Leadership Views on the Barriers and Incentives to Clinical Preceptorship

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ABSTRACT

Background: Clinical education often relies on a one-to-one student-preceptor model. Recruiting and retaining quality preceptors to sustain this model has become increasingly difficult at academic institutions across the nation. While ample literature describes preceptor barriers and incentives as viewed by physician educators, few studies explore the issue from institutional leadership perspectives.

Objectives: This study aimed to describe leadership perceptions across an academic institution to better understand knowledge gaps, system barriers, and proposed solutions to help institutions take action and address preceptor shortages.

Methods: Between February and July 2019, the researchers conducted one-on-one semi-structured interviews with sampled representation of Medical College of Wisconsin leadership. The researchers reviewed transcriptions of each interview verbatim and used a qualitative grounded theory approach to generate content codes and themes. Researchers iteratively refined codes using the constant comparison method until all interviews were analyzed and final themes and subthemes were defined.

Results: Twelve institutional leaders participated, of whom 5 were clinical executives, 1 was an academic executive, 4 were academic deans, and 2 were educational directors. Analysis yielded 4 major themes: student impact, recognition, physician well-being, and leadership.

Conclusion: Each content theme highlighted areas to consider when addressing preceptor issues within an institution: (1) leadership knowledge gaps regarding the scope of preceptor challenges, particularly time commitments and the number of preceptors required; (2) improving career advancement or promotion criteria to recognize teaching efforts; (3) enhanced physician well-being from teaching, while important, may no longer be sufficient for participation, especially without financial compensation; (4) distributed leadership may be needed to address issues at the course, clinic, and system levels.

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INTRODUCTION

Many medical schools use one-to-one student-preceptor models to teach in the clinical environment. This model provides a rich personalized learning opportunity for students, but its success typically depends on creating a large sustainable pool of qualified preceptors. Building and maintaining such a preceptor pool is a major logistical challenge. Unfortunately, this issue is widespread. In the 2013 Clerkship Survey of all MD- and DO-granting medical schools, 80% of respondents were concerned about the number of clinical sites available for clinical education.[1,2] Understanding and addressing the challenges of building robust preceptor pools is essential for preserving and augmenting high quality clinical education.

The difficulty in preceptor recruitment results from numerous factors, including preceptors experiencing lower clinical productivity, longer work hours, and limited recognition.[3,4] Physician barriers and incentives to preceptorship have been long reported in the literature; however, preceptor shortages remain. Few studies explore the issue from academic and clinical leadership perspectives to understand why institutions have seemingly not lowered barriers or offered incentives to address preceptor concerns. In this study, we used qualitative analysis of semistructured interviews with institutional leadership to better understand knowledge gaps, existing incentives, potential solutions, and barriers to solution implementation.

Box 1. Leadership Semi-Structured Interview Questions

- Please name barriers to physician participation as a clinical preceptor.
- In what ways would you minimize the above barriers?
- How much time is added to a physician's half day of clinic to teach a medical student?
- What incentives are currently in place to entice physicians to serve as preceptors to medical students?
- What are other incentives you suggest (may not be in place currently or have been tried in the past)?
- Do you think physicians should be monetarily compensated for participating as a preceptor? If so, what would be a reasonable amount?
- Is there anything else we have not discussed that you would like to comment on?

Box 2. Themes and Subthemes Identified Through Qualitative Analysis

Student Impact: How students affect the clinical environment
- Time
- Clinical productivity
- Infrastructure
- Competing clinical and administrative demands

Recognition: Benefit to preceptors for educating students
- Financial compensation
- Career advancement
- Tokens of appreciation

Physician Well-being: Factors that influence a physician's well-being
- Work-life balance
- Flexibility
- Professional development

Leadership: Roles of clinical and educational leaders
- Establish expectations for preceptors
- Clear communication of institutional teaching requirements
- Need to enable champions and local leaders

METHODS

Between February and July 2019, we conducted semistructured interviews with a purposeful sample of Medical College of Wisconsin (MCW) leadership. Researchers chose individuals with a stake in medical education who, collectively, represented leadership across all MCW-affiliated institutions. Most of the MCW-affiliated institutions are located within the greater Milwaukee area, including Froedtert & MCW, Children's Hospital of Wisconsin, and Clement J. Zablocki VA Medical Center. MCW also has 2 regional campuses located in Green Bay and Central Wisconsin. Study participants did not receive compensation. Ethical approval was granted by the MCW Institutional Review Board on November 29, 2018.

Researchers employed a grounded theory approach[5,6] to best understand participants' views on preceptor issues. We developed a semistructured interview protocol based on a review of literature regarding physician barriers and incentives for preceptorship.[2-4] Institutional medical education experts reviewed interview questions for clarity. One individual of the study team (PH) facilitated all of the interviews using the interview protocol (Box 1). Each interview lasted approximately 30 minutes. PH recorded each session using a digital handheld recorder and transcribed interviews verbatim, excluding any identifiers.

Three members of the study team (JB, PH, TM) analyzed transcripts though an iterative coding process. Initially, the study team independently reviewed 2 interviews to establish preliminary codes of recurring ideas and experiences. The researchers then met to jointly review, refine, and finalize the coding structure. Employing a constant comparative method, the researchers iteratively analyzed the remainder of interviews and then compared interviews to synthesize codes into overarching themes.

JB and TM are physicians who also serve as course directors and clinical preceptors. PH is an instructional designer. While we are MCW employees, none work with the study participants as part of our daily responsibilities.

RESULTS

Of the 12 participants, 5 were clinical executives, 1 was an academic executive, 4 were academic deans, and 2 were educational directors. Participants collectively represented all of the MCW-affiliated institutions: 5 from Froedtert & MCW, 2 from Children's Hospital of Wisconsin, 2 from Clement J. Zablocki VA Medical Center, 2 from the Green Bay campus, and 1 from the Central Wisconsin campus. All invited participants agreed to be interviewed. The qualitative analysis resulted in 4 major themes: student impact, recognition, physician well-being, and leadership. Box 2 provides all major themes and subthemes. We identified no additional conceptual codes in reviewing the final transcript, suggesting theoretical saturation.

Student Impact

All participants discussed how students affect physicians and their clinical environment. The participants observed mainly the students' impact on time, productivity, and infrastructure. The most prevalent of these subthemes was time. Participants estimated physicians spend an additional zero to 60 minutes per 4-hour block of clinic when precepting. One participant pointed out that the increase in time affected all clinic staff:

> My medical assistant who is working with me is now staying half an hour, 45 minutes late. The person at the front desk who checks out the last patient can't leave until they're gone. The lab person who waits until I'm done to know if they're going to get a lab can't leave until that last person goes. So if somebody runs late, there's a whole cascade of other people who support them who have to hang around longer.

Multiple participants attributed the barrier of time to the increasing number of physician demands within a clinic session. One participant perceived this as "[the] collapsing of time in the clinical arena." Examples of competing tasks included charting requirements, quality metrics, and high patient volumes resulting from the "incredible competition in town now." Simplified

workflows and innovative learning models were mentioned as possible solutions:

> Somehow, we have to get to a place where this doesn't become just 1 more thing and find ...build some simplicity. Leverage the skill set that the students bring to the table, and build, figure out where that partnership can happen.

Participants' ideas on how to accomplish this simplicity included improving student productivity, for example through student-led learning or billable student documentation.

Some participants felt an increasing pressure to take more than 1 student into their clinical space:

> …our docs and our APPs (advanced practice providers) are being contacted by every educational institution under the sun in southeast Wisconsin that has an APP program, or post-doc program, or just go down the list—and they're being inundated with these requests to precept.

Regarding the magnitude of student impact, some participants estimated the academic faculty workforce was sufficient to fulfill preceptor needs: "…we have about 1500 faculty, we have a lot of other doctors who are on staff…I guess what we need is 200 or 250 or something [as preceptors]."

Meanwhile the number of academic faculty available for teaching may be decreasing as career paths specialize:

> It's just all over the country that this [trend towards specialization] is what's happening. They'll be teams of great researchers, they'll be some clinician educators… and they'll be an army of clinicians generating the resources to support everything.

Recognition

A majority of participants discussed the importance of recognition, particularly in the form of financial compensation and career advancement. Participants' beliefs conflicted regarding the appropriateness and amount of financial reward.

In general, participants felt academic physicians should not receive financial compensation for teaching, rather it was an expectation of their self-chosen career: "… for primary care doctors or most specialty doctors, there's no reason to be at an academic medical center unless you are interested in teaching." No participant mentioned a specific amount of time expected of faculty to be spent teaching. Two participants mentioned "Teaching Value Units," analogous to "Relative Value Units." as a method for quantifying teaching efforts.

Conversely, most participants were in favor of compensating community physicians. Regarding the amount, one stated that the community physician should be "made whole" to balance out their loss in clinical productivity. Similarly, another participant stated, "…we just need to have a level playing field, so people don't think they'll be penalized for doing this mission." Participants said the importance of compensation was growing as the sense of moral obligation to teach may be declining:

> Schools often assume that [physicians] want to work for free, and that probably has less of an altruistic appeal for people who trained in the 80s and 90s [than for those] who trained before then.

Another participant acknowledged:

> I think that personal satisfaction and giving back is a big part of that incentive, but it's not enough to rely on to get the kind of engagement that I think we want to have or need to have moving forward.

Others pondered the impact of compensation. One participant expressed concern that monetary reward was a "perverse incentive" and would yield low quality preceptors. Conversely, another participant envisioned the potential for improving education quality through compensation:

> If I'm compensating a preceptor and expect changes, I expect that they're going to be very engaged in learning about student education, about proving their teaching skills, [and] they will be available.

Many participants questioned the feasibility of financial compensation, especially those who assumed this responsibility fell on the academic institution. Two participants, however, identified the health care system as the responsible financial party, noting the perks of a talent pipeline and recognition as an academic affiliate within the community.

Participants also viewed career advancement as an important form of recognition. Career advancement was viewed universally as being of higher value to academic physicians versus community physicians. Multiple participants mentioned the need for explicit expectations for teaching and a clear pathway for teaching to contribute to career advancement. Participants were unsure if current promotion criteria accounted for teaching efforts; as stated by 1 participant, "I think, hopefully, we're giving strong credit for this [precepting] in our promotion pathways."

Physician Well-being

Participants universally stated that an intrinsic interest in teaching is key for participation as a preceptor. Multiple participants described the personal fulfillment gained from teaching, such as the "feeling of giving back" and "self-satisfaction of contributing to a person's education." Others felt inspired as a physician model, noting, "[precepting] forces you to be the best doctor you can be. It's one of the great things about having learners around."

While students may elevate well-being, 1 participant expressed concern that they disrupt physician work-life balance and noted that the importance of this balance may be on an upswing:

> My presumption is that this is a generation of Millenials/GenXers [who] will have a much better sense of work-life

balance and much better sense of family at the end of the day because they are making choices saying both [family and career] are important.

Participants said flexibility may help physicians maintain work-life balance and could be achieved by allowing physicians to easily opt in and out of teaching over time, dynamic clinic scheduling, and partnerships with other physicians.

Lastly, participants noted professional development in clinical education was important to one's well-being. Specifically, participants mentioned that activities such as sharing best practices and networking build confidence, provide a sense of connectedness, and promote physician satisfaction.

Leadership

All participants described the need for strong leadership across multiple organizational levels. At the course level, participants voiced that leadership was needed to ensure clear preceptor expectations, noting "…the biggest barrier is maybe a misconception… by our faculty or those who could have the role of how much effort is required in order to be a preceptor."

To achieve effective communication of expectations, multiple participants envisioned the role of local champions:

> The best thing we could do, if possible, is to create some champions…within every department or…every division that could say 'look, you know I've done this for the last 4 to 5 years and it's really not that big [of a time commitment]'…rather than a mass email.

Participants suggested that local champions could support physicians by explaining the role of a preceptor, helping faculty prepare for students, and engaging faculty in quality improvement.

Participants also discussed institutional leadership in the context of developing community partnerships. One participant observed that health care systems have become key stakeholders as more physicians shift away from private practice models:

> In the old days, I would call in favors. I'd pick up the phone, call somebody that was in private practice, and say 'oh, could you take a student for a certain period of time for this purpose?' And they would say yes or no. Now, because of the employment status, it's frequently not the physician that is the decision-maker. Maybe it's the clinic manager, maybe somebody higher up in their organization structure. It may be somebody completely removed from their practice. So I think that one of the things we have to work on in the community is… the docs are willing, but the health systems aren't for a variety of reasons.

DISCUSSION

Collectively, institutional leadership-perceived incentives and barriers align well with the literature.[7-12] One major barrier, which participants and the literature alike describe, is time.[13-15] Studies have shown that physicians report increased clinical and nonclinical workloads, which may explain why the time required to precept is an ongoing barrier.[7,10] Further compounding the issue of time is that the demand for preceptors is increasing as the number of health professional trainees grows.[10] While participants in this study recognized the issues of time and preceptor demand, a few participants underestimated their magnitude. The literature shows a student adds at least 30 minutes to a clinic half-day,[13,14] yet, notably, some of study participants thought a student adds no additional time. Further, a few participants thought the preceptor demand could be fulfilled by academic faculty alone. At MCW, the first 2 years of medical school require the participation of over 500 preceptors, not including preceptors needed for third- and fourth-year clerkships, medical residencies, and other health sciences programs. As 1 participant pointed out, there simply is not enough academic faculty to meet the institution's teaching needs: "I have 103 primary care pediatricians that work for Children's [Hospital of Wisconsin] who are nonacademic. We have 3 academic general pediatricians." These findings may present an opportunity for improved communication to institutional leadership regarding the scope of the preceptor issue.

Study participants and the literature recognize that the additional time spent teaching by preceptors has a financial cost,[16] which comes in the form of decreased clinical productivity, increased administrative needs, and infrastructure.[14,16] To estimate the clinical productivity cost, one may equate the extra 30 minutes spent with a student per clinic half-day to 1 level 4 ambulatory visit, for which the Centers for Medicare and Medicaid Services (CMS) estimated payment is $90.[17] During 1 of the early MCW clinical courses, approximately 215 students participate in 20 half-day clinic sessions over the course of a year. Thus, it may be reasonable to estimate the annual clinical productivity cost incurred by this course alone to be $387,000 (215 x 20 x $90). The debate comes when determining who should absorb this cost – physicians, academic institutions, or health care systems.

Traditionally, physicians have been willing to bear the brunt of this cost by volunteering their time. This altruism stemmed from the intrinsic joy of teaching.[11,12,15] Whether this altruism remains sufficient for participation is questionable. Similar to finding in the literature, participants of this study were split on whether or not it is time to financially compensate preceptors. Many studies show that preceptors are still primarily incentivized by the intrinsic rewards of teaching; however, others have found nonpreceptor physicians placed an increased importance on financial reward.[11,12,18-21] Additionally, while studies show many in academic leadership feel monetary compensation would help recruit and retain preceptors, like our study participants, they doubted its feasibility.[1,18,22] Some study participants suggested the financial responsibility should be shared with participating health care systems given the benefits of a talent pipeline and recognition as an academic partner. Complicating the issue is the unclear impact of

financial compensation, such as its effect on education quality or the spurring of institutional competition, which may place publicly funded institutions at a disadvantage.[21,23,24] Thus, the decision to compensate preceptors is complex and may entail understanding local physicians' expectations, negotiating with health care systems, and coordinating actions with other institutions within a region.

To counter financial costs imposed on physicians, academic institutions have turned to other extrinsic rewards. Participants in this study highlighted career advancement as a key reward for academic faculty. However, participants were unclear whether or not teaching was currently a factor for promotion. They also pointed out that a method for quantifying teaching effort was important but absent. Overall, clear quantifiable expectations for career advancement may be a key area of focus for growing and maintaining preceptor pools.

As for intrinsic reward, participants in this study correctly recognized that the personal fulfillment of teaching remains a main motivating factor for precepting.[8,11,12] The sense of well-being accompanied by teaching is of critical importance, particularly in an era of increasing physician burnout and menial administrative workload.[7] However, all good things must come in moderation. Excessive expectations for preceptor teaching may hasten burnout. Study participants offered solutions to help preserve personal reward from clinical teaching, such as allowing for preceptor flexibility in clinic scheduling or the ability to easily opt-in or out of teaching at any time.

In regard to minimizing barriers, study participants pointed out the need to support preceptors administratively and develop innovative teaching models that foster both learning and clinical productivity. These aims mirror the literature[25] and specifically align with efforts made by organizations such as the Society of Teachers of Family Medicine (STFM).[4,26,27] STFM has published tools, such as a student passport, to minimize administrative burdens and effectively led CMS policy change to allow for billable aspects of student documentation.[26-28]

While solutions offered by organizations like STFM are helpful, much work is still needed for their successful implementation. Institutions need to tailor solutions to meet the individual needs of physicians and practices. To accomplish this, study participants expressed the need for strong leadership across multiple organizational levels. Currently, at many institutions, course directors take on much of this work. Unfortunately, they may be poorly positioned to implement systems change, influence promotion criteria or budget proposals, partner with community organizations, negotiate with health care systems, or represent the institution on policy change. Further, the efforts of individual course directors are often fragmented, which produces inefficiencies. For example, communication to physicians may be redundant and inconsistent, thus fatiguing its recipients to preceptor requests. As a result, some medical schools have created a centralized office for managing clinical educators.[29] A recent director role advertised for such an office within the University of California San Francisco School of Dentistry entailed accounting for clinical education budgets; a central preceptor database; continuing education; quarterly site visits; and quality metrics to assess sites, preceptors, and program successes.[30] Allocating centralized resources to support leaders distributed at the level of courses, clinics, and institutions may allow for both comprehensive and streamlined solutions.

Limitations

Limitations of this study include participant representation from a single institution, which may restrict generalization of its results. Additionally, researchers deliberately, rather than randomly, selected participants, which may have introduced result bias.

CONCLUSION

Preceptor shortages challenge academic institutions across the nation. Much is known about preceptor issues based on the perspectives of preceptor physicians. Yet shortages remain. This study is the first to explore perspectives of leaders across an academic institution to better understand knowledge gaps, system barriers, and proposed solutions to address preceptor shortages. Each content theme highlighted areas to consider when addressing preceptor issues within an institution: (1) leadership knowledge gaps regarding the scope of preceptor challenges, particularly time commitments and the number of preceptors required; (2) improving career advancement or promotion criteria to recognize teaching efforts; (3) enhanced physician well-being from teaching, while important, may no longer be sufficient for participation, especially without financial compensation; (4) distributed leadership may be needed to address issues at the course, clinic, and system levels.

Prompt attention and investment to addressing preceptor issues are critical as the stakes to clinical education are high. The return on investment to academic institutions will be the success of its trainees. After all, as 1 participant stated, "We rely on our students and our residents and our fellows to really be the spokespeople [for our institution]."

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REFERENCES

1. Erikson C, Hamann R, Levitan T, Pankow S, Stanley J, Whatley M. Recruiting and maintaining U.S. clinical training sites: joint report of the 2013 Multi-Discipline Clerkship/Clinical Training Site Survey. Accessed August 16, 2019. https://paeaonline.org/wp-content/uploads/2015/10/Recruiting-and-Maintaining-U.S.-Clinical-Training-Sites.pdf

2. Leggio LE, Ryan MS, Peltier CB, et al. Recruitment and retention: recommendations from the Association of Medical School Pediatric Department Chairs Education Committee and the Council on Medical Student Education in Pediatrics Task Force on Community Preceptors. *J Pediatr.* 2017;191:4-5.e1. doi:10.1016/j.jpeds.2017.08.043

3. Beck Dallaghan GL, Alerte AM, Ryan MS, et al. Recruiting and retaining community-based preceptors. *Acad Med.* 2017;92(8):1168-1174. doi:10.1097/ACM.0000000000001667

4. Christner JG, Dallaghan GB, Briscoe G, et al. The community preceptor crisis: recruiting and retaining community-based faculty to teach medical students-a shared perspective from the Alliance for Clinical Education. *Teach Learn Med.* 2016;28(3):329-336. doi:10.1080/10401334.2016.1152899

5. Watling CJ, Lingard L. Grounded theory in medical education research: AMEE Guide No. 70. *Med Teach.* 2012;34(10):850-861. doi:10.3109/0142159X.2012.704439

6. Glaser, BG. *Theoretical Sensitivity: Advances in Methodology of Grounded Theory.* Sociology Press; 1978.

7. Vath BE, Schneeweiss R, Scott CS. Volunteer physician faculty and the changing face of medicine. *West J Med.* 2001;174(4):242-246. doi: 10.1136/ewjm.174.4.242

8. Grayson MS, Klein M, Lugo J, Visintainer P. Benefits and costs to community-based physicians teaching primary care to medical students. *J Gen Intern Med.* 1998;13(7):485-488. doi:10.1046/j.1525-1497.1998.00139.x

9. Vinson DC, Paden C, Devera-Sales A, Marshall B, Waters EC. Teaching medical students in community-based practices: a national survey of generalist physicians. *J Fam Pract*. 1997;45:487-494.

10. Graziano SC, McKenzie ML, Abbott JF, et al. Barriers and strategies to engaging our community-based preceptors. *Teach Learn Med*. 2018;30(4):444-450. doi:10.1080/10401334.2018.1444994

11. Scott I, Sazegar P. Why community physicians teach students (or not): barriers and opportunities for preceptor recruitment. *Med Teach.* 2006;28(6):563-565. doi:10.1080/01421590600627375

12. Ryan MS, Vanderbilt AA, Lewis TW, Madden MA. Benefits and barriers among volunteer teaching faculty: comparison between those who precept and those who do not in the core pediatrics clerkship. *Med Educ Online.* 2013;18:1-7. doi:10.3402/meo.v18i0.20733

13. Vinson DC, Paden C, Devera-Sales A. Impact of medical student teaching on family physicians' use of time. *J Fam Pract*. 1996;42:243-249.

14. Levy BT, Gjerde CL, Albrecht LA. The effects of precepting on and the support desired by community-based preceptors in Iowa. *Acad Med*. 1997;72:382-384. doi:10.1097/00001888-199705000-00018

15. Peyser B, Daily KA, Hudak NM, Railey K, Bosworth HB. Enlisting New Teachers in Clinical Environments (ENTICE); novel ways to engage clinicians. *Adv Med Educ Pract.* 2014;5:359-367. doi:10.2147/amep.S69063

16. Boex J, Boll A, Franzini L, et al. Measuring the costs of primary care education in the ambulatory setting. *Acad Med.* 2000;75:419-425. doi:10.1097/00001888-200005000-00007

17. Centers for Medicare & Medicaid Services. Calendar year (CY) 2019 Medicare physician fee schedule (PFS) proposed rule. Documentation and payment for evaluation and management (E/M) visits, advancing virtual care, and quality payment program. Published 2019. Accessed August 15, 2019. https://www.cms.gov/About-CMS/Story-Page/CY-19-PFS-Final-Rule-PPT.pdf

18. Anthony D, Jerpbak CM, Margo KL, Power DV, Slatt LM, Tarn DM. Do we pay our community preceptors? Results from a CERA clerkship directors' survey. *Fam Med*. 2014;46(3):167–73. Accessed August 7, 2019. https://fammedarchives.blob.core.windows.net/imagesandpdfs/pdfs/FamilyMedicineVol46Issue3Anthony167.pdf

19. Latessa R, Colvin G, Beaty N, Steiner BD, Pathman DE. Satisfaction, motivation, and future of community preceptors: what are the current trends? *Acad Med.* 2013;88(8):1164-1170. doi:10.1097/ACM.0b013e31829a3689

20. Nelson A. The role of compensating community preceptors in family medicine. *Fam Med*. 2014;46(7):563-564. Accessed August 21, 2019. https://fammedarchives.blob.core.windows.net/imagesandpdfs/pdfs/FamilyMedicineVol46Issue7Nelson563.pdf

21. Christner JG, Beck Dallaghan G, Briscoe G, et al. To pay or not to pay community preceptors? That is a question. *Teach Learn Med.* 2019;31(3):279-287. doi:10.1080/10401334.2018.1528156

22. Ryan MS, Leggio LE, Peltier CB, et al. Recruitment and retention of community preceptors. *Pediatrics*. 2018;142(3):e20180673. doi:10.1542/peds.2018-0673

23. Woodall L, Smith G, Garr D, Hopla D, Kern D. Can state-supported interprofessional coalitions cure preceptor shortages? *JAAPA*. 2018;31(6):1-4. doi:10.1097/01.JAA.0000533667.10945.ed

24. Ashar B, Levine R, Magaziner J, Shochet R, Wright S. An association between paying physician-teachers for their teaching efforts and an improved educational experience for learners. *J Gen Intern Med*. 2007;22(10):1393-1397. doi:10.1007/s11606-007-0285-2

25. Ullian JA, Shore WB, First LR. What did we learn about the impact on community-based faculty? Recommendations for recruitment, retention, and rewards. *Acad Med.* 2001;76(4 Suppl):S78-S85. doi:10.1097/00001888-200104001-00015

26. Theobald M, Ruttter A, Steiner B, Morley CP. Preceptor expansion initiative takes multitactic approach to addressing shortage of clinical training sites. *Fam Med.* 2019;51(2):159-165. doi:10.22454/FamMed.2019.379892

27. Theobald, Mary. STFM tackles preceptor shortage. *Ann Fam Med*. 2016;14(2):183-184. doi:10.1370/afm.1917

28. Power DV, Byerley JS, Steiner B. Policy change from the Centers for Medicare and Medicaid Services provides an opportunity to improve medical student education and recruit community preceptors. *Acad Med*. 2018;93(10):1448-1449. doi:10.1097/acm.0000000000002245

29. Irby DM. Where have all the preceptors gone? Erosion of the volunteer clinical faculty. *West J Med*. 2001;174(4):246. doi:10.1136/ewjm.174.4.246

30. School of Dentistry, University of California San Francisco. Open recruitments: Director of Community Based Clinical Education and Partnerships. Published 2019. Accessed August 15, 2019. https://aprecruit.ucsf.edu/JPF02511

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