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Research Article

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Medicare transitional care management services' association with readmissions and mortality

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Abstract

In 2013, the Centers for Medicare and Medicaid Services (CMS) introduced codes to reimburse outpatient providers for post-discharge transitional care management (TCM). Understanding the implications of TCM reimbursement on outcomes is crucial for evaluating CMS's investment and guiding future policy. We analyzed the association between physician organization (PO) TCM code use and post-discharge readmissions and mortality using 100% fee-for-service Medicare claims. Using a difference-in-differences approach we compared 1131 "high-TCM" POs (top quartile of TCM code use from 2015–2017) to 1133 "low-TCM" POs (bottom quartile) from before (2012) and after (2015–2017) TCM code implementation, controlling for PO and beneficiary attributes and readmission risk. TCM code use was associated with decreased 30- and 90-day readmissions (−0.31 [95%CI: −0.52, −0.09] and −0.42 [95% CI: −0.71, −0.14] percentage points, respectively), but no significant difference in mortality. Year-by-year, 2017 saw greatest readmission reduction, with a slight mortality reduction in that year only. Readmission reductions were greatest in POs not affiliated with health systems, Accountable Care Organizations (ACOs), or academic medical centers, and least in those with fewer primary care physicians. Narrow, indirect interventions like fee-for-service TCM billing code reimbursement may have limited potential to improve post-discharge outcomes overall. However, small independent practices may derive somewhat greater benefit from this support for post-discharge care.

Lay Summary

In 2013, the Centers for Medicare and Medicaid Services introduced new billing codes for transitional care management (TCM) to support doctors in providing better, more timely, and more coordinated care after patients are discharged from the hospital. This study looks at whether these new billing codes have helped reduce readmissions and death among Medicare patients after discharge from the hospital. By analyzing Medicare data from 2012 through 2017, we found that using TCM codes was linked to a modest reduction in the number of patients readmitted to the hospital within 30 and 90 days after discharge, with the greatest improvements seen in 2017. However, we did not observe a significant association with patient deaths after discharge overall, with a small reduction in 2017 only. The benefits of TCM code use were more noticeable in smaller physician practices that were not part of larger health care systems, Accountable Care Organizations, or academic medical centers. These findings suggest that, overall, fee-for-service TCM billing codes have limited potential to improve patient outcomes after hospital discharge, although smaller, independent practices may benefit relatively more from this type of financial support for post-discharge care.

Key words: transitional care; hospital discharge; readmissions; Medicare; fee-for-service; billing codes; health policy.

Introduction

Readmission to the hospital after discharge is a potentially preventable adverse outcome, in some cases attributable to gaps in quality or coordination of care post-discharge. Medicare beneficiaries' readmissions are estimated to cost from $12 to $44 billion per year.[1-5] To incentivize reductions in hospital readmissions, the Centers for Medicare and Medicaid Services (CMS) implemented the Hospital Readmissions Reduction Program (HRRP) and held the provider accountable for readmissions in many value-based payment programs, Alterative Payment Models (APMs) and reporting programs (eg, Hospital Value-Based Payment [HVBP]; Skilled Nursing Facility Value-Based Payment [SNF VBP]; the Bundled Payments for Care Improvement [BPCI] models, the Comprehensive Care for Joint Replacement [CJR] model; the Oncology Care Model [OCM]; Accountable Care Organization [ACO] models including Medicare Shared Savings Program [MSSP], Pioneer, NextGen, and Realizing Equity, Access, and Community Health [REACH]; Medicare Advantage Star Ratings).[6] To reduce readmissions, many hospitals have implemented initiatives to coordinate care surrounding discharges, called transitional care management (TCM). However, transitional care is also relevant to patients' outpatient providers.

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To address outpatient providers' role in reducing readmissions and improving outcomes after discharge, in 2013 the CMS created 2 new TCM billing codes for a comprehensive bundle of post-discharge services provided by outpatient providers within 30 days of discharge from an inpatient facility, including both a visit and non–face-to-face coordination. Use of these codes to date has been modest and uneven.[7-10] They may be underutilized for a variety of reasons, including administrative and logistical burden of the required services and documentation, lack of awareness, inadequate reimbursement to offset investments required, or challenges in integrating new billing processes—especially across complex care teams and organizations.[11,12] Between 2013 and 2016 the use of TCM codes increased from 3.7% to 9.3% of eligible discharges, and physician practices' use of any TCM codes increased from 5.1% to 7.8% of all office-based practices and from 14.1% to 21.5% of practices with any primary care providers (PCPs).[8,9] Practices billing TCM codes had more physicians, more Medicare beneficiaries per PCP, were more likely to be in an ACO or use other advanced primary care billing codes (ie, annual wellness visit or chronic care management codes), and had fewer non-White or dually eligible patients. Among physician organizations (POs) using TCM codes, the services were provided for a fraction of their eligible patients.[9]

Intensive transitional care programs can reduce readmissions,[13-18] but the impact of Medicare reimbursement for TCM codes on patient outcomes has not been as rigorously assessed. The TCM programs with the greatest impact on 30-day readmissions typically involve a more complex and intensive suite of services than those required by the Medicare TCM codes (eg, home visits, in-hospital visits, assigned nurse/provider/coach, multiple contacts).[13-16] Existing studies have begun to assess this by comparing patients who received TCM code–billed services with those who did not, and found lower post-discharge mortality, readmissions, and spending after receipt of TCM services.[19,20] However, these patient-level analyses may be subject to selection bias. Patients who respond to TCM coordination outreach and attend a TCM visit after discharge may be healthier or more engaged than those who do not, and thus less likely to have poor post-discharge outcomes even without receiving a TCM service. Moreover, practices may vary widely in their adoption of TCM services and those practices with better post-discharge outcomes at baseline may also be more likely to incorporate TCM codes and services without substantive changes in practice. No prior study has assessed whether a PO's adoption of Medicare TCM code reimbursement is associated with improved post-discharge outcomes, including readmissions and mortality.

Data and methods

Data and study population

We used 100% Medicare data from 2011–2018 using the Carrier and MEDPAR files to assess utilization and beneficiary attributes from the denominator files. We used the Medicare Data on Provider Practice and Specialty (MD-PPAS) database to link physicians to Taxpayer Identification Number (TIN)–identified POs and identified PO health system affiliation from the 2015 Medicare Provider Enrollment, Chain, and Ownership System (PECOS) and Internal Revenue Service (IRS) Form 990 Schedule R.

Our attribution method derived from that used by the RAND Center of Excellence on Health System Performance.[21-24] We identified POs and attributed beneficiaries to them in each year from 2012–2017 using MD-PPAS to identify all POs (using TINs) and their associated physicians and advanced-practice clinicians (using National Provider Identifiers, or NPIs), and excluded POs that did not have at least 1 physician from a specialty providing direct patient care (eg, single specialty radiology or pathology groups). Physician organizations were identified as "affiliated" with health systems if they were owned or managed by a health system that included at least 1 short-term, general acute care hospital and 1 PO. Using PECOS, POs were grouped into and identified as affiliated with health systems if the system had the following: (1) a 5% or greater direct or indirect ownership interest in the PO or (2) operational or managerial control over the PO whether there is an ownership interest by the system. From IRS Form 990, we linked POs with hospitals based on their joint appearance on the same form. Physician organizations are listed on Form 990 when the filing organization operates the entity. We identified PO academic medical center affiliation according to previously published criteria.[25]

We attributed Medicare beneficiaries aged 18 years and older to POs based on the plurality of their evaluation and management (E&M) visits to primary care physicians (ie, general internal medicine, family medicine, or geriatrics, excluding hospital-based physicians), or, for those without visits to primary care physicians, the plurality of visits with internal medicine subspecialists (ie, cardiology, endocrinology, gastroenterology, hematology/oncology, infectious disease, nephrology, pulmonology/critical care, rheumatology/immunology, and physical medicine/rehabilitation).

We sought to identify a cohort of POs in which TCM use could be measured and compared, balancing including a broad range of POs and ensuring a sufficient number of Medicare patients to warrant PO adoption of novel Medicare billing codes. As such, we identified POs continuously present from 2011 through 2017, that in each year had 3 or more physicians, of which at least 1 was a primary care physician with at least 50 attributed Medicare patients aged 65 years or older and living in the United States, and having at least 20 short-stay discharges (eg, short-stay hospital admissions with a discharge to the community).

Measures

For each calendar year, we measured TCM visits for each PO (ie, CPT codes 99495 and 99496) that were provided within 30 days of a preceding eligible short-stay hospital discharge to the community.

We measured patients' post-discharge outcomes in a given calendar year, identifying observed readmissions within 30 days of discharge using the specifications from the Healthcare Effectiveness Data and Information Set (HEDIS) all-cause readmissions measure as the basis of our measurement,[26] and a modified version that extended the measurement of readmissions to within 90 days. We also measured mortality within 30 and 90 days of discharge.

Analytic approach

We performed a quasi-experimental analysis to compare the changes in post-discharge outcomes (ie, 30- and 90-day readmissions and mortality) from 2015 to 2017 for patients of POs that adopted TCM billing codes with those of otherwise similar POs that did not, after implementation of these novel fee-for-service billing codes in 2013.

We categorized POs in the top quartile of TCM use among short-stay discharges to the community between 2015–2017 (ie, TCM use in ≥16.2% of discharges) as "high-TCM" and those in the bottom quartile (ie, TCM use in <1.8% of discharges) as "low-TCM." This approach allowed for gradual uptake of TCM codes after the introduction of reimbursement in 2013, and enabled comparison between relatively fuller-adoption and non-adoption among POs thereafter. These POs and their attributed beneficiaries constituted our study population.

We used a difference-in-differences approach with linear regression models to compare the change in post-discharge mortality and all-cause readmissions from before TCM code implementation (2012) to after implementation (2015–2017), excluding 2013 and 2014 from the analysis given the low observed uptake in those years in prior studies and to allow for gradual adoption. Our models controlled for beneficiary and PO attributes and used PO-level fixed effects to account for unobservable PO-level differences and clustered standard errors at the PO level. Beneficiary attributes included the following: age quartile, sex, dually eligible status, probability of White vs non-White race via the Medicare Bayesian Improved Surname Geocoding,[27] metropolitan vs non-metropolitan residence, and medical complexity via quartiles of the HEDIS plan all-cause readmission measure risk-adjustment weights (hereafter, readmission risk; based on age, sex, surgery during hospitalization, discharge clinical condition, comorbid condition). For POs, time-variant attributes in all models included the number of attributed beneficiaries, number of physicians, and proportion of physicians who are PCPs, while time-invariant attributes (ie, system affiliation, academic affiliation, and ACO participation in 2017) only contributed to models with interactions included (Appendix A).

The association between a PO's adoption of TCM codes and post-discharge outcomes was estimated by the interaction between "high-TCM" and the post-period variables (either the combined 2015–2017 post-period or fixed effects for each year). We assessed variation in that association by 3-way interaction with key PO attributes (ie, system affiliation, academic affiliation, ACO participation, and proportion of physicians in primary care).

We assessed several model specifications with combinations of included PO and beneficiary attributes and PO fixed effects to assess the robustness of our association of interest. As an alternate approach to the 3-way interactions with PO attributes, we conducted regressions stratified by PO attributes of interest.

Results

After inclusion criteria were met, our study included 1131 high-TCM POs and 1133 low-TCM POs that averaged 3643.0 (SD: 5802.2) and 1714.8 (SD: 2848.8) attributed beneficiaries per year, respectively (Table 1). On average, compared with low-TCM POs, high-TCM POs had slightly more physicians (45.8 vs 42.9), a slightly higher proportion of PCPs (75.7 vs 70.2), were less often system affiliated (25.5 vs 33.0) and less often academic medical center affiliated (1.9% vs 4.1%), had more 1-sided risk ACO participation (72.9% vs 62.8%), and similar 2-sided risk ACO participation (15.0% vs 15.2%). Compared with low-TCM POs, on average high-TCM POs had populations of similar age (78.4 vs 77.5 years), gender mix (55.1% vs 54.9% female), and similar readmission risk among patients with eligible admissions (−1.88 vs −1.87) but had fewer non-White patients (13.5% vs 22.9%) and fewer dually eligible patients (17.0% vs 23.4%).

Table 1. Characteristics of high- and low-TCM–use physician organizations.

	High-TCM POs	Low-TCM POs
No. of POs	1131	1133
PO characteristics		
Number of MDs, mean (SD)	45.8 (103.9)	42.9 (209.1)
Proportion of PCPs, mean (SD)	75.7 (26.4)	70.2 (29.4)
System affiliated, ***n*** (%)	288.0 (25.5)	374.0 (33.0)
ACO affiliated, *n* (%)		
One-sided risk	825.0 (72.9)	711.0 (62.8)
Two-sided risk	170.0 (15.0)	172.0 (15.2)
Academic medical center, ***n*** (%)	22.0 (1.9)	46.0 (4.1)
No. of attributed beneficiaries, mean (SD)	3643.0 (5802.2)	1714.8 (2848.8)
Attributed beneficiary characteristics, mean (SD)		
Age, y	78.4 (1.7)	77.5 (1.9)
Female, %	55.1 (5.0)	54.9 (6.0)
Non-White, %	13.5 (14.9)	22.9 (25.4)
Dually eligible, %	17.0 (13.6)	23.4 (19.2)
Non-metropolitan, %	23.3 (32.5)	31.9 (37.5)
Readmission risk-adjustment factor	−1.88 (0.12)	−1.87 (0.17)

Abbreviations: ACO, Accountable Care Organization; PCP, primary care provider; PO, physician organization; TCM, transitional care management.

While both had relatively stable rates of TCM-eligible discharges over time, high-TCM POs averaged more discharges per year than low-TCM POs: 605.7 in 2012 compared with 653.8 in 2017 for high-TCM POs vs 319.7 in 2012 to 310.4 in 2017 for low-TCM POs; this is approximately proportionate to the difference in mean attributed beneficiaries to the POs (Figure 1, Appendix B). As intended, the number of TCM visits grew more in the high-TCM group than in the low-TCM group (201.8 vs 3.9 visits, on average, in 2017) corresponding with greater growth in the percentage of eligible discharges that had a TCM visit (32.8% vs 1.1%, on average, in 2017).

While readmission rates were similar for high- and low-TCM POs in 2012 (30-day readmissions of 13.6% and 13.4%, respectively; 90-day readmissions of 25.0% and 24.9%, respectively), readmissions decreased slightly more for high-TCM POs than for low-TCM POs by 2017 (30-day readmissions of 13.0% and 13.3%, respectively; 90-day readmissions of 23.8% and 24.5%, respectively) (Figure 2, Appendix B).

Likewise, post-discharge mortality rates were similar for high- and low-TCM POs in 2012 (30-day mortality of 1.86% and 1.84%, respectively; 90-day mortality of 5.46% and 5.43%, respectively), and they declined slightly for high-TCM POs but increased slightly for low-TCM POs by 2017 (30-day mortality of 1.79% and 1.98%, respectively; 90-day mortality of 5.22% and 5.63%, respectively).

In adjusted difference-in-differences linear regression analyses (Figure 3A, Appendix C), PO TCM use was associated with decreased readmissions in the post-discharge period (ie, 2015–2017): −0.31 ($P = .005$) percentage point and −0.42 ($P = .004$) percentage point decreases for 30- and 90-day readmissions, respectively, but no significant difference in mortality. Year-by-year differences in the post-period TCM use and readmissions (Figure 3B, Appendix C) were largest in the last measured year (2017) (−0.39 [$P = .003$] and −0.48 [$P = .007$]

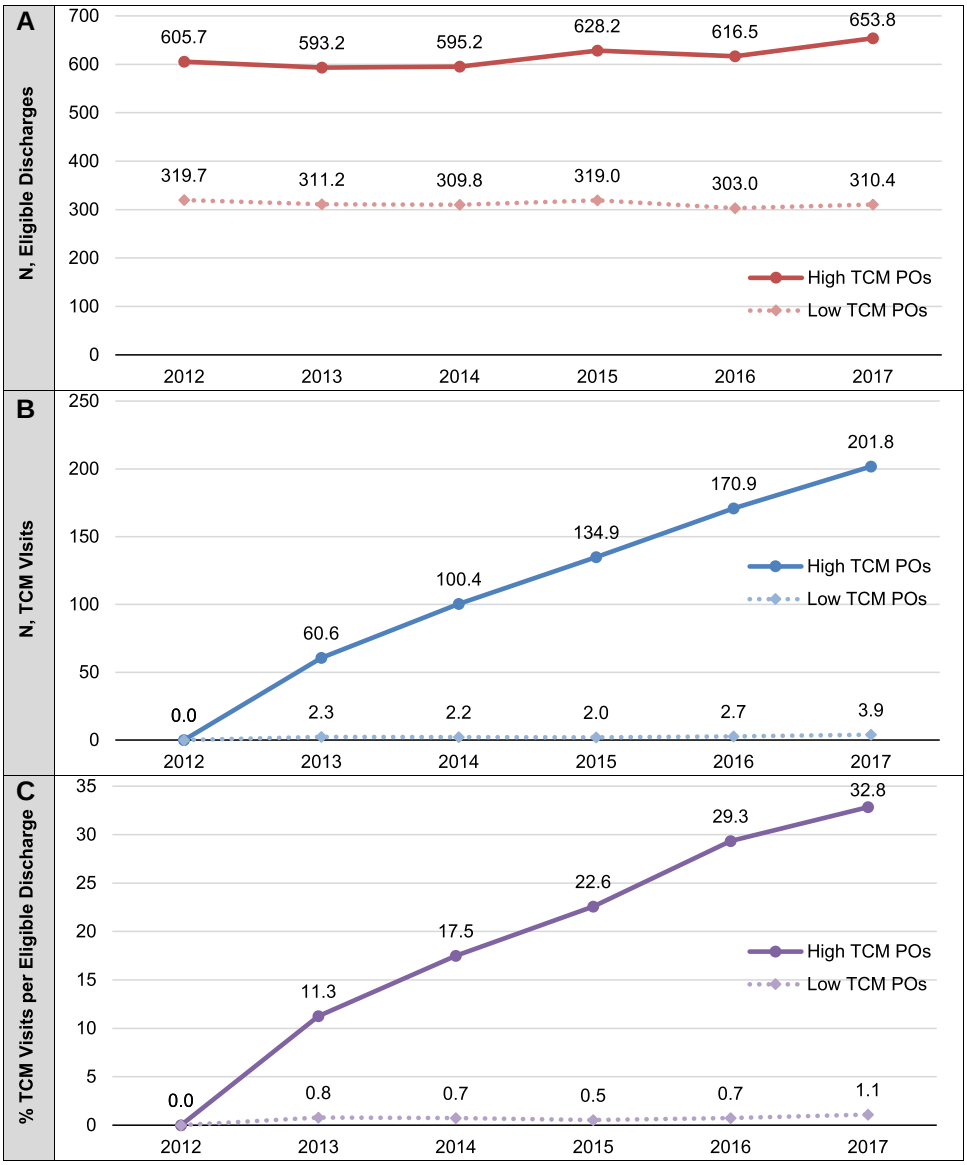

Figure 1. (A–C) Trends in discharges and TCM use among high- and low-TCM POs from 2012 to 2017. Abbreviations: PO, physician organization; TCM, transitional care management.

percentage points for 30- and 90-day readmissions, respectively). Further, there was a slight negative association between TCM uptake and mortality in 2017 only (−0.23 [$P = .01$] and −0.31 [$P = .024$] percentage points for 30- and 90-day mortality, respectively). Unadjusted findings were similar (Appendix D), and these results were robust to several model specifications (Appendix E).

Differences in the association between TCM use and post-discharge outcomes varied by PO characteristics (Figure 4, Appendix F). The relationship between TCM uptake and readmissions was greatest for POs not affiliated with a system (−0.43 [$P = .001$] and −0.65 [$P < .001$] percentage point decreases for 30- and 90-day readmissions, respectively), those that were not an ACO (−0.60 [95% CI: −1.10, −0.10; $P = .02$] and −0.93 [95% CI: −1.57, −0.29; $P = .005$] percentage point decreases for 30- and 90-day readmissions, respectively), and those that were not an academic medical center (−0.31 [95% CI: −0.52, −0.10; $P = .004$] and −0.44 [95% CI: −0.72, −0.15; $P = .003$] percentage point decreases for 30- and 90-day readmissions, respectively), and was less in POs with the fewest primary care physicians (−0.21 [95% CI: −0.52, 0.11; $P = .03$] and −0.06 [95% CI: −0.52, 0.40; $P = .12$] percentage point decreases for 30- and 90-day readmissions, respectively). There was no significant variation in the association between TCM implementation and mortality by PO attributes. Results were robust to several model specifications (Appendix E) and findings from regression analyses stratified by PO attributes were qualitatively similar to these findings (data not shown).

Discussion

In our national study of the use of TCM codes, we found that POs' use of TCM codes after hospital discharge was associated with modest improvement in 30- and 90-day readmissions and limited to no change in mortality. We also found that the

Figure 2. (A, B) Trends in readmission and mortality rates among high- and low-TCM POs from 2012 to 2017. Abbreviations: PO, physician organization; TCM, transitional care management.

association between TCM code use and post-discharge outcomes increased over the study period with POs' greater use of them, with the greatest association with readmissions outcomes observed in 2017 and a slight decrease in mortality observed in that year. As TCM use rates also increased over time, this could be suggestive of a dose response. That is, we observed that the association between TCM use and outcomes appeared to increase concurrently over time along with the frequency of TCM use among high-TCM POs. Moreover, the associations between TCM use and readmissions were not evenly distributed, with a greater association among those POs with a greater percentage of providers who are PCPs and those not affiliated with health systems, ACOs, or academic medical centers.

Our conclusions differ somewhat from earlier analyses of relationships between TCM codes and post-discharge outcomes. Earlier beneficiary-level analyses found higher health care costs, higher mortality, and more readmissions between 31 and 60 days after hospital discharge among patients who did not receive a TCM service compared with those who did.[19,20] However, for a TCM service to be billed, action is required on both the part of the provider and the patient. More activated or supported patients may be more likely to respond to providers' post-discharge TCM outreach, as well as to schedule and keep post-discharge appointments. Since TCM services can only be billed when the bundle of required services is provided, including the visit, those for whom TCM codes are ultimately billed may differ from those for whom they are not. On the other hand, POs may also preferentially provide TCM to the subset of patients most likely to benefit from additional coordination provided. Since these differences are not necessarily observable in claims and administrative data, beneficiary-level comparisons may be subject to selection bias. Our analysis differs, in that because our identification of treatment and control is at the PO level, it is not subject to beneficiary-level selection with regard to those who ultimately receive the TCM services. Accordingly, the associations we observed between TCM service use and outcomes are more modest. Within high-TCM POs, there may still be differential targeting or receipt of TCM services among the patients served by that PO. Future research should assess the degree to which PO use of TCM services may ameliorate or augment disparities in post-discharge outcomes.

The association observed between TCM use and readmissions and mortality increases over time. As rates of use of these codes also increased among high-TCM POs during our study period, this finding is suggestive of a dose response, and lends support to the observed association being truly attributable to TCM code implementation.[7,9] This may also suggest that there is a learning curve to a PO's ability to ramp up and successfully deliver the bundle of post-discharge transitional care services reimbursed by the novel codes, as practices and staff become accustomed to processes, patient needs, and resources. Nonetheless, even in later years, the observed change in post-discharge outcomes was small compared with more heavily structured care delivery packages and with discharging-hospital–based interventions.[13] Moreover, while we assessed both readmissions and mortality at multiple time points after

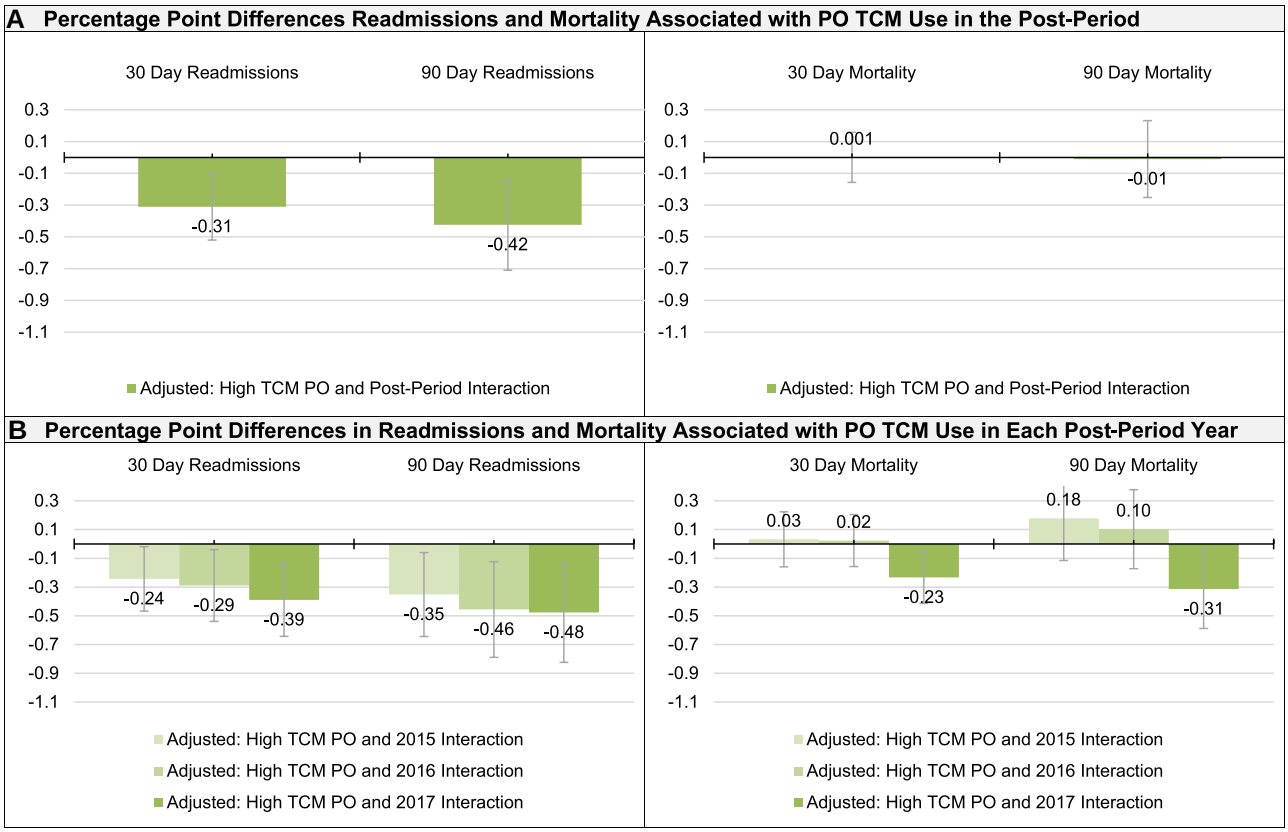

Figure 3. (A, B) Adjusted differences in readmission and mortality associated with PO TCM use. Abbreviations: PO, physician organization; TCM, transitional care management.

discharge using administrative data, TCM reimbursement may have impacts beyond these outcomes. Future research could consider patient-reported outcome measures, patient experience measures, and qualitative assessments from providers to more comprehensively assess the effects of TCM reimbursement.

The greater association between TCM use and post-discharge outcomes among key subgroups of POs suggests that the benefits of novel fee-for-service billing code interventions are likely to be relatively tightly focused, as opposed to broad. Aligned with prior research demonstrating lower readmission rates for small, independent practices,[28] we observed that the association between these codes and post-discharge outcomes is greater in those POs with a greater proportion of their physicians practicing primary care and those not affiliated with systems, ACOs, or academic medical centers. While those POs affiliated with systems, ACOs, or academic medical centers might seem to have more care management and coordination resources to potentially bring to bear, it could be that the focus of these large organizations was relatively diluted, compared with independent primary care–oriented POs. Despite greater overall resources, larger affiliated POs may also face more bureaucratic constraints, whereas independent POs may be more nimbly and flexibly able to adapt to innovate and prioritize TCM services in response to payment incentives. Alternatively, larger affiliated POs may have already made changes in post-discharge coordination and management, so the marginal impact of the care incentivized by the novel TCM codes' use was limited. As such, the implications of the trend towards consolidation and affiliation of practices with larger systems and POs on the overall relationship between financial incentives and post-discharge outcomes remain unclear. Our findings suggest that a potential function of fee-for-service care-coordination billing codes, like TCM codes, may be to spur independent POs and practices towards the types of care-coordination activities that are essential features of APM and VBP participation. By encouraging more of these POs and practices to use these novel fee-for-service billing codes,[8,9] they may help to effectively target resources to their greatest effectiveness to improve post-discharge care.

Further, while baseline readmissions, mortality, and readmissions risk were similar for high- and low-TCM POs, the 2 differed somewhat, with low-TCM POs having a greater proportion of non-White, dually eligible, and non–metropolitan-residing patients. As such non-White, dually eligible, and non-metropolitan patients may have less access to TCM services.[29] Direct support from CMS through targeted and proactive outreach by Quality Improvement Organizations may facilitate greater uptake of TCM codes in practices serving these populations. Further, even within a given PO, there may also be uneven delivery of TCM services among patients served by that organization. Future research should examine the degree to which TCM services may ameliorate or exacerbate disparities in post-discharge outcomes.

Our study has limitations. First, it is observational in nature; we cannot know whether the association we observed is due to the TCM codes themselves or due to other policy interventions or payment or delivery system changes that disproportionately affected POs with high-TCM use. We cannot fully account for this difference; however, our quasi-experimental approach

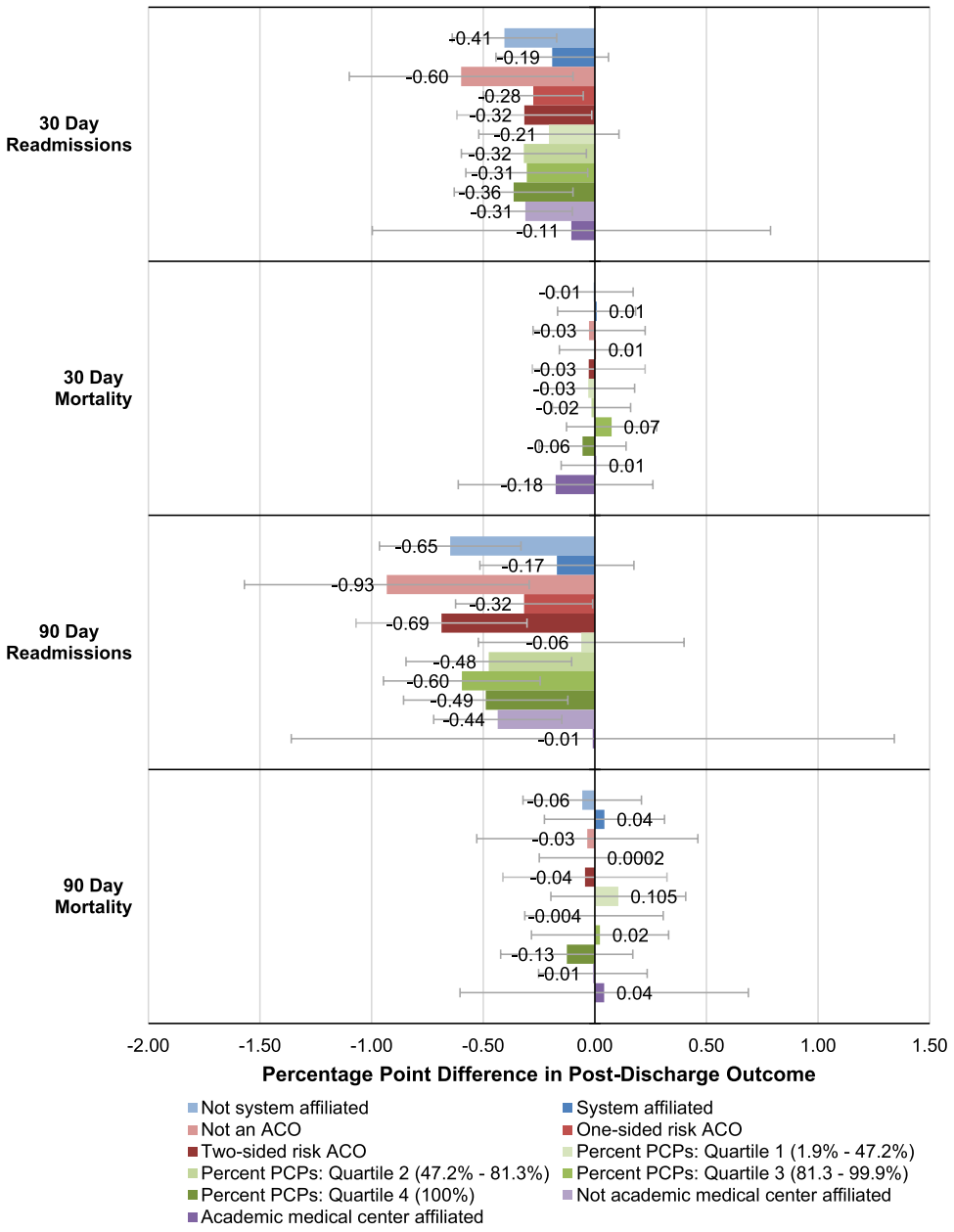

Figure 4. Adjusted differences in readmission and mortality associated with PO TCM use by PO characteristics. Abbreviations: ACO, Accountable Care Organization; PCP, primary care provider; PO, physician organization; TCM, transitional care management.

that compares high-TCM POs with otherwise similar POs with low use of TCM codes, and accounting for Medicare 1- and 2-sided risk ACO participation, should ameliorate these concerns. The POs may differ in other observable and unobservable ways that could impact their post-discharge outcomes; however, our approach accounting for PO and beneficiary attributes and a PO fixed effect should ameliorate this concern. Relatedly, we recognize that, without multiple pre-intervention time points, we cannot fully assess the parallel trends assumption typically required to draw causal inferences from difference-in-differences analyses. However, previous research addressing post-discharge outcomes over a similar time period (ie, readmissions assessed in the years preceding implementation of the HRRP) supports our assumption of parallel trends.[30,31] Furthermore, our quasi-experimental design includes controlling for a comprehensive set of beneficiary and PO attributes, including PO fixed effects to address unobservable PO differences, which aims to mitigate these concerns. Further, while our lack of a truly unexposed control group might suggest multiple interrupted time series (ITS) as an alternative analytic approach, our measures being specified for annual assessment limited the frequent time points typically needed for ITS analysis. However, our use of year-level fixed effects helps control for time-specific shocks and trends, providing a bridge towards mitigating related concerns and ensuring the robustness of our difference-in-differences framework. Additionally, we cannot observe the degree to which a PO's actual post-discharge care delivery differs when TCM codes are billed vs not; it is possible that some POs may provide services similar to those reimbursed by the TCM codes without billing for them, which would lessen the observable potential improvement associated with the use of these novel codes. This could be

true both in the period before the codes were available as well as the period following. Finally, we were unable to include Medicare professional services not billed in the Carrier file (eg, federally qualified health center and rural health clinic visits billed in the outpatient file); the impact of TCM codes may differ in these settings give their different organization, population, and reimbursement structure.

Our findings demonstrate that incremental, narrowly specified, indirect interventions, like novel additional outpatient fee-for-service billing codes, may be insufficient to substantially improve post-discharge outcomes initially. Supports and systems to provide post-discharge coordination can be complex and costly to set up; the fee-for-service reimbursement for TCM codes may not be sufficient support this investment without a sufficient volume of this care being delivered and billed. In short, ramp-up for this care may be difficult in this reimbursement model. However, reimbursement for TCM may help some POs to offset the costs setting up the type of infrastructure and capacity to provide these services effectively and consistently over time. Moreover, TCM codes may provide independent POs and practices with an initial financial bridge towards building capacity for broader care-coordination efforts. However, organizations may ultimately need more robust support to enact the types of structured transitional care interventions that could yield greater improvements in post-discharge outcomes overall.

Author contributions

R.O.R. and R.L. had full access to the study data and take responsibility for the integrity of the data and the accuracy of the analysis.

Supplementary material

Supplementary material is available at *Health Affairs Scholar* online.

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Conflicts of interest

Please see ICMJE form(s) for author disclosures. These have been provided as supplementary materials.

Data availability

The data used in this study were obtained under a Data Use Agreement with the Centers for Medicare & Medicaid Services (CMS) and are not publicly available due to confidentiality and data use restrictions. Data are, however, available from CMS upon reasonable request and with permission of CMS. Researchers interested in accessing the data should contact the CMS Research Data Assistance Center (ResDAC) for information on the application process and requirements.

Notes

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