

Work-Family Balance and Academic Advancement in Medical Schools

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Objective: *This study examines various options that a faculty member might exercise to achieve work-family balance in academic medicine and their consequences for academic advancement.*

Method: *Three data sets were analyzed: an anonymous web-administered survey of part-time tenure track-eligible University of Illinois College of Medicine (UI-COM) faculty members conducted in 2003; exogenous data regarding the entire UI-COM faculty; and tenure rollback ("stop-the-clock") usage by all tenure track-eligible UI-COM faculty from 1994 to 2003.*

Results: *The data reveal a gender split in career-family balance priorities that affect academic advancement among part-time faculty. Women select part-time status for child care; men choose part-time to moonlight. Similarly, among all faculty members seeking tenure rollbacks, women request rollback for child care; men request rollback for other reasons. Among all faculty members, full-time men were more likely to be on the tenure track than any other group. Needs identified by the part-time faculty survey include improved mentoring in track selection, heightened awareness of options, such as tenure rollback, and provision of equitable benefits and opportunities.*

Conclusions: *Policy changes, such as a prorated tenure track, are needed to support a family-friendly culture with flexibility throughout the career lifespan for both men and women medical faculty.*

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As demographics change, interest has increased in developing strategies for achieving work-family balance in academic medicine. Between 1979 and 2002, according to American Medical Association (AMA) data, the percentage of women physicians almost tripled, from 9.1% to 25.2%. In 2002, women comprised 41.9% of U.S. physicians under age 35. In 2002–2003, according to the American Association of Medical Colleges (AAMC) data, women represented 46.7% of the entering medical students across the United States, compared with only 25.3% in 1979–1980. At the University of Illinois at Chicago College of Medicine (UI-COM), 54% of the 300-student class entering in 2004 was female.

The peak childbearing years coincide with the years of medical school, residency, and early career. Potee et al. (1) note that of 586 female Yale medical graduates matriculating between 1922 and 1999, 82% of those over 40 were mothers. Between 1950 and 1989, 42% of these mothers had their children during medical training. In a study by Woodward et al. (2) of female physicians 10 years after medical school entry, one-third of the women studied had taken a maternity/child care leave and 24% had taken time away from their careers for other reasons, while only 11% of men had interrupted their careers.

Work-family balance is a concern for both men and women. Men nationwide are becoming increasingly more involved with childrearing (3). Men who prioritize work-family balance, by turning down overtime or relocation or travel or by staying home with sick children or covering vacations, may be seen as less committed or may be passed over for promotion (4).

Children also are affected by work-family balance choices. Recent infancy and early childhood research (5) indicates that from birth to age five, children undergo profound developmental changes that require close interpersonal relationships with caregivers for optimal realization. However, the increase in two-income and single-parent

households has created a generation of children raised in variable quality day-care and afterschool arrangements.

Though this article's primary focus is on faculty members engaged in raising children, issues of work-life balance extend to faculty members who are dealing with eldercare, personal illness or disability, and the like. In academic medicine, long work hours and a ticking tenure clock collide with the biological clock of junior faculty members wishing to raise families, frequently within a dual-career family format. This collision forces difficult choices. Options include deciding not to have children or postponing childbearing (and risking infertility with increasing age). Childbirth presents a new set of difficult choices for both men and women. Do they hire a full-time child care provider so they can stay on track with their careers, but spend less time with their children? Does one parent work part-time and spend more direct time raising the family, but curtail career opportunities, promotion, and tenure as a result?

In its Statement of Principles on Family Responsibilities and Academic Work (6), the American Association of University Professors stated: "Transforming the academic workplace into one that supports family life requires substantial changes in policy and, more significantly, changes in academic culture." The academic tenure track, designed at a time when the faculty was predominantly male and wives raised the children, has not kept pace with the needs of the current and future generations. As a result, the face of leadership in academic medicine does not reflect the diversity of medical school graduates. Nonnemaker (7) notes diminished interest among women in pursuing careers in academic medicine, starting in the late 1990s. According to an analysis of faculty attrition data from 1980–1999 by the AAMC (8), female, non-white, and clinical faculty members leave full-time appointments at a higher rate than male, white, and basic science faculty members.

Playing by the outmoded rules of the academic game can have serious and long-lasting effects on both career and family trajectories. Mason (9, 10) reports that among tenured Ph.Ds, women are far more likely than men to be childless, single, divorced, separated, or to have fewer children than desired. Comparing men and women who have children within 5 years of earning a Ph.D., women are approximately 20% less likely to achieve tenure. Mason concludes, "A true measure of gender equity in the academy would look at both career and family outcomes. We call this two-pronged measure the "baby gap test," because it takes into account both the gap in professional outcomes

for women with children compared with men and the gap in family formation for academically successful women."

The conflict between child-rearing demands and outmoded academic advancement policy has serious ramifications for medical schools as well. According to Bickel (11), "Among the most disadvantageous structures and practices are tenure and promotion policies that force unnecessary choices, either advancement or family, during the decade following residency training when most female and male physicians have young children. Since female physicians tend to be most productive between the ages of 50 and 60, they do not fit the career trajectory assumed by promotion policies, and they often do not strive for promotion to senior rank as a result." This inequity has contributed to inadequate progress in women's leadership in academic medicine. Nationally, women comprise only 14% of tenured faculty, 12% of full professors, and 8% of medical school department chairs (12).

In a survey of full-time academic medical school faculty in 24 U.S. medical schools, Carr et al. (13) found that among faculty with children, women had greater obstacles to academic careers, less institutional support, fewer publications, slower self-perceived career progress, and lower career satisfaction. However, no significant differences between the sexes were seen for faculty without children. The authors conclude that female faculty with children face major obstacles in academic careers, and suggest simple modifications to overcome these obstacles, including the creation of part-time career tracks.

In 1993, Levinson et al. (14) surveyed 245 part-time faculty respondents in U.S. departments of medicine about working conditions, attitudes toward professional and personal issues, and institutional policies. Women faculty worked an average of 35 hours per week, combining their careers with childbearing, whereas men worked 51 hours per week, divided between their faculty position and independent practice. Respondents' work time was devoted to teaching and patient care, with no time dedicated for research. Most faculty members (86%) were in nontenure track positions. Only 8% reported that existing institutional policies allowed part-time faculty more time to reach promotion and tenure standards. A high degree of career satisfaction existed (mean score, 8.6 on a 10-point scale) even though faculty believed that part-time status made promotion more difficult and negatively influenced colleagues' perceptions of them.

There are a limited number of strategies that junior faculty may currently employ to simultaneously balance career and family demands in academic medicine, beyond

the short-term remedy of parental leave. These strategies include part-time appointment, nontenure track selection, tenure rollback (“stop-the-clock”), and a prorated tenure track option. The availability of these various options varies widely among medical schools. By analyzing UI-COM data, the current study examines the effect on academic advancement of choosing various work-family balance strategies.

Method

Overview

Three data sets were analyzed: an anonymous web-administered survey of part-time tenure track-eligible UI-COM faculty members, conducted in 2003; exogenous data regarding the entire UI-COM faculty as of June 2003; and tenure rollback (“stop-the-clock”) usage among all tenure track-eligible UI-COM faculty from 1994 to 2003. The three data analyses are juxtaposed to shed light on the problem of work-family balance from a variety of angles. The analysis of tenure rollback usage has no precedent in the literature. This unfunded study received Institutional Review Board approval.

Context and Sample

UI-COM, the largest medical school in the United States, had 3,738 faculty members as of June 2003 (1,035 salaried full- and part-time and 2,703 nonsalaried). The College of Medicine is part of the University of Illinois, a land-grant state university.

UI-COM promotion and tenure guidelines provide a multiplicity of track options (15). The tenure track allows the pursuit of promotion and tenure with a 6-year clock, using different sets of requirements for a research or clinical emphasis. Various nontenure tracks allow promotion without tenure, using a decreased expectation of scholarly productivity. Achievement of tenure confers the right of continuous employment for the percent-time appointment attached to the faculty title. The nontenure tracks generally provide year-to-year contracts.

The sample population was the 97 part-time tenure track-eligible (50–99%-time appointment) faculty members at all four UI-COM campuses (Chicago, Urbana-Champaign, Rockford, and Peoria) on June 26, 2003. Faculty members who were “geographic full-time” (i.e., full-time appointment split between the University and the neighboring Veteran’s Administration hospital) were not included. These 97 part-time tenure track-eligible faculty members comprised 14% of all UI-COM tenure track-

eligible faculty (50–100%-time appointments). Of these, 87 had degrees of M.D. or M.D./Ph.D. and seven were Ph.Ds. The remainder of the degrees included Psy.D., D.NSc., DO, and M.A.

Survey

The anonymous web-administered survey of the part-time tenure track-eligible UI-COM faculty had four sections: 1) demographics, 2) respondent profile with more complex categorical questions ranging from reasons for current status to mentoring issues, 3) an attitude and opinion survey section with modified six point Likert scales, and 4) three mixed questions (ranking, categorical, open-ended comments). The survey required approximately 15 minutes to complete.

The principal investigator contacted all potential subjects by electronic mail. The e-mail itself described the purpose of the study and provided a link to the survey. Multiple follow-up e-mails with the link to the survey were sent. Telephone calls and campus mail were also utilized as needed. The survey was available online for completion from October 27, 2003 through November 30, 2003. Paper-and-pencil surveys were provided to those who requested them.

Two additional data sets, provided by the UI-COM Dean’s Office of Faculty Affairs, were analyzed. The first was a “snapshot” of the entire UI-COM faculty on June 26, 2003, including breakouts by percent-time, track, and gender. The second enumerated UI-COM tenure rollback requests from 1994 (the start of program usage tracking) through June 2003. The tenure rollback system at University of Illinois provides a compensatory mechanism to temporarily “stop the tenure clock,” resulting in an extension of the probationary period, when selected events cause a setback to a faculty member’s progress toward tenure. A rollback of one year may occur, on up to two separate occasions, during the probationary term.

Results

A) Part-Time Faculty Survey

Overall Respondent Characteristics. There was a 45.4% (44/97) survey response rate. Respondent and sample populations were similar in age distribution, rank, tenure/nontenure track, percent time appointment, and years on the UI faculty; however, significantly fewer males responded (51%) than were present in the sample population (78%). The average respondent’s percent-time appointment was 68.4%, with an average of 36.8 hours

worked per week by self-report. Thirty-nine percent of respondents were on the tenure track; 43.2% were junior faculty. The average length of time on the UI faculty was 13.4 years.

Respondents were almost evenly split by gender (22 male, 21 female, 1 declined to state). The average male respondent's age was 53.4 years; the average woman respondent was 48.7 years old. There were no respondents under the age of 35; only one faculty member was under the age of 35 in the sample population. Almost all respondents (42/44, 95.5%) were in marital or life-partner relationships. Respondents averaged 2.4 children. Only two out of 44 respondents planned to have more children in the future. No one was part-time because of personal illness or disability; one person was part-time as a secondary reason because of a child's illness.

Survey Analysis. Respondents' primary reasons for choosing a part-time appointment fell into two basic categories: to achieve work-family or work-life balance, or to obtain additional income from employment outside the university. Although over one fourth of the respondents were retirement-eligible, few of them cited retirement phase-in as a primary reason for choosing part-time employment.

In contrast to most women choosing part-time status for child-rearing purposes, most men primarily chose part-time status in order to gain additional income from non-university employment (Figure 1). Men were more likely to divide their professional focus between the university and an outside job. Women's full professional effort, on the other hand, was more likely to be focused at the university. Despite these differences, the median number of peer-reviewed publications (6) was the same for men and women respondents.

Respondents' stated needs were in four areas: improved mentoring and support at all levels; clarification of duty hours and expectations; provision of equitable benefits and opportunities; and improved administrative support. The majority of both men and women respondents indicated insufficient mentoring regarding track choice. Less than one third of respondents received mentoring in track selection. Nevertheless, the majority of both men and women reported no adverse experiences due to their part-time status and reported overall satisfaction with a part-time academic career.

Although the correlation between percent time and hours worked was significant ($r = 0.44$), it is interesting to note that the lower the percent-time appointment, the

more hours per week worked proportionally. Linear regression predicting hours worked from percent-time showed that two 50%-time employees would put in 58.8 hours per week, versus an essentially full-time equivalent (99.9% time) employee, who would put in 46.1 hours per week. It appears that the University gets more "bang for its buck" from its faculty members with 50–75% time appointments.

The majority of part-time faculty members on the tenure track had worked at or near full-time in order to achieve tenure. The majority of both men and women respondents, regardless of track choice, were unaware of the existence of tenure rollback. However, women were significantly more aware of this option than men. Only 16% of respondents were aware of a tenure rollback option at the time of track selection.

Figure 2 presents the mean agreement with the statement: "When I chose my track, it would have been useful to have been able to prorate the tenure clock to reflect my percent-time appointment (e.g., a 50% appointment gets 12 years instead of 6 to reach tenure)." The majority of all respondents, particularly women and tenure-track respondents, agreed that a prorated tenure track option would have been useful to them at the time of their track selection.

FIGURE 1. Primary Reason for Part-Time Status

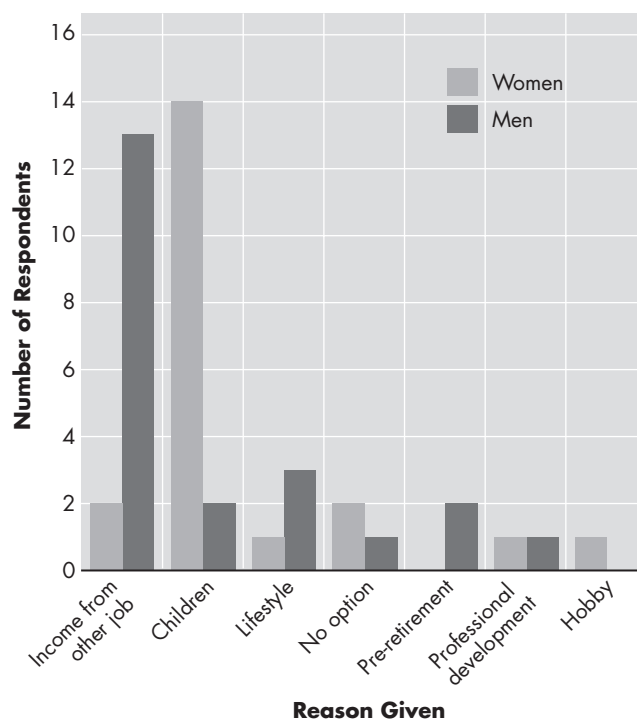
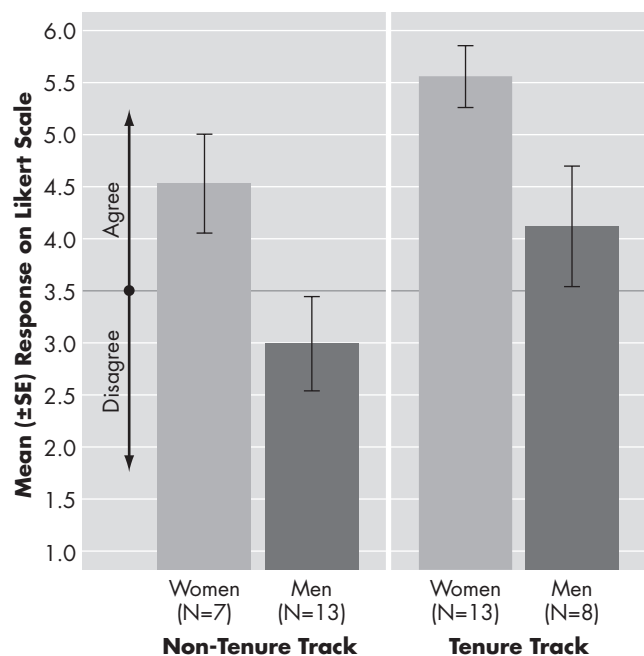


FIGURE 2. Perceived Usefulness of a Prorated Tenure Track

B) Tenure Rollback (“Stop-the-Clock”) Usage Analysis, UI-COM 1994–2003

Do women faculty members who choose full-time employment face similar challenges as part-timers? It is instructive to examine a complementary data set that applies to both full-time and part-time tenure-track faculty members: tenure rollback usage. The data set includes all UI-COM tenure rollbacks from the start of program data collection in 1994, through June 2003.

There were 48 faculty members whose requests were approved; four of these had two rollbacks approved. (An artifact substantially increased the use of tenure rollbacks in 1999. Because of a government-imposed freeze on human subjects research at the University of Illinois in 1999, faculty members were strongly encouraged to apply for rollbacks if their research involved human subjects. Twelve faculty members (8 women and 4 men), citing human subjects issues as their primary reason, applied for and received tenure rollbacks in 1999–2000 and 2000–2001.) Table 1 presents the tenure outcomes for faculty who had approved rollbacks. Of the 40 faculty members utilizing tenure rollbacks whose tenure outcome had been determined, men were equally likely as women to achieve tenure ($\chi^2 = 0.19$, $df = 1$, n.s.).

The number one primary reason for women faculty, regardless of percent time, to request tenure rollback was

parenthood/child care (Figure 3). In contrast, no men primarily requested a rollback for this reason.

C) Tenure-Track Eligible (Part- and Full-Time) Faculty Demographics

Table 2 presents the distribution of tenure track-eligible (50–100%-time appointment) UI-COM faculty, as of June 2003, by gender, rank, track, and percent time. Out of 224 COM tenure track-eligible women, 82.6% were full-time. Of the 97 women on the tenure track, 87.6% were full-time. Among the 50–100%-time tenure track-eligible faculty at UI-COM (593 men and 224 women), there were 363 men and 97 women on the tenure track.

The majority of women (57%; 127/224) chose nontenure tracks, regardless of part- or full-time status. By comparison, a majority of men (61.2%; 363/593) chose the ten-

TABLE 1. Advancement Outcomes of Faculty With Tenure Rollbacks (1994–2003)

	Tenure approved	Tenure denied	Decision pending
Men	6	8	3
Women	13	13	5
Total	19	21	8

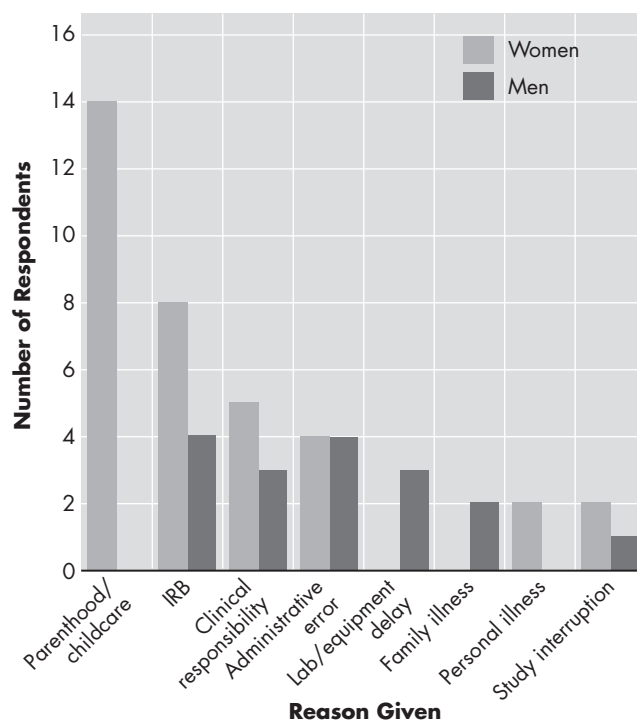
FIGURE 3. Primary Reason for Tenure Rollback Request

TABLE 2. Distribution of 50–100%-Time University of Illinois College of Medicine Faculty on June 26, 2003, by Gender, Rank, Track, and Percent-Time

	50–99%-Time Women	50–99%-Time Men	Full-Time Women	Full-Time Men	Total
Tenure Track Sub-Total	12	30	85	333	460
Junior Tenure Track	6	3	34	73	116
Senior Tenure Track	6	27	51	260	344
Non-Tenure Track Sub-Total	27	38	100	192	357
Junior Non-Tenure Track	19	24	84	133	260
Senior Non-Tenure Track	8	14	16	59	97
Total for All Tracks	39	68	185	525	817

ure track. This difference was significant ($\chi^2 = 21.07$, $df = 1$, $p < 0.05$). Among the COM faculty with tenure track-eligible percent-time appointments, men are significantly more likely than women to select the tenure track. This difference was moderated by percent-time status. Compared with full-time men (333/525), full-time women (85/185) were significantly less likely to select the tenure track ($\chi^2 = 17.27$, $df = 1$, $p < 0.05$). However, there was no significant difference between the number of part-time men (38/68) and women (27/39) selecting a nontenure track.

The proportion of full-time versus part-time women selecting the tenure track was not significantly different (46% versus 30%). However, full-time men were more likely to select the tenure track than part-time men (63% versus 44%) ($\chi^2 = 9.46$, $df = 1$, $p < 0.05$).

The overall relationship of these results is summarized in Table 3. Full-time men were significantly more likely to select the tenure track than any other group.

Discussion

The results of this study underscore the gender differences in career strategies undertaken by medical faculty to achieve work-family balance and that these differences affect academic advancement. Women choose part-time for

TABLE 3. Percentage of Faculty Members Selecting the Tenure Track*

	Full-time	Part-time	Overall
Men	63%	44%	61%
Women	46%	30%	43%
Overall	59%	39%	56%

*Note: percentages with common superscripts are significantly different from one another by χ^2 test, $p < 0.05$.

childrearing; men choose part-time for outside employment. Women request tenure rollback for child care; men request tenure clock stoppage for other reasons. Being male and full-time predicts tenure track selection.

This study has several limitations. Since the survey respondents' demographics are representative of the sample population except for gender (fewer male respondents), any results focused on gender solely obtained using the respondent data set may underestimate the effect of being a part-time faculty man. In addition, the survey data were self-reported, which may create desirability bias (mitigated by respondent anonymity) and is subject to inaccuracies in memory.

UI-COM faculty data may have limited "generalizability" to other faculty at University of Illinois or to faculty at other institutions.

Future surveys of different populations, including both full-time and part-time faculty, are needed to address the larger issues of work/family balance and academic advancement. Significantly more full-time men than full-time women select the tenure track at UI-COM; however, the factors affecting this disparity have not been examined. It is interesting to note that although the primary reason for women respondents to choose part-time status is child care, there is only one part-time UI-COM faculty member under the age of 35. Since most junior faculty members are of childbearing age, it seems logical that full-time women junior faculty members are struggling with similar issues of work-family balance. Full-time junior faculty members may be preferentially selecting a nontenure track in an effort to set reasonable career expectations while simultaneously meeting the demands of a young family.

It should no longer be news that approximately equal numbers of men and women are entering medical school. We need to address proactively the fact that many junior

faculty members are raising families. If we do not change the rules of the game, faculty members who care about work-family balance will continue to be underrepresented in the senior ranks of academic medicine. Drago and Williams (17) suggest: "Raising a child takes 20 years, not one semester. American women, who still do the vast majority of child care, will not achieve equality in academia so long as the ideal academic is defined as someone who takes no time off for child rearing."

Drago and Williams (17) propose a prorated tenure track for part-time faculty with full professional effort. Prorated probationary periods are already in place at many institutions. (These institutions include Columbia, Cornell, Harvard School of Public Health, Stanford, University of California System, University of Iowa, University of New Mexico, University of Pittsburgh, University of Washington, University of Wisconsin-Madison, Vanderbilt, and Yale.) At the University of Michigan, the tenure clock is abolished for any tenure-track faculty member with less than an 80%-time appointment (18). The majority of UI-COM survey respondents indicated support for a prorated tenure track option. The strong agreement by women nontenure track respondents implies that if a prorated tenure track had been available as an option at the time of track selection, more part-time women would have chosen the tenure track instead of the nontenure track. This suggests a potential policy change that could encourage academic advancement for part-time women faculty. In addition, it is unclear how many full-time faculty members would prefer a reduced percent-time appointment if a prorated tenure track were available.

Some junior faculty members with young families may not be able to reduce their hours if they wish to remain competitive in particular areas of research. Currently, most junior faculty development grants require full-time appointments. Policy changes must occur on a national level in order to create a more family-friendly culture in the research arena.

This study's results are a snapshot of a culture in evolution. According to an American Council on Education report (19), "[D]ata do show that young White male faculty (members) are making career sacrifices for parenting and caregiving at a much higher rate than their senior counterparts. Young White males also are more likely to support family-friendly institutional policies and resources, not only for the benefit of women, but for themselves as well. . . . [F]aculty homes with spouses or partners to manage the family and household are becoming

obsolete." One male UI-COM survey respondent, who chose part-time employment to be involved in child care, commented: "The down side of being part-time is made up for by my balance of work/family time."

It is time to redefine the pathways to success in academic medicine. If we are to maintain a diverse and talented faculty, the current leadership in academic medicine must take bold action to address the need for work-family balance while promoting academic advancement. This will require active faculty development and visionary policy change. Part-time tenure tracks, prorated tenure tracks, tenure rollback or "stop-the-clock" options, flexible face-time requirements, changing career development grant requirements to include part-time faculty, increased mentoring, and other options are outlined by the American Council on Education report (19). Most importantly, the academic climate needs to change from the top. We must actively encourage faculty members to utilize existing options to facilitate work-family balance, rather than devaluing them for doing so.

In the final analysis, the best philosophy in human resource policy planning is that "a rising tide floats all boats." The goal is to create a family-friendly culture that is flexible enough to address varying needs over the lifespan of each faculty member's career. We need to take concrete action to help junior faculty members achieve both academic and personal success.

This article incorporates research findings from Dr. Fox's Master's in Health Professions Education thesis, Department of Medical Education, University of Illinois at Chicago, 2004.

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