While complex model attribution policies have previously limited collaboration between episode-based payment models and ACOs, in the Transforming Episode Accountability Model (TEAM), overlap policies are designed to encourage bundled payment model participants to collaborate with ACOs on patient care and coordination. Second, we examine the impact of the model on primary care utilization. Third, we assess whether the model has unintended favorable or unfavorable impacts on patients dually eligible for Medicare and Medicaid.

A. Key Findings

Additional Benefits and Consequences of BPCI Advanced

- BPCI Advanced provides access to value-based care for patients from underserved populations and medically complex patients who may not be reached by Accountable Care Organizations (ACOs) or other CMS Innovation Center models. Participants reported that BPCI Advanced engages specialists and hospitals who are not always engaged in ACOs and advanced primary care models.
- Some BPCI Advanced participants reported that participation in both BPCI Advanced and an ACO gives them access to more data and facilitates handoffs to primary care after a hospitalization or procedure. However, analysis of claims data does not yet indicate that provider or patient attribution to an ACO offers enhanced benefits in terms of reducing total payments or readmissions.
- BPCI Advanced is increasing patient connections to primary care providers after discharge for patients with medical episodes.
- Quality of care under the model for patients who are dually eligible and thus at higher risk for poor outcomes did not differ from the comparison group. Specifically, patients who are dually eligible had similar readmission and mortality rates and patient-reported functional status, care experience, and satisfaction compared to comparison group patients who are dually eligible.

B. Engagement in Accountable Care Models

As of 2024, nearly half of all Medicare fee-for-services (FFS) beneficiaries were connected to a Medicare ACO initiative.[31] As the reach of value-based care grows, so does the overlap between episode-based payment models and Medicare ACO initiatives. The evaluation team identified the overlap between BPCI Advanced and Medicare ACO initiatives at both the provider and patient level and examined whether this overlap led to amplified cost savings or improved quality of care. We also conducted key informant interviews in 2023 and 2024 with 45 current or former BPCI Advanced participants that had concurrently participated in or led a Medicare ACO at any point between January 2020 and February 2024. These interviews allowed us to better understand what this overlap meant to BPCI Advanced providers and patients in terms of care redesign and experience in the model. See **Appendix C** for details on methods.

1. Overlap Between BPCI Advanced and Medicare ACOs Is Growing

In Model Year 5 (2022), nearly half of all BPCI Advanced episodes were for patients attributed to a Medicare ACO,[32] an 8 percentage point (pp) increase from Model Year 4 (2021) (47.7% vs.

[31] Centers for Medicare & Medicaid Services. (2024). *Participation continues to grow in CMS Accountable Care Organization initiatives in 2024*. https://www.cms.gov/newsroom/press-releases/participation-continues-grow-cms-accountable-care-organization-initiatives-2024

[32] We assessed attribution to the following ACOs: Comprehensive End-Stage Renal Disease Care Model, Shared Savings Program, Vermont All-Payer ACO Model, and ACO Realizing Equity, Access, and Community Health (REACH) Model, which was called the Global and Professional Direct Contracting (GPDC) Model until 2023.

40.0%) (Exhibit 21; see **Appendix L** for Model Year 4 results).[33] Most of the episode overlap was with the Shared Savings Program, the largest Medicare ACO initiative, where the share of overlapping episodes in Model Year 5 increased by 5 pp from Model Year 4 (41.0% vs. 35.6%). A larger share of surgical episodes was for patients attributed to an ACO compared with medical episodes (52.3% vs. 46.1%), similar to Model Year 4.

Exhibit 21: BPCI Advanced Episodes by ACO Attribution, Model Year 5 (2022)

Clinical Episode Type	Number of BPCI Advanced Episodes	Percentage of BPCI Advanced Episodes for Patients Attributed to Medicare ACOs		
		All ACOs (%)	Shared Savings Program ACOs (%)	GPDC/REACH ACOs (%)
All Clinical Episodes	372,510	47.7	41.0	6.7
Medical	277,448	46.1	39.7	6.5
Surgical	95,062	52.3	44.8	7.5

Note: "All ACOs" refers to episodes with patients attributed to the Shared Savings Program, ACO REACH Model (previously GPDC), Comprehensive End-Stage Renal Disease Care Model, or Vermont All-Payer ACO Model. Patients attributed to any Shared Savings Program ACO regardless of level or track were eligible to trigger BPCI Advanced episodes in Model Year 5. These numbers may not align with those listed elsewhere in the report as each analysis has unique exclusions for the sample analyzed. ACO = Accountable Care Organization; ACO REACH = ACO Realizing Equity, Access, and Community Health; GPDC = Global and Professional Direct Contracting.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators. The CMS Master Data Management (MDM) provided beneficiary-level payment model data.

In Model Year 5, 1 in 5 episode initiators participated in the Shared Savings Program, similar to Model Year 4 (20.3% vs. 20.6%, respectively) (Exhibit 22). About 1 in 4 BPCI Advanced hospitals participated in a Shared Savings Program ACO, a slight increase from Model Year 4 (26.9% vs. 26.2%). Participation in a Shared Savings Program ACO among BPCI Advanced physician group practices (PGPs) decreased in Model Year 5 compared with Model Year 4 (8.2% vs. 9.5%).

Exhibit 22: Number of BPCI Advanced Hospitals and PGPs in the Shared Savings Program, Model Year 5 (2022)

Episode Initiator Type	Number of Model Year 5 Episode Initiators	Episode Initiators Participating in the Shared Savings Program (%)
Hospital	431	26.9
PGP	233	8.2
Total	664	20.3

Note: The numbers of BPCI Advanced episode initiators are limited to the BPCI Advanced hospitals and PGPs with episode volume in Model Year 5. These numbers may not align with those listed elsewhere in the report as each analysis has unique exclusions for the sample analyzed. The evaluation team based ACO participation on the BPCI Advanced-attributed TIN. If a BPCI Advanced participant reported a different TIN on the ACO participation list, it was not identified as participating in both BPCI Advanced and an ACO. ACO = Accountable Care Organization; PGP = physician group practice; TIN = Taxpayer Identification Number.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators. The CMS Research Identifiable Files (RIFs) provided provider-level Medicare ACO participation data.

[33] The Model Year 4 numbers in **Appendix L** are different from those reported in the Fifth Annual Report because we updated the methodology of how we count ACO attribution. Please see **Appendix C** for details on methods and **Appendix L** for the Model Year 4 descriptive tables.

Among hospitals and PGPs participating in both BPCI Advanced and a Shared Savings Program ACO, more than half of their Model Year 5 episodes were for patients attributed to a Shared Savings Program ACO, a 5 pp increase from Model Year 4 (51.6% vs. 46.4%) (Exhibit 23). Among hospitals and PGPs not participating in a Shared Savings Program ACO, only 15.7% of BPCI Advanced episodes were for patients attributed to a Shared Savings Program ACO, which is lower than in Model Year 4 (15.7% vs. 18.0%). Even though the total number of hospitals and PGPs participating in BPCI Advanced declined between Model Year 4 and Model Year 5, the proportion of patients attributed to both BPCI Advanced and the Shared Savings Program has increased over time.

Exhibit 23: BPCI Advanced Episodes by Shared Savings Program Participation Status, Model Year 5 (2022)

BPCI Advanced and ACO Participation	Total Number of BPCI Advanced Episodes	Share of Episodes for Patients Attributed to an SSP ACO (%)
Hospitals and PGPs in BPCI Advanced and an SSP ACO	91,309	51.6
Hospitals and PGPs in BPCI Advanced Only	281,201	15.7

Note: The numbers of BPCI Advanced episodes are for episodes initiated by BPCI Advanced hospitals and PGPs that initiated at least one episode in Model Year 5. These numbers may not align with those listed elsewhere in the report as each analysis has unique exclusions for the sample analyzed. ACO = Accountable Care Organization; PGP = physician group practice; SSP = Shared Savings Program.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators. The CMS Research Identifiable Files (RIFs) provided provider-level Medicare ACO participation data.

2. Evidence Suggests ACO Overlap Did Not Produce Additive Impacts

Both BPCI Advanced and Medicare ACOs aim to reduce unnecessary Medicare spending and unplanned hospital readmissions. This alignment in goals could lead to reduced Medicare spending and improved quality outcomes for patients in both initiatives compared with those in only one initiative. For example, participants reported identifying preferred PAC providers and working with these facilities and agencies to improve care and reduce costs in the PAC period for patients in both initiatives. Providers also use care coordinators to monitor BPCI Advanced and ACO patients in the post-discharge period (PDP) to ensure a successful recovery and avoid unplanned hospital readmissions, and these complementary efforts for patients in both initiatives may result in enhanced effects on the readmission rate and episode payments.

Methods Overview: Overlap With ACOs

Overlap between BPCI Advanced and an Accountable Care Organization (ACO) can occur at the patient level (where a BPCI Advanced patient is also attributed to an ACO), the provider level (where a BPCI Advanced hospital or physician group practice also participates in an ACO), or both.

We defined overlap at the *patient* level for the main analysis of additive benefits, identifying Shared Savings Program attribution for BPCI Advanced patients and the matched comparison group. We also conducted sensitivity analyses by strictly defining the ACO sample to include only Shared Savings Program ACO patients whose anchor stay or procedure was at a hospital that is part of the same Shared Savings Program ACO and the non-ACO sample to include only non-ACO patients whose anchor stay or procedure was at a hospital that was not participating in the Shared Savings Program (see **Appendix C** for details on methods and **Appendix L** for results).

To understand whether overlap of these initiatives amplifies the BPCI Advanced objectives of episode cost reduction or care coordination, we estimated the difference in impacts of BPCI Advanced on episodes for patients attributed to a Shared Savings Program ACO compared with those not attributed to any ACO using a difference-in-difference-in-differences (DiDiD) method.

Our main outcomes of interest were total payments (Part A and B payments for the anchor stay or procedure through the 90-day PDP) and primary care use during the 90-day PDP, as care coordination incentives under both types of models may encourage primary care visits. We also analyzed quality outcomes (readmission and mortality rates) and institutional PAC use (see **Appendix L** for quality and PAC use outcomes).

In Model Year 5, episodes for BPCI Advanced patients attributed to a Shared Savings Program ACO and those not attributed to an ACO had a reduction in average episode payments for both medical and surgical episodes (see **Appendix L**). We did not find statistically significant differences in the payment reductions between the two groups for medical or surgical episodes, suggesting that overlap between BPCI Advanced and a Shared Savings Program ACO at the patient level did not result in amplified effects on total payments. These findings are generally consistent with Model Year 4 results (see **Appendix L**).

We did not find differences in the impact on readmission rates between BPCI Advanced patients in a Shared Savings Program ACO compared with patients who were not attributed to an ACO (see **Appendix L**). The difference in impact on mortality for medical episodes was not statistically significant, and for surgical episodes, even though the difference was large and statistically significant, it failed the parallel trends test (see **Appendix L**).[34]

> *"There's no advantage of being in both of these programs [BPCI Advanced and a Medicare ACO] simultaneously on the care that you're going to get here. We deliver the highest care possible, and so our standard is to treat everyone to the best of our ability."*
>
> – BPCI Advanced Hospital

Among surgical episodes in Model Year 5, BPCI Advanced patients attributed to a Shared Savings Program ACO had a larger reduction in PAC use than non-ACO patients (1.7 pp; 90% confidence interval [CI]: –3.4, –0.1; p = 0.08). However, this larger reduction in PAC use did not translate to a statistically significant difference in spending for surgical episodes. These findings are consistent with Model Year 4 results (see **Appendix L**).

The evaluation team also examined the differences in impacts on primary care use. For patients with medical episodes, BPCI Advanced encouraged primary care connections after discharge, both for patients in a Shared Savings Program ACO and for patients who were not attributed to an ACO, relative to the comparison group. In Model Year 5, primary care use after discharge among surgical episodes decreased for both groups of BPCI Advanced patients relative to the comparison group. The decline in primary care use was statistically significant only for patients not aligned to

[34] A failure of the parallel trends test indicates that BPCI Advanced and matched comparison hospitals and PGPs did not have the same trends for that outcome in the baseline period, suggesting that BPCI Advanced and comparison hospitals and PGPs could be on different trends in the intervention period. This may indicate that the impact estimate partially reflects a continuation of preexisting trends and does not solely reflect the impact of BPCI Advanced.

any ACO. For those aligned to the Shared Savings Program, the decline was not statistically significant and failed the parallel trends test,[35] and the difference in impacts was not statistically significant (see **Appendix L**). Model Year 4 results were slightly different for surgical episodes; the difference in impacts between patients attributed to the Shared Savings Program and patients not attributed to an ACO was positive and statistically significant (see **Appendix L**).

Overall, these findings suggest that overlap of the models at the patient level had neither additive nor detrimental effects on the episode payment and quality outcomes we evaluated; the results were consistent when we looked at patient- and provider-level overlap for the sensitivity analyses. One possible reason we did not see amplified effects from model overlap is that BPCI Advanced patients receive the same treatment regardless of whether they are attributed to an ACO, as reported in interviews with participants. In some cases, BPCI Advanced hospitals assigned patients to be managed by either the ACO care coordination team or the BPCI Advanced team so that it was clear who was accountable for each patient. In other cases, BPCI Advanced and ACO efforts were not coordinated and resulted in duplication. A few participants reported that in some instances, both a care navigator from the Medicare ACO and a care navigator from BPCI Advanced reached out to patients in the PDP, resulting in limited additional value.

> *"[Our ACO was] more than willing to come to the table to work with us and really talk about how we can strengthen those processes, which is why we created these warm handoffs for our population and health teams and identify potential patients who need that level of continued support and continued longitudinal care through our ACO programs … they see the value in providing care for the bundled patients not only because they want to increase quality, but there is the potential to grow our ACO."*
>
> – BPCI Advanced Hospital Participating in an ACO

However, some participants felt that overlap between BPCI Advanced and ACOs at the participant level benefited patients. They said in interviews that they thought participating in both a Medicare ACO initiative and BPCI Advanced improved quality of care for patients because multiple teams were engaged in preventing readmissions and ensuring successful discharge and recovery. In addition, many interviewees stated that participating in both initiatives provided an enhanced incentive to connect patients to primary care after a hospitalization or procedure and that this handoff between BPCI Advanced and the Medicare ACO was where the two programs worked well together. One convener participant noted that a cardiologist participating in both its ACO and BPCI Advanced shared that he was able to open more dedicated slots to in-network primary care physicians and get these patients seen within 24 hours so that they do not have to wait and go through the standard new patient process. Facilitating connections to primary care physicians following patient hospitalizations or procedures was seen as an advantage of being in both initiatives and could have the added benefit of growing the ACO in terms of attributed patients.

An advantage of concurrent participation from the ACO's perspective is access to episode and PAC data. A former BPCI Advanced participant that was also a Medicare ACO noted that participation in the model provided the health system with data on network utilization and post-

[35] A failure of the parallel trends test indicates that BPCI Advanced and matched comparison hospitals and PGPs did not have the same trends for that outcome in the baseline period, suggesting that BPCI Advanced and comparison hospitals and PGPs could be on different trends in the intervention period. This may indicate that the impact estimate partially reflects a continuation of preexisting trends and does not solely reflect the impact of BPCI Advanced.

acute efficiency, in terms of length of stay and repeated PAC use. The data also offered insights on where costs were incurred during the hospitalization and 90-day PDP. These data allowed the ACO to target its resources and follow up with patients to mitigate expenditures. Even though our quantitative analyses did not provide evidence of amplified effects of BPCI Advanced and ACO overlap on episode readmissions and mortality, individual hospitals and PGPs may find that their involvement in both types of models improves quality when considering a broader set of quality indicators, such as patient-reported care experiences. We plan to further study BPCI Advanced and ACO overlap using patient survey data in future evaluation reports. Participating hospitals and PGPs may also find that concurrent participation increases their ability to engage specialists and hospitals in care redesign activities.

Shadow Bundle Data

Shadow bundle data are a modified version of the claims data received by BPCI Advanced participants. They include monthly episode-level data with costs for Accountable Care Organization-attributed beneficiaries for specific conditions or procedures and the 90-day post-discharge period, as well as benchmark prices.

Considering the benefits of the BPCI Advanced episode data to Medicare ACOs, CMS began providing shadow bundle data to Shared Savings Program and Realizing Equity, Access, and Community Health (REACH) ACOs in 2024. The provision of these data aligns with goals in the CMS Innovation Center's Specialty Care Strategy related to enhancing specialty care performance data transparency. Many former BPCI Advanced participants that were interviewed in 2024 expressed appreciation for the shadow bundle data because the data broke down costs for each service line and each 90-day care episode, which was helpful to ACOs as they built their transition-of-care programs and tried to reduce costs for higher-risk patients. Interviewees also noted that shadow bundle data provided information to evaluate specialist performance on cost and quality and could be used to better engage specialists. The shadow bundle data complement ACOs' broader population health analyses and ability to review disease-specific costs and opportunities. Providing these data to Medicare ACOs may help total cost of care models create bundled payment targets and achieve savings similar to BPCI Advanced participants.

3. BPCI Advanced Reached Patient Subgroups Not Attributed to ACOs

Although BPCI Advanced and ACO initiatives share similar goals, their focus on different parts of the care continuum could mean they reach different patient populations. To better understand which patient populations are engaged in these models, the evaluation team analyzed the characteristics of BPCI Advanced patients attributed to a Medicare ACO compared with those not attributed to an ACO.

In Model Year 5, patients with BPCI Advanced episodes who were not attributed to a Medicare ACO were more likely to be dually eligible for Medicare and Medicaid (24.3% vs. 14.2%), have dementia (28.2% vs. 22.0%), receive care in a rural hospital (6.6% vs. 5.6%), and have higher medical complexity compared with patients with BPCI Advanced episodes who were attributed to an ACO (Exhibit 24). We measured medical complexity by "super-utilizer" status (that is, patients with at least four hospital admissions or emergency department visits in the previous model year), Hierarchical Condition Category (HCC) score, and use of services before the episode and during the PDP.

Exhibit 24: BPCI Advanced Patient Characteristics by ACO Attribution, Model Year 5 (2022)

Patient Characteristic	Percentage of BPCI Advanced Episodes		Difference
	Patients With ACO Attribution	Patients Without ACO Attribution	
Dually Eligible	14.2%	24.3%	10.1 pp*
Dementia	22.0%	28.2%	6.2 pp*
Rural	5.6%	6.6%	1.0 pp*
Prior Admission	20.4%	22.8%	2.4 pp*
Share of Episodes With Prior ED Visits	30.2%	31.8%	1.6 pp*
Share of Episodes With PDP Admissions	23.6%	25.6%	2.1 pp*
Share of Episodes With ED Visits During the 90-Day PDP	20.2%	21.1%	0.9 pp*
Prior Admission Number of Days	1.7	2.2	0.5*
Super-Utilizer	15.9%	17.5%	1.6 pp*
Number of Admissions During the 90-Day PDP	1.9	2.2	0.3*
HCC Score	1.7	1.8	0.1*

Note: Exhibit shows BPCI Advanced episodes for patients who were or were not attributed to one of the ACOs assessed (Shared Savings Program, ACO REACH Model, Comprehensive End-Stage Renal Disease Care Model, Vermont All-Payer ACO Model). The overall sample size included 372,510 episodes, which does not account for episodes with missing patient data in the table above. The HCC score is based on the 6 months prior to the anchor hospitalization or procedure. The share of episodes with prior admissions and number of days are based on care at an acute care facility during the 180 days before the anchor stay or procedure. The share of episodes with PDP admissions is based on the patient having any days in the hospital during the 90-day PDP. The share of episodes with prior ED visits is based on 180 days before the anchor date. The super-utilizer indicator is based on a patient having four or more hospital admissions or ED visits during Model Year 4. The difference column is the mean difference between BPCI Advanced episodes without ACO attribution minus with ACO attribution, and an asterisk (*) indicates that the difference in distribution is statistically significant at the 10% level. ACO = Accountable Care Organization; ACO REACH = ACO Realizing Equity, Access, and Community Health; ED = emergency department; HCC = Hierarchical Condition Category; PDP = post-discharge period; pp = percentage point.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators. The CMS Master Data Management (MDM) provided beneficiary-level payment model data.

The variation in medical complexity may relate to differences in the design of BPCI Advanced and Medicare ACO initiatives. For instance, BPCI Advanced episodes are triggered when a patient has a hospital stay or outpatient procedure, whereas attribution to an ACO is based on the use of primary care services. By focusing on acute care, BPCI Advanced may offer new connections to value-based care for Medicare FFS patients and may provide an opportunity to link these patients to ACOs.

Our findings show that the BPCI Advanced Model contributes to the value-based care landscape by reaching patients who are medically complex and dually eligible. While we did not see additional benefits for BPCI Advanced patients attributed to ACOs, participants in both initiatives expressed appreciation for BPCI Advanced data and the model's ability to engage specialists and hospitals in value-based care.

C. Connections to Primary Care

> *"That first and foremost key factor for bundled payment success and readmission reduction is really something that primary care holds, with the support of [the BPCI Advanced] team of care."*
>
> – BPCI Advanced Hospital

In addition to investigating how BPCI Advanced interacts with Medicare ACOs, the evaluation team assessed the impact of the model on primary care use. Model participants have reported enhancing their efforts to connect patients with primary care to improve patient recovery and reduce the chance of unplanned hospital readmissions, which could hinder their ability to reduce spending below the target price. Particularly for medical episodes, participants consider connections to primary care providers within 7 to 10 days of discharge essential to a successful recovery and avoidance of emergency department visits and unplanned readmissions.

In 2023, the evaluation team conducted key informant interviews to better understand whether the model affected coordination with primary care providers. Interviewees reported that the model accelerated or expanded existing coordination efforts, especially for patients with medical episodes. At a minimum, participants reported alerting primary care providers when patients are admitted to the hospital through admission, discharge, and transfer (ADT) feeds and post-discharge summaries. Many hospitals emphasized the importance of scheduling a primary care appointment on behalf of the patient before discharge, especially those participating in medical clinical episode service line groups (CESLGs). Some participants would even monitor whether the patient attended the primary care appointment and, if not, address any obstacles to appointment attendance. It was less common for specialists, including orthopedic and spinal surgery groups, to coordinate with primary care providers in the PDP. However, these providers did coordinate with primary care providers before hospitalization to seek clearance prior to elective procedures and, in some instances, to optimize patients for surgery. Some interviewees stated that it was easier to coordinate with primary care providers if the primary care provider was affiliated with the hospital, hospital system, or ACO.

Prioritizing Primary Care

Many hospitals described how they aimed to connect patients to primary care providers within 7 days of discharge. Providers report that this practice is especially important for high-risk patients, such as those with multiple comorbidities.

Given what we learned in the interviews, the evaluation team conducted a claims analysis to understand whether the data supported participant reports of the model's impact on primary care visits. The team created a measure to indicate whether the patient had a primary care visit within a selected window during the PDP, ranging from 7 days to 90 days, and we present results by medical and surgical episodes. We used difference-in-differences (DiD) regressions to estimate the effect of the model on the percentage of episodes where the patient had at least one primary care visit during the window of interest. See **Appendix C** for more detail on measure definitions and other methods.

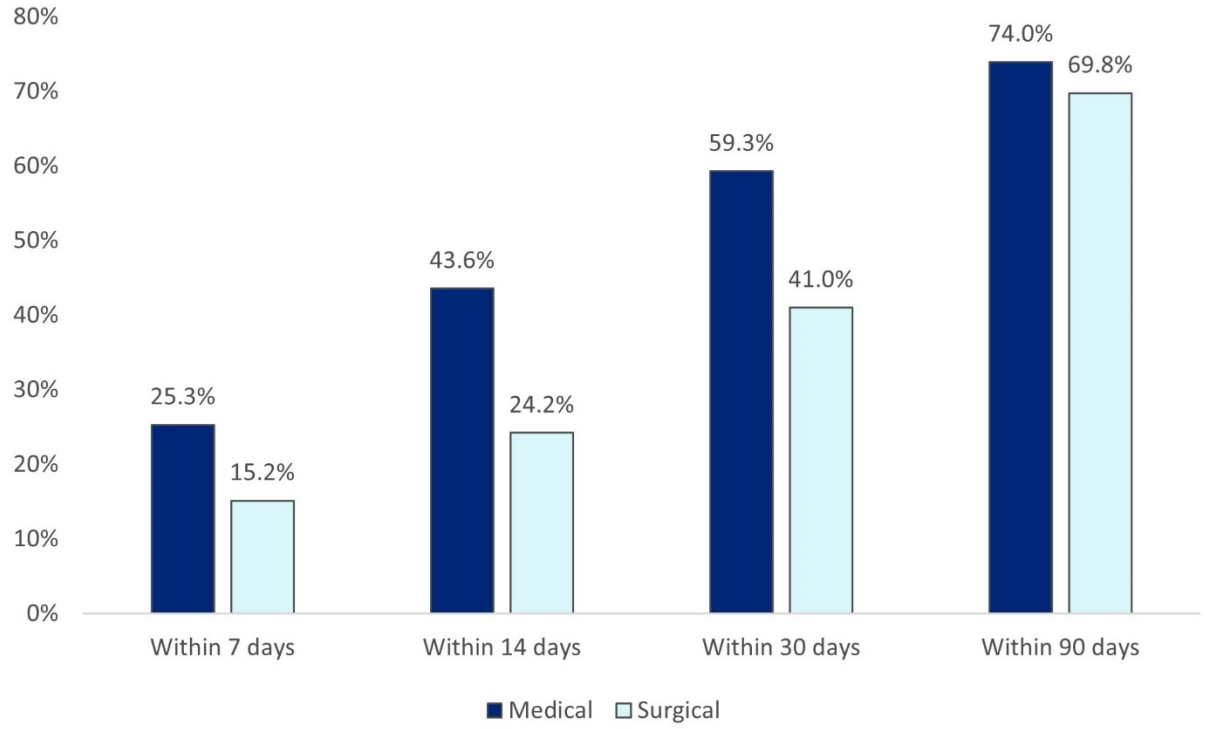
1. BPCI Advanced Increased Primary Care Use in the Post-Discharge Period

The evaluation team first examined the timing of primary care visits following hospitalizations or procedures for medical and surgical episodes. In Model Year 5, primary care use during the PDP was higher for medical episodes than surgical episodes for all windows (7, 14, 30, and 90 days),

with the biggest difference in primary care use occurring in the 14-day PDP and the smallest difference in the 90-day PDP (Exhibit 25). We also assessed rates of primary care use prior to the anchor hospitalization or procedure for BPCI Advanced episodes, which were similar to rates of primary care use during the PDP (see **Appendix M**).

Higher primary care use for medical episodes than surgical episodes aligns with findings from participant interviews. Participants reported targeting primary care connections for patients with medical episodes, particularly the most medically complex patients, and they discussed the importance of making these connections within 7 to 10 days of discharge. On the other hand, participants in surgical clinical episodes reported that connecting patients to primary care providers in the PDP is less of a priority for patients after surgery because in many cases, the surgeons prefer to conduct follow-up visits and want to avoid unnecessary expenditures in the PDP.

Exhibit 25: Cumulative Share of Hospital and PGP BPCI Advanced Episodes With a Primary Care Visit After the Anchor, Model Year 5 (2022)



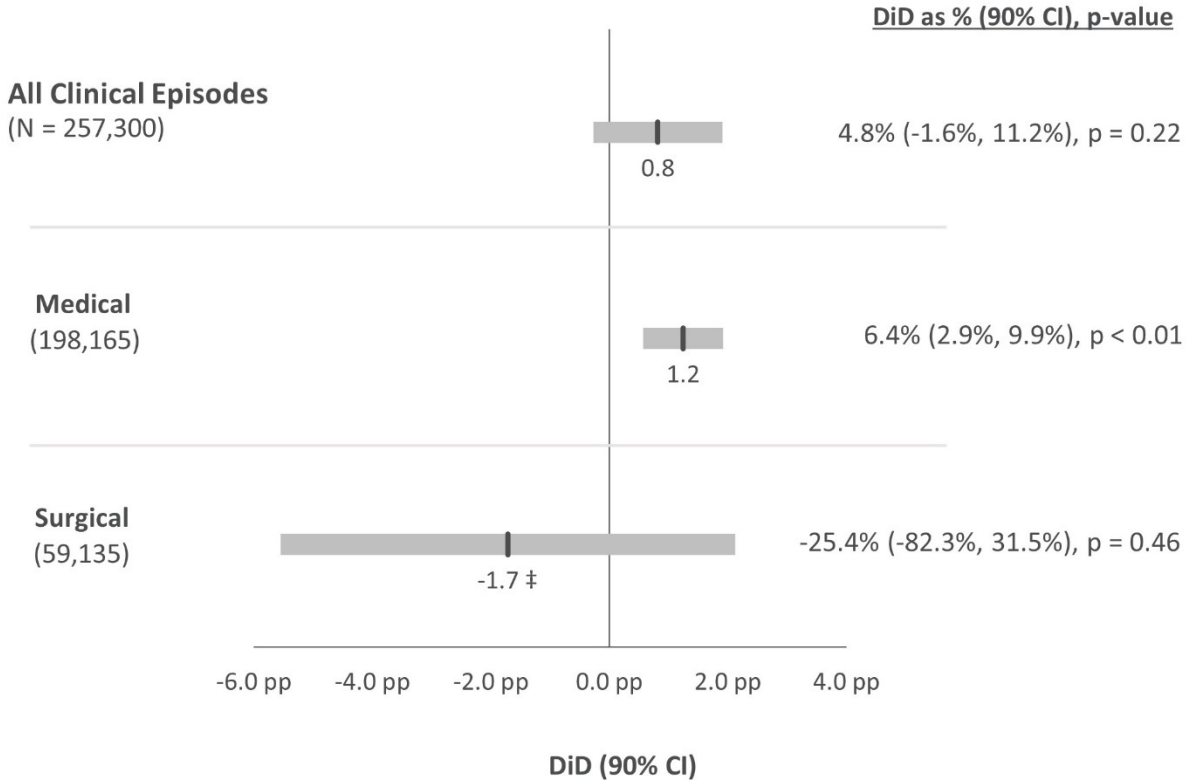
Note: PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators.

During Model Year 5, the BPCI Advanced Model increased the proportion of episodes with a primary care visit during the first week of the PDP for medical episodes by 1.2 pp (90% CI: 0.6, 1.9; $p < 0.01$), or 6.4% of the baseline mean (Exhibit 26). This positive impact was driven by hospital episodes within the *medical and critical care* and *neurological care* CESLGs and PGP episodes within the *medical and critical care* and *gastrointestinal care* CESLGs (where the latter narrowly misses statistical significance) (see **Appendix M**). We did not find a statistically significant impact for surgical episodes, which aligns with qualitative data indicating that

participants prioritized primary care connections for patients with complex medical episodes more than for patients with surgical episodes. See **Appendix P** for results for select surgical clinical episodes included in TEAM.

Exhibit 26: Proportion of Episodes With a Primary Care Visit During the First Week of the PDP, Model Year 5 (2022)



Note: The estimates in this exhibit are the results of a difference-in-differences (DiD) model. The grey bars indicate the 90% CI of the DiD estimates. The estimates represent the relative change in the share of episodes with a primary care visit during the 7 days following the anchor. Results are also listed as a percentage of the BPCI Advanced baseline mean. See **Appendix C** for details on the DiD methodology, outcome definitions, data sources, and additional information on methods. See **Appendix M** for more detailed results. CI = confidence interval; DiD = difference-in-differences; PDP = post-discharge period.

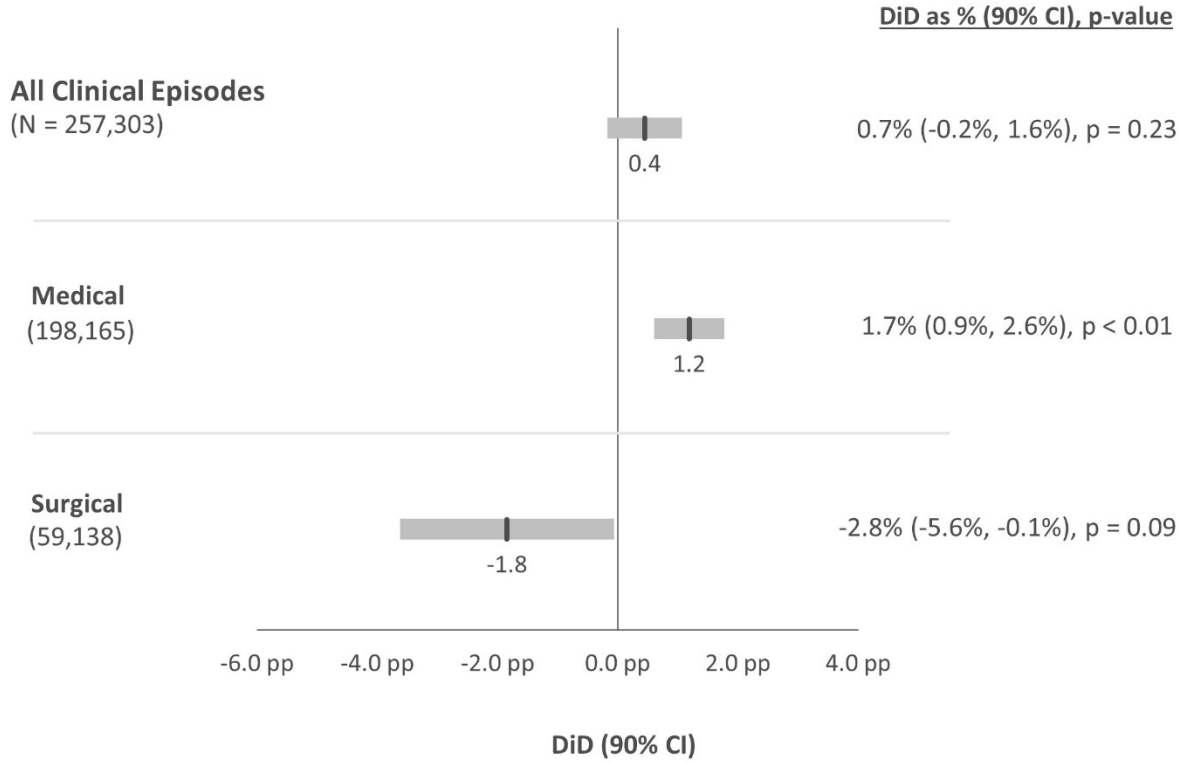
‡ We rejected the null hypothesis that BPCI Advanced and matched comparison hospitals and physician group practices had parallel trends for this outcome (with 90% confidence). This may indicate the impact estimate partially reflects a continuation of preexisting trends and does not solely reflect the impact of the BPCI Advanced Model. See **Appendix M** for parallel trends test results.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators and matched comparison providers.

Within the 90-day PDP, the model had similar effects to those observed during the 7-day PDP (Exhibit 27). BPCI Advanced increased the proportion of episodes with a primary care visit during the 90-day PDP for medical episodes by 1.2 pp (90% CI: 0.6, 1.8; $p < 0.01$), or 1.7% of the baseline mean, and it decreased the proportion of episodes with a primary care visit during the 90-day PDP for surgical episodes by 1.8 pp (90% CI: –3.6, –0.1; $p = 0.09$), or 2.8% of the baseline. Again, the positive impact for medical episodes was driven by hospital episodes within the *medical and critical care* and *neurological care* CESLGs and PGP episodes from all medical CESLGs except for *gastrointestinal care*. The negative impact for surgical episodes was driven by hospital episodes

within the *gastrointestinal surgery* CESLG (see **Appendix M**). This positive impact on primary care use for medical episodes is similar in magnitude to the effect in Model Year 4 (see **Appendix M**).

Exhibit 27: Proportion of Episodes With a Primary Care Visit During the 90-Day PDP for All Patients, Model Year 5 (2022)



Note: The estimates in this exhibit are the results of a difference-in-differences (DiD) model. The grey bars indicate the 90% CI of the DiD estimates. The estimates represent the relative change in the share of episodes with a primary care visit during the 90 days following the anchor. Results are also listed as a percentage of the BPCI Advanced baseline mean. See **Appendix C** for details on the DiD methodology, outcome definitions, data sources, and additional information on methods. See **Appendix M** for more detailed results. CI = confidence interval; DiD = difference-in-differences; PDP = post-discharge period.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators and matched comparison providers.

2. BPCI Advanced Spurred New Connections to Primary Care

Given the CMS Innovation Center's goals of connecting more patients to value-based care and integrating specialty care in the patient's care journey, we analyzed the subset of patients with no primary care prior to the anchor hospitalization or procedure to determine whether BPCI Advanced is leading to new primary care connections. Participants reported during interviews that they were connecting BPCI Advanced patients with new primary care providers when patients did not already have a primary care provider.

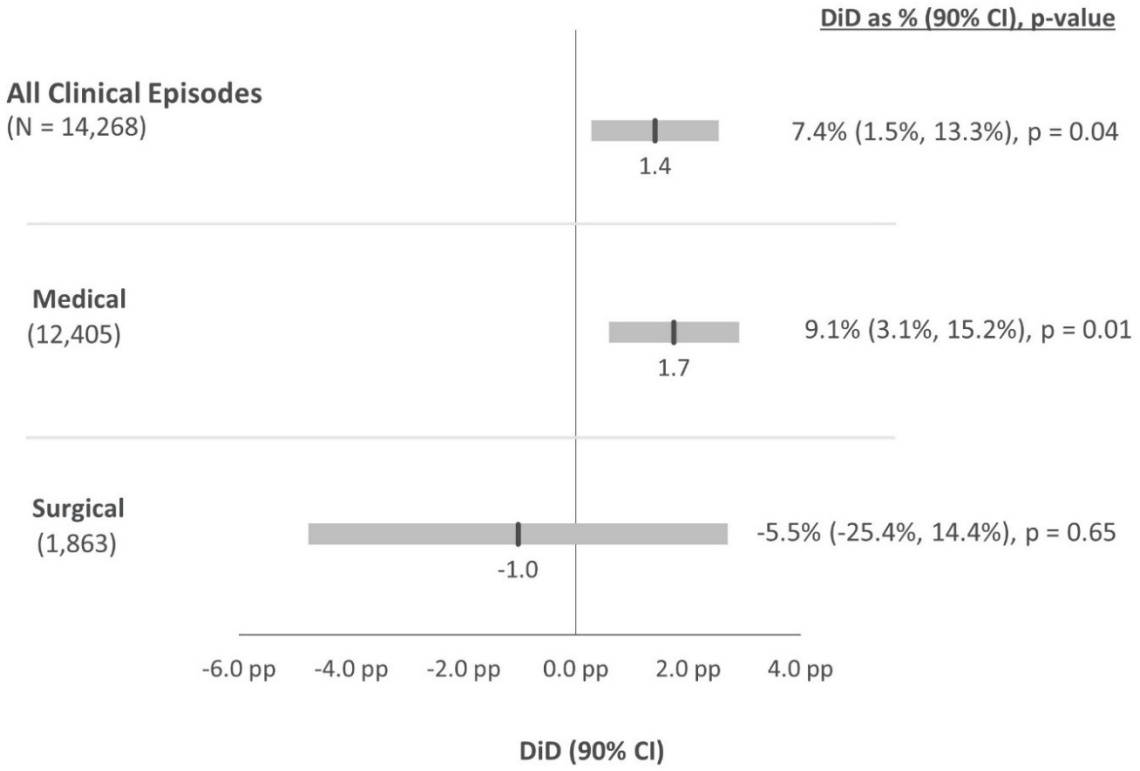
Among BPCI Advanced episodes in Model Year 5, 94.3% had at least one primary care visit in the 2 years prior to the episode. For the subset of patients who did not have a primary care visit prior to the episode, we measured the impact of BPCI Advanced on the share of episodes that had at least one primary care visit during the 7-day and 90-day PDPs. Within the 7-day PDP, we did not find

any statistically significant impact of the model on new connections to primary care (see **Appendix M**), but we did during the 90-day PDP.

The BPCI Advanced Model increased the proportion of episodes in Model Year 5 with a primary care visit during the 90-day PDP for patients who did not have a primary care visit prior to the anchor by 1.4 pp (90% CI: 0.3, 2.5; p = 0.04), or 7.4% of the baseline mean (Exhibit 28). This positive impact was driven by medical episodes, where BPCI Advanced led to an increase of 1.7 pp (90% CI: 0.6, 2.9; p = 0.01), or 9.1% of the baseline mean. This finding suggests that bundled payment models can successfully connect previously unconnected patients to primary care providers.

These results indicate that BPCI Advanced may have additional benefits that help the CMS Innovation Center advance its strategic goals and objectives. BPCI Advanced is helping ensure that patients who are recovering from hospitalizations or procedures are connected to their primary care providers in the PDP. Furthermore, it may help establish new accountable care relationships for patients without primary care providers.

Exhibit 28: Proportion of Episodes With a Primary Care Visit During the 90-Day PDP for Patients Without Primary Care Prior to the Anchor, Model Year 5 (2022)



Note: The estimates in this exhibit are the results of a difference-in-differences (DiD) model. The grey bars indicate the 90% CI of the DiD estimates. The estimates represent the relative change in the share of episodes with a primary care visit during the 90 days following the anchor. Results are also listed as a percentage of the BPCI Advanced baseline mean. See **Appendix C** for details on the DiD methodology, outcome definitions, data sources, and additional information on methods. See **Appendix M** for more detailed results. CI = confidence interval; DiD = difference-in-differences; PDP = post-discharge period.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning on or after January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning on or after January 1, 2022, and ending on or before December 31, 2022 (intervention period) for BPCI Advanced episode initiators and matched comparison providers.

D. Impact of the Model on Dually Eligible Patients

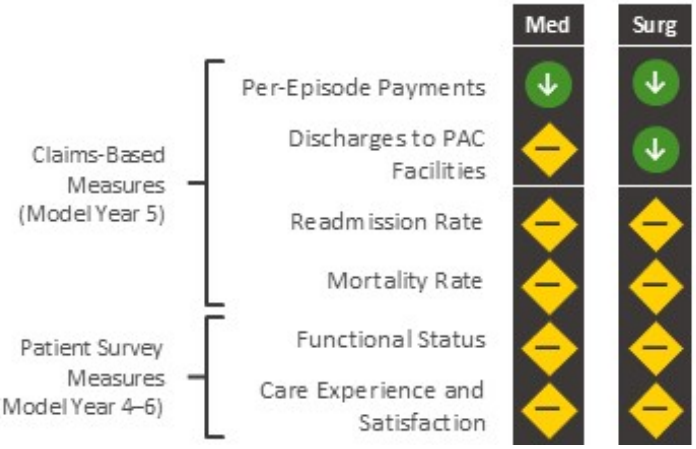
BPCI Advanced participants report implementing care redesign activities to reduce unnecessary Medicare spending and improve care coordination as patients transition from a hospitalization or procedure to the PAC setting. Improved care coordination could disproportionately benefit patients who are dually eligible for Medicare and Medicaid, who tend to have higher baseline costs, more medical complexity, and higher readmission rates. Alternatively, the incentive to reduce unnecessary PAC services could result in adverse outcomes for these patients, especially if they are more likely to face obstacles to a successful recovery at home. This section evaluates the impact of the BPCI Advanced Model on patients who are dually eligible for Medicare and Medicaid.

The evaluation team analyzed the impact of the BPCI Advanced Model on claims-based quality measures (readmission and mortality rates) for this subpopulation using DiD and DiDiD methodologies. The DiD methodology estimates the impact of the model on BPCI Advanced episodes for dually eligible patients relative to non-dually eligible comparison patients, while the DiDiD methodology compares the impacts between dually eligible and non-dually eligible patients. (See **Appendix C** for details on the methodologies.)

In addition to analyzing claims-based quality measures, the evaluation team surveyed patients in Model Years 4 through 6 (2021–2023) to identify differences in functional status, care experience, and satisfaction with care between BPCI Advanced and comparison respondents. For each survey measure, we estimated whether differences between BPCI Advanced and the comparison group were statically significant. We used additional tests to determine whether multiple survey measures within a domain were simultaneously statistically significant. The two domains are "functional status" and "care experience and satisfaction." We also compared these differences between subpopulations. (See **Appendix C** for details on the methodology.)

In Exhibit 29, we present a high-level overview of the claims-based and patient survey results for each outcome by episode type (medical vs. surgical).

Exhibit 29: Summary of Model Impacts on Dually Eligible Patients



Note: The arrow shows the overall direction of the finding: decrease (↓) or no clear direction (–). The shape and color of the icon indicates favorability: green circle is favorable and yellow diamond is no impact. Readmission and mortality rates are based on Model Year 5 (2022) claims data. Functional status and care experience and satisfaction are based on Model Year 4 through 6 (2021–2023) patient survey data. Med = medical; PAC = post-acute care; Surg = surgical.

BPCI Advanced participants have reported in interviews that they implemented care redesign strategies that may benefit patients with unmet nonmedical needs, including those who are dually eligible. For example, participants screen patients for social risk factors, such as housing instability, food insecurity, and access to transportation, since these factors often are the catalyst for suboptimal recovery from a hospitalization or procedure and increase the risk of unplanned hospital readmissions. Based on these screenings, participants reported risk-stratifying their BPCI Advanced patients and targeting more resources toward patients who have greater needs and may be at higher risk of readmission.

Other strategies participants used to address the needs of patients with unmet nonmedical needs included the following:

- Referring patients to **social workers** to address nonmedical needs
- Creating **resource guides** or lists of community support organizations that could help patients address social needs
- Deploying **care navigators** to monitor patients in the PDP and address any issues to enable a successful recovery and prevent hospital readmissions (for example, helping patients get meals and groceries and sign up for Medicaid)
- Addressing **medication adherence challenges** by conducting pharmacy interviews with patients before hospital discharge
- Addressing **transportation barriers**, including contracting with ride-share companies and creating transportation voucher programs
- Addressing **language barriers** by prioritizing the patient's preferred language in skilled nursing facility placement, if possible, and using bilingual staff or paid translation services
- **Piloting programs** to improve care for patients who frequently are readmitted to the hospital, including transition-to-home and palliative care programs
- Setting up **programs for palliative care** for patients reaching the end stage of their disease progression

Some participants reported that the BPCI Advanced Model not only incentivized the creation of care coordination activities and follow-ups that address patient social needs but also helped fund these activities through reconciliation payments. Model participants reported using these care redesign initiatives for all patients, not just those attributed to the model. However, participants recognized that these initiatives may be especially beneficial to patients with unmet nonmedical needs and those who may not have been touched by another value-based care model.

> *"Patients that are not attributed to the ACO, that may not have access to care, do require more resources and support to coordinate following discharge. We find that really interconnecting care at the right time has been so highly beneficial for these patients and their families and have seen the direct value in embedding additional resources as we have progressed through [BPCI Advanced] to further provide support to our patients."*
>
> – BPCI Advanced Hospital

1. BPCI Advanced Had Limited Impacts on Patients Who Are Dually Eligible for Medicare and Medicaid

We did not find statistically significant impacts on the readmission rate for dually eligible BPCI Advanced patients relative to comparison patients or differences in the impacts between dually eligible and non-dually eligible patients with medical or surgical episodes. These results differ from Model Year 4, when we found a statistically significant increase in the readmission rate for dually eligible patients with medical episodes relative to the comparison group. In Model Year 5, we also did not find impacts or a difference in impacts on the mortality rate for dually eligible patients. Again, these results differ from Model Year 4, when we found a statistically significant relative decline in the mortality rate during the anchor stay or 90-day PDP for dually eligible patients with medical episodes relative to the comparison group. The Model Year 5 results suggest that the BPCI Advanced Model did not affect readmission or mortality rates for patients who were dually eligible or patients who were not dually eligible.

Among dually eligible patients, BPCI Advanced and comparison respondents did not report statistically significantly different changes in most functional status measures in Model Years 4 through 6 when aggregating across all episodes and when separating medical and surgical episodes (Exhibit 30). This was also the case for non-dually eligible patients. However, among individual measures, BPCI Advanced dually eligible respondents were 3.7 pp less likely to report an improvement in planning regular tasks than comparison respondents ($p < 0.01$).

Across all episodes for patients who were dually eligible, differences in care experience and satisfaction between BPCI Advanced and comparison respondents were a mix of favorable and unfavorable when considering individual measures, and no differences were statistically significant (Exhibit 31). This was also the case when analyzing medical and surgical episodes separately (see **Appendix O**).

Exhibit 30: Differences in Patient-Reported Functional Status Between BPCI Advanced and Comparison Respondents Who Are Dually Eligible, Model Years 4–6 (2021–2023)

Note: The estimates in this exhibit are the result of a cross-sectional, risk-adjusted multinomial logistic regression model for trinary indicators. All responses were weighted for nonresponse and sampling design. Reported sample sizes reflect the number of BPCI Advanced survey respondents. Comparison sample sizes were roughly similar. Values to the left of zero indicate unfavorable results. Values to the right of zero indicate favorable results. The p-values for functional status results indicate joint statistical significance for differences in the proportion of patients indicating one of three categories: improvement in (or maintained highest function), decline in (or maintained lowest function), or stayed the same (not shown in figure). The difference between BPCI Advanced and comparison respondents in the category "stayed the same" is the sum of the "improvement in" and "decline in" categories for each measure in the figure. Results are reported in percentage point terms. See **Appendix C** for details on the survey design and methodology, outcome definitions, data sources, and additional information on methods. See **Appendix D** for the instrument used. See **Appendix O** for more detailed results.

Source: The BPCI Advanced evaluation team's analysis of survey responses paired with Medicare claims and enrollment data for episodes with anchor stays or procedures that occurred in July or August 2021 (during Model Year 4), July or August 2022 (during Model Year 5), or April, May, June, July, August, or September 2023 (during Model Year 6).

Exhibit 31: Differences in Care Experiences and Satisfaction Between BPCI Advanced and Comparison Respondents Who Are Dually Eligible, Model Years 4–6 (2021–2023)

***Note*:** The estimates in this exhibit are the result of a cross-sectional, risk-adjusted multinomial logistic regression model for binary indicators. All responses were weighted for nonresponse and sampling design. Reported sample sizes reflect the number of BPCI Advanced survey respondents. Comparison sample sizes were roughly similar. Values to the left of zero indicate unfavorable results. Values to the right of zero indicate favorable results. The p-value for satisfaction with post-discharge care indicates joint statistical significance for differences in the proportion of patients indicating one of three categories: 9–10 rating, 7–8 rating, or 0–6 rating. Results are reported in percentage point terms. See **Appendix C** for details on the survey design and methodology, outcome definitions, data sources, and additional information on methods. See **Appendix D** for the instrument used. See **Appendix O** for more detailed results.

Source: The BPCI Advanced evaluation team's analysis of survey responses paired with Medicare claims and enrollment data for episodes with anchor stays or procedures that occurred in July or August 2021 (during Model Year 4), July or August 2022 (during Model Year 5), or April, May, June, July, August, or September 2023 (during Model Year 6).

E. Discussion

1. What Are the Model Year 5 Findings?

Although BPCI Advanced was not expressly designed to extend value-based care to patients who are dually eligible for Medicare and Medicaid or increase connections with primary care providers, findings from this chapter indicate these were additional benefits of the model. Model Year 5 results indicate that BPCI Advanced reached medically complex patients and dually eligible patients who were not attributed to Medicare ACOs. While we did not find amplified benefits from patient overlap in BPCI Advanced and Medicare ACOs in terms of reduced payments or hospital readmissions, participants reported that concurrent participation in both initiatives does result in broader provider engagement in value-based care. Participants also reported that BPCI Advanced data are especially valuable to Medicare ACOs in understanding where costs occur in the 90-day care episode. In a value-based care landscape increasingly dominated by Medicare ACOs and advanced primary care models, BPCI Advanced may be playing an important role in engaging specialists and hospitals in value-based care.

We found evidence that BPCI Advanced participants linked patients with medical episodes to primary care providers at a higher level than comparison providers. BPCI Advanced increased the proportion of medical episodes where the patient had a primary care visit during the first week after discharge and during the full 90-day PDP relative to patients who did not receive care under the model. We did not find a statistically significant impact for patients with surgical episodes, which could be due to surgeons preferring to conduct the follow up themselves. The model also increased new primary care connections for BPCI Advanced patients without a primary care visit in the last 2 years. This result was driven by medical episodes. We do not see a statistically significant increase in new primary care connections for BPCI Advanced patients with surgical episodes. Both qualitative and quantitative data indicate that BPCI Advanced is increasing patient connections to primary care providers after discharge for a medical episode and, in some instances, helping patients establish new primary care relationships.

Overall, the model generally did not have different impacts on dually eligible patients in terms of readmission or mortality rates. Additionally, results of the patient survey indicate that for patients who were dually eligible, differences in care experience and satisfaction between BPCI Advanced and comparison respondents were a mix of favorable and unfavorable when considering individual measures, and no differences were statistically significant. The evaluation team will continue to closely monitor outcomes for dually eligible patients under the model.

2. How Do These Findings Compare With Model Year 4 Results?

We identified some differences between Model Year 5 and Model Year 4 results for the outcomes discussed in this chapter. BPCI Advanced overlap with Medicare ACOs grew in Model Year 5. Despite this growth, the BPCI Advanced Model's reach to clinically complex patients and dually eligible patients who are not attributed to an ACO was similar to results found in Model Year 4, reinforcing the notion that BPCI Advanced may be consistently reaching patients who are not yet connected to value-based care.

We found that the model increased primary care visits in the PDP among medical episodes in both Model Year 4 and Model Year 5, but findings for surgical episodes differed between years. We did not detect an effect on primary care visits among surgical episodes in Model Year 4, whereas we found a decrease in primary care visits during the PDP for surgical episodes in Model Year 5.

In terms of claims-based quality measures, we no longer observed one of the concerning effects that were present in Model Year 4. Specifically, we no longer saw a statistically significant increase in the readmission rate for dually eligible patients with medical episodes. However, we also saw some positive effects that were present in Model Year 4 disappear. In Model Year 4, we found a statistically significant decline in the mortality rate among medical episodes for dually eligible patients relative to the comparison group that did not appear in Model Year 5.

Our patient-reported outcome results were similar to those presented in the BPCI Advanced Fifth Evaluation Report for surveys from Model Years 4 and 5.[36] However, in this report, with additional responses from Model Year 6 surveys, we expanded analyses to stratify by medical and surgical episodes for those who are dually eligible for Medicare and Medicaid, and we used additional testing to determine the statistical significance of all outcomes within the domains of "functional status" and "care experience and satisfaction." For dually eligible respondents, we note in the Fifth Evaluation Report that BPCI Advanced dually eligible respondents reported less favorable changes in functional status than dually eligible comparison respondents. In this report, while we found that 9 out of 10 measures were less favorable for BPCI Advanced dually eligible respondents than comparison respondents, the differences are small, and we cannot conclude that functional status overall is less favorable for BPCI Advanced patients than the comparison group.

The patient-reported outcome results should be interpreted in the context of the limitations listed in **Chapter VI. Discussion**. Because the survey data were only collected during the performance periods, we cannot determine whether differences between BPCI Advanced and comparison respondents existed during the baseline period or whether they were caused by the model. In addition, lower response rates among patients from underserved populations relative to our overall sample exacerbate concerns about the generalizability of our results to all patients dually eligible for Medicare and Medicaid.

3. What Do These Findings Mean for CMS Objectives?

While BPCI Advanced was not designed specifically to connect patients to primary care providers, results from Model Year 5 indicate that an additional benefit of the model is an increase in primary care visits for patients with medical episodes relative to the comparison group, particularly in the 7- and 90-day PDPs. Results also indicate that the model helped establish new relationships for patients who did not have a primary care provider prior to their hospitalization or procedure. Qualitative and quantitative data from Model Year 5 indicate that it is less common for BPCI Advanced participants to connect patients to primary care during the 90-day PDP following surgical episodes compared with medical episodes.

As a result of the broad participation in BPCI Advanced, millions of Medicare beneficiaries have been exposed to value-based care and participant efforts to improve care coordination for patients

[36] The BPCI Advanced Fifth Evaluation Report is available for download at https://www.cms.gov/priorities/innovation/innovation-models/bpci-advanced.

with medical and surgical episodes. BPCI Advanced participants are financially responsible for Medicare FFS beneficiaries admitted to the hospital with the clinical conditions for which they have chosen to be held accountable by CMS. Model Year 5 results indicate that BPCI Advanced reaches patients not attributed to a Medicare ACO, and these patients are more clinically complex than patients attributed to an ACO. The BPCI Advanced Model could have the additional benefit of reaching patients not reached by other models and engaging these patients in value-based care.

BPCI Advanced is operating in a value-based care landscape with increasing participation in Medicare ACOs, as evidenced by the larger overlap compared with Model Year 4. While the evaluation team did not find evidence of enhanced reductions in Medicare expenditures or lower readmission rates for BPCI Advanced participants that also participated in Medicare ACOs, interviews with participants that were involved in both value-based care models emphasized the value of concurrent participation in terms of access to data and engagement of specialists and hospitals in care redesign efforts. The evaluation team is continuing to research how accountable care models and episode-based payment models like BPCI Advanced can work together to improve patient care and lower unnecessary costs.

VI. Discussion

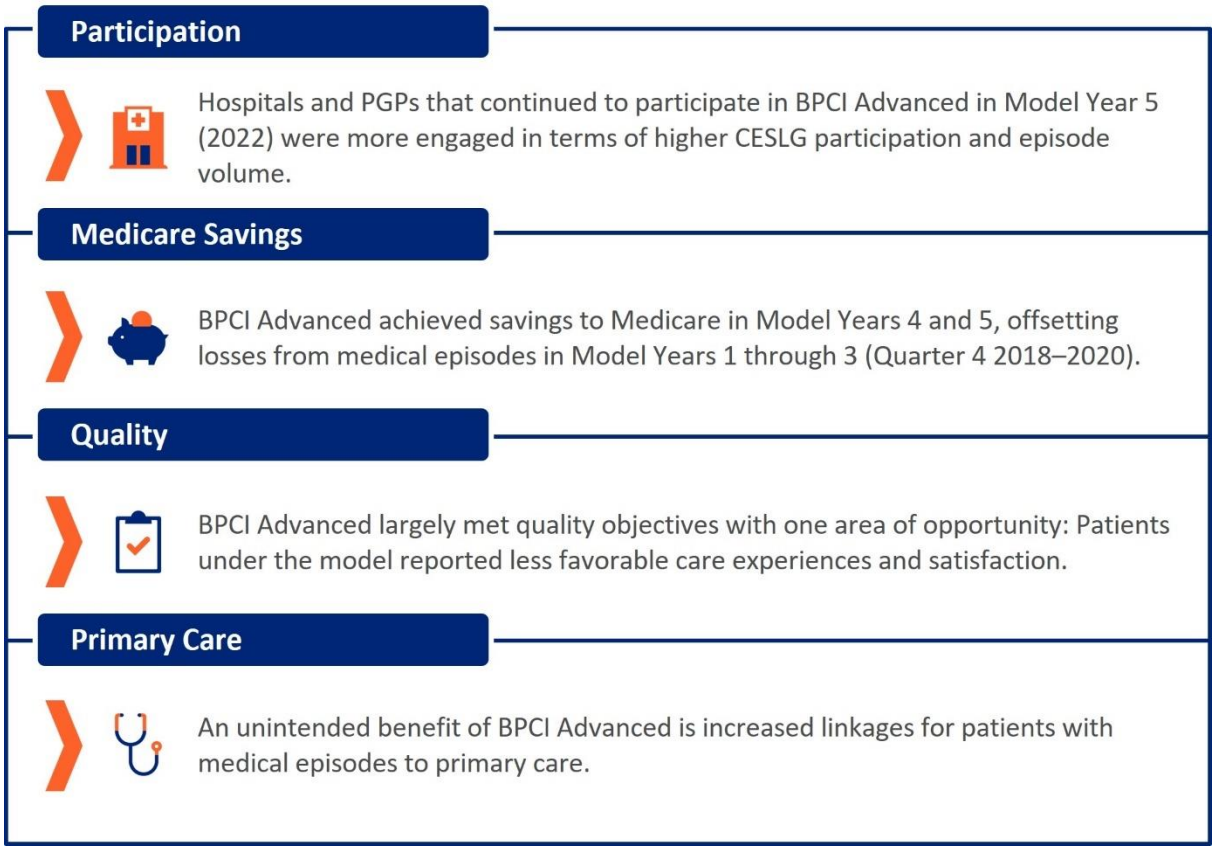
A. Summary of Findings

1. What Was the Impact of BPCI Advanced in Model Year 5?

In Model Year 5 (2022), BPCI Advanced participants reduced expenditures while maintaining quality-related health outcomes, with room for improvement in patient-reported experiences. About one-third of hospitals and physician group practices (PGPs) left the model between Model Years 4 and 5, as participants continued adjusting to major changes to the BPCI Advanced Model design introduced in Model Year 4 (2021). Participants that stayed in the model appeared to be more engaged, as they had higher average episode volume and more favorable reconciliation payments from CMS than those that exited. As reported in **Chapter II. Participant Characteristics**, many participants that chose to remain in the model sought to gain experience with bundled payments in anticipation of a mandatory bundled payment model in the future.

Exhibit 32 highlights key findings discussed in this evaluation report.

Exhibit 32: Highlights From the Sixth Evaluation Report



Note: CESLG = clinical episode service line group; PGP = physician group practice.

Source: The BPCI Advanced evaluation team's analysis of Medicare claims and enrollment data for episodes with anchor stays or procedures beginning January 1, 2015, and ending on or before September 30, 2018 (baseline period) and episodes with anchor stays or procedures beginning January 1, 2021, and ending on or before December 31, 2022 (Model Year 4 and 5 intervention period) for BPCI Advanced episode initiators and matched comparison providers, and the CMS BPCI Advanced Database as of December 29, 2023.

For the second straight year, BPCI Advanced resulted in net savings to Medicare. Participants reduced episode expenditures by about $320 million, largely by decreasing institutional post-acute care (PAC) use, especially use of skilled nursing facilities (SNFs) and inpatient rehabilitation facilities (IRFs). However, some participants were not able to reduce Medicare expenditures below the target price and had to make repayments to CMS. In Model Year 5, participants made about $26.3 million in repayments to CMS, which contributed to the approximately $344 million in savings to Medicare attributed to BPCI Advanced in Model Year 5. Total Medicare savings were smaller in Model Year 5 than in Model Year 4 ($465 million), due to decreased participation and the resulting lower episode volume.

BPCI Advanced achieved savings in Model Year 5 without compromising the quality of care, as measured by changes to hospital readmission and mortality rates. The model's ability to reduce utilization of PAC facilities while maintaining quality of care is a success. While BPCI Advanced is largely meeting its quality objectives, the evaluation identified one area of opportunity for improvement. Patient survey results from Model Years 4 through 6 (2021–2023) indicate that some BPCI Advanced patients reported less favorable care experiences and satisfaction than patients who received care from providers who did not participate in the model. For example, some BPCI Advanced respondents were less likely to say they felt prepared to leave the hospital, less likely to agree that medical staff took their preferences into account in deciding what health care services they should have after leaving the hospital, and less likely to agree that medical staff talked with them about whether they would have the help they needed when they got home. One potential reason for these less favorable experiences is the reduction in PAC facility utilization under the model. During interviews with model participants, hospitals and PGPs reported that patients and families often expected the patient to recover from their hospitalization or procedure at an IRF or SNF and may feel providers were stinting on care by sending patients home to recover. Additionally, home recovery can be more burdensome on families and caregivers because it requires them to take time off from work or travel to help the patient recover. While most BPCI Advanced patients reported favorable care experiences and satisfaction, there may be an opportunity for participants to improve communication with patients and caregivers and better set expectations for home recovery.

Overall, the evaluation team did not find a disproportionate positive or negative impact of the model on dually eligible patients. BPCI Advanced was not designed to target these patients, but the evaluation analyzed whether the model had favorable or unfavorable impacts on this subset of patients. Quality results were mixed by measures for this subpopulation, with examples of both favorable and unfavorable findings. We will continue to closely monitor the impact of the model on these patients.

The BPCI Advanced Model increased primary care use after discharge for patients with medical episodes, suggesting improved care coordination under the model. This finding aligned with qualitative data collected during interviews and site visits, in which participants reported strategies to increase connections to primary care providers after discharge, particularly for medically complex patients. The model also connected patients without primary care providers to new primary care relationships, an additional benefit of the model. However, for patients with surgical episodes, the model resulted in a decrease in primary care use after discharge. In interviews, participants reported that surgeons prefer to conduct follow-up visits themselves and want to avoid unnecessary episode expenditures.

Episode-based payment models like BPCI Advanced are just one element of the value-based care landscape. As of 2024, nearly half of Medicare fee-for-service (FFS) beneficiaries were aligned to an Accountable Care Organization (ACO). Understanding how BPCI Advanced overlaps with Medicare ACO initiatives, as well as the benefits and challenges of this overlap for providers and patients, continues to be a priority for CMS. While results did not indicate an additive impact of hospital or patient alignment to both BPCI Advanced and a Medicare ACO, participants in both initiatives reported advantages to concurrent participation, including episode data that helped ACOs identify cost improvement strategies for specific service lines and engagement of specialists and hospitals in value-based care. The provision of shadow bundle data to Medicare ACOs in 2024 may play an important role in helping better integrate specialists into ACOs and bring more transparency to specialists' performance.

2. What Do the Model Year 5 Results Mean for CMS Objectives?

As in prior years, Model Year 5 participants implemented care redesign strategies to achieve the model's goals of reduced costs, improved outcomes, and better coordinate care for patients. This report includes care redesign spotlights highlighting interventions that hospitals and PGPs used to reduce Medicare payments and improve quality of care for patients. These care redesign efforts illustrate how patient and provider experience effectively changed in response to the model and how hospitals and PGPs subsequently transformed care by shifting the culture around discharge decision-making, making structural investments and changes to care processes, and building relationships and improving coordination between inpatient and outpatient providers.

In site visits and interviews conducted in Model Year 5, participants reported using the data that CMS provided to them as a starting point to identify inefficiencies and opportunities to improve care and lower costs during care episodes. This heightened awareness of costs both in the acute setting and in the post-discharge period (PDP) and ultimately shifted the culture at participant organizations. For many participants, these data helped them understand their performance relative to their peers. For example, some participants reported realizing they were overusing SNFs compared with their peers. Insights from the performance data sparked care redesign plans that led to cultural shifts and broader system transformation.

Participants implemented care redesign initiatives before, during, and after hospitalizations or procedures. Prior to planned elective surgeries, participants reported optimizing patients to ensure successful surgeries and recoveries. Participants screened patients for medical and social risk factors and either attempted to mitigate these risks or postponed elective surgeries and referred patients to their primary care physician. Participants reported setting patient and caregiver expectations for recovery through education on chronic conditions and sharing which resources would be needed to successfully recover at home if that was their discharge destination. In the acute setting, participants reported standardizing care pathways and reducing variation in care to decrease unexpected costs, getting patients up and walking more quickly after surgeries, and modifying interdisciplinary rounds to engage multiple providers in each patient's care and discharge plan. The most common care redesign strategy used to lower Medicare payments was reducing discharges to costly PAC facilities and sending patients home to recover from a hospitalization or procedure when medically appropriate. In the post-acute setting, participants continued to build relationships with preferred PAC providers to monitor patients in the PDP and shorten length of stay in these facilities, many times by having staff conduct rounds in their

preferred SNFs. For patients who were discharged directly home, participants used care coordinators to monitor patients to address any risk factors for hospital readmission or emergency department visits. Finally, participants reported that they connected patients with primary care providers after hospitalizations or procedures, particularly for medical episodes, to ensure successful recoveries and reduce readmissions. These common care redesign activities could serve as a roadmap for Transforming Episode Accountability Model (TEAM) participants that are new to value-based care and planning care redesign efforts.

In Model Years 4 and 5, the evaluation found that BPCI Advanced hospitals and PGPs connected patients with medical episodes to primary care after hospitalizations or procedures at a greater rate than comparison hospitals and PGPs, an additional benefit of the model beyond CMS objectives. BPCI Advanced also increased primary care use after hospitalizations or procedures for patients who had not received any primary care in the previous 2 years. BPCI Advanced participants reported that connecting patients to primary care providers in the 7 to 10 days after discharge was critical to avoiding complications and hospital readmissions. Many hospitals encouraged staff to set up primary care appointments, instead of directing the patient to schedule appointments themselves.

BPCI Advanced and Medicare ACOs share similar objectives, such as reduction in unnecessary Medicare expenditures and improved care coordination. While we did not find that BPCI Advanced patients who were also in an ACO had more favorable outcomes in terms of episode expenditures or quality as measured by readmissions, participants in both models reported value to their concurrent participation. Participants used similar care redesign strategies across their value-based payment models and the same infrastructure, relationships, and processes, which might lead to efficiencies. Participants said that BPCI Advanced uniquely engaged specialists and hospitals in value-based care models, and ACOs could leverage this engagement. Participants also reported the value of the BPCI Advanced episode data and service line insights in helping the ACO reduce unnecessary expenditures. CMS now provides this type of episode data, sometimes referred to as shadow bundle data, to Medicare ACOs, which may help them replicate bundled payment targets and reduce costs for patients with hospitalizations or outpatient procedures.

3. Looking Ahead

The next BPCI Advanced evaluation report will include findings from Model Year 6 (2023), which included further pricing methodology changes, such as a reduction in the CMS discount for medical episodes from 3% to 2% and a reduction of the cap on the peer group trend factor adjustment for all episodes from 10% to 5%. In addition, the public health emergency ended in 2023, and participants were held accountable for all patients with a COVID-19 diagnosis. The evaluation team will explore the impact of these changes on model participation and participant experience, in addition to impact analyses and calculations of Medicare program savings.

The attrition in participation after Model Year 4 design changes suggests that Medicare savings may come at the expense of model participation, which could limit the potential for future savings and for system-level care transformation. CMS is implementing a mandatory episode-based payment model, TEAM, which aims to establish the framework for managing episodes as a standard practice in Traditional Medicare. This new model will require hospitals in randomly selected core-based statistical areas (CBSAs) to be held accountable for patient episodes, which include the anchor hospitalization or outpatient procedure and the 30 days after discharge. The

model will include five surgical clinical episodes: coronary artery bypass graft procedures, lower extremity joint replacements, major bowel procedures, spinal fusion procedures, and surgical hip or femur fracture treatment procedures. TEAM is built on lessons learned from the BPCI Advanced and Comprehensive Care for Joint Replacement (CJR) Models. Some considerations from this annual report could also inform TEAM, as described below.

As in prior years, in Model Year 5, there were larger per-episode reductions in episode expenditures from CMS for surgical episodes than for medical episodes, which was one of the contributing factors in CMS' decision to select surgical episodes in TEAM. However, medical episodes reach a broader population, as described above. By focusing on surgical episodes, TEAM may reach different patient populations than BPCI Advanced does.

Although the vast majority of BPCI Advanced patients reported positive care experiences, a larger share of patients in the comparison group who did not receive care under the model reported positive care experiences. Evaluations of future episode-based payment models, such as TEAM, may consider continuing to examine patient perspectives to understand whether less favorable care experiences and satisfaction are the result of participants' care redesign activities in response to episode-based payment model incentives.

Since 2022, many BPCI Advanced participants reported a decline in episode volume due to patient alignment to providers in the ACO Realizing Equity, Access, and Community Health (ACO REACH) Model. Patients who are attributed to participants in ACO REACH are not eligible to trigger BPCI Advanced clinical episodes. Some participants reported losing half of their episode volume to REACH ACOs, causing some to drop out of the model. TEAM is adopting a more complementary approach to model overlap by allowing patients attributed to any Medicare ACO to be eligible for a TEAM episode to complement longitudinal care models.

Some participants that have remained in BPCI Advanced for multiple years have described diminishing opportunities for reducing expenditures under the target price. TEAM will use regional pricing so that a hospital does not have to compete against its own performance but rather against hospitals in its region.

Like BPCI Advanced, the overall objectives of TEAM are to lower costs, reduce unnecessary PAC utilization and length of stay, and enable a quicker recovery after surgery. A larger proportion of safety-net hospitals may participate in TEAM since all hospitals in a selected CBSA will be required to participate in the model. TEAM will include a gradual path to risk for safety-net hospitals and will have lower risk levels over the course of the model. In the remaining years of BPCI Advanced, the evaluation contractor will continue to identify lessons learned and considerations for TEAM, especially around the experience of safety-net hospitals in an episode-based payment model.

B. Limitations

The results provided in this report should be interpreted in the context of the evaluation limitations related to data and methods.

We used a difference-in-differences (DiD) framework that is dependent on the validity of our selected comparison group. Our comparison group was constructed to be similar to BPCI

Advanced hospitals and PGPs across characteristics most expected to have an impact on the outcomes. However, our estimates may be affected by an imbalance of unobservable characteristics. Because we constructed comparison groups using a sample of all patients, analyses that study subpopulations, such as our ACO analysis and analysis of dually eligible patients, may be particularly affected by such imbalances.

Patient characteristics of the treated and comparison groups may also be changing differently across time. **Appendix G** displays patient characteristics for baseline and intervention periods and indicates a slight shift to a less complex patient population for BPCI Advanced providers participating in surgical episodes relative to the comparison group. Although we control for various patient characteristics and sociodemographic measures, such as prior institutional use, age, and Hierarchical Condition Category (HCC) score, there could be changes in the patient population that we are not able to account for, which may bias our estimates.

Another limitation of our DiD estimates is that we did not evaluate all BPCI Advanced episodes in Model Year 5. We excluded certain BPCI Advanced hospitals and PGPs to improve balance with the comparison group, while we excluded others due to a lack of baseline data needed for our DiD design. Not evaluating all BPCI Advanced episodes may create bias when estimates made from our evaluated sample are extrapolated to all BPCI Advanced episodes, such as in our calculations to estimate savings to Medicare, which is extrapolated to all episodes in the clinical episodes we evaluated. Furthermore, we did not evaluate all clinical episodes in the BPCI Advanced Model due to limited participation and difficulty finding matched comparison groups, although the clinical episodes we did evaluate represent more than 98% of all BPCI Advanced episode volume.

Similarly, our analysis of patient survey results may not be representative of all BPCI Advanced patients, as we collected survey data in monthly intervals, rather than spanning entire model years, and did not have full response rates. Additionally, response rates varied by subpopulation and were notably lower for underserved populations, which could limit our ability to conduct analyses of patient-reported outcomes for underserved populations. Finally, we collected survey data during model performance periods and therefore cannot determine whether differences between treatment and comparison groups existed during the baseline period.

For more detail on the limitations of our evaluation, see **Appendix C**, which includes detailed limitations for each analysis, a more comprehensive discussion, and references to sensitivity tests in the context of our limitations.

C. Conclusion

In Model Year 5, BPCI Advanced met or exceeded its objectives in all but one area of opportunity. The model achieved net savings to Medicare for the second year in a row through a combination of episode expenditure reductions and repayments to CMS. The model did not affect hospital readmission rates or mortality rates, but some patients receiving care under the model reported less favorable care experiences and satisfaction than patients in the comparison group. Episode-based payment models like BPCI Advanced may play an important role in connecting patients who have not been reached by other models to value-based care, engaging specialists and hospitals in care redesign, and connecting patients to primary care.