

Financial Incentives for Medical Assistants: A Mixed-Methods Exploration of Bonus Structures, Motivation, and Population Health Quality Measures

Stacie Vilendrer, MD, MBA, MS¹

Cati Brown-Johnson, PhD⁴

Samantha M. R. Kling, PhD, RD⁴

Darlene Veruttipong, MPH¹

Alexis Amano, MS¹

Bryan Bohman, MD²

William P. Daines, MD³

David Overton, RN⁴

Raj Srivastava, MD, FRCP(C), MPH⁵

Steven M. Asch, MD, MPH^{4,6}

¹Division of Primary Care and Population Health, Stanford University School of Medicine, Stanford, California

²Department of Anesthesiology Perioperative and Pain Medicine, Stanford University School of Medicine, Stanford, California

³Internal Medicine Clinical Program, Intermountain Healthcare, Murray, Utah

⁴University Healthcare Alliance, Newark, California

⁵Intermountain Healthcare Delivery Institute, Intermountain Healthcare, Salt Lake City, Utah

⁶Center for Innovation to Implementation, Veterans Affairs, Menlo Park, California



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CORRESPONDING AUTHOR

Stacie Vilendrer

Division of Primary Care
and Population Health

Stanford University School of Medicine
1265 Welch Rd, Mail Code 5475
Stanford, CA, 94305
staciev@stanford.edu

ABSTRACT

PURPOSE Medical assistants (MAs) have seen their roles expand as a result of team-based primary care models. Unlike their physician counterparts, MAs rarely receive financial incentives as a part of their compensation. This exploratory study aims to understand MA acceptability of financial incentives and perceived MA control over common population health measures.

METHODS We conducted semistructured focus groups between August and December of 2019 across 10 clinics affiliated with 3 institutions in California and Utah. MAs' perceptions of experienced and hypothetical financial incentives, their potential influence on workflow processes, and perceived levels of control over population health measures were discussed, recorded, and qualitatively analyzed for emerging themes. Perceived levels of control were further quantified using a Likert survey; measures were grouped into factors representing vaccinations, and workflow completed in the same day or multiple days (multiday). Mean scores for each factor were compared using repeated 1-way ANOVA with Tukey-Kramer adjustment.

RESULTS MAs reported little direct experience with financial incentives. They indicated that a hypothetical bonus representing 2% to 3% of their average annual base pay would be acceptable and influential in improving consistent performance during patient rooming workflow. MAs reported having greater perceived control over vaccinations ($P < .001$) and same-day measures ($P < .001$) as compared with multiday measures.

CONCLUSIONS MAs perceived that relatively small financial incentives would increase their motivation and quality of care. Our findings suggest target measures should focus on MA work processes that are completed in the same day as the patient encounter, particularly vaccinations. Future investigation is needed to understand the effectiveness of MA financial incentives in practice.

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INTRODUCTION

Given ongoing nationwide shortcomings in clinical services to improve population health,¹ primary care practices are under increasing financial and regulatory pressure to efficiently deliver high-quality health care.^{2,3} Team-based primary care models, with each team member functioning at the top of his or her scope of practice, have been an effective solution.⁴⁻⁶

Medical assistants (MAs) make up a substantial portion of the medical workforce and have played a key role because of their multifunctionality, short training period, racial and socioeconomic backgrounds often reflective of the patient communities served, and high relative value as the lowest-paid members of the care team.⁷⁻¹² In many jurisdictions, their scope has expanded to include health coaching, scribing, translating, and phlebotomy, which has enabled MAs to deliver increased value to team-based primary care.⁷⁻¹² Notably, high-performing MAs can improve

standardized quality measures in their patient population, including those related to screening, immunization status, medication adherence, and tobacco cessation.^{7,13,14} MAs have further demonstrated value in team-based care settings by problem solving in real time to remove barriers to care.¹⁵ Despite the growing value provided by MAs, performance-based financial incentives, which have been widely used and evaluated in the physician population,¹⁶ are typically not part of their compensation.^{12,17}

Strategies for efficiently and effectively incentivizing the primary care team to promote high-quality care are debated.^{7,12} Physician financial incentives have been linked to better patient care,¹⁶ but less is known about incentives for other staff. Financial incentives for MAs have been shown to be appropriate¹² and effective¹⁸ in the context of expanded MA roles and responsibilities. Incentives could improve performance by providing recognition and clarifying goals, as demonstrated among MAs outside of the United States.¹⁹ These studies suggest that MA incentives may be useful in health systems' efforts to improve quality of care, but optimizing incentive design is important. Too small of an incentive relative to salary is ineffective at changing physician behavior.^{20,21} Modest incentives, however, may result in greater productivity gains when aimed at MAs, given their relatively low annual median pay of \$34,800 in 2019, one-half the median annual pay of registered nurses (\$73,300) and one-sixth that of physicians (\$208,000).²²

Incentives may come with some risk. Financial motivators make up a relatively narrow band of human motivational domains, which also include mastery, autonomy/power, relatedness, social purpose, and hygiene factors (avoiding demotivation).²³ Research has shown that extrinsic motivators (eg, financial rewards) can "crowd out" intrinsic motivators (eg, autonomy), leading to a reduction in performance long term.²³⁻²⁷ These unintended effects may be mitigated to a certain degree by the structuring of a financial incentive: sustainability, a performance focus on quantity rather than quality, and the copresence of nonfinancial incentives may attenuate these adverse effects.^{23,26,27}

Furthermore, effective incentive design requires workers to have both the capability to perform the desired task and control over the desired outcome²⁸; these aspects depend on which area of performance is being incentivized. Even when MAs have the capability for expanded roles,^{7,12} they may not always exercise control over outcomes commonly incentivized in primary care, including health measures (eg, adequate diabetes control) that are used by national pay-for-performance programs.²⁹ Similar to professional organizations for physicians, the American Association of

Medial Assistants has voiced concern that MAs are being asked to deliver outcomes they cannot control.³⁰ Worker control over an incentivized performance area is an essential component of effective incentive programs in other health settings.¹⁶ Further research is needed to understand MA perceptions of control over various population health quality measures in order to select appropriate targets for financial incentive. This exploratory study therefore aims to understand MA acceptability of financial incentives and perceived control over common population health measures.

METHODS

Using mixed methods to explore MA perspectives on financial incentives (past and theoretical), we assessed variation in work processes that may be influenced by a financial incentive and perceived control over common population health measures with semistructured focus groups that incorporated a short survey. Key incentive frameworks described above^{23,31} were used to guide the design, interpretation, and presentation of findings.

Settings

Our study sites were primary care clinics in 3 health organizations across urban, suburban, and partially rural geographies in the United States (University Healthcare Alliance, Newark, California; Stanford Health Care, Stanford, California; and Intermountain Healthcare, Salt Lake City, Utah). Within each organization, we chose a subset of sites to represent urban (including suburban) and partial rural settings where available. Participants whose clinics were in counties having a greater than 25% rural area based on US Census definitions were designated as partially rural.³²

All 3 organizations were subject to pay-for-performance incentives at the system level through government and private payors; thus, each prioritized population health performance measures. The study was reviewed by the Stanford School of Medicine and Intermountain Healthcare Institutional Review Boards (protocols 51945 and 1051215, respectively) and did not meet the definition of human subjects research.

Data Collection

From August to December 2019, all MAs within each selected clinic were e-mailed an invitation by their managers to participate in a 1-hour focus group; the managers were not present during the conversation. Participants did not receive financial compensation for their time, although lunch was provided. None of the authors practiced within these clinics.

Focus groups (led by physician and health services researcher S.V.) consisted of a qualitative

semistructured discussion around MA perceptions of incentives, including their experience with past incentives and their reaction to a hypothetical incentive that offered \$250 per quarter (\$1,000 per year) for reaching a threshold performance across 3 population health measures (Supplemental Appendix 1, available at <https://www.AnnFamMed.org/lookup/suppl/doi:10.1370/afm.2719/-DC1>). They were also asked to comment on work processes relating to population health measures.

Each focus group included a written portion that was introduced approximately 20 minutes into the discussion and captured demographic data and a Likert³³ survey that asked, "How much control do you as a medical assistant have over improving the percentage of patients meeting each of the following quality metrics?" This question was followed by a list of 11 population health measures of interest, including process measures (eg, depression screening) and outcome measures (eg, A_{1c} control) (Supplemental Appendix 2, available at <https://www.AnnFamMed.org/lookup/suppl/doi:10.1370/afm.2719/-DC1>). Response options ranged from 0 (no control) to 4 (complete control).

Data Analysis

Focus Group Analysis

Conversations were recorded with permission from all participants and transcribed verbatim (Rev.com). Data collection continued until thematic saturation was achieved. Authors (S.V., C.B.-J., and A.A.) created an initial codebook based on emergent themes from early transcripts and used a constant comparative method³⁴ to categorize remaining data using NVivo 12 software (QSR International). Authors (S.V., C.B.-J., and A.A.) collectively reviewed a subset of transcripts to reach consensus on a coding structure before recoding all remaining transcripts in sequence (A.A. and S.V.) to ensure consistency. Codes were further analyzed to identify any potential differences in MA perceptions between clinic organizations as well as between clinic geographies.

Survey Analysis

We processed and analyzed quantitative data using SAS version 9.4 (SAS Institute, Inc) and R version 3.6.1 (R Project for Statistical Computing). For MA characteristics, we report descriptive data (numbers and percentages of MAs). Survey questions were grouped into vaccinations, activities

that MAs could complete themselves during the visit (same day; eg, body mass index screening, tobacco screening), and activities that involved a more complex workflow that spanned multiple days (multiday; eg, colorectal cancer screening) based on the authors' clinical experience and verified by focus group discussions. To determine whether perceived control differed between the factors, we used repeated 1-way ANOVA with Tukey-Kramer adjustment.

RESULTS

Across the 3 institutions, we conducted 10 focus groups with 4 to 9 participants each, for a total of 59 MA participants. As shown in Table 1, the large majority of MAs (78.0%) worked in urban/suburban settings, 44% were aged 30 to 39 years, 92% were female, 37% were White, and 54% were non-Hispanic. Nearly one-half had worked as an MA for 10 years or more. Findings were consistent across institutions as well as urban/suburban vs partially rural areas, and are therefore reported for the cohort as a whole.

Table 1. Sociodemographics of MA Participants (N = 59)

Sociodemographic Measure	No. (%)	Sociodemographic Measure	No. (%)
Age-group, y		Hispanic	
18-29	14 (23.7)	No	32 (54.2)
30-39	26 (44.1)	Yes	27 (45.8)
40-49	11 (18.6)	Location	
50-59	6 (10.2)	Urban/suburban	46 (78.0)
60-69	2 (3.4)	Partially rural	13 (22.0)
Sex		Health system organization ^a	
Missing	1 (1.7)	UHA	16 (27.1)
Female	54 (91.5)	SHC	20 (33.9)
Male	4 (6.8)	IHC	23 (39.0)
Race		Years as MA	
Missing	11 (18.6)	<1	2 (3.4)
American Indian	1 (1.7)	1-4	11 (18.6)
Asian	9 (15.3)	5-9	17 (28.8)
Native Hawaiian or Pacific Islander	1 (1.7)	≥10	29 (49.2)
White	22 (37.3)		
Other or multirace	15 (25.4)		

IHC = Intermountain Healthcare; MA = medical assistant; SHC = Stanford Health Care; UHA = University Healthcare Alliance.

Notes: MAs reported that all clinics except for 1 SHC clinic predominately used an MA-to-physician 1:1 teamlet model, although other variations (eg, 3:3, 2:5, 3:2, and 2:1) were used across all institutions. MA work primarily consisted of tasks related to rooming patients and preparing them for seeing the physician. SHC MAs also rotated through checking patients in at the front desk.

^a These organizations represent diversity in payment structures and patient populations served: SHC is a large academic health system delivering a range of highly specialized care; UHA is a network of primary care practices closely affiliated with SHC that serve patients from diverse socioeconomic backgrounds in the San Francisco Bay Area; IHC is an integrated delivery system with its own health insurance and is the largest provider in its area.

The mixed-methods analysis suggested 3 emergent themes around MA incentives: (1) limited MA experience with financial incentives but overall acceptability, (2) potential for increased performance through increased effort, and (3) strongest perceived control over same-day population health measures. We discuss findings below with illustrative comments denoted by participant number and focus group number (MA, FG).

Experience With Performance Incentives

Incentives Uncommon but Highly Valued

The majority of participants reported no ongoing or past experience with financial incentives. One MA reported a performance-based bonus at a prior job within private practice, when she received \$2,000 for hitting a diabetic screening target (MA 3, FG 9). Only 2 of the 9 clinics tied MA performance-based incentives to population health outcomes. One of these clinics had recently implemented the incentive program, although MAs had not yet received the incentive and could not articulate its scope. At the other clinic, nonfinancial incentives included a "jeans day" with a party featuring an Italian soda bar, donuts, and pizza, and was based on performance thresholds. There was variation in the degree of motivation this nonfinancial incentive elicited:

"It's not going to stir me ... to be like some crazed woman going to stab everybody with a flu shot." (MA 4, FG 7)

"And I'm just the opposite. I'm calling every single one of my patients and asking them if they had a flu shot." (MA 2, FG 7)

MAs had more experience with payments not explicitly tied to performance. A minority of MAs reported receiving year-end "thank you" bonuses based on hours worked, ranging in annual value from \$100 to \$500. MAs acknowledged the high value they placed on both financial and nonfinancial signals of gratitude from their employers: "At [other clinics], they had a ton of employee appreciation things. They have a huge holiday party at a hotel and sit-down dinner" (MA 2, FG 3). In discussing a \$2 per hour pay raise, another MA said, "When you [managers] say to these MAs 'We really do appreciate what you do behind the scenes, and here is a small token of our appreciation'... It goes a long ways to say thank you" (MA 4, FG 9).

Response to a Hypothetical Financial Incentive

When presented with a hypothetical bonus of \$250 every 3 months, MA reactions were overwhelmingly positive toward this monetary incentive. Their reactions included joyful laughs and "Heck yeah!" (MA 2, FG 4). The amount was considered to be substantial as well as more acceptable than other gifts received:

"It's better than getting a jacket or a flashlight ... that's a waste of money" (MA 7, FG 2). Using incentives to increase satisfaction was also suggested, as one MA reported, "I'd be happier... [an incentive] would probably make you happier while you're doing it." (MA 6, FG 6).

Reactions highlighted the perceived recent increase in workload related to population health measures. One MA spoke hypothetically to her employer, "What more do you want me to do? I'm a nurse practically" (MA 4, FG 6). As physicians received financial incentives for work completed in part by MAs, some MAs thought their own financial incentive might restore equity in this regard. One MA shared her frustration: "But if we're doing all the work, and we already know they're making all the money, [then] we're peons" (MA 7, FG 10).

Rare skeptical perspectives suggested that a higher hourly wage would be a more favorable acknowledgment of quality work than a bonus: "I don't want a bonus. I just want to do a good job and not worry about these meticulous little pieces" (MA 4, FG 7). Others did not see value in incentivizing work already considered part of one's job: "I don't think it would change the way that I would do my job..." (MA 2, FG 4).

The MAs were also worried that incentives might have unintended adverse consequences. They reported that incentives might draw attention away from important but hard-to-measure patient care: "What would get left at the wayside...?" (MA 4, FG 8). Another MA suggested that the measure of population health outcomes and goals "captures just a very little part of what an MA does daily" and wanted a more expansive consideration of performance (MA 4, FG 7).

Perceived Impact of Incentives on Performance

The dominant mechanism by which MAs reported that financial incentives could improve organizational performance centered around increased MA effort and consistency (Table 2).

High Potential for Increased MA Effort in Multiple Areas

Focus groups revealed multiple mechanisms by which an MA incentive might improve population health outcomes. MAs reported some lack of consistency in completing every task for every patient while performing rooming activities, both in their own and others' performance. Many thought an incentive "would encourage those who aren't, maybe, working up to the bar" (MA 4, FG 5). Comments made by some suggested that incentives might serve as both motivation and reminder: "I won't forget anymore" (MA 2, FG 4) and "I would nail it all" (MA 1, FG 5).

Table 2. MA-Reported Mechanisms Whereby Financial Incentives May Improve Organizational Performance

Mechanism	Illustrative Quotations
Increased employee effort	
Consistent performance	"Definitely different work ethics amongst all MAs, yes. You can be on top of it like OCD/type A or you could just exist I guess." (MA 5, FG 7)
Thorough follow-up in gathering outside records	"We have [a] standard where when it's slow, we're supposed to create folders, but some people don't follow up. Some people delete the whole thing when you're not supposed to. You're supposed to keep it for at least a month or 3." (MA 2, FG 5) "I send messages to myself. I call myself on my phone...Because I'll be home and I'll remember something I forgot to do so I call myself." (MA 2, FG 9)
Equivalent population health care for non-panel patients	Expectations vary across clinics and institutions for whether MAs work to close population health gaps for patients not on their physicians' panel. (Field notes)
Signaling of organization priorities	"We just had a report run on us last week about our blood pressure ... everyone's name was on there ... we just passed it around in the huddle and you could see those ones that don't do standard work ... they only double-checked it [blood pressure] 1 time. This has been embedded in our heads for 2 months. 'Why can't you do your job?'" (MA 1, FG 5)

FG = focus group; MA = medical assistant; OCD = obsessive-compulsive disorder.

MAs reported overall confidence in their ability to close population health gaps; they never cited a lack of knowledge or ability as a barrier to closing a health care gap. Where MA-assigned tasks were not completed, many thought this failing was due a lack of effort, rather than ability (MA 2, FG 4).

Much of the work needed to close health care gaps involved reaching out to an outside organization to obtain records (eg, record of completion of a diabetic eye screen). Some abandoned this effort after a single attempt; others kept detailed reminders about which care gaps needed follow-up. Some thought financial incentives might address discrepancies between this type of activity. One MA reported, "We're supposed to do a lot of things every time that people don't do" (MA 3, FG 8). Finally, MAs in a minority of clinics believed that a financial incentive could shift the current behavior whereby some MAs would close care gaps only for patients on their own physicians' panel, rather than for all patients they interacted with. Patients assigned to another physician or those without an assigned physician would therefore miss the benefits of the MA population health workflow.

Organization Priorities Signaled Through Physician Incentives

The ubiquitous presence of the physician financial incentives tied to performance on population health measures seemed to create a mechanism whereby MAs were aware of the clinic's priorities, and achievement hinged on their responsibilities and tasks, even though the MAs themselves were not incentivized.

Across each focus group, MAs readily reported multiple target population health measures, even before receiving the written survey questionnaire on which the measures were listed. Information about clinic and physician performance on these metrics were presented on run charts displayed on the wall in multiple settings, available directly through the electronic health record, and/or in printed reports distributed by managers. This information also came from physicians, although MAs reported that physicians varied in their level of engagement with regard to metric performance. Engaged physicians initiated conversations with their team to plan to meet metric goals: "[Physicians] say, 'Oh well

I'm not here tomorrow... Can you work on [this measure] this week? Because our numbers are not good'" (MA 4, FG 2). An MA financial incentive is therefore unlikely to provide additional benefit from signaling clinic priorities beyond what has already been accomplished through the presence of physician financial incentive.

Perceived Control of Population Health Measures

Overall, MAs reported having variable control over population health measures, captured both in the survey and in focus group discussions. Perceptions of control depended largely on characteristics of the measure itself. Survey responses shown in Table 3 indicated that MAs perceived a lot of control or complete control for many same-day measures. Perceived control differed between the same-day, multiday, and vaccination measures ($P < .001$). As shown in Table 4, MAs rated their control of multiday metrics lower than those of same-day metrics ($P < .001$) and vaccinations ($P < .001$). Control for same-day metrics and vaccinations did not differ ($P = .45$).

Similarly, MAs shared perspectives that they had the most control over population health measures conducted within the same day. They seemed to refer to these measures specifically, noting, "If I can touch the patient, I can get it done" (MA 1, FG 5) and "We only can control what comes into the clinic" (MA 4, FG 9). When asked which measure they felt they had the most influence to change, 2 MAs discussed the importance of being in the room with the patient (FG 2):

Table 3. MAs' Perceptions of Control Over Population Health Measures (N = 57)

Population Health Measure ^a	No Control, No.	A Little Control, No.	Moderate Control, No.	A Lot of Control, No.	Complete Control, No.
Eye examination in diabetic patients	7	16	25	5	3
BMI screening	2	3	13	6	32
Controlling high blood pressure	4	8	24	9	10
Screening for depression	2	4	5	19	25
Use of imaging for low back pain	35	7	7	5	0
Influenza vaccination	0	3	8	24	21
Tobacco screening	0	2	4	22	29
Breast cancer screening	6	10	20	14	6
Colorectal cancer screening	3	14	23	11	5
Pneumococcal vaccination for adults ^b	0	3	14	21	18
Good control of A _{1c} in diabetic patients	5	16	18	9	8

BMI = body mass index; MA = medical assistant.

Note: Values are numbers of MAs.

^aThese measures were selected because of their inclusion in a national pay-for-performance program, ready measurability using the population health software at 2 organizations (Healthy Planet, Epic Systems), relative commonality across institutions, and diversity in associated disease and clinician roles involved in improving the measure. For example, physicians are expected to control placing imaging orders for low back pain,³⁵ so this measure is included as a comparator.

^bAlthough pneumococcal vaccination guidelines call for multiple doses,^{36,37} achieving the national measurement is based on a single dose; thus, vaccinations can also be considered a specific type of same-day measure, although they are analyzed independently.

MA 5: I believe it [the measure we have the most control over] is a depression screen because most of the time we do it in the room with the patient, so we go over it.

MA 4: Because we're putting in weight and height... those are the easiest ones.

Participants also recognized the importance of having designated time with the patient to close population health gaps, including addressing measures that are

typically captured in person such as blood pressure and body mass index screening. Accessing records outside the clinic was seen as challenging: "...outside of the clinic... the diabetic eye check, those are a bit trickier because we can't ensure the patient can do it" (MA 4, FG 8).

For measures over which MAs reported having moderate to little control, the degree to which individual MAs felt control seemed to reflect the degree to which they saw themselves as a health coach: "I'll encourage the patient to do some deep breathing... I've had some men actually be so surprised like, 'Oh my gosh. My BP never dropped by 10 or 20 units'" (MA 4, FG 5).

MAs reported a number of external barriers to closing population health gaps (Table 5). These were felt to be beyond what a financial incentive could influence and were considered areas over which MAs perceived themselves to have little control. They included a lack of time, patient factors including poor compliance and declining care, lack of physician follow-through, poorly designed electronic health records, inability to adequately address a

Table 4. Differences in MA-Perceived Control Between Health Measures by Timing and Activity Type (Screening, Vaccination)

Comparison	Overall Perceived Control, Mean (SD) ^a	Effect Size (95% CI)	P Value
Same day vs vaccination			
Same day	3.18 (0.83)	-0.14 (-0.42 to 0.14)	.45
Vaccination	3.04 (0.82)		
Same day vs multiday			
Same day	3.18 (0.83)	1.21 (0.93 to 1.48)	<.001
Multiday	1.99 (0.82)		
Vaccination vs multiday			
Vaccination	3.04 (0.82)	1.07 (0.79 to 1.34)	<.001
Multiday	1.99 (0.82)		

^aOn a scale from 0 (no control) to 4 (complete control). Degrees of freedom = 111 for all comparisons.

Table 5. Barriers MAs Face When Trying to Improve Population Health Measures

Barrier	Illustrative Quotation
Time pressure including inability to work overtime	"There's a lot of [population health] questions and there's a lot of pressure for us to do a lot within a certain time frame, and so I think asking [all] the questions is kind of out of the question. It's too much to do." (MA 1, FG 4) "We can't have overtime, but we can't do our job. We can't do everything we need to do in the amount of the time we have." (MA 3, FG 8) "I have my little [population health] folders at my desk, all paper, all wanting to be done." (MA 2, FG 5)
Poor patient compliance (multifactorial)	"They go home, they're the ones that have to take that pill, go to the pharmacy and get it. Pay for it. A lot of our patients, it's 'why aren't you taking your diabetes med?' 'I can't afford it.' ... It's heartbreaking." (MA 2, FG 9) "I think there's a patient assumption that they assume that the doctor is going to always take care of them and do those refills, but the system's not set up for that." (MA 1, FG 7)
Patient declines care	"Sometimes patients don't want to do colonoscopies and even patients that are due for colonoscopy will be like, 'I don't care, I'm not going to do that till the day I die.' So that is challenging." (MA 1, FG 3) An exchange from FG 8: "I know it gets frustrating when someone's coming in and they're sick and we're like, 'Let me go over the depression questionnaire with you.'" (MA 4) "They need a refuse button because I've had a patient that refuses to answer questions." (MA 2) "They do." (MA 4)
Lack of physician follow-through	"Everybody's doctor's different. Some doctors are very good at being more meticulous in their record keeping and making sure things are ordered and stuff, where other doctors don't order things as well and whatnot. ... You may work twice as hard but your doctor didn't make the metrics, so you're not getting anything, yet you're working just as hard as someone else." (MA 6, FG 2)
Poorly designed electronic health record	"I think it's remembering when the MAs are doing the remaining intake to get to that e-cigarette area because it's a separate screen so you have to remember to take that extra step because vaping is such a new thing." (MA 9, FG 1) "We scan that sucker [vaccination] it should autofill, without a doubt. That just doesn't make any sense to me. Same with even just logging on ... why does his [primary care physician] name not autofill? I use it 99% of the time?" (MA 3, FG 9)
Inability to adequately address a positive depression screen	Facilitator [follow-up question regarding the depression screen]: "Does anybody start crying?" An exchange from FG 2: "Almost every other patient ... They're coming in for like a toe, foot problem. You're asking them some depression questions and they break down." (MA 7) "That's why it's hard for the doctors too. When we were trying to add it to the workflow, it was hard for them, because they were like, 'Okay. We're here for foot pain and now we're talking about depression.' And of course, in all of this it expanded more than the 15 to the 30 or 40 [minutes]." (MA 4) An exchange from FG 9: "You have no choice but to stare at a computer because you've got to hit all these dots, rather than, you know, sit there and when they're crying at you ..." (MA 2) "And you only have that short window to get it done." (MA 4) "'Stop crying for just a minute.'" (MA 2) "And you have to hurry because the doctor's on your butt." (MA 4)
Reluctance to irritate patient	"I personally don't like quizzing because if someone asked me every time I saw a provider, I would be annoyed, so I try to make a mark of that, like 'when's the last time I asked them?' so I know if they're not a generally depressed person so I'm not bothering them." (MA 4, FG 7) "It is a lot of extra work, and we're not harassing people, but sometimes it feels like we're harassing them, making sure they're doing what they need to do, but in the end it is saving [the health system] money. It is saving patients hospital visits. It is saving ER [emergency room visits]. So it is making a difference. It doesn't always feel like it." (MA 2, FG 7)
Frequent role switching	"It's very important that same MA continues doing the [population health list] work for it, especially on admin time. That way you know where you left off, because someone else touches it, it ends up you have to start from the beginning to understand." (MA 2, FG 5)

FG = focus group; MA = medical assistant.

positive depression screen, reluctance to irritate a patient, and frequent switching of tasks (eg, front desk to back office to rooming).

DISCUSSION

This study underscores the potential opportunity and risk posed by MA financial incentives to improve the

quality of care, particularly given MAs' expanding roles. MAs reported that the idea of a financial incentive, even a relatively small one, was acceptable overall. They showed positive interest in a bonus representing 2% to 3% of their average annual base pay (\$34,000 to \$40,000 in their geographic localities³⁰). Although past literature suggests that a 10% to 20% bonus is needed to create meaningful behavior change among

higher-paid professionals,³⁸ our findings point to potential benefit from directing limited health system resources to lower-paid system members.

Participating MAs reported nearly no direct experience with financial incentives but indicated that they might encourage increased consistency in their day-to-day performance related to population health measures. Behavior change might include not forgetting steps during patient rooming workflow, repeated follow-up to obtain outside records, and completing population health workflow for all patients, rather than solely for their physician's empaneled patients. These disclosures suggest at least some room for improvement in MA performance that might be influenced by a financial incentive and lead to improved patient outcomes.

MAs also expressed that although they have the skills necessary to close population health gaps, they control only a subset of population health measures, particularly those with workflow processes that can be completed during a single patient encounter. These measures included body mass index screening, tobacco use, and depression screening, as well as influenza and pneumococcal vaccinations, from the subset of 11 measures studied. The principle of linking incentives to same-day measures, however, may be expanded to other existing and novel population health measures. The quantity of simultaneous target measures also matters, and care should be taken to avoid overburdening MAs with too many "meticulous little pieces," as suggested by cognitive load theory.³⁹ Furthermore, empiric investigations of potential adverse behavioral and relational consequences resulting from the introduction of financial incentives, alongside strategies to mitigate such effects, are needed to inform where and how financial incentives might optimally be applied in the MA population.

A dominant undercurrent throughout these conversations validates prior findings¹² that large structural challenges within each health system—capacity constraints, work hour restrictions, inefficient electronic health records, and patient behavioral health issues, among others—make it challenging for MAs to complete their daily tasks. External barriers such as an inability to retrieve records from outside sources or a patient declining recommended care dominated themes of resistance to incentive workability. Health systems considering introducing an MA financial incentive must therefore consider all aspects of the MA work environment and workflow to remove existing barriers to optimal performance. Additional research is needed to understand how to best use MAs in health care systems to improve quality of care and staff experience.

Patients of diverse backgrounds may also benefit from increased MA involvement in their care activities,

given their increased diversity relative to other members of the health care team.^{40,41} Racially concordant care between patients and physicians has been associated with greater patient satisfaction, higher-quality communication, and better patient health outcomes,⁴²⁻⁴⁴ but how MA diversity might impact clinical care is uncertain. We note participant demographics in our sample were even more racially and ethnically diverse than those of national MA samples, with an overrepresentation of Hispanic participants (45.8% sample, 26.1% national) and Asian participants (15.3% sample, 4.2% national), though the sex balance was equivalent.⁴⁰ Our sample more closely approximated local California health worker demographics where 6 of the 10 focus groups took place.⁴¹

This work is exploratory in nature and focused on the impact of incentives on quality of care, yet findings suggest a possible secondary effect on employee satisfaction. MA financial incentives are thought to improve satisfaction and reduce staff turnover.⁴³ Some MAs remarked that because physicians received financial incentives for the work completed in collaboration with the MA, a personal financial incentive would increase fairness and, potentially, job satisfaction. Such "organizational justice," defined as employees' perceptions of fairness in the workplace, has also been associated with improved performance and decreased turnover.^{17,46} Use of MA financial incentives to improve staff satisfaction therefore merits further research.

We note that this research was also conducted before the COVID-19 pandemic and the corresponding shift to telemedicine in many health systems.^{47,48} MAs' ability to close population health care gaps may be severely limited if they are not well integrated into the video visit workflow and thus have limited contact with the patient.^{49,50} Additional investigation is needed to assess this concern.

This study has several limitations. Our focus groups were drawn from 3 institutions in 2 geographic areas and may not be representative of MAs in other institutions or regions. Our use of focus groups rather than individual interviews fostered important dialog but may also have limited certain disclosures. Additionally, participant demographic data were captured anonymously and not directly tied to individual qualitative comments given the potential vulnerability MAs faced in participating in a focus group in their place of work. This choice limited an analysis comparing subgroups of varying demographics, although this may be an area for future investigation. Further, our conclusions—based on 11 population health measures—may have varied had other measures been chosen. Additional study is needed to understand MA perceptions of control across the multitude of existing population

health measures. Also, there is a need to evaluate the return on investment for incentive programs that address population health metrics, particularly the increase in performance for every dollar spent.

In conclusion, within 3 health care organizations, primary care MAs perceived that relatively small performance-based financial incentives would increase their motivation and the quality of care in their clinic. Furthermore, MAs reported feeling responsible for and able to control population health outcomes that could be completed within a single encounter, such as body mass index screening, depression and tobacco screening, and vaccinations. As health care systems nationwide aim to improve population health measures, it may be a savvy use of limited resources to focus incentives more on MAs. With MAs playing an increasingly essential role within primary care teams, future investigation is needed to develop effective and fair financial incentives.

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Key words: behavior change; medical assistants; financial incentives; team-based care; population health measures

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