MIPS in Residency? A Look at Merit-Based Incentives in an Internal Medicine Residency Outpatient Practice

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ABSTRACT

Background In January 2017, full implementation of the Medicare Access and CHIP Reauthorization Act (MACRA) Merit-based Incentive Payment System (MIPS) inspired us to introduce a similar incentivized model of value-based care into our internal medicine residency's outpatient practice.

Objective To provide real-world experience in a value-based payment practice model, we provided monetary incentives to internal medicine residents for meeting inbox management expectations, timely reporting, and improvement in clinical outcome measures.

Methods Thirty-seven residents were divided into 6 teams. Over a 5-month period, clinical goals were to reduce by 5% each teams' average number of patients with diabetes who had HbA1c > 9% and to raise by 10% the number of diabetes patients at target blood pressure. Goals for inbox management were established: all forms, notes, medication refills, and patient requests were expected to be complete at the end of each week. Teams received monetary bonuses based on compliance with reporting, management of inboxes, and progress toward clinical outcome goals.

Results Every team improved their patients' blood pressure; however, no one reached the 10% target. Every team improved their patients' average HbA1c, and 2 teams surpassed the 5% goal. All teams met their weekly reporting goal, and half completed the inbox management tasks 100% of the time. Of the 26 participants who completed the survey, 22 (85%) favored continuing the program.

Conclusions Providing monetary incentives in a team-based internal medicine residency model improved patient outcome measures and provided real-world exposure to incentivized value-based care.

Introduction

With the repeal of the Sustainable Growth Rate (SGR) and the passing of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA),[1] the practice of outcomes-driven, high-value care has become a necessary component of treating Medicare patients.[2] Although evidence demonstrates that practice management curricula can be beneficial,[3] historically, residents in training have not been well-prepared to understand the principles of business in medicine.[4,5] It is not clear how to provide residents realistic experiences in outcomes-driven, incentivized outpatient care. We developed a modified version of MACRA's Merit-based Incentive Payment System (MIPS) in our internal medicine residency outpatient practice to reinforce principles taught in the high-value care and business of medicine curriculum and improve outpatient intervisit care and clinical outcomes in our patients with diabetes.

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Editor's Note: The online version of this article contains the survey of Mini-MIPS experience and the Mini-MIPS tracker.

Methods

Setting and Participants

In January 2017, our community-based categorical internal medicine residency program consisted of 37 learners (12 postgraduate year 1 [PGY-1], 13 PGY-2, and 12 PGY-3) working in an X+Y schedule that includes 1 week of continuity practice for every 4 weeks (3+1), excluding vacation and critical care rotations. Our program converted to the X+Y schedule in July 2015 from a traditional half-day per week model. Our business of medicine curriculum covers the SGR repeal, quality-based payment systems, high-value care principles, MACRA, and quality improvement concepts. All residents complete mandatory self-study assignments in the Institute for Healthcare Improvement Open School[6] during their PGY-1. Our resident outpatient continuity practice is supervised by 5 full-time American Board of Internal Medicine certified internal medicine teaching faculty. For this

project, we used 2 registered nurses (RNs) who gathered and summarized input from their team of licensed practical nurses (2) and medical assistants (4).

Our nursing staff reported that since transitioning to the X+Y schedule, residents were not consistently completing intervisit patient care tasks, such as durable medical equipment and home health paperwork, office notes, medication refills, and other office tasks, in a timely manner. In addition, they reported that outpatient electronic inbox messages and papers-for-review and signatures were frequently ignored during the weeks when the residents were not scheduled in office. Clinical staff requested clearer processes for contacting residents about patient requests, home health paperwork, and prescription refills during non-office weeks.

What was known and gap
With the federal push toward pay-for-performance, residency programs need a method to prepare residents for outcomes-driven, incentivized outpatient care.

What is new
A modified version of MACRA's Merit-based Incentive Payment System to reinforce principles taught in a business of medicine curriculum and to improve outpatient intervisit care and clinical outcomes in patients with diabetes.

Limitations
Single site and small sample size limit generalizability; survey lacks validity evidence and had a low response rate.

Bottom line
The use of monetary incentives in a team-based care model can improve clinical measures and residents' outpatient intervisit task completion.

Intervention

In January 2017, our program implemented a pay-for-performance incentive aimed at improving intervisit patient care practices and providing real-world experience in an incentivized outpatient care model.

During a business meeting, the program director shared with residents and faculty the concerns raised by office nursing staff. At that time, the plan for financially incentivizing performance was presented and the group developed expectations for intervisit care, timelines, and responsibilities. The group set a goal of 100% completion of weekly intervisit tasks. In addition, the group set goals for specific clinical outcomes: reduce the percentage of our diabetes patients with HbA1c > 9 by 5%[7] and improve the total number of all patients with diabetes at target blood pressure[8] by 10% over the 5-month project period. In consultation with our clinical RN leads, algorithms for communication and cross-coverage for residents and clinical staff were developed (FIGURE), distributed to residents by e-mail, and posted throughout our clinical sites.

At this time, residents were divided alphabetically into 6 cross-coverage teams (2 of each PGY level) and given color designations (the red team had an additional PGY-2 resident). The decision was made by the group to reward each team, rather than each individual, with a monetary bonus for progress toward the stated goals (TABLE). Each team selected a team leader and was given autonomy to determine cross-coverage assignments within their team, day of the week for their scheduled reporting, specific clinical interventions to achieve patient outcome goals, and distribution of anticipated bonus payment.

Support staff used electronic health record (EHR) data to provide each team with the patients with HbA1c > 9%; the teams used this data to determine the team average HbA1c for patients with > 9% level (n = 49). They also generated a report of all patients with diabetes age 18 and older who had their blood pressure measured in the office during the last year (n = 107) and calculated a baseline percentage of patients with diabetes with target blood pressure. These patients were the group for inclusion during the entire project period (n = 156). Each team was notified of their baseline data as well as the calculated target endpoints for the project.

Our 2 PGY-2 quality chiefs tracked intervisit task completion, obtained the weekly reports from team leaders, and posted the progress on our residency website over the project period.

Outcomes

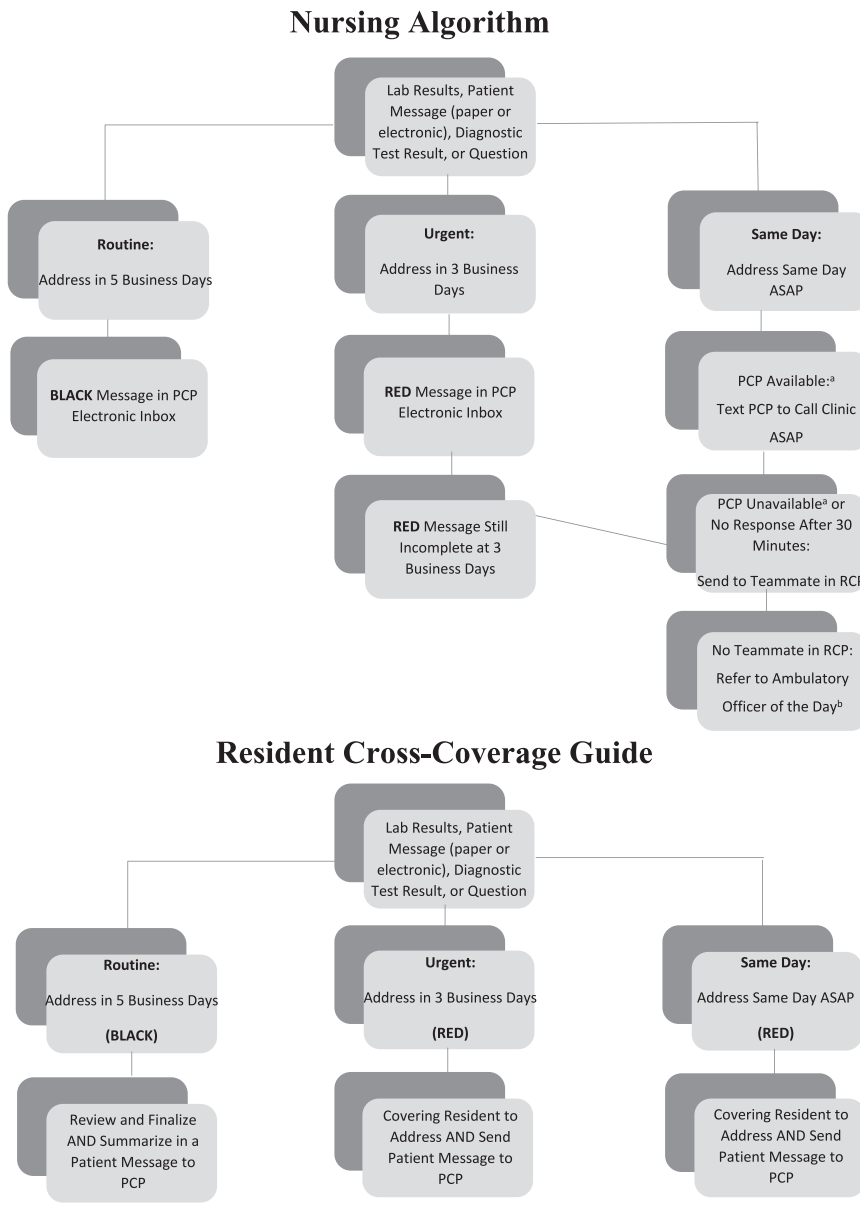
At the end of 5 months, outcomes included the number of teams achieving an average 5% reduction in HbA1c of all their patients with diabetes with HbA1c > 9% at baseline and those achieving an average 10% improvement in their patients with diabetes at target BP. The number of teams that achieved weekly reporting and inbox task completion goals and that received incentive payments were measured.

At conclusion of 5 months, an anonymous 8-question survey was administered to project participants about their experience. The survey was developed by the authors without further testing and included open-ended and dichotomous questions (provided as online supplemental material). Descriptive statistics were calculated for the outcomes.

The Aultman Health Foundation's Human Research Review Board declared this project exempt.

Results

All residents (37), faculty (5), and clinical staff (8) participated in the intervention. Clinical staff reported that patient care delays were nearly eliminated



FIGURE

Nursing Algorithm and Resident Cross-Coverage Guide

Abbreviations: PCP, primary care physician; RCP, respiratory care practitioner.

[a] Residents scheduled on medical intensive care unit, cardiology, vacation, away rotation, or night float are generally unavailable for texts and pages. Use your judgment.

[b] Ambulatory officer is on-call each day for urgent patient care needs when primary care physician is unavailable.

during the 5 months. Every team demonstrated improvement in their HbA1c clinical outcome goal, with 2 teams (33%) improving their patients' average HbA1c by more than 5%. All 6 teams made improvement toward their blood pressure clinical outcome goal; however, no one reached the 10% improvement target. During these 5 months, no team earned more than 2 reporting penalties, and half (50%) did not receive any reporting penalties (provided as online supplemental material).

Out of 50 participants, all 37 residents and 5 faculty were given the survey. Eight clinical staff members' input was summarized by the 2 RNs who each completed a survey (44 total surveys). Out of these 44 surveys, 26 were completed. Clinical interventions reported by residents included setting shared goals with patients about blood pressure and glucose self-monitoring, intervisit telephone calls to patients, weight management goal-setting and dietary counseling, referral to community health worker for

TABLE
Team Goals and Incentives

Intervisit Care Goals	Incentive Payment (per resident)	Penalty
100%: On-time weekly reporting by each team 0%: Reports of incomplete patient care tasks (eg, refills, papers for review and signature, labs to review, electronic inbox clear)	$50	4 or more missed/unsatisfactory weekly reports ▪ forfeit $50 reporting incentive ▪ 5% penalty subtracted from total earnings for each missed/unsatisfactory report $\geq$ 4
Any percentage improvement toward team's target blood pressure goal at the end of 5 months	$50	None
5% or more improvement in team's average HbA1c at the end of 5 months	$100	None
10% or more improvement in team's percentage of diabetics in target blood pressure range at the end of 5 months	$75	None
Total possible bonus per individual resident	$275	. . .

exercise, diet education, and incentive programs for patients. The majority of respondents (85%, 22 of 26) answered "yes" to the statement, "We should continue a program of rewarding residents with monetary incentive for timely completion of work and favorable clinical outcomes." Additional supportive statements included, "It's a good way to prepare and educate residents for their future careers," and "Yes, it helps motivate and eventually leads to change in behavior." A comment from an individual who was opposed to continuing the pay-for-performance was, "The problem with this is it takes away the purpose of doctoring. . ."

All 6 teams decided to share bonus payments equally among team members. The maximum monetary bonus received by an individual was $200. The total bonus paid at the end of 5 months was $5,450.

For this project, we repurposed funds in our budget that were traditionally used for rewarding resident performance and scholarship. Previously, this money had been awarded through an application process to residents who demonstrated excellence in research, summary performance evaluations, and involvement in hospital and/or program committees. We also used 1 to 2 hours of experienced information technology (IT) personnel time and an EHR capable of reporting clinical data for individual residents. Quality chiefs and program directors dedicated roughly 10 hours of time reviewing the EHR reports, calculating and communicating team baseline and target data, reporting results on the web-based tracker, and developing the survey.

Discussion

The results of this study indicate the use of monetary incentives in a team-based care model can improve clinical measures and outpatient intervisit task completion in an internal medicine resident continuity practice and provide real-world exposure to an incentivized value-based care model. The majority of survey responses were favorable about continuing this model in our practice.

Several studies have shown pay-for-performance can improve processes and clinical measures in primary care practices with or without an EHR.[9–12] However, data are sparse regarding outpatient residency practices. By simulating MACRA's Quality Payment Program (MIPS), our community-based residency tested the effect of offering a performance-based incentive to internal medicine resident physicians in their outpatient practice.

Our project was limited by its small size, with relatively few residents, clinical staff, and patients included. Only 59% (26 of 44) of participants responded to our survey. It did, however, solve the problem of poor intervisit care task completion, and was a timely interactive lesson to residents about the emerging value-based care model in which they will practice.

Ethical considerations exist in a pay-for-performance model.[13,14] Our project lacked a measurement of intervisit task completion errors. Data were not collected about correct completion of medication refills, forms, etc. Information about resident referral practices from the inpatient setting to their outpatient practices was not collected. Residents could have avoided accepting new high-risk patients with diabetes into their own teams' patient panels.

We were unable to obtain complete EHR reports from our IT department. After the project had begun, manual accounting of resident continuity practice

showed a greater total number of patients with diabetes than our electronic report generated. Anticipating this, our project structure did minimize the impact of this factor on the outcome, but our patients with diabetes who were not identified did not receive the same personalized attention as those who were identified. In addition, quality chiefs had to manually obtain updated data from the inpatient EHR to report progress toward HbA1c goals because our inpatient and outpatient electronic records are noncommunicating.

Although we saw improvement, the short duration of the project made significant clinical outcomes measurement unachievable. We cannot assess the longevity of our intervention's impact. It is possible that resident interest and enthusiasm may fade over time. We were fortunate to have the funding to monetarily reward resident performance; however, funding constraints may limit the generalizability to other programs. Additional studies could test other intangible rewards, like scheduled free time, special privileges, schedule selection perks, etc. Future assessments should include pre and post-measurement of medical errors in this type of team-based cross-coverage model and could use this to set another target to reward.

Conclusion

The use of monetary incentives in a team-based care model can improve clinical measures and outpatient intervisit task completion in an internal medicine resident continuity practice and provide real-world exposure to an incentivized value-based care model. Most participants who responded to our survey favored continuation of this model in our practice.

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