

Time Well Spent: The Association Between Time and Effort Allocation and Intent to Leave Among Clinical Faculty

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Abstract

Purpose

To explore the relationship between clinical faculty members' time/effort in four mission areas, their assessment of the distribution of that time/effort, and their intent to leave the institution and academic medicine.

Method

Faculty from 14 U.S. medical schools participated in the 2011–2012 Faculty Forward Engagement Survey. The authors conducted multivariate logistic regression analyses to evaluate relationships between clinical faculty members' self-reported time/effort in each mission area, assessment of time/

effort, and intent to leave the institution and academic medicine.

Results

Of the 13,722 clinical faculty surveyed, 8,349 (60.8%) responded. Respondents reported an average of 54.5% time/effort in patient care. The authors found no relationship between time/effort in patient care and intent to leave one's institution. Respondents who described spending "far too much/too much" time in patient care were more likely to report intent to leave their institution (odds ratio 2.12, $P < .001$). Those who assessed their time/effort in all mission areas as "about right" were less likely

to report intent to leave their institution (64/1,135; 5.6%) than those who reported "far too little/too little" or "far too much/too much" time/effort in one or more mission areas (535/3,671; 14.6%; $P < .001$).

Conclusions

Although the authors found no relationship between reported time/effort in patient care and intent to leave, the perception of "far too much/too much" time/effort spent in that mission area was correlated with intent to leave the institution. Efforts to align time/effort spent in each mission area with faculty expectations may improve retention.

In 1910, Abraham Flexner¹ proposed a new model of medical education with a full-time, salaried medical school faculty, devoted to teaching and research and protected from clinical practice demands. One hundred years later, clinical faculty at academic medical centers typically are salaried. Yet, their funding largely is derived from their clinical efforts and is intended to support the clinical operation as well as the research and education missions of their institutions.^{2–4} Clinical faculty attrition rates are alarming—according to the literature, 50% left their institution and 80% of the departing faculty left academic medicine altogether within a 10-year period.^{5,6} The cost of this turnover, measured in terms of recruitment and hiring costs as well as lost clinical income, has been estimated

at over \$100,000 to replace a generalist, close to \$300,000 to replace a specialist, and over a half million dollars to replace a surgical subspecialist,⁷ a cost that academic medical centers can ill afford.

One workplace characteristic positively associated with job satisfaction for faculty at academic medical centers is satisfaction with time spent in the institution's mission areas.⁸ One study of the predictors of "serious intent" to leave academic medicine identified concerns regarding clinical service as significantly related to intent to leave.⁹ Particularly problematic to clinical faculty in this sample were the lack of departmental support for excellence in clinical service and the lack of recognition for clinical excellence among the criteria for academic advancement. A national survey of full-time faculty at 26 U.S. medical schools querying respondents about their perceptions of institutional culture identified the institution's interest in income above faculty members' personal values as a factor significantly associated with intent to leave.¹⁰ Additionally, a study on career fit found that academic faculty spending less than 20% of their

time on the activity they found most meaningful were significantly more likely to experience burnout.¹¹ These findings indicate that the nature of the work environment, the rewards offered, and the alignment of values between institutions and individuals seem to be related to both job satisfaction and turnover among faculty; however, currently we do not completely understand the factors that may help to predict these important outcomes.

Given the projected national shortage of physicians,¹² clinical faculty recruitment and retention is likely to be more difficult in the coming years. In addition, an increasing clinical workload for faculty has led to concerns about faculty satisfaction,^{13–15} the future success of the education and research missions,^{2,16} and its role as a contributor to faculty departures from academic medicine.^{17,18} Some have suggested that the exodus of clinical faculty to private practice is the result of an overload of clinical duties,^{13,17} driven in part by declining sources of nonclinical revenue and by increased competition in the health care market.¹⁹ We wonder then if there is a threshold

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Acad Med. 2014;XXX:00–00.

First published online

doi: 10.1097/ACM.0000000000000458

for the level of clinical effort that will fuel a desire to leave academic medicine for a significant proportion of clinical faculty.

In this study, using data from the 2011–2012 Faculty Forward Engagement Survey, we investigated the relationship between faculty time and effort spent supporting the four mission areas (research, patient care, education, administration) and intent to leave one's institution and to leave academic medicine. Additionally, given existing research regarding the importance of career fit, values, and faculty autonomy to job satisfaction, we examined the relationship between faculty members' assessment of whether their time and effort is spent appropriately and intent to leave. Current concerns about the impact of clinical workload on the education mission, faculty satisfaction, and faculty retention^{2,13,15–17} lead us to hypothesize that clinical faculty attrition is positively correlated with the quantity of clinical effort and with the perception of the appropriateness of the amount of time spent serving the patient care mission.

Method

Fourteen U.S. medical schools accredited by the Liaison Committee on Medical Education (LCME) participated in the Association of American Medical Colleges' (AAMCs') 2011–2012 Faculty Forward Engagement Survey. Institutions self-selected to participate in this effort, which is designed to encourage an evidence-based approach to improving faculty workplace environments.²⁰ The distribution of full-time basic science and clinical faculty at the participating institutions was representative of that at all LCME-accredited U.S. medical schools.²¹ Full- and part-time faculty at the participating institutions were invited to complete a Web-based survey assessing faculty satisfaction, intent to leave, and the workplace factors that may be related to overall engagement and retention.

The Faculty Forward Engagement Survey included 14 structured domains to measure key factors that drive employee engagement. The survey instrument was developed and tested in 2008–2009 by experts in survey research, organizational science, and academic medicine. Literature reviews, faculty focus groups, and cognitive interviews were used to inform its development.¹⁶ Between the survey's first full administration in 2009

and its second in 2011, the instrument was refined based on psychometric analyses to enhance its content and construct validity. The instrument included questions that assess faculty time/effort spent in the four mission areas and self-reports of intent to leave.

While the AAMC administered the survey, each participating institution provided faculty contact information. Faculty from 13 institutions received an initial e-mail invitation and several reminders to complete the voluntary survey between October and December 2011. Faculty from another institution received the same e-mail invitations and reminders between January and February 2012, per the institution's request. The AAMC's human subjects research protection program and affiliated independent review board (American Institutes for Research, Washington, DC) approved the collection and use of data for this research.

We assessed retention risk using responses to the survey item "Do you plan to leave this medical school in the next 1–2 years?" Respondents who replied yes were asked a follow-up item, "Do you plan to leave academic medicine in the next 1–2 years?" Respondents then were asked to report the percentage of time/effort spent in each of the following mission areas using whole numbers and totaling 100%: teaching and education; research and scholarship; patient care and client services; and administration and institutional services. We categorized the percentages of reported time/effort spent in each mission area into 10% increments and used univariate plotting and descriptive statistics to examine the distribution of respondents per decile. Finally, respondents were asked to assess their time/effort spent in each mission area using a five-point Likert-like scale (far too little, too little, about right, too much, far too much). For the purposes of these analyses, we condensed the responses into three categories (far too little/too little, about right, far too much/too much).

We modeled intent to leave the medical school and academic medicine using multivariate logistic regression. We used chi-square tests to prescreen the following factors for inclusion in the model: (1) the reported time/effort spent in each mission area, (2) respondents' assessment of their time/effort spent, and (3) respondents' demographics (gender, race, administrative title, rank). Curvilinear

tests were also conducted to examine the relationship between intent to leave and percent time/effort spent in each mission area. We tested the relationship between a respondent's time/effort spent in clinical care, for example, and the likelihood of her or his leaving the medical school using multivariate logistic regression. Results were expressed as multivariate odds ratios (ORs) according to levels of reported time/effort. We used SPSS version 19 (IBM, Armonk, New York) and SAS Version 9.3 (SAS, Cary, North Carolina).

Results

The survey was administered to a total of 15,570 faculty from the 14 participating institutions, and 9,600 responded (61.7% response rate). Of the 13,722 clinical faculty surveyed, 8,349 (60.8%) responded. The distribution of respondents differed slightly from the expected distribution given the population, with fewer part-time ($P = .001$) and slightly more basic science faculty ($P = .007$) responding than expected (see Table 1).

In this study, we focused on the subset of respondents who indicated that they were members of a clinical department and were actively engaged in clinical practice (6,342/13,722; 46.2%). This group included 3,977 (of 6,342; 62.7%) male respondents, 3,309 (of 5,192; 63.7%) senior faculty (full and associate professors) respondents, and 3,018 (of 6,162; 49.0%) who reported having an administrative title. Significantly more senior faculty (2,132/3,221; 66.2%) than junior faculty (817/2,526; 32.3%) respondents held administrative titles ($P = .001$). Respondents reported spending an average of 54.5% of their time on patient care, 17.1% on education, 14.3% on research, and 14.1% on administration.

Descriptive statistics showed that patient care remained the only mission area without skewed results (see Figure 1). Whereas univariate plotting of time/effort spent in patient care remained relatively symmetric (skewness = -0.03), distributions for the other mission areas were highly skewed (skewness ranging from 1.88 to 2.08).

Table 2 provides the multivariate ORs predicting respondents' intent to leave their medical school in the next one to two years. Demographic variables including gender, race, and rank were not significant

Table 1
Characteristics of Respondents to the 2011–2012 Faculty Forward Engagement Survey and of a Comparative Faculty Population

Characteristic	Survey sample, no. (% of 9,600)	Faculty population, no. (% of 15,570)
Appointment status		
Full-time	8,926 (93.0)	13,762 (88.8)
Part-time	674 (7.0)	1,728 (11.2)
Department type		
Basic science	1,251 (13.0)	1,848 (11.9)
Clinical	8,349 (87.0)	13,722 (88.1)
Rank		
Senior (full or associate professor)	5,156 (53.7)	N/A
Junior (assistant professor)	3,671 (38.1)	N/A
Gender		
Male	5,960 (62.1)	9,745 (62.6)
Female	3,640 (37.9)	5,821 (37.4)
Race/ethnicity		
Majority (white or Asian)	8,849 (92.2)	14,297 (91.9)
Minority (all other)	750 (7.8)	1,268 (8.1)
Title		
Administrative	3,940 (41.1)	N/A
Nonadministrative	5,366 (55.9)	N/A
Department type/degree		
Basic science	1,251 (13.0)	1,848 (11.9)
Clinical MD	6,509 (67.8)	10,638 (68.3)
Clinical PhD/other	1,840 (19.2)	3,082 (19.8)

Note: Data displayed reflect the population invited to participate in the Faculty Forward Engagement Survey, as well as the respondent group. Totals shift across demographic categories as some data were not reported for all individuals. Additionally, rank and administrative title were not collected at the population level.

predictors of intent to leave. Testing these demographics as predictors of intent to leave in separate models revealed similar results (see Table 3). However, having an administrative title decreased the

odds of leaving (OR = 0.77, *P* = .021). Respondents who spent more time on research had slightly increased odds of leaving (OR = 1.11, *P* = .023). Contrary to our hypothesis, our analyses did not

indicate an association between the quantity of time/effort spent in patient care and intent to leave. Curvilinear tests also illustrated this pattern (see Figure 1). Instead, respondents' assessments of their time spent in each mission area (far too little/too little, about right, far too much/too much) appeared to be strong predictors of intent to leave. Respondents reporting far too much/too much time spent on patient care were more than twice as likely to report intentions to leave their medical school (OR = 2.12, *P* < .001). Reports of either far too little/too little (OR = 1.38, *P* = .021) or far too much/too much (OR = 1.92, *P* < .001) time spent on administrative activities increased the odds of intent to leave. Respondents who reported that they spent far too much/too much time on education were more than two and a half times more likely to report intent to leave (OR = 2.6, *P* < .001).

Chi-square analyses indicated that respondents who assessed their time/effort spent in each of the four mission areas as "about right" were significantly less likely to report intent to leave the medical school (64/1,135; 5.6%) than those who reported far too little/too little or far too much/too much time in at least one mission area (535/3,671; 14.6%; *P* < .001). To assess the possibility of dose response amongst respondents reporting an "imbalance" in the allocation of time/effort, we grouped responses by the number of mission areas (0–4) reported as "about right." Intent to leave was progressively more likely as the number of mission areas reported as not "about right" increased, from 5.6% (64/1,135) for all areas "about right" to

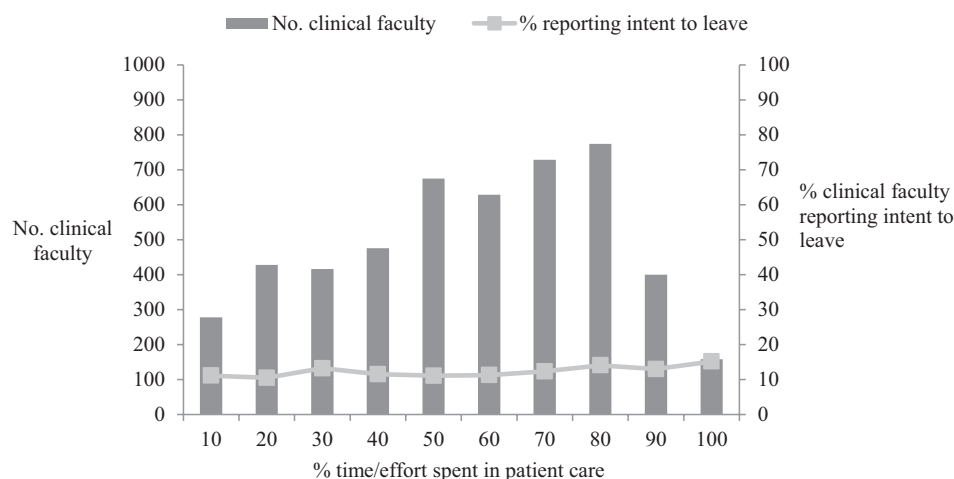


Figure 1 Number of clinical faculty respondents reporting time/effort in patient care and the percentage of those faculty reporting intent to leave their medical school in the next one to two years (odds ratio = 1.06, *P* = .138). Percentage of time/effort in patient care reported by decile (e.g., 0%–10%, 11%–20%, 21%–30%).

Table 2

Multivariate Odds Ratios Predicting 5,078 Clinical Faculty Members' Intent to Leave Their Medical School in the Next One to Two Years, From the 2011–2012 Faculty Forward Engagement Survey

Variable	No.	No. (%) reporting intent to leave	Odds ratio	95% confidence interval	P value
Gender					
Male	3,212	382 (11.9)	1	—	—
Female	1,866	238 (12.8)	1.03	0.84–1.26	.767
Race					
Minority	418	51 (12.2)	1	—	—
Majority	4,660	569 (12.2)	1.02	0.72–1.45	.898
Administrative duties					
No administrative title	2,464	332 (13.5)	1	—	—
Administrative title	2,477	265 (10.7)	0.77	0.62–0.96	.021
Rank					
Junior faculty	2,115	259 (12.2)	1	—	—
Senior faculty	2,641	307 (11.6)	1.10	0.89–1.36	.372
% Time/effort spent in mission area^a					
Education	4,899	569 (11.6)	1.08	0.97–1.21	.146
Research	4,525	559 (12.4)	1.11	1.02–1.22	.023
Patient care	4,693	607 (12.9)	1.06	0.98–1.15	.138
Perception of time/effort spent in mission area					
Administration					
<i>Too little</i>	619	100 (16.2)	1.38	1.05–1.82	.021
<i>Just right</i>	3,139	304 (9.7)	1	—	—
<i>Too much</i>	989	168 (17.0)	1.92	1.51–2.44	< .001
Education					
<i>Too little</i>	1,457	228 (15.6)	1.22	0.98–1.52	.076
<i>Just right</i>	3,413	348 (10.2)	1	—	—
<i>Too much</i>	121	32 (26.4)	2.60	1.63–4.16	< .001
Research					
<i>Too little</i>	2,894	432 (14.9)	1.20	0.94–1.54	.143
<i>Just right</i>	1,823	151 (8.3)	1	—	—
<i>Too much</i>	59	10 (16.9)	1.39	0.63–3.09	.415
Patient care					
<i>Too little</i>	192	32 (16.7)	1.32	0.81–2.15	.262
<i>Just right</i>	3,140	266 (8.5)	1	—	—
<i>Too much</i>	1,700	314 (18.5)	2.12	1.70–2.66	< .001

Note: Totals differ amongst demographics and reports of time/effort because of nonresponse.

^aThe authors categorized percent time/effort spent in each mission area using increments of 10 percentage points. A test of curvilinearity was used to confirm that the assumption of linearity was satisfied. Time spent in the administration mission area was excluded from the final model because of sample size. The authors used a Hosmer/Lemeshow test to assess goodness of fit (chi-square = 15.57; degrees of freedom = 8; P = .048).

9.4% (84/896), 12.6% (165/1,305), 18.3% (188/1,029), and 22.2% (98/441) for one to four areas, respectively (all chi-square test P values < .001 relative to all areas “about right”).

With respect to intent to leave academic medicine, faculty rank was the only significant predictor (see Table 3). Senior faculty respondents were significantly less likely to report intent to leave than junior

faculty respondents (OR = 0.56, P = .04). Goodness-of-fit tests showed that the model was not a good predictor of intent to leave academic medicine.

Discussion

Our study explored the relationship between clinical faculty members' self-reported time and effort in each of the four mission areas of academic medicine

(patient care, education, research, and administration), their satisfaction with the time and effort they spend in each mission area, and their intent to leave the medical school and academic medicine. Given the concern about the increasing clinical workload for faculty, we were particularly interested in the relationship between reported time and effort in the patient care mission area and intent to leave. Interestingly, our

Table 3

Multivariate Odds Ratios Predicting 620 Clinical Faculty Members' Intent to Leave Academic Medicine in the Next One to Two Years, Among Those Intending to Leave Their Medical School in the Next One to Two Years, From the 2011–2012 Faculty Forward Engagement Survey

Variable	No.	No. (%) reporting intent to leave	Odds ratio	95% confidence interval	P value
Gender					
Male	382	76 (19.9)	1	—	—
Female	238	28 (11.8)	0.58	0.33–1.01	.054
Race					
Minority	52	6 (11.5)	1	—	—
Majority	568	98 (17.3)	1.64	0.59–4.53	.344
Administrative duties					
No administrative title	334	66 (19.8)	1	—	—
Administrative title	263	33 (12.5)	0.86	0.49–1.51	.593
Rank					
Junior faculty	260	58 (22.3)	1	—	—
Senior faculty	306	34 (11.1)	0.56	0.32–0.97	.040
% Time/effort spent in mission area^a					
Education	595	100 (16.8)	1.34	0.96–1.88	.084
Research	557	89 (16.0)	0.81	0.54–1.21	.305
Patient care	610	101 (16.6)	1.32	0.98–1.78	.071
Perception of time/effort spent in mission area					
Administration					
<i>Too little</i>	101	20 (19.8)	0.85	0.43–1.69	.642
<i>Just right</i>	304	50 (16.4)	1	—	—
<i>Too much</i>	168	23 (13.7)	1.17	0.60–2.26	.651
Education					
<i>Too little</i>	230	35 (15.2)	0.64	0.35–1.16	.140
<i>Just right</i>	348	62 (17.8)	1	—	—
<i>Too much</i>	31	6 (19.4)	0.80	0.24–2.64	.716
Research					
<i>Too little</i>	434	73 (16.8)	0.86	0.43–1.73	.668
<i>Just right</i>	150	23 (15.3)	1	—	—
<i>Too much</i>	10	1 (10.0)	2.58	0.23–29.3	.446
Patient care					
<i>Too little</i>	32	4 (12.5)	0.56	0.07–4.65	.588
<i>Just right</i>	266	39 (14.7)	1	—	—
<i>Too much</i>	315	58 (18.4)	1.37	0.73–2.55	.326

Note: Totals differ amongst demographics and reports of time/effort because of nonresponse.

^aThe authors categorized percent time/effort spent in each mission area using increments of 10 percentage points.

A test of curvilinearity was used to confirm that the assumption of linearity was satisfied. Time/effort spent in the administration mission area was excluded from the final model because of sample size. The authors used a Hosmer/Lemeshow test to assess goodness of fit (chi-square = 4.36; degrees of freedom = 8; $P = .820$).

study did not find a relationship between the quantity of self-reported time and effort in the patient care mission area and intent to leave either the medical school or academic medicine, even at the higher levels of clinical effort. We did find a relationship between satisfaction with time and effort spent in each of the mission areas and intent to leave the medical school but not with intent to leave academic medicine.

Faculty who were not satisfied with the distribution of their time and effort in the various mission areas were significantly more likely to report intent to leave their institution. We also found an increase in intent to leave when time and effort spent in the patient care and education mission areas or in an administrative role was perceived as not “just right.” Our study did not provide insight into the reasons that faculty perceived “too much” or “too

little” time and effort spent in a mission area. However, lack of control and the absence of autonomy in the workplace are well-documented contributors to low job satisfaction and burnout in human services industries.²² Workers who perceive that the distribution of their job responsibilities and tasks are outside of their control are far more likely to experience burnout, which results in a variety of negative outcomes including

turnover²³ and, in health care settings, a decline in the quality of care physicians provide.^{24–26}

Previous research identified some factors that may influence this perception of an inappropriate distribution of time in the patient care and education mission areas. In explorations of predictors of intent to leave academic medicine, researchers identified a strong association between underappreciation and lack of reward for excellence in teaching and clinical service and intent to leave.^{9,27} In addition, clinicians who reported a lack of adequate services and facilities to provide excellent patient care were more likely to report intent to leave their academic position. Interestingly, in our study, dissatisfaction with time and effort in the various mission areas was associated with intent to leave one's institution but not academic medicine, suggesting that clinical faculty may believe they can find a position at another institution that allows for a balance of effort in the mission areas more suitable to their desires.

Our study's finding with respect to having an administrative role and perception of time and effort in administration is notable. Over half of respondents reported having an administrative title, which was associated with less intent to leave the medical school. Yet, dissatisfaction with either too much or too little time and effort in administration was associated with greater intent to leave the medical school. Our study does not explain why an administrative title is associated with less intent to leave the medical school, though possible explanations include a greater sense of engagement within the department or medical school, a greater understanding of the complexities associated with department or medical school operations, or a greater sense that one is valued by the institution because he or she was chosen for an administrative role. Also noteworthy is the fact that our sample included more senior faculty with administrative roles, which could have skewed our data. Senior faculty, who have unique concerns related to career and mentoring needs and work–life balance,^{28,29} may be more likely to stay at their institution because of their standing, their vesting in the organization, and their proximity to retirement. The relationship between administrative roles, time and effort in administration, and intent to leave requires further exploration.

We found that the clinical faculty in our study cohort who considered their efforts appropriately dispersed across the four mission areas were the least likely to report intent to leave their institution. This finding is in keeping with data from the academic medicine¹¹ and organizational development literature, which found that the amount of time spent on activities that a worker finds most meaningful is inversely related to the rate of burnout and associated turnover. As little as 20% of time devoted regularly to these most meaningful activities has been associated with lower rates of burnout and higher rates of employee engagement, an antidote to turnover. Our finding then provides medical school leadership with an assessment that may allow for early intervention to prevent unintended faculty loss. Institutions could rely on either a formal annual faculty evaluation or a less formal evaluation process, such as periodic mentoring meetings, incorporating into either the faculty member's assessment of his or her satisfaction with effort distribution; both processes are likely to yield productive and actionable suggestions to enhance faculty retention.

Additionally, our findings support the need to compare a prospective faculty member's priorities with the expectations of the position during the recruitment and hiring process. For instance, a faculty member who desires a significant teaching or research role is not likely to be a good fit for a predominantly clinical position. This concept of “increasing engagement with work by creating a better ‘fit’ between the individual and the job”³⁰ was labeled a “new perspective” when it was first discussed in 1998. Since then, it has been well recognized in the organizational literature as an antidote to burnout and a deterrent to attrition.³¹ The importance of matching a prospective faculty member's expectations with the institution's expectations is further supported by exit interview data, which suggest that unmet expectations are a factor in faculty members' decisions to leave the institution.¹⁷ Our findings support prior work³² that suggests that more careful attention to matching the institution's expectations for a position with those of prospective faculty at hiring is needed for job satisfaction and, as such, may lead to improved retention for clinical faculty.

Although our study has limitations, it benefits from a large, diverse group of

faculty respondents who were geographically distributed across academic medical centers. Despite the robust response rate (61.7%), our sample may not be representative of the national cohort of clinical faculty. Institutions self-selected to participate, and our study cohort overrepresented public medical schools within universities compared with free-standing public and private medical schools. Additionally, as our results reflect aggregate data for all clinical faculty who participated in the survey, the results for specific clinical specialties within academic medicine may differ from those reported here.³³ Finally, the factors influencing why faculty leave their institutions and academic medicine are complex and myriad. The AAMC has conducted additional research into the factors that drive retention, based on the Faculty Forward Engagement Survey domains. Their findings indicate that perceptions of the medical school's focus on mission, the workplace culture, an individual's relationship with her or his supervisor and colleagues, faculty recruitment and retention, and clinical environment also affect intent to leave.^{34,35} Our study specifically examined the relationship between time and effort in the four mission areas and perceptions of whether that time and effort was just right, too much, or too little. Although our results match actual turnover rates for faculty at academic medical centers (based on AAMC Faculty Roster data),³⁶ which supports the validity of our findings, the relative importance of these variables with respect to other variables affecting intent to leave was not the focus of our study and warrants further exploration.

Clinical faculty vary in their desire to engage in the patient care, education, research/scholarship, and administration missions areas, and the appropriate mix of these activities is highly personal. Although a more individual approach to faculty time and effort allocation may be unwieldy for academic leaders, this approach may be worth the additional effort if it is successful in reducing unwanted faculty departures. Our findings can inform faculty assessment practices. The simple assessment of faculty perceptions of their time and effort allocation may significantly enhance early identification of individuals considering leaving their institution, allowing for appropriate interventions to counterbalance those factors associated with their intention to leave.

Acknowledgments: The authors would like to thank the following individuals for their valuable contributions: Sarah Bunton, April Corrice, Leslie Morrison, Craig Porter, Angela Sharkey, and Alonzo Walker.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: The institutional review board at the American Institutes for Research, Washington, DC, approved this study (project EX00215, 9/27/11).

Previous presentations: Select results from this study were presented or discussed at the following meetings: the Association of American Medical Colleges Group on Faculty Affairs Annual Meeting, August 2012, Indianapolis, Indiana; and the Association of American Medical Colleges Annual Meeting, November 2012, Denver, Colorado.

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References

- Flexner A. Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching. Bulletin No. 4. Boston, Mass: Updyke; 1910.
- Barzansky B, Kenagy G. The full-time clinical faculty: What goes around, comes around. *Acad Med.* 2010;85:260–265.
- Miller JC, Andersson GE, Cohen M, et al. Follow the money: The implications of medical schools' funds flow models. *Acad Med.* 2012;87:1746–1751.
- Kennedy DW, Johnston E, Arnold E. Aligning academic and clinical missions through an integrated funds-flow allocation process. *Acad Med.* 2007;82:1172–1177.
- Alexander H, Lang J. The long-term retention and attrition of U.S. medical school faculty. *AAMC Analysis in Brief.* June 2008;8:1–2.
- Corrice AM, Fox S, Bunton SA. Retention of full-time clinical M.D. faculty at U.S. medical schools. *AAMC Analysis in Brief.* February 2011;11:1–2.
- Schloss EP, Flanagan DM, Culler CL, Wright AL. Some hidden costs of faculty turnover in clinical departments in one academic medical center. *Acad Med.* 2009;84:32–36.
- Bunton SA, Corrice AM, Pollart SM, et al. Predictors of workplace satisfaction for U.S. medical school faculty in an era of change and challenge. *Acad Med.* 2012;87:574–581.
- Lowenstein SR, Fernandez G, Crane LA. Medical school faculty discontent: Prevalence and predictors of intent to leave academic careers. *BMC Med Educ.* 2007;7:37.
- Pololi LH, Krupat E, Civian JT, Ash AS, Brennan RT. Why are a quarter of faculty considering leaving academic medicine? A study of their perceptions of institutional culture and intentions to leave at 26 representative U.S. medical schools. *Acad Med.* 2012;87:859–869.
- Shanafelt TD, West CP, Sloan JA, et al. Career fit and burnout among academic faculty. *Arch Intern Med.* 2009;169:990–995.
- Association of American Medical colleges. GME Funding: How to Fix the Doctor Shortage: Projected Supply and Demand of Physicians, 2008–2020. https://www.aamc.org/advocacy/campaigns_and_coalitions/fixdocshortage/. Accessed June 19, 2014.
- Kelly AM, Cronin P, Dunnick NR. Junior faculty satisfaction in a large academic radiology department. *Acad Radiol.* 2007;14:445–454.
- Demmy TL, Kivlahan C, Stone TT, Teague L, Sapienza P. Physicians' perceptions of institutional and leadership factors influencing their job satisfaction at one academic medical center. *Acad Med.* 2002;77(12 pt 1):1235–1240.
- Association of American Medical Colleges. Medical Faculty Job Satisfaction: Thematic Overviews From Ten Focus Groups. Washington, DC: Association of American Medical Colleges; 2006.
- Fye WB. The origin of the full-time faculty system. Implications for clinical research. *JAMA.* 1991;265:1555–1562.
- Limacher M, Mylona E, Pollart S, Fox S, Dandar V. Why do talented faculty leave their institutions? Poster presented at: AAMC Group on Faculty Affairs Professional Development Conference; August 4–7, 2011; Seattle, Wash.
- Aronoff DM. And then there were none: The consequences of academia losing clinically excellent physicians. *Clin Med Res.* 2009;7:125–126.
- Campbell EG, Weissman JS, Blumenthal D. Relationship between market competition and the activities and attitudes of medical school faculty. *JAMA.* 1997;278:222–226.
- Association of American Medical Colleges. Faculty Forward Engagement Survey. <https://www.aamc.org/services/facultyforward/>. Accessed June 19, 2014.
- Association of American Medical Colleges. Medical School Profile System (MSPS). <https://services.aamc.org/mspsreports/index.cfm>. Accessed June 19, 2014.
- Maslach C, Leiter MP. Early predictors of job burnout and engagement. *J Appl Psychol.* 2008;93:498–512.
- Goodman EA, Boss RW. The phase model of burnout and employee turnover. *J Health Hum Serv Adm.* 2002;25:33–47.
- Shirom A, Nirel N, Vinokur AD. Overload, autonomy, and burnout as predictors of physicians' quality of care. *J Occup Health Psychol.* 2006;11:328–342.
- Firth-Cozens J, Greenhalgh J. Doctors' perceptions of the links between stress and lowered clinical care. *Soc Sci Med.* 1997;44:1017–1022.
- de Oliveira GS Jr, Chang R, Fitzgerald PC, et al. The prevalence of burnout and depression and their association with adherence to safety and practice standards: A survey of United States anesthesiology trainees. *Anesth Analg.* 2013;117:182–193.
- Durso SC, Christmas C, Kravet SJ, Parsons G, Wright SM. Implications of academic medicine's failure to recognize clinical excellence. *Clin Med Res.* 2009;7:127–133.
- Stearns J, Everard KM, Gjerde CL, Stearns M, Shore W. Understanding the needs and concerns of senior faculty in academic medicine: Building strategies to maintain this critical resource. *Acad Med.* 2013;88:1927–1933.
- Stanford School of Medicine. Task Force and Survey Report. August 25, 2008. <http://med.stanford.edu/academicaffairs/senior-faculty/task-force.html>. Accessed June 19, 2014.
- Maslach C, Goldberg J. Prevention of burnout: New perspectives. *Appl Prev Psychol.* 1998;7:63–74.
- Armstrong PI, Day SX, McVay JP, Rounds J. Holland's RIASEC model as an integrative framework for individual differences. *J Couns Psychol.* 2008;55:1–18.
- Rousseau DM. Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements. Thousand Oaks, Calif: Sage Publications; 1995.
- Bunton SA, Corrice AM, Mallon WT. Clinical Faculty Satisfaction With the Academic Medicine Workplace. Washington, DC: Association of American Medical Colleges; 2010.
- Association of American Medical Colleges. 2011–2012 AAMC Faculty Forward Engagement Survey Driver Analysis. 2013. Unpublished data.
- Dandar V, Fox S, Radosevich D. 2011–2012 AAMC Faculty Forward Engagement Survey Cohort Driver Analysis. 2012. Unpublished data.
- Association of American Medical Colleges. Faculty Roster. <https://www.aamc.org/data/facultyroster/>. Accessed June 19, 2014.