

**SECTION: Creating Flexible Pathways for Faculty Success,
Engagement, and Retention**

**A New Physician Leadership Academy Program: An Outcomes-Based Follow Up
Survey**

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This poster addresses the **conference theme** of “creating flexible pathways for faculty success, engagement and retention.”

Hypothesis/Goal: There is a critical need for preparing healthcare professionals, particularly physicians, for health system leadership roles and responsibilities.¹ As a newer academic medical center, our health system desired to create a new leadership program focused on physician role leaders and junior faculty who exhibited leadership potential.

We hypothesized that Physician Leadership Academy (PLA) participants would positively perceive the overall impact of this experience on their professional development.

Methods/Approach: The purpose of our study was to analyze the impact of a physician leadership training program involving 122 participants over a five year period (2008-2013). The program, known as the Physician Leadership Academy (PLA), was launched in 2008 and consisted of a single-year cohort-based experience. Most participants were relatively junior faculty members and were either self-nominated or nominated by departmental leadership. The program consisted of 10-12 sessions covering a variety of leadership skills taught by senior leadership including: administrative, business/financial management, career development, strategic planning, communication, people management, decision-making, change management, team leadership, and patient safety/care quality.

In August 2014, previous PLA participants completed an online, 16-item anonymous survey. A Likert-type rating scale was used wherein participants were asked to rate the PLA’s impact on selected aspects of their leadership skills, if they would be interested in participating in a second level of physician training in the future, and for comments about the most and least worthwhile aspects of the PLA and general recommendations.

Outcomes/Results: Participants represented eight different physician specialties, with the largest group being Internal Medicine physicians (23%). Of the 122 participants who completed the PLA, 107 (88%) remain employed by our medical center. The PLA experience was labor intensive and involved 22 hours of instruction, assigned readings between sessions and submission of a capstone project. 48% of previous participants completed the survey. Respondents were 64% male; 56% assistant professor, 31% associate professor; 32% were affiliated with Internal Medicine. Demographics did not impact overall themes of responses.

80% of all respondents strongly agreed or agreed that participation in the PLA was worthwhile. 57% of all respondents strongly agreed or agreed that self-confidence in their leadership abilities was positively impacted by the PLA program. The PLA program impacted the “people management” skills of participants the most (77% agreement); and impacted “decision-making” skills the least (43% agreement). 52% stated that they would participate in a more advanced program on leadership, whereas 41% indicated they would need additional details about such a program before

committing to participation. Useful comments concerning the most and least worthwhile aspects of the program were received.

Lessons Learned & Significance: Overall, participants seemed to positively perceive the PLA's impact on their professional development. Selected aspects of the program, most notably the emphases on financial management and teamwork, were lauded. Further emphases on practical, "real world" application of skills and mentoring were requested as part of a future, more in-depth physician leadership program. This valuable input from previous PLA participants will help guide future development of future programming on leadership.

¹Steinert Y, Naismith L, Mann K. "Faculty Development Initiatives Designed to Promote Leadership in Medical Education: A BEME Systematic Review (BEME Guide No. 19)." Medical Teacher 2012; 34: 483-503.

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Optimizing Faculty Careers on a Regional Campus: Challenges and Opportunities

Poster Abstract: Career Flexibility for Biomedical Faculty of Today and Tomorrow

Applicability to conference themes:

This poster applies the conference goal and all three themes to regional campuses. The number of such campuses has rapidly expanded and significant numbers of faculty members are now based outside academic medical centers. This poster summarizes over 35 years' experience serving approximately 170 paid and over 1,000 volunteer faculty members of a regional campus located approximately 200 miles from the academic medical center. These faculty members represent all specialties and are located in communities across a large geographical area. In 2014, the LCME recognized faculty development programs as a strength of the institution.

Goal/Problem: How are the professional development needs of a large, diverse and dispersed faculty best met through a community-based regional campus?

Methods/Approach: The poster will illustrate how current operations have evolved to meet needs of an expanding and changing faculty including:

Needs assessment: routine data (incorporated into annual faculty review) plus ad hoc assessments targeting specific areas/groups

Programs, Services and Resources: Matrix of programs, resources and services coordinated through Office of Faculty Affairs and Professional Development (FAPD) principally

1. Campus-wide: seminars/workshops, teaching Bootcamp, standardized learner
2. Departmentally-based: various programs, including HRSA funded activities
3. Special groups; including preceptors & educational leadership development
4. Co-sponsored programs; esp. with GME, Research Office, Human Resources

5. Individual services; orientation, academic development plans, mentoring
6. Collaborative programs with other campuses
7. Webinars and connection to external programs
8. External groups, conferences, programs (AAMC, specialty-specific, other)
9. Website and office/staff support
10. Promotion and Tenure process, including applicant support, Committee training.

Administrative:

1. Collaboration with faculty and administrative leaders to represent needs of regional campus-based faculty members in development of schoolwide policies and procedures
2. Input to administrative leaders, faculty governance and others on innovations and “best practices” in faculty affairs and professional development.
3. Ensuring appropriate procedures on regional campus: faculty appointments, promotions, terminations etc

Outcomes: Data on faculty retention, satisfaction, promotion, academic productivity

Lessons Learned:

1. Regional campus faculty members are supportive but often cautious about faculty affairs requirements and the desirability of professional development, especially if originating from a remote institution.
2. Associate dean and staff must be able to articulate policies, practices, and requirements in terms that reflect local perspectives and priorities and help navigate individuals through systems.
3. Services and resources must be flexible, adaptable, accessible. Multiple small “niche” programs and individual services are now more important than traditional workshop formats.
4. Co-sponsoring and collaborating with external and internal groups enhances scope and local ownership of services
5. Investing in key faculty members provides a network of resource individuals
6. Building an academic culture takes time and effort

Submission title: The Part-time Faculty Member Perspective: Improving the Workplace

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Conference theme: Creating flexible pathways for faculty success, engagement and retention

Session objectives:

Part-time faculty members represent a sizeable component of the faculty workforce at U.S. medical schools. Estimates suggest that they comprise approximately 17% of the total faculty population. Academic medicine has used part-time work schedules as a mechanism to recruit and retain high-quality faculty members. Supporting faculty with part-time appointments can help yield high-functioning health care teams. Yet, scholars have a limited understanding of part-time faculty perspectives. This research explores, from the part-time faculty member perspective, what can be done to improve the medical school workplace.

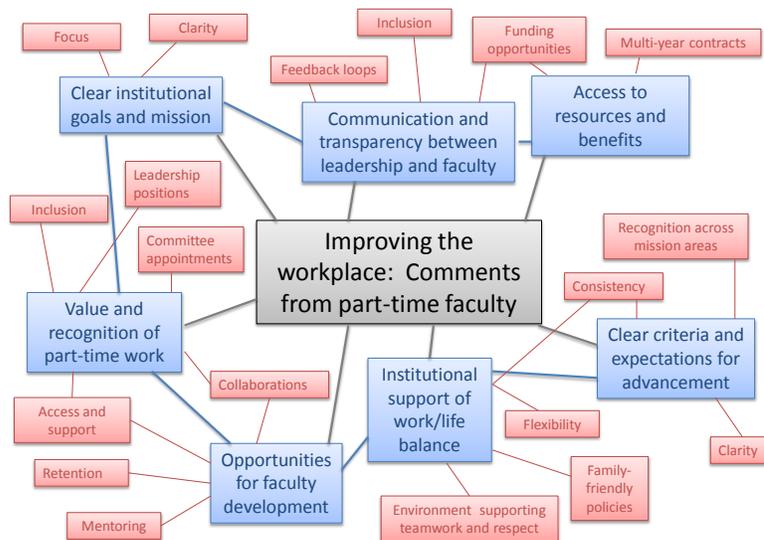
Methods/Approach:

Data are from open-ended responses from 632 faculty at 21 institutions that participated in the AAMC Faculty Forward Engagement Survey—a survey that assesses satisfaction and engagement in the academic workplace—between 2011 and 2014. Faculty were asked to describe the top thing their medical school could do to improve the workplace. The authors performed theme identification and concept mapping of the responses with the aim of describing, understanding, and illuminating the part-time faculty perspective. Both authors generated themes independently to ensure inter-rater reliability, and then the concept map was developed to represent the themes and their interconnections reflected within the responses.

Results:

Several salient themes emerged from the analysis and concept mapping of these responses around improving the workplace. These included communication and transparency and faculty; access to resources and benefits; value and recognition of part-time work; clear institutional goals and mission, institutional support of work/life balance; clear criteria and expectations for advancement; and clear criteria and expectations for advancement. Each of these seven themes will be described and illustrated with examples of responses in this poster.

Figure 1: Themes from Part-time Faculty Responses around Improving Their Workplace



Lessons Learned and Significance:

While these comments were qualitative and cannot be generalized to the entire population of part-time medical school faculty, these respondents' comments do provide, from their perspective, insight into what their institutions could do to improve the workplace and provide a new layer in our understanding of part-time faculty in academic medicine. We know from previous research that most part-time faculty are working at least .5 FTE and their overall satisfaction is equivalent to their full-time colleagues (i.e., they are generally satisfied with their medical school), despite some challenges faced with their appointment. As a mechanism to recruit and retain high-quality faculty, institutions may be well served to continue to create policies and systems to support the cadre of part-time faculty members as there will likely be increasing demand for these types of positions among the next generation of academic physicians and scientists.

The Faculty Flex Voucher Program: Central Support to Keep Scholarly Work Moving

Ann J. Brown, MD, MHS, Vice Dean for Faculty

Jessica Womack, Faculty Development Program Coordinator (will attend conference)

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This abstract describes an innovative program that addresses the following conference themes:

- 1. Creating flexible pathways for faculty success, engagement and retention*
- 2. Mentoring models to foster faculty development throughout a career*

In 2014 the Duke School of Medicine Office for Faculty Development launched the Faculty Flex Voucher Program to address the critical challenge of jump-starting an academic career at the same time that family/childcare obligations are least flexible. The voucher program connects junior faculty with acute work-life balance challenges to high quality academic services. Vouchers are customizable, designed by the faculty member with the service provider, and are meant to provide targeted academic support to move a scholarly project toward completion.

The structure for the voucher program evolved from faculty focus groups with men and women in the basic and clinical sciences. In these discussions, early-career faculty were asked what work-life challenges they faced in keeping their research and publication agendas active and what institutional support would enhance their ability to stay on target. Faculty described a lack of flexibility in their discretionary time, an inability to relegate work to the “third shift” as they had before children (or other work-life challenge), and cultural pressure to seamlessly manage both work and family responsibilities. They sought flexible support that could be applied “on demand” to overcome a barrier to finishing a scholarly project.

In response to this feedback the Faculty Flex Vouchers were designed as a way to provide flexible support to faculty with work-life challenges. Through this program, faculty can apply for vouchers of up to \$2,500. Vouchers are good for 6 months, and redeemable for an array of professional services at existing offices (Duke Office of Clinical Research, the Duke Clinical Research Institute’s Publications Services Group, and the Medical Center Library). Applications are open to all pre-tenure junior faculty in both the basic and clinical sciences. A tenure track appointment is not required. Priority is given to those who articulate acute work-life balance obstacles in their applications.

The first call for applications was distributed in fall 2014 and garnered 18 (14 women, 4 men) applications totaling approximately \$41,000 in requests. Application essays spoke of the challenge of being present for children without allowing work to suffer. They referenced childcare, eldercare, single-parent households, personal health crises, and cultural pressures to “do it all.” Faculty requested relatively small amounts of money for

projects such as database construction, data entry, manuscript editing, project management and referencing. But the impact they described this work potentially having on their academic careers was substantial. In many cases 30-40 hours of assistance would allow completion of projects that have languished for months or even years. This small amount of financial support will allow them to focus their minimal discretionary time on family responsibilities while project work continues. The voucher program also connects faculty with professionals who can offer targeted mentorship related to their area of expertise.

The inaugural vouchers are active now. Feedback will be gathered from participants and service providers at the conclusion of the voucher period in June 2015. Evaluations will drive future changes to the program, including possible expansion to other service providers. Current plans are to repeat the program twice per year.

Abstract

Title: Gender Differences in Barriers to Career Flexibility: Implications for Academic Compensation

Authors: Lydia Pleotis Howell MD, Laurel A. Beckett PhD, Yueju Li MS, Amparo C. Villablanca MD; University of California, Davis School of Medicine

Goal: Flexible career policies are seen as important to faculty satisfaction, recruitment and retention, but are under-utilized in our school and others. Our goal is to better understand the factors that influence a flexible culture at medical schools in order to identify targets for intervention by sharing gender differences in perceived barriers and their implications for developing compensation plan metrics. . **Methods:** An educational intervention to raise awareness of flexibility policies (maternity leave, tenure clock extension, modified duties, part time options, deferral of review) was conducted over four years and included presentations, newsletter articles, brochures, website development/updates. All faculty at UCD School of Medicine were surveyed in 2010 and 2013 on attitudes toward and awareness of policies, policy use, and barriers. Faculty survey respondents were 268 (32%) in 2013; 325 (42%) in 2010. Data were tabulated by gender and proportions calculated for respondents. Statistical comparisons were based on exact tests for proportions and t tests for scaled variables. Significance was at $p < 0.05$. **Results:** Following the intervention, awareness of policies increased for both genders and was ranked slightly higher by women (mean 3.3 of 5; 1 lowest, 5 highest) than men (mean 2.9 of 5) as compared to 2010 when awareness for both genders ranked near 2.5 of 5. In 2013, both genders reported 'burdening colleagues' as the greatest barrier to using policies (43% women, 47% men, $p = ns$). No single barrier dominated in 2010. Other barriers showed significant gender differences in 2013. Men (56%) more frequently reported financial barriers than women (40%; $p = .01$), a marked increase from ~20% for both genders in 2010. More women reported concern about being perceived by their department chair as less committed to career (women 58%, men 41%, $p = .01$) and adverse effect on academic advancement (women 41%, men 30%, $p = .05$). Regarding factors limiting time taken for a leave, a substantial percentage of men (18%) reported that using policies didn't fit the values of their culture/heritage (women 9%, $p = .04$) as well as concerns about decreased visibility at work (men 49%, women 29%, $p = .001$). **Lessons Learned and Significance:** Raising awareness of flexibility policies/opportunities is not sufficient to create a flexible work culture. Barriers must be identified and addressed. The major flexibility barrier in our medical school involves concerns about overburdening colleagues during a leave/accommodation. More women than men report other related barriers to flexibility policy use, including concerns about reduced visibility and about perceptions by the chair of their commitment to career. These issues are more prominent than four years ago, perhaps because our educational intervention successfully raised policy awareness and

heightened perception of potential barriers to policy use. Compensation plan metrics send strong messages regarding organizational values and influence perceptions and behavior. We therefore suggest raising visibility of contributions to the team by placing suggested metrics within a department compensation plan, such as attendance at key rituals and events. These can mitigate barriers related to visibility, career commitment, and burdening colleagues and minimize the need to be ever-present and always available.

Supporting faculty career flexibility through the career life cycle: a comprehensive strategy.

Theme: i. Creating flexible pathways for faculty success, engagement and retention

Presenters: R. Milner, J. Cain, J. Ockene, J. Congdon, and L Thorndyke

Problem Statement: Changes in clinical reimbursement, a more competitive research funding climate, technological innovations, and changes in expectations of balance between professional and personal commitments have greatly affected faculty work and satisfaction. To address the challenges facing academic medical centers in recruiting and retaining talented faculty throughout their career path requires a portfolio of new strategies. Today's faculty demand more flexible work environments and career pathways.

Methods/ Approach:

We utilized the following structured approach to assess needs and implement programs and policies to develop comprehensive strategy for enhanced flexibility and satisfaction while promoting faculty success:

1. Conduct an institutional self-assessment (national and local surveys, focus groups)
2. Identify areas of need and prioritize
3. Collect additional information, including targeted interviews and peer institution intelligence
4. Engage stakeholders to design solutions
5. Gain approval and support from key leaders
6. Develop a communication strategy
7. Implement program or policy
8. Evaluate and revise for continuous quality improvement

Outcomes:

By viewing the faculty career life cycle with this standard process, we identified areas of need and identified different approaches accordingly. We then developed solutions that included programs (mentoring, speaker's series, , workshops, etc.), policies (part time, transition to retirement), individual consultations (for mentoring, retirement, promotion), tools (web based support, checklists, etc.) or a combination for each area identified.

Examples of new initiatives across the timeline include:

1. Early Career: Onboarding Program; Part time Guidelines; Peer mentoring program for promotion
2. Mid to Late Career: Vitality Award for Mid-Career Faculty; Transition through Retirement Program

Two elements common to many initiatives included mentoring programs and individual faculty consultations.

Lessons Learned and Significance:

A comprehensive approach to view faculty needs across the career life cycle assures that there are relevant programs and policies that address key needs for all faculty. Programs were

implemented more successfully and smoothly when the structured approach was followed than when a step was missed in the process. Continued revision and marketing is important for firmly establishing new programs and policies as part of the institutional culture. This career life cycle model is a template that can be used in any institution both to identify target groups and to assure that the needs of the entire faculty are addressed for faculty flexibility and development.

What's in a name? New faculty positions with limited academic involvement.

Charles G. Irvin, Ph.D., Associate Dean of Faculty

Frederick C. Morin III, M.D., Dean

College of Medicine, University of Vermont

Conference theme:

Creating flexible pathways for faculty success, engagement and retention.

Goal and statement of problem to be solved:

The current faculty pathways at the College of Medicine (COM) at the University of Vermont (UVM) include: tenure, clinical scholar, research and educator yet still did not capture the full spectrum of faculty situations. In particular there are two groups of faculty or potential faculty for whom the academic environment provides a barrier to success and engagement. These faculty situations represent the extreme end of the spectrum of academic involvement and as such do not fit into our four pathways for further promotion. Lastly, as our affiliated hospital develops a regional ACO the relationship and expectations of the partners of the enterprises need to be considered.

Approach:

We developed one new faculty position and a second is in process.

Clinical Practice Physician (CPP):

Faculty fitting this position are predominantly practicing physicians whose academic activities such as research and scholarship are minimal. Modest amounts of teaching may be involved. The appointments can be part or full time. Approval is required by the physician leader of the UVM Medical Group (the academic practice), departmental chair of the applicable department and the Dean. No reasonable delay (less than thirty days) are permitted. Terms of the appointment are for five years. The physician-leader of the practice shall determine the minimally invasive renewal process. The appointment requires acceptance in the practice and handled as a opportunity hire. While intended for UVM Health Network, physicians within the home institution in Burlington are also eligible. Should a CPP develop substantial academic activities, they can be considered for appointments in other pathways, e.g. clinical scholar pathway.

Faculty Scientist:

In the research scholar pathway we currently have an entry position called Research Associate (similar to lecturer in other institutions). Typically these are/were senior postdoctoral associates. An analysis of the persons currently in the position showed that many have been in this position over 20 years. It also suggested that for many their current role was technical support not research leadership or independence. UVM does not provide an acceptable option for staff positions. The current proposal before the faculty is to create a faculty position, Faculty Scientist that would accomplish these goals:

1. Better reflect what the faculty member does.

2. Decrease the stress/expectation of further academic progression.
3. Decrease the administrative burden as research associates are reviewed at one year intervals. Individuals are expected to hold a terminal degree in their discipline (PhD) and demonstrate a high degree of technical expertise beyond that usually encountered in laboratory technicians.

Outcomes:

The CPP position was approved by the faculty by unanimous vote and approved by the UVM Board of Trustees in early 2014. The Faculty Scientist position has received strong support with little push back in faculty meetings to date.

Lessons Learned:

The complexity of academic medicine and science are such that providing positions where faculty can be relieved of the burden of continuous cycles of review and reappointment and provided an opportunity to reduce administrative burden and is acceptable to faculty.

Abstract

Title: Faculty and Administrator Perceptions of Time During Paid Parental Leave of Absence

Author(s): Jennifer L. Allie, PhD

Conference theme: Creating flexible pathways for faculty success, engagement and retention

Hypothesis/goal: In recent years, an upward trend in the frequency and type of career-flexibility policies in academic medicine has overcome institutions nationwide. This poster explores faculty and administrator perceptions regarding time and commitment during parental leave, specifically addressing the assumptions of the ideal worker, importance of face-time, and the potential implications for faculty parents who opt to use parental leave policies.

Methods/approach: In 2010, the university policy center conducted a full evaluation of the paid parental leave policy adopted in 2006. The policy evaluation included a mixed-method analysis of web-based survey results from faculty and their corresponding department chairs. Individual interviews and focus groups were conducted with faculty who had used the parental leave. Their respective department chairs were asked to assess the percentage of time spent on institutional missions (i.e., teaching, service, research) during approved parental leave.

Outcomes/results: Results from the analysis showed a discrepancy in perception of time spent on institutional missions while on university approved parental leave, where 68% of faculty respondents noted that while on leave they continued to advise students, compared to department chairs who reported only 25% of faculty contributing to this effort while on leave. A continued disproportionate outcome revealed 39% of faculty indicated that they continued service activities, while 75% of department chairs indicated that faculty did not engage in service during parental leave. Parents described being notified of meetings and feeling as if they were “left with no choice but to show up with baby in tow.” Faculty parents described feeling obligated to be present, particularly if one of their colleagues was also on leave and planned on attending. More

problematic in regards to a culture that supports career flexibility, however, were the comments received from several of the mothers, who recalled showing up to these meetings only to be subjected to ridicule for nursing their child during faculty meetings.

Lessons Learned and Significance: All parties agreed that the parental leave policy was a valuable recruitment and retention tool although faculty and leadership differed in their perceptions on time spent by faculty parents while on parental leave. The policy evaluation team recommended that a formal document be completed at the time of the request for leave. The document would outline expected contributions during parental leave and would be shared with the department chair in an effort mitigate some of the concerns made by administrators and other faculty regarding parents being absent while on university sanctioned parental leaves of absence. The findings of this evaluation, particularly the perception of time and commitment, establishes that while implementing a formal parental leave policy may be a perceived value, oversight and accountability for leaders' perception of these policies and faculty time at the departmental level remain crucial components in fostering a culture where faculty may integrate their professional and personal identities without penalty

SECTION: Mentoring Models to Foster Faculty Development Throughout a Career

DEVELOPMENT OF A MULTILEVEL, MULTIDIMENSIONAL MENTORING INITIATIVE

Sana Loue, Daniel Anker, Sumita Khatri, and Pamela B. Davis

Conference Theme: Mentoring models to foster faculty development throughout a career

Hypothesis/Goal: Faculty responses to a series of medical school climate surveys and focus groups identified a need for mentoring. We hypothesized from these findings that mentoring is needed and would be beneficial to faculty members at all levels (instructor, assistant, associate, and full professor) and tenure statuses (tenure track, tenured, and non-tenure track).

Methods/Approach: We developed a multilevel, multidimensional mentoring initiative for faculty. The Office for Faculty Development and Diversity collaborates with all department chairs and many individual faculty members to assist with the development of individual faculty mentoring committees and department-specific mentoring programs. Mentoring committees are being established for all faculty members, regardless of rank or tenure status. Faculty members are encouraged to develop five-year Individual Career Plans in collaboration with their mentoring committee members in order to enhance their likelihood of success along their desired career trajectory.

We instituted additional programmatic components in order to augment the discipline-specific and career mentoring provided to faculty by their mentoring committees. The Faculty Toolkit series is a monthly workshop series targeted for junior and mid-level faculty that focuses on diverse topics critical to the enhancement of professional skills in an academic medical setting. Additional mentoring opportunities have been implemented through the creation of FLEX (**F**oundations in **L**eadership **EX**cellence), a multi-session leadership training program with individualized coaching for female basic science and clinical faculty at all levels (Assistant through Full Professor), and LInCS (**L**eaders **I**N **C**ommunication **S**kills), a program designed for mid- and senior level clinical and basic science faculty to enhance their communication skills with patients, research participants, colleagues, and communities. Coaching is available for individual faculty members through the Office for Faculty Development and Diversity. We established the Faculty Development Council, comprised of representatives from all basic science and clinical departments, to provide the Office for Faculty Development and Diversity with a mechanism for ongoing feedback about faculty mentoring needs.

Outcomes/Results: All basic science and many clinical departments have established individual mentoring committees for their faculty members. In response to the mentoring

initiative, various departments have identified one or more of their faculty members to serve as the point person(s) for faculty development within their departments. Evaluations of the Faculty Toolkit workshops and the LInCs programming have been overwhelmingly positive. Additional resources are needed to support faculty members in their efforts to transition towards part-time, emeritus, or retirement status.

Lessons Learned and Significance: A menu of diverse mentoring formats is necessary to provide support to faculty members and enhance their likelihood of success at all stages of their careers. The provision of mentoring is particularly critical as faculty members transition between career levels and assume new and challenging responsibilities.

Career Flexibility for Biomedical Faculty of Today and Tomorrow: A National Conference

March 14-15, 2015, BU Medical Campus | Boston, MA

Abstract

Conference theme: 2. Mentoring models to foster faculty development throughout a career

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Title:

Life, career and socio-cultural differences in desired mentor characteristics among female faculty in academic medicine

Goal:

Relatively little is known about what individuals look for in a mentor (Young et al., 2006) yet initiation of the mentor-protégé relationships is critical for effective mentorships (Turban & Dougherty, 1994). In this study, we investigate the characteristics female faculty in academic medicine desire in a mentor, including: 1) location similarity, 2) racial-ethnic similarity, 3) gender similarity, 4) personal interest similarity 5) career interest similarity and 6) political capital and influence. Given the influence of sociocultural, career and life stage differences associated with race-ethnicity, nationality, age, family responsibilities and academic rank we hypothesize that female faculty preferences for mentor characteristics will vary along these demographic factors.

Methods:

Statistical analysis was conducted using survey data from the Women and Inclusion in Academic Medicine study collected in 2012. Demographic differences were assessed using the responses of 3,127 female faculty at thirteen academic institutions with hierarchical linear models. Each of the mentor characteristics perceived as important were regressed on 1) race-ethnicity (non-Hispanic White, non-Hispanic Asian, non-Hispanic African American, Hispanic); 2) foreign born status (yes/no); 3) age (<44, 44-54, >54); 4) academic rank (Instructor, Assistant Professor, Associate Professor, Professor); 5) childcare responsibilities (current, past two years, none/never); 6) marital/partnership status (yes/no); and 7) prior experience as a mentee (yes/no).

Results:

Demographic differences were observed in what characteristics female faculty perceived as important in mentors, including race-ethnicity and foreign-born status differences in the importance of race-similarity, career interest similarity, personal interest similarity, location similarity and the political capital/influence of a mentor. Faculty older than 45

years rated career interest similarity as less important and personal interest similarity and race similarity as more important than faculty younger than 44 years. Faculty that have received past mentoring perceived race and gender similarity as less important and political capital/influence of mentors as more important than faculty with no past experience of mentoring. Female faculty with current childcare responsibilities perceived gender similarity (i.e., having a women as a mentor) as more important compared to faculty with past childcare responsibilities. Junior faculty rated mentor gender similarity and location similarity as more important than senior faculty. Married/partnered female faculty rated location similarity as more important compared to single female faculty.

Significance:

We proposed that women faculty in academic medicine will desire mentor characteristics to a greater or lesser degree based on demographic factors that shape preferences including race-ethnicity, foreign-born status, academic rank, age, childcare responsibilities, protégé status, and marital/partnership status. Significant demographic differences were found across 13 medical institutions. The findings point to a need to revisit mentoring models for fostering development of female faculty throughout their careers. In particular, these results document the unique needs of women faculty in academic medicine and serve to better inform recommendations for tailoring mentoring programs and evaluating current mentor provisions at academic medicine institutions, thereby having implications for female faculty career flexibility.

The Faculty Mentoring Institute

Presenter: Lily S. Hsu, Ed.D

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ABSTRACT

Theme: Mentoring models to foster faculty development throughout a career
MCPHS University is dedicated to preparing students for successful careers in healthcare through excellence in teaching, scholarship, research, professional service and community engagement. It offers programs at the certificate, bachelor, master's and doctoral level. Faculty hired all have expertise in their discipline and strong clinical skills but often lack classroom teaching experience and scholarship of teaching and learning. Heavy teaching loads that include didactic, laboratory and clinical teaching leave little time for faculty to acquire skills in student learning and engagement. The lack of teaching and scholarship experience among new faculty was identified in an online survey and focus groups that were conducted in 2008. The university responded by establishing two major faculty development programs. The first program developed was the New Faculty Orientation (NFO) Program. This year long seminar based program targeted new faculty who had less than three years of teaching experience. The NFO purpose was to define the major responsibilities of faculty; familiarize faculty with resources and tools available and focus on skills and strategies to strengthen their teaching. The NFO also provided an opportunity for new faculty to develop relationships with faculty from other schools.

Participant feedback led the NFO program to be delivered face to face on each campus and to provide a greater focus on teaching and classroom management. Faculty also identify a teaching project that is presented at the annual faculty showcase at the end of the academic year.

In 2010 the Faculty Mentoring Institute (FMI) was started and its purpose was to mentor faculty who had completed the NFO program or mid-level faculty seeking mentoring. The FMI was led by a group of senior faculty or "Fellows" who were appointed by the Provost. The Fellows were recognized for their expertise in teaching, scholarship and/or service and represented faculty from different disciplines and campuses. The FMI provides structured programs and individual mentoring on a variety of topics. Some of the activities offered include an annual Faculty Scholarship Showcase, New Directions for Established Scholars (NDES) intramural grant program to support associate and full professors in developing scholarship in teaching and learning, and workshops on preparing for promotion.

Faculty response to the NFO and FMI programs indicate that goals of these programs are being met. The NFO program was voluntary the first three years but made a requirement in 2012 for all eligible faculty. The FMI program has established two major events that highlight faculty scholarship and builds collegiality. The 5th Annual Faculty Scholarship Showcase will be in May 2015 and the number of submissions has grown to over 100 posters. The NDES program was piloted last year and was approved again for this year.

These two programs address major faculty issues and receive strong support from the Provost and deans. Challenges remain with conflicts in scheduling and teaching schedules and technology. As the university grows the ability to equally reach the campuses also becomes more difficult.

Assessment of Junior Faculty Attitudes Toward Mentoring

Laurie W. Leclair, Renee D. Stapleton, Polly E. Parsons, Charles G. Irvin, Benjamin T. Suratt.*

Conference Theme: Mentoring models to foster faculty development throughout a career

Hypothesis: Informal polling of the faculty in the Department of Medicine suggested that many junior faculty did not have identified mentors, and even those that did had little understanding of the promotion process and lacked strategic plans for career development. We hypothesized from these findings that junior faculty in the department not only suffered from inconsistently identified mentors, but also from inadequate mentoring on career development and advancement within academic medicine, regardless of whether they had a faculty mentor.

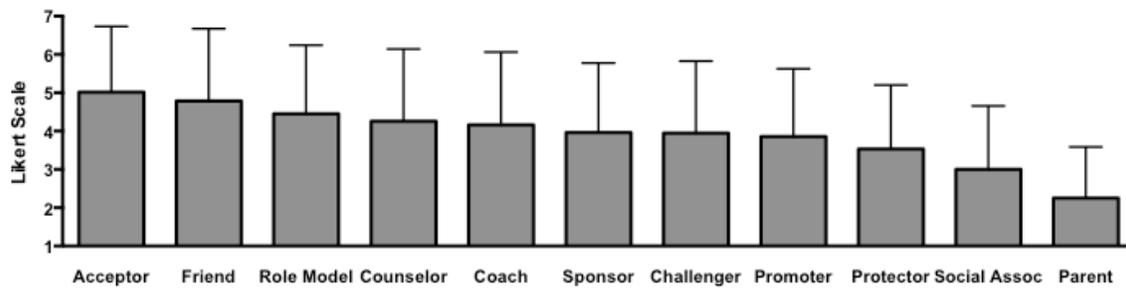
Methods/Approach: We performed a multidimensional survey of all junior faculty (below rank of Associate Professor) within the Department of Medicine at our institution (n=82). This cohort included all junior faculty in Primary Care, Hospitalist Medicine, and Subspecialty Medicine, and on all promotion tracks (Tenure, Clinical Scholar, Research, and Teaching). The survey consisted of demographic questions and assessment of current mentoring status (has an identified mentor, does not, or uncertain), as well as the Ragins/McFarlin Mentor Role Instrument (RMMRI; Ragins and McFarlin, 1990). The RMMRI consists of 33 Likert scale questions assessing both career development and psychosocial dimensions of the mentoring relationship within multiple domains: Career - Coach, Challenger, Sponsor, Promoter, and Protector; Psychosocial - Acceptor, Friend, Role Model, Counselor, Social Associate, and Parent. Respondents who reported that they either had no identified mentor or were uncertain were asked to answer these questions in reference to whomever they consistently turned to for professional advice in the department. The survey was completed online by the faculty using SurveyMonkey.

Outcomes/Results: We received responses from 57 faculty for a 70% response rate (45% men, 55% women). Of these respondents, 61.4% reported having an identified mentor, 24.6 reported having no mentor, and 14.0% were uncertain whether they had one. These trends were similar between male and female respondents, although slightly more women faculty said they had identified mentors (67.9% of women vs. 60.9% of men). The RMMRI responses for the entire cohort showed that the characterizations of their mentors that they most strongly agreed with were in the psychosocial dimension (Acceptor, Friend, Role Model, and Coach) with the exception of 'Social Associate' and 'Parent,' which were the lowest of the 11 domains examined and were excluded from further analysis. Domains within the career dimension fell in the middle, with the least accepted descriptors being 'Promoter' and 'Protector' within this dimension. Although women respondents reported lower overall Likert scores across all domains (p=0.01), there were no significant differences between men and women in any individual domain. Those respondents who reported having an identified mentor were more likely to agree with

descriptors in the psychosocial dimension than respondents without mentors ('no mentor' or 'uncertain'). However, there were no significant differences between those with and without mentors within any of the Career dimension. Thus, having an identified mentor did not appear to influence these (low) scores.

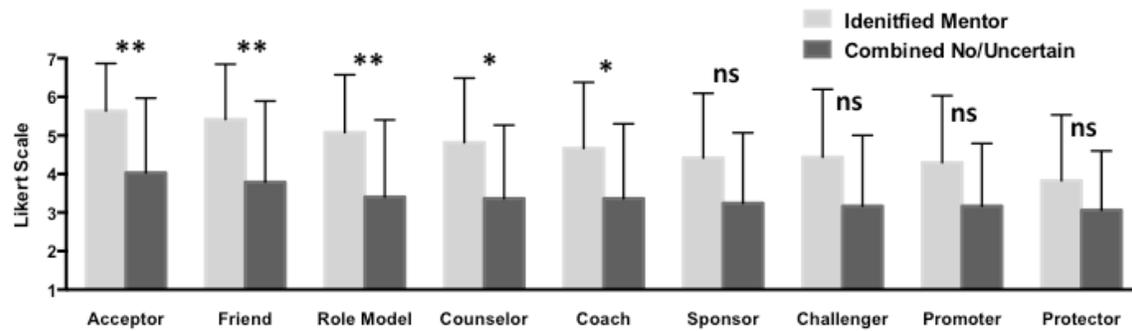
Lessons Learned and Significance: Nearly 40% of the junior faculty in our Department of Medicine do not have an established mentor, a figure that is unacceptably high but similar to other Academic Medical centers. Faculty mentors either do not understand the importance of or feel comfortable with mentoring in many aspects of career development.

Fig. 1 Attitudes Toward Mentor



Likert scale: 1 (strongly disagree) to 7 (strongly agree)

**Fig. 2 Attitudes Toward Mentor:
Identified Mentor vs. No/Uncertain**



Likert scale: 1 (strongly disagree) to 7 (strongly agree)

NENFA: a Regional Network on Faculty Affairs and Faculty Development

Emelia Benjamin and Robina Bhasin, Boston University School of Medicine; Lisa Coplit, Quinnipiac School of Medicine; Michele Cyr, The Warren Alpert Medical School of Brown University; Zoe Fonseca-Kelly, Harvard Medical School; Charles Irvin, University of Vermont College of Medicine; Kathleen Lowney, Tufts University School of Medicine; Linda Bockenstedt, Yale University School of Medicine; Robert Milner, University of Massachusetts Medical School; Christine Power, Dana-Farber Cancer Institute

Themes addressed: All, providing a model for dissemination of practices in faculty career flexibility.

Goal:

There are 10 medical schools within the six states of New England and many affiliated health centers, particularly in Boston. Each of these institutions has experienced and knowledgeable individuals in faculty development and faculty affairs, representing a concentration of expertise within a small geographical area. The goal of the New England Network on Faculty Affairs (NENFA) was to develop a structure to share best practices in faculty development and faculty affairs, foster collegiality, and encourage scholarship and collaboration.

Approach:

NENFA was founded in 2010 to bring together the faculty leaders and administrators responsible for faculty affairs and faculty development in the academic health centers in New England. NENFA's mission is to share best practices, foster collegiality, and encourage scholarship with the overarching goal of recruiting, retaining, and advancing our diverse medical school faculties. NENFA is managed by a steering committee composed of one representative from each of the 10 New England medical schools and one representative from the Harvard affiliated hospitals and institutes. Membership is restricted to the New England area but individuals from outside the region are welcome to attend meetings. A list server facilitates communication among the members. NENFA's major activity is sponsoring meetings, held twice a year on topics in faculty development and faculty affairs.

Results:

To date, NENFA has held six half-day meetings, hosted by a member institution. Most of the meetings have focused on issues in faculty career flexibility. Topics have included "Recognizing and Rewarding Clinical Scholarship", "Recruitment & Retention of a Diverse Faculty", "Fostering Faculty Vitality", "Late-Career Faculty Transitions", "Mentoring and Support for a Diverse Faculty", and "Mentoring Programs for Faculty". Each meeting may include keynote presentations, a "data blitz" to share best practices, and ample time for discussion. The meetings are well-attended, typically 40–60 participants, and well-received. Expenses, including dinner, are modest and usually funded by the host institution.

Lessons Learned:

Our experience is that NENFA meetings and other interactions enhance and complement the national meetings on faculty affairs and development, providing added benefit for its members. Furthermore, local meetings within a relatively small geographical area provide an opportunity to bring together faculty and staff who do not have the opportunity to attend the more distant

meetings. NENFA provides a model for similar collaborations in other regions of the USA.

SECTION: MID AND LATE CAREER VITALITY AND TRANSITION TO RETIREMENT

Title: How Does A Mid-Career Faculty Development Program in Academic Medicine Impact Faculty and Institutional Vitality?

Authors: MaryAnn Campion^{1,2}, Robina Bhasin¹, Emelia Benjamin¹, Mary Shann²

¹ Boston University School of Medicine, ² Boston University School of Education

Conference theme(s) addressed:

- (2) Mentoring models to foster faculty development throughout a career
- (3) Mid and late career vitality and transition to retirement

Abstract:

Background: Faculty vitality is integral to the endurance of higher education. Strengthening vitality is particularly important for mid-career faculty, who represent the largest and most productive segment but also the most dissatisfied. Ultimately, faculty burnout affects faculty retention, which can create downstream problems for an institution. While the mid-career phase is particularly vulnerable to diminishing vitality, the backdrop of academic medicine appears to be another factor that may put faculty at risk of attrition. Over the past 25 years, the number of clinical faculty in medical schools has more than doubled while tenure-track positions have been cut in half (Bunton & Corrice, 2011). Concurrently, medical schools have experienced a dramatic reduction in federal research funding and reliable clinical income (Barzansky & Kenagy, 2010). In order to survive, administrators have come to rely on faculty with distinct expertise who focus primarily on research, teaching, or patient care. These concentrated roles are misaligned with antiquated promotion criteria, making it increasingly difficult to reward these same faculty members for their efforts. Therefore, it has become imperative for medical schools to embrace alternative strategies to maintain faculty commitment and productivity.

Goal: In 2008, Baldwin et al. assessed the needs and experiences of mid-career faculty through a cross-section of interviews, identifying themes of high expectations, neglect, reassessment, and adaptation. In 2006, Steinert et al. performed a meta-analysis of faculty development programs in academic medicine, finding that positive changes in attitude, increased knowledge, and gains in teaching skills were most commonly associated with programs designed around experiential learning. While Baldwin's work addresses the specific needs of mid-career faculty, and Steinert's work focuses on faculty development in medical schools, there is a paucity of data that links the two subjects. This gap marks a clear need for research in this arena. Therefore, in January 2013, Boston University School of Medicine initiated the Academy for Collaborative Innovation and Transformation (ACIT), a ten-month mid-career faculty development program designed to allow participants to engage in interdisciplinary collaboration, self-reflection, mentoring networks, and the development of strategic leadership skills. This first iteration of ACIT consisted of six two-day interactive learning modules and multidisciplinary group projects based on institutional needs.

Methods: At this time, a mixed methods evaluation is underway using a quasi-experimental

design to assess the impact of ACIT on faculty and institutional vitality. Quantitative pre-post surveys related to knowledge, skills, attitudes, and connectivity are being used to compare ACIT participants with a reference group that was matched based on rank, department/section, track, and years of work experience. The quantitative data is being augmented by interviews and focus groups to gain the perspectives of multiple stakeholders, including participants, senior leadership, department chairs, and ACIT staff members.

Results: Data analysis will be completed by February 1, 2015, and will be included in the final poster presentation.

Significance: Although we are unable to comment on the impact of ACIT at this time, it stands to reason that the results may have implications for future initiatives aimed at mid-career faculty development at BU and beyond.

Barzansky, B., & Kenagy, G. (2010). The full-time clinical faculty: what goes around, comes around. *Academic Medicine, 85*(2), 260-265.

Baldwin, R., Dezure, D., Shaw, A., & Moretto, K. (2008). Mapping the terrain of mid-career faculty at a research university: Implications for faculty and academic leaders. *Change: The Magazine of Higher Learning, 40*(5), 46-55.

Bunton, S. A., & Corrice, A. M. (2011). Evolving workplace flexibility for US medical school tenure-track faculty. *Academic Medicine, 86*(4), 481-485.

Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M., . . . Prideaux, D. (2006). A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No.8. *Medical Teacher, 28*(6), 497.

Transition through retirement: The next faculty development frontier

Joanna Cain, Robert Milner, Judy Ockene, John Congdon, Luanne Thorndyke
University of Massachusetts Medical School, Office of Faculty affairs

Themes addressed: Mid and late career vitality and transition to retirement

Goal:

To support the needs of faculty through pre-retirement, retirement, and post retirement

Methods/Approach:

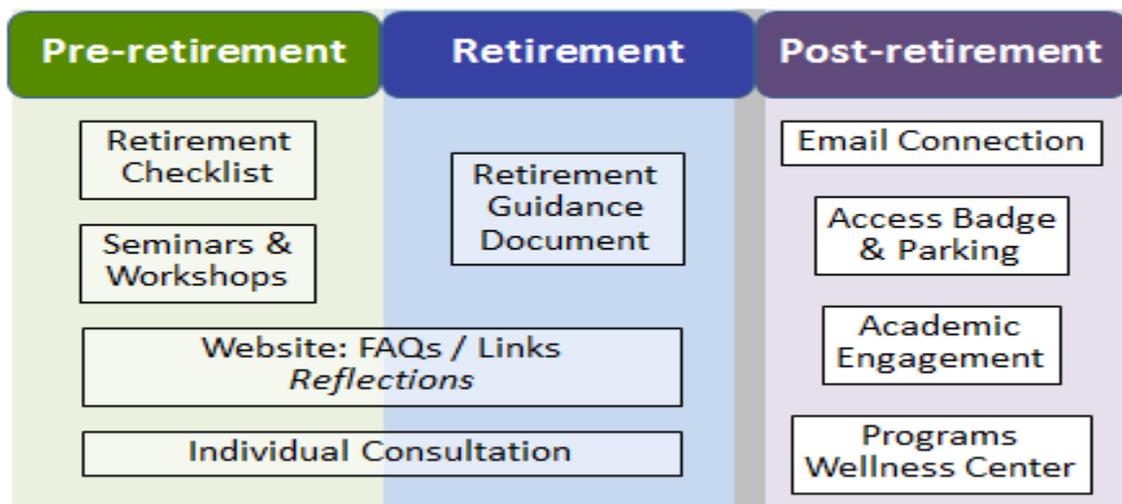
We surveyed faculty 50 and over to identify areas of need and priorities. Programs to address needs in the three identified areas of pre-retirement, retirement, and post-retirement were initiated with stakeholder input. The program is based on the goal of assuring faculty achieve a graceful retirement and the institution achieves ongoing engagement of faculty, transfer of knowledge, and smooth succession planning. Further development is being guided by a stakeholder focus group, ongoing evaluation of programs offered for faculty, and development of tools for the institutional leaders to continue to improve outcomes.

Outcomes:

Our demographic survey follows the national data with an average of around 20% of faculty over 60 and a distribution that varies from nearly 48% to 7% in individual Departments. Faculty over 50 were surveyed with a 28% response. This survey found that overall 38% were not prepared for retirement. There is a major shift from 50 to 54 (11.6%) to 55 to 64 (34%) to over 65 (87%) in having a transition through retirement plan. There was strong interest in tax planning, investment planning, long term care topics as well as a desire for departmental recognition and opportunities to engage post retirement. There was a strong interest in web based information.

The survey was used to design the three phase plan each with specific programs:

The *Transition Through Retirement Program* has components across the three phases of retirement



Lessons Learned/ Next steps:

We followed the UMMS OFA model of data driven design, adoption, and ongoing evaluation.

We learned:

1. Stakeholders need to be continually engaged throughout all processes of development. The alliance across two Human Resource Departments that faculty interface with was key for checklists, frequently asked questions, seminars and workshops.
2. We were not able to go as far with retirement guidance for phasing as we initially hoped, due to not fully integrating stakeholders concerned with tenure based financing.
3. A key component of advancing and implementing programs has been raising the level of conversation about retirement within the institution through seminars, individual consultations, detailing key leaders, and informal conversations around the seminar topics.
4. This informal conversation has allowed us to identify key fears around planning for transition a year or two ahead in two areas:
 - a. job security and efficacy (lame duck syndrome)
 - b. paucity of options or peers to discuss options for post-retirement careers that we will focus on addressing in the next phases of programs.
5. The recognition of the need for an institutional/ Departmental approach to transition planning for the transition through retirement is growing. Our focus has been on the faculty needs and we will be exploring transition planning through retirement and succession planning to meet the most common institutional needs over the next year.

Vital Signs: Engagement among Faculty Considering Retirement

By Valerie M. Dandar, MA and Sarah A. Bunton, PhD

Conference theme: Mid and late career vitality and transition to retirement

Goal:

Faculty attrition greatly impacts the workplace environment. Faculty leave institutions for myriad reasons, but research shows that disengaged faculty are more likely to do so. As faculty progress through their career, events in an individual's or institutional environment may disrupt one's work life, prompting disengagement, vitality loss, and transition. It is important, therefore, to understand the key factors comprising engagement to gain insight into what signals vitality loss among mid- and late-career faculty and impact decision-making about retirement.

Methods:

Data analyzed were from administrations of the Faculty Forward Engagement Survey collected from 5,207 faculty at 26 US medical schools from 2011-2014. Analysis focused on full-time senior rank faculty (i.e., associate or full professor) who were '45-65 years of age' or 'over age 65'. Responses to survey items related to perceptions of work, collegiality, development, and workplace culture were categorized by age group and plans to retire and assessed for significant differences with ANOVA and post-hoc analyses.

Results:

Among faculty age 45-65, those considering retirement reported feeling less positively about several key factors contributing to engagement that may indicate a loss of vitality when compared with same-aged colleagues not planning to retire. Significant differences (at $p < .05$) were observed across several statements where respondents were prompted to rate their level of agreement. For example, fewer faculty aged 45-65 considering retirement agreed with:

- I am satisfied with
 - my autonomy at my work (3.85 vs. 4.09)
 - the pace of my professional advancement at this medical school (3.24 vs. 3.53)
 - the quality of personal interaction with departmental colleagues (3.80 vs. 4.00)
- I feel that the workplace culture at this medical school cultivates collegiality (3.53 vs. 3.84)
- My departmental colleagues are respectful of my efforts to balance work and home responsibilities (3.64 vs. 3.84)

Among faculty over 65, those planning to retire felt less positively about many similar statements when compared with colleagues not planning to retire. In both age categories, those planning or considering retiring worked fewer hours per week. Those 45-65 unsure of their retirement plans ($p < .001$) and those over 65 planning to retire were less satisfied with their medical school as a place to work when compared with those not planning retirement ($p = .017$). Faculty open-ended comments support these findings and will be highlighted.

Significance:

Findings are concurrent with Viggiano and Strobel's description of loss of faculty vitality and the Career Management Life Cycle. In order to support the retention and engagement of talented senior faculty, institutional leaders should consider, for example, the continued development of flexible work policies, specifically part-time and contract appointments. Alternatives to full-time appointments provide mechanisms for faculty considering retirement to introduce lifestyle balance, while focusing professional effort on mission activities that rejuvenate collegiality and vitality. ¹

Viggiano, Thomas and H. Strobel. "The Career Management Life Cycle: A Model for Supporting and Sustaining Faculty Vitality and Wellness" in *Faculty Health in Academic Medicine: Physicians, Scientists, and the Pressures of Success* Editors: Thomas R. Cole, Thelma Jean Goodrich, Ellen R. Gritz 2009 Humana Press

Aging of Faculty in Basic Science and Clinical Departments, 1981 - 2011

Christine Q. Liu¹, PhD, William F. Rayburn², MD, MBA, Emory Morrison, PhD³

^{1,3}Association of American Medical Colleges, Washington D.C. and ²Department of Obstetrics and Gynecology, University of New Mexico School of Medicine, Albuquerque, NM

Theme: 3. • Mid and late career vitality and transition to retirement

Study Objective: The age of faculty in basic science and clinical departments has increased while retention rates remain high. This investigation determines whether faculty left were comparable in age structure of the retained faculty.

Methods: This descriptive study used the Association of American Medical Colleges (AAMC) Faculty Roster. The findings reflect the ages of full-time faculty in 5-year groups in basic science and clinical departments between 1981 and 2011. Ages for the faculty who left the institution that year as well as those retained in the department were examined every five years and proportions of faculty older than 55, 65, and 75 were studied.

Results: During this 30-year period, the total number of full-time physician faculty in basic science departments increased from 11,645 to 15,459, and in clinical departments increased more than ten-fold from 37,585 to 106,479 individuals. The average faculty age in basic science departments was 44.6 in 1981 and 52.5 in 2011, while the average age in clinical departments was 43.8 in 1981 and 49.3 in 2011. Percentages of basic science faculty 55 years or older were 49.8 percent in 1981 and 51.3 percent in 2011; while those 65 years or older were 32.7 percent in 1981 and 21.3 percent in 2011, those 75 years or

older were 6.4 percent in 1981 and 3.3 percent in 2011. Over this same period, percentages of basic science faculty who left the institution who were 55 years or older were 18.4 percent in 1981 and 40.8 percent in 2011; while those 65 years or older were 8.8 percent in 1981 and 22.8 percent in 2011, those 75 years or older were 0.3 percent in 1981 and 5.1 percent in 2011. In clinical departments, faculty 55 years or older were 42.5 percent in 1981 and 40.3 percent in 2011; while those 65 years or older were 25.9 percent in 1981 and 14.2 percent in 2011, those 75 years or older were 6.0 percent in 1981 and 2.5 percent in 2011. Over this same period, percentages of clinical department faculty who left the institution who were 55 years or older were 16.2 percent in 1981 and 31.1 percent in 2011; while those 65 years or older were 6.6 percent in 1981 and 12.4 percent in 2011, those 75 years or older were 0.3 percent in 1981 and 2.6 percent in 2011.

Significance: The average age of faculty increased steadily, regardless of department. The higher proportion of faculty who left in older age groups likely reflect retirement in appreciable numbers. The high proportion of faculty leaving institution at or approaching retirement age is important for policy issues pertaining to the succession planning and retirement policy for faculty with diverse backgrounds.

References:

Alexander H, Liu CQ. The Aging of U.S. Medical School Faculty, 1967-2007. Analysis In Brief, Washington, DC: Association of American Medical Colleges.2009;9(4):1-2.

Schloss EP, Flanagan DM, Culler CL. Some hidden costs of faculty turnover in clinical departments in one academic medical center. Acad Med. 2009;84, 32-36. Career Flexibility for Biomedical Faculty of Today and Tomorrow: A National Conference

Poster Abstract Submission

Troy S. Buer, PhD, Robin S. Fisher, MS, PHR, Ashley Ayers, BA, Susan M. Pollart, MD, MS,
University of Virginia School of Medicine, Office of Faculty Affairs and Faculty Development

Career Flexibility at the University of Virginia: Implications for Faculty Engagement

Conference Themes

This poster will address the following two conference themes:

- Flexible pathways for faculty success, engagement and retention
- Mid- and late-career vitality and transition to retirement.

Goal

Faculty physicians and scientists work in a complex, demanding environment. Academic health centers (AHCs) are comprised of interrelated and legally separate organizations (e.g., medical schools, teaching hospitals, etc.) each with their own policies, procedures, and practices.¹ What's more, multiple missions are pursued in a competitive healthcare business environment. AHCs are susceptible to market forces and accreditation standards, licensure requirements, and regulatory pressures.² Such an environment places numerous (and often competing) demands on faculty that have critical implications for faculty engagement and for the longevity and vitality of faculty careers. We demonstrate policies one AHC employs to support faculty throughout their careers and demonstrate the impact of those policies on faculty engagement.

Approach

The poster will detail career flexibility options available to University of Virginia School of Medicine (UVA SOM) faculty. The multiple opportunities for career flexibility will be described. Faculty have participated in an employee engagement survey annually since 2012 and the engagement of faculty employing these career flexibility options will be discussed.

Results

We will report data for UVA SOM faculty by:

- Number of days used by leave type
- Number of faculty off the tenure "clock" detailed by gender, basic science vs. clinical, time, and reason
- Number of part-time faculty (by gender, department)
- Number of faculty telecommuting
- Number of faculty with phased retirement
- Faculty engagement data by leave type compared to overall faculty engagement

Significance/Lessons

Significance/Lessons

¹ Mallon, W. T. (2004). *The handbook of academic medicine: How medical schools and teaching hospitals work*. Washington, DC: Association of American Medical Colleges.

² Ad Hoc Committee of Deans. (2004). *Educating doctors to provide high quality medical care: A vision for medical education in the United States*. Washington, DC: Association of American Medical Colleges; Anderson, R. A., & McDaniel Jr, R. R. (2000). Managing health care organizations: Where professionalism meets complexity science. *Health Care Management Review*, 25(1), 83-92; The Blue Ridge Academic Health Group. (2003). *Reforming medical education: Urgent priority for the academic health center in the new century* (No. 7). Atlanta, GA: The Robert W. Woodruff Health Sciences Center.

Faculty vitality and productivity are essential to the future of academic medicine.³ The data we present will demonstrate how many UVA SOM faculty members have taken advantage of the flexible career options available to them and the level of engagement by leave type. Such data is meaningful to faculty vitality given the positive connections between engagement and faculty satisfaction, productivity, and retention. The data may also shed light on how effective we are at communicating the flexible career policies. The more career options and resources faculty have the better equipped they are to navigate the challenges of working in academic medicine.

³ Pololi, L.H., Krupat, E., Civian, J.T., Ash, A.S., Brennan, R.T. (2012). 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, *Academic Medicine*, 87(7), 859-869.

Faculty vitality and productivity are essential to the future of academic medicine.⁴ The data we present will demonstrate how many UVA SOM faculty members have taken advantage of the

Predictors of Mid-to-Late Career Publication Productivity: A Retrospective Cohort Study

Peter Whittaker and Karin Przyklenk, Cardiovascular Research Institute, Wayne State University, Detroit, MI

Aim: Maintaining research productivity and vitality benefits the individual as well as the institution. However, identifying factors associated with maintained research productivity has been problematic. Our hypothesis was that diversification (being active in more than one research area rather than being highly focused on a single topic) could contribute to such productivity.

Methods: We assessed the publications of 35 current Medical School faculty members at a research university with very high research activity (Carnegie Classification). Faculty members from three departments were screened. To be included, each person's first publication had to be ≥ 25 years ago. We excluded people with common last names for whom we could not be certain that all of the appropriate publications had been identified. The "all databases" section of the Web of Science (Thomson Reuters) was used to identify the publications and the number of citations each received. Two seven year periods were assessed; 2001-2007 and 2008-2014. The H-index for each period was calculated separately. In addition, the career H-index was also recorded. Maintained productivity was defined as an H-index ≥ 7 for the most recent period. Multiple and diverse areas of research were assessed by inspection of the manuscripts published in the most recent period. Based on the subject matter, a binary score was assigned to create two groups; multiple research areas (MRA) and single area (SA). The risk ratio (RR) and corresponding 95% confidence intervals (CI) was calculated for maintained productivity in the two groups. We also performed logistic regression to determine predictors of maintained productivity and calculated the corresponding odds ratios (OR) and their 95% CI.

Results: The time since first publication was similar in both groups; MRA 35 years (95% CI 27 to 41 years) and SA 34 years (95% CI 31 to 36 years). Career H-index was higher in the MRA versus the SA group [32.6 (95% CI 25.7 to 39.5) vs. 23.8 (95% CI 20.0 to 27.7)]; $P = 0.025$. The RR for maintained productivity by faculty with multiple research

areas was 2.41 (95% CI 1.05 to 5.55) versus the single area group. Logistic regression revealed that the strongest predictor of maintained productivity was H-index in the 2001-2007 period; OR 1.64 (95% CI 1.01 to 2.65).

Conclusion: The results suggest that active work in multiple research areas is associated with maintained productivity. However, this does not indicate causality, and work in a single research does not preclude maintained productivity. Nevertheless, recent past productivity was associated with subsequent productivity. We propose that use of H-index analysis and encouragement to expand research areas are potential tools to enable faculty members to maintain research productivity in mid-late career.
