

# Empowering Junior Faculty: Penn State's Faculty Development and Mentoring Program

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## Abstract

Empowerment of faculty is essential for academic success. The Junior Faculty Development Program (JFDP), sponsored by the Office of Professional Development of the Penn State College of Medicine, was established in 2003 with the goal of promoting the development and advancement of junior faculty so they can achieve success in their academic careers. The program consists of two components: a curriculum in research, education, clinical practice, and career development, and an individual project completed under the guidance of a senior faculty mentor. The curriculum provides faculty with knowledge, skills, and resources.

Mentoring provides relationships and support. Together, these elements combine to empower junior faculty to better manage their careers.

The effectiveness of the program has been demonstrated by several measures: participants evaluated the program highly, demonstrated increases in their perceptions of their own abilities, and completed tasks important to the advancement of their careers. Participants stated they were better prepared to advance their academic careers and that the individual projects would contribute to their career advancement.

On the basis of this experience, the authors suggest that faculty development programs should empower faculty so that they can more effectively chart a successful career in academic medicine. This report describes an empowerment model, and the design, implementation, and evaluation of the Junior Faculty Development Program in 2003–04 and 2004–05. The authors offer this program as a model for the benefit of other institutions and for one of their most valuable assets: junior faculty.

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**J**unior faculty are an essential resource and a significant investment for academic health centers. The future of an institution depends to a great extent on the degree to which it is successful in nurturing the career development of the most junior members of its faculty.<sup>1</sup>

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Junior faculty, those entering academic medicine at the assistant professor or instructor level, are recruited for their first faculty position because of excellent training in research or clinical practice. These enthusiastic individuals often lack the knowledge, skills and guidance—beyond the ability to perform in the laboratory or the clinic—that are critical for managing their own careers in academic medicine. If an academic health center is to grow and flourish, junior faculty must be nurtured, mentored, and retained.

Academic medicine has been slow to embrace the proactive development of individuals at the most vulnerable stage of their careers. In 2000, only 20% (15) of 76 medical schools surveyed had offices devoted to faculty development, and no school had a comprehensive faculty development system.<sup>2</sup> Academic health centers and leaders are now beginning to understand the true cost of turnover in health care<sup>3</sup> and of failing to develop and retain faculty. The sink-or-swim mentality that was previously the modus operandi of academia is slowly being replaced by the concept of stewardship of investment, and the need for faculty

development is now increasingly appreciated.

We believe that empowerment of faculty is essential for their academic success. We have developed a model for empowerment of faculty and applied this model to design the Junior Faculty Development Program (JFDP) at the Pennsylvania State University College of Medicine. In the JFDP, junior faculty are defined as those at the Assistant Professor level who have been with the institution less than five years. The program consists of a comprehensive curriculum in academic professional development and a mentoring program. Combined, these components provide the ingredients essential to empower faculty and facilitate their future success. We believe that the model presented here is an effective one and hope that other schools will consider using it to create programs targeted to vulnerable groups such as junior faculty.

## The Program

In 2003, an associate dean for professional development was named and the Office of Professional Development created. Responding to the priority need for faculty development identified

through a campus-wide strategic planning process, an initiative focused on junior faculty was begun. A small team of highly committed faculty was assembled to design, implement, and evaluate the program. The team consisted of a clinical department chair (DAQ), a former basic science chair (RJM), an educator with a PhD in medical education (JHG), a clinician-educator (MEG), and the associate dean for professional development (LET). The team established the following goals for the JFDP:

- To promote the development and advancement of faculty of the Pennsylvania State University College of Medicine through a program targeted to and tailored to the specific needs of junior faculty
- To nurture and cultivate junior faculty to become the next generation of academic leaders
- To support the retention of native faculty talent through opportunities and support to continuously build and expand professional skills

According to Kanter and others,<sup>4-6</sup> several ingredients are necessary to create workplace empowerment: access to opportunities, information, support, resources and relationships.<sup>4</sup> The achievement of workplace empowerment leads to retention, job satisfaction, and improved performance.<sup>4</sup> Kanter developed her theory to describe work within large organizations. These concepts were tested with nurses and nursing faculty, and a positive relationship between work empowerment and job satisfaction, retention, and work performance was demonstrated.<sup>5,6</sup> To our knowledge, however, these ideas have not been tested with physicians and scientists in academic health centers. We developed an empowerment model (Figure 1) and

applied it to design the JFDP. Following Kanter's principles, our empowerment model for junior faculty encompasses knowledge, skills, resources (links to people and information), support (in the form of committed time), and relationships, especially mentoring. Two components of the program were established: a curriculum that would provide knowledge, skills and resources, and a mentoring program that would facilitate relationships and support.

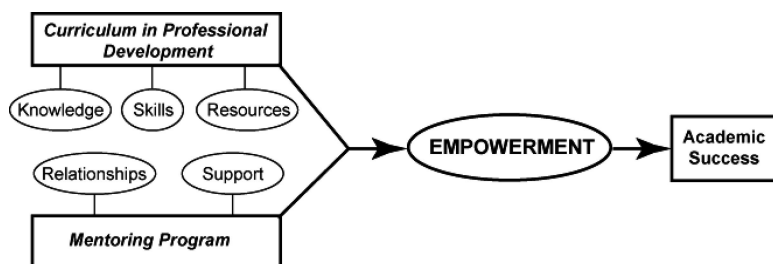
The curriculum was designed to be both intensive and comprehensive. A "course" format was chosen for the delivery of the curriculum, rather than using other types of educational activities (such as a seminar series or a series of workshops). A yearlong, regularly scheduled program allows a broad set of topics to be addressed, with an interlude of time for participants to reflect and prepare assignments that require application of new skills. The classroom model of regular weekly meetings with a cohort of junior faculty colleagues creates a safe environment for support and guidance from peers, program faculty, and mentors, and encourages peer networks among classmates.<sup>7</sup> The program was designed for both physicians and basic scientists in the same audience. An objective is to facilitate collaborations between these two groups, in alignment with the goals and strategies of the institution. The team felt that it was essential for clinicians to learn about research issues and for basic scientists to understand issues affecting clinicians. Thus, all participants are expected to attend all sessions, regardless of their disciplines.

The curriculum provides participants with a working knowledge of the system necessary for survival and advancement in an academic health system. The curriculum consists of approximately 30

two-hour sessions, with additional sessions for the participants to make short presentations about their projects. The sessions run from 7:00–9:00 AM every Friday morning, September through May. Although the curriculum has been slightly modified over three years, typically twelve sessions are devoted to topics in career development, eleven to education, four to research, and three to clinical topics. Multiple educational formats are utilized: interactive classroom and panel presentations, case discussions, and group exercises. Four "microteaching" sessions allow participants to practice teaching skills, an area where faculty are often poorly prepared. The expected time commitment is four hours per week, including class time, outside preparation, and work on projects. Therefore it is essential, particularly in clinical departments, that the department chair guarantee protected time. Department chairs acknowledge program participation in the faculty member's annual performance review. In addition, participants may earn up to 50 hours of Category 1 continuing medical education credit.

Each faculty member identifies an individual project to complete during the JFDP. Projects must be aligned with the faculty member's academic interests and be approved by his or her department chair. Each participant conducts his or her project with the guidance of a senior faculty mentor. Junior faculty suggest one or more potential mentors and are encouraged to think broadly to include individuals whom they do not know and might be reluctant to approach. The planning committee reviews the suggestions and may identify alternative senior faculty. To encourage new and cross-institutional relationships, mentors are usually selected from a different department than that of the mentee, and have no preexisting mentoring relationship with the mentee.

The mentoring program facilitates relationships among peers and senior colleagues in an atmosphere that is collaborative, collegial, and supportive. Jackson and colleagues<sup>8</sup> reported that mentored faculty members were more satisfied and more confident than peers who did not have mentors. Various models of institutional mentoring programs have been reported in the



**Figure 1** A model for empowerment of junior faculty through a professional development program based on the concepts of Kanter and others.<sup>4-6</sup> This model is embodied in the Junior Faculty Development Program discussed in the text.

literature.<sup>9,10</sup> Mentoring, in the context of the JFDP, is project-focused and outcome-driven. Nevertheless, the expectations for the mentoring relationship encompass the essential elements or functions of the mentoring relationship.<sup>9,10</sup> Mentoring relationships focus on achievement, assistance, and support to the protégé by the mentor; include any or all of three components: emotional and psychological support, direct assistance in career and professional development, and role modeling; are reciprocal, benefiting mentor and protégé; are personal in terms of direct interactions; and derive from the relatively greater experience, influence and achievement of the mentor.<sup>9,10</sup> The formation of a mentoring relationship in the JFDP, based on needs identified through individual projects, reflects the natural history of many mentoring relationships. Further, the formalized mentoring program in the JFDP provides an opportunity for junior faculty to gain experience in initiating and developing new professional relationships and expands their network of relationships and connections. Most senior faculty have been eager to serve as mentors. No additional compensation is provided to the mentors. Mentors are recognized for their service by induction into The Mentoring Academy of the Pennsylvania State University College of Medicine, an honorary organization established by the Office of Professional Development.

### Program Participants

A total of 56 faculty have completed the program to date: 24 in 2003–04, and 32 in 2004–05. Most were recently appointed assistant professors and are on the nontenure track. (At our institution, most physicians are hired on the nontenure track.) The participants reflect the population of junior faculty from the entire institution, and 16 of 23 departments were represented: five of eight basic science departments and 11 of 15 clinical departments. The distribution of degrees and genders mirrors the institution's total population of junior faculty. Twenty-two of the 56 participants were women (39%), congruent with the proportion of female assistant professors in the College of Medicine (38%). Physicians outnumbered basic scientists in both years of the program. Basic scientists

based in clinical departments were overrepresented. Six participants did not complete the program. Three of these left the institution during the program; two could not complete program requirements; and one withdrew for personal reasons but enrolled in the following year.

Of the 56 participants in the first two years of the program, 49 (87%) were assigned mentors from a different department and 48 (86%) did not have a preexisting relationship with their mentors. The 48 mentors represented almost all the academic departments (19/23) in the College of Medicine. The majority were full Professors (41; 85%) and included eight department chairs, five division chiefs or vice-chairs and four senior members of the college administration. Two mentors were based at Penn State's campus in State College, Pennsylvania. Eight mentors agreed to serve in both of the first two years of the program.

The projects completed by the participants during the first two years of the program were distributed across all three institutional missions: 18 education topics, 31 research, and seven clinical. Education projects consisted of new courses, educational methodologies, and curricula. Research projects have focused on grant applications and projects in areas of basic science, clinical and patient-oriented research, and epidemiology. Clinical projects have involved planning and implementing new, multidisciplinary clinical services. In all cases the projects were new ventures that benefited the individual's department and the institution.

Approximately fifty faculty, administrators, and staff have contributed to the program as presenters or panelists. The program relies almost exclusively on expertise within the institution, particularly senior members of the administration and a number of department chairs. Thus, senior faculty leaders have become familiar with the goals, objectives, and delivery of the JFDP, and their involvement has demonstrated that institutional leaders value the professional development of junior faculty. Junior faculty benefit from the opportunity to interact with institutional leaders, empowering them to approach these individuals in the future.

### Program Evaluation

The JFDP is evaluated extensively to determine the effectiveness of the program and to provide data for ongoing improvement. Each session of the curriculum and each presenter are rated in a postsession evaluation. Participants complete a self-assessment before and after the program that provides a measure of self-efficacy (i.e., their perceptions of their own abilities). Participants also complete an extensive, postcourse survey consisting of both qualitative and quantitative metrics. The final survey is an overall assessment of the program, its perceived impact on participants' careers, and the effectiveness of the mentoring program. Mentors also complete an evaluation at the conclusion of the program. A midpoint survey, completed by both mentors and mentees, is used to identify any problems in the new mentoring relationship. Finally, we have initiated a longitudinal study to track the career paths of participants and the status of mentoring relationships initiated during the program. Evaluation of the JFDP has received approval from the school's institutional review board (IRB).

Data from two years of the program were analyzed by class cohort, by total participants, and by physician and basic scientist subcategories. Almost all respondents agreed or strongly agreed that they were satisfied with the program and that they would recommend the program to colleagues (Table 1). Enthusiasm for the program was also reflected by attendance of the participants: the mean attendance rate was 79% in 2003–04, and 84% in 2004–05. All respondents agreed or strongly agreed that the program was a valuable educational experience and that they felt better prepared to fulfill their institutional responsibilities. Overall, there was a tendency for basic scientists to be more positive than physicians in their evaluation of the JFDP in general and of the mentoring component in particular.\*

Greater than 90% of the participants agreed or strongly agreed that they had

\*The number of participants is too small to allow statistical analysis of the differences between basic scientists and physicians, and comparison by tenure status is not possible due to the small number of tenure track faculty involved.

Table 1

**Participants' Ratings of Statements about the Junior Faculty Development Program (JFDP), Pennsylvania State University College of Medicine, 2003–05\***

Statement rated	No. (%) who chose "agree" or "strongly agree"	Mean score for item
Overall, I was satisfied with the JFDP.	36/37 (97.3)	4.49
I would recommend the JFDP to my colleagues.	37/38 (97.4)	4.47
The JFDP was a valuable educational experience.	38/38 (100.0)	4.61
I have implemented the knowledge & skills gained in the JFDP in my career.	38/38 (100.0)	4.37
I am better prepared to fulfill my role in the institution as a result of participation.	38/38 (100.0)	4.47
I am better prepared to advance my career as a result of participation in the JFDP.	35/38 (92.1)	4.45
I feel more comfortable approaching institutional leaders.	32/38 (84.2)	4.16
I have developed collaborative relationships with other JFDP participants.	28/38 (73.7)	3.84
I believe my project will have an important impact on my career advancement.	35/38 (92.1)	4.37
I believe my project will have an important impact on the department/institution.	35/38 (92.1)	4.32
My mentor had a significant impact on my project.	35/38 (92.1)	4.39
I have benefited from the mentoring relationship.	36/38 (94.7)	4.50
My mentor is readily available.	36/38 (94.7)	4.53
I meet with my mentor on a regular basis.	35/38 (92.1)	4.16
I am better prepared to initiate and negotiate a new mentoring relationship.	19/21 (90.5)	4.29
I have discussed goals for my academic development with my mentor.	25/38 (65.8)	3.89
My mentor helps me to integrate my personal/professional responsibilities.	29/38 (76.3)	4.16
My mentor has involved me in professional activities within the institution.	19/38 (50.0)	3.58
My mentor has involved me in professional activities outside the institution.	17/38 (39.5)	3.24
I would like the mentoring relationship to continue.	32/38 (84.2)	4.32

\* Data from two years of the program combined:  $n = 17$  (2003–04);  $n = 21$  (2004–05); response rate was 68%. Participants, all of whom were junior faculty, were asked to rate each statement on the following scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5); the mean scores were calculated from this scale.

benefited from their mentoring relationship, that the mentor was available and met regularly with them, and that the mentor had an impact on their project (Table 1). Many also agreed that they would like the mentoring relationship to continue. Some of the relationships extended beyond the scope of the individual project. For example, some mentees stated that their mentor had discussed the mentee's academic development and had involved them in professional activities inside and outside the institution. In the evaluation by mentors (data not shown in the table), 80% of respondents (16 of 20 mentors

surveyed after Year 1) agreed or strongly agreed that they would like the mentoring relationship to continue, they believed they had contributed significantly to their mentee's project, and they would be willing to serve as a mentor in future years. Notably, 84% of mentors (16 of 19 mentors surveyed) agreed or strongly agreed that they (the mentors) had benefited from the mentoring relationship.

All respondents indicated that they had implemented skills or knowledge learned during the program (Table 1). When asked if they had taken specific actions as

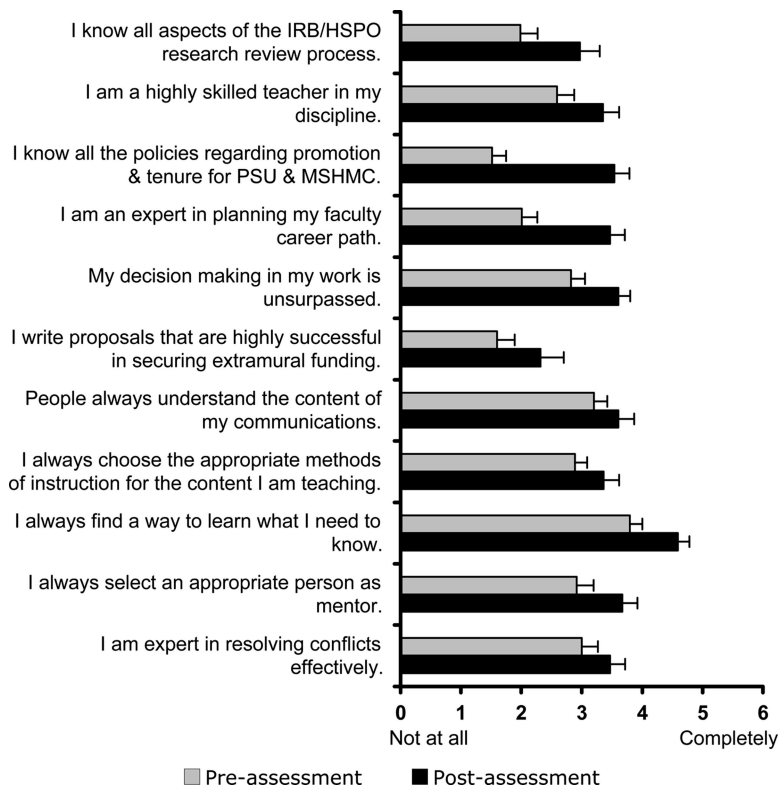
a result of participating in the program, over 85% (33 of 38 participants) stated that they had identified their career goals, both for the next year and for longer-term (data not shown in table). A majority of participants stated that they had updated their curriculum vitae or biosketch, planned for their annual performance review, set up their promotion dossiers, changed the way they conducted feedback sessions, identified sources for grant funding, established new research collaborations, and changed the way they communicated with patients.

Finally, a self-efficacy instrument tracked changes in the participants' perceptions of their own abilities (Figure 2). Faculty perceived increases in their abilities in each of the areas assessed, which were the IRB/HPSO research review process, teaching skills, understanding promotion and tenure, career planning, decision making skills, grant-writing skills, communication skills, accessing information, selecting a mentor, and conflict management. Significant increases were present for statements about planning a career path and knowledge of policies for promotion and tenure.

## Discussion

### Program effectiveness

The goal of the JFDP is to promote the development and advancement of junior faculty. The charge to establish a faculty development program for junior faculty at Penn State's College of Medicine provided the opportunity to build a comprehensive program based on the notion of empowerment, and a model of empowerment was used to drive the planning process. The effectiveness of the program is demonstrated by several measures: the highly favorable assessment of the program by both participants and mentors, the increase in the participants' perceptions of their own abilities (self-efficacy), the actions taken by the participants as a result of the program, and the scope of the projects completed by the participants. Furthermore, empowerment of junior faculty to better manage their careers is demonstrated by the fact that almost all participants believed they were better prepared to advance their careers, and had identified both short- and longer-term career goals.



**Figure 2** Junior Faculty Development Program participants’ perceptions of their self-efficacy in areas of career development measured before and after completing the 2003–04 program. Responses were recorded on a six-point scale from 0 (not at all true) to 6 (completely true). The mean scores and standard errors for each statement for the preassessment group of 24 faculty and the postassessment group of 20 faculty are shown.

The individual projects are tangible outcomes of the program and further evidence of junior faculty empowerment. While it is possible that some of these projects might have been conducted without the program, participants stated that completion was greatly facilitated by the structure of the program and guidance provided by their mentor. Over 90% (35 of 38 surveyed) reported their belief that their project would have an important impact on their career advancement (Table 1).

The JFDP has also benefited the institution. Projects completed were new ventures that benefited the individual’s department and the institution, and have thus contributed to the vitality of the institution. “Institutional vitality” is achieved when faculty members accomplish their goals and these goals are aligned with the goals of the institution.<sup>11</sup> In addition, senior faculty mentors have expressed greater interest and commitment to junior faculty and personal satisfaction from their participation. Although more difficult to measure, department chairs and others

have indicated to us that the program has contributed to enhanced retention and increased productivity of participants.

The program is now accepted across the college of medicine and the Milton S. Hershey Medical Center, as indicated by the following:

- The program has strong support from institutional leaders, as evidenced by their encouragement of faculty to enroll, and their participation as speakers and instructors.
- Faculty presenters and mentors have expressed satisfaction with their roles in the program. Some mentors have been willing to participate in subsequent years to work with new mentees on different projects.
- Department chairs are willing to protect time for faculty to participate in the program. Approximately four hours per week is recommended, or 0.1 full-time equivalent.
- Several chairs highlight the program as they recruit new faculty by providing the JFDP brochure to faculty

candidates as they interview and/or including the associate dean for professional development in the interview schedule of prospective faculty candidates to discuss opportunities for faculty development at the institution.

- Sustained enrollment in the program indicates consistent interest. Chairs and junior faculty have begun to plan for participation a year or two in advance of actual enrollment.
- There is broad representation in the program from across the campus. Most departments have enrolled at least one faculty member in the program.

These findings support the assertion that programs like the JFDP may be a mechanism to enhance organizational vitality, as well as to promote individual empowerment and success. We believe that faculty development programs represent a sound financial investment for academic health centers. An assessment of outcomes is mandatory, however, to justify continued investment by the organization. The individual projects are tangible outcomes that demonstrate a return on investment for the institution. A longitudinal study of participants will evaluate the perception of empowerment, actual outcomes in terms of faculty achievements, and the relationship between empowerment and academic success. In the long term, the JFDP will allow us to test the construct that empowering junior faculty to manage their own careers lays the foundation for academic success.

**Recommendations**

We suggest six strategies for institutions that are interested in creating high-impact faculty development programs.

First, an empowerment model that provides knowledge, skills, and resources, and a supportive environment that builds relationships, particularly through mentoring, should guide programs for the development of junior faculty.

Second, institutional commitment of resources and accountability are necessary but not sufficient for comprehensive faculty development initiatives. At our school, the identification of an associate dean for professional development and the creation of an office of professional

development are evidence of our institutional commitment to faculty development. But institutional commitment goes beyond the identification of a lead organizer and a pool of financial resources. The commitment encompasses a deeper understanding, on the part of the institution, of the need for investment in junior faculty and the willingness, on the part of departmental chairs, leaders, and senior faculty mentors, to make that investment.

Third, high-impact faculty development can be accomplished with efficient, relatively modest budgets. The JFDP is economical in terms of direct costs, relying largely on speakers from the institution who do not expect an honorarium, a cadre of volunteer mentors, and on-site facilities. But there are considerable indirect costs, particularly the loss of clinical revenue that could be generated by the clinical faculty during the approximately 60 hours of the formal curriculum. In this context, institutional and departmental commitment is a critical element for success. In return for this investment, the JFDP reinforces departmental efforts to provide for individual faculty development and mentoring, improve faculty satisfaction, promote retention, and improve performance.

Fourth, the development of relationships among faculty is an important factor in the creation of programs targeted to vulnerable populations such as junior faculty. This concept has been intricately woven throughout the JFDP. Features of the program that emphasize relationship-building are using a class approach as opposed to a seminars or workshops; including both basic scientists and clinicians in the same class; having very few tracked sessions for basic scientists or clinicians; expecting participants to attend all classes; and establishing a classroom environment to facilitate collaborations and networks. More than 70% of the participants (28 out of 38 surveyed) report collaborations with peers in the program. We believe this finding may be significant as we

longitudinally track retention rates and performance characteristics of the JFDP cohorts.

Fifth, mentoring is a valuable mechanism to create significant relationships and provide support needed to empower junior faculty. Mentoring is an essential component of the JFDP. To date the JFDP has provided a positive mentoring experience for over 100 junior and senior faculty. Although mentors were asked only to provide guidance on their mentees' projects, many provided more general career advice and support. These data suggest that a broader relationship may indeed develop in the context of a time-limited, project-focused program. Mentoring at all career stages is important for success and particularly for junior faculty who have just gained their first independent academic positions. We recommend that junior faculty development programs incorporate mentoring as a key element.

Finally, a team-based approach to planning, implementation, and continued improvement is recommended to increase the quality and overall outcome of faculty development programs. Teamwork, a major aspect of our planning process, reflects joint contribution of team members, requires individual and mutual accountability, and depends on collaboration. Teams outperform individuals acting alone or in other types of groups (such as committees), and are often necessary to lead deep and lasting organizational change or to guide organizational commitment and unity.<sup>12,13</sup>

At the Pennsylvania State University College of Medicine, the JFDP provides junior faculty with the tools to manage their careers successfully. These include the ability to navigate a mentoring relationship, the ability to set goals, and expanded network of collegial relationships, and specific skill sets such as presentation, facilitation, and communication. The JFDP has also provided a mechanism to institutionalize commitment to faculty development and to mentoring. Through this report, we

offer this programmatic model for the benefit of other institutions and for one of their most valuable assets: junior faculty.

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