A Time to be Promoted

The Prospective Study of Promotion in Academia (Prospective Study of Promotion in Academia)

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OBJECTIVE: The study’s objectives were to determine (1) the rate at which department of medicine faculty in the United States are promoted, (2) if clinician-educators (CEs) are promoted to Associate Professor at the same rate as clinician-investigators (CIs), and (3) the variables that predict promotion.

METHODS: The Prospective Study of Promotion in Academia was a part-retrospective, part-prospective (from 2000 to 2003) cohort study. Six hundred and four Internal Medicine junior faculty across the United States who had been registered as new appointees with the Association of American Medical Colleges in 1995 were invited to participate. Twenty-one percent of these had already left their institution when the study began. One hundred and eighty-three Internal Medicine faculty from 87 institutions in 35 states enrolled. The main outcome measure was the time from appointment as Assistant Professor to promotion to Associate Professor.

RESULTS: Follow-up was complete for all 183 faculty. Among the faculty that achieved promotion, the estimated median time to promotion was 6.0 years (95% Conf. Int. =5.8 to 6.2). The unadjusted sixth-year promotion rate for CEs was 16%, while for CIs it was 26% (P=.002). Independent negative predictors of promotion included low amount of research time (Hazard Ratio [HR]=0.3, 95% Conf. Int. =0.2 to 0.5), having a manuscript review service (HR=0.4, 95% Conf. Int. =0.2 to 0.7), never meeting with Chairman/Chief about promotion (HR=0.4, 95% Conf. Int. =0.2 to 0.7), low job satisfaction (HR=0.5, 95% Conf. Int. =0.3 to 0.9), and working in the Northeast (HR=0.6, 95% Conf. Int. =0.4 to 1.1). Positive predictors included making between $130 and $149,000 per year (HR=1.9, 95% Conf. Int. =1.1 to 3.4), working more than 60 h/wk (HR=1.9, 95% Conf. Int. =1.1 to 3.0), having a mentor available (HR=1.8, 95% Conf. Int. =1.1 to 2.9), and having access to a grant office (HR=1.6, 95% Conf. Int. =1.0 to 2.6).

CONCLUSION: CEs and CIs appear to be promoted at different rates. The characteristics that are independently associated with earlier promotions are: (1) having access to a grant office, (2) if clinician-educators (CIs) are promoted to Associate Professor at the same rate as clinician-investigators (CIs), and (3) the variables (demographics, job characteristics, prior training, and motivation) associated with promotion of CEs.

KEY WORDS: promotion; motivation; academic medicine.

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In a 1997 survey by Jones and Gold from the Association of American Medical Colleges (AAMC), nearly three quarters of medical school deans reported that their schools had a separate track for faculty who predominantly worked in patient care and education, commonly known as clinician-educators (CEs).1 These tracks developed as clinical revenue played an increasingly important role in funding academic medical centers, growing from approximately 3% in the 1960s to nearly 45% of their revenue today.2 Not only do CEs fulfill the ever increasing clinical demands at academic medical centers, often they are the education specialists and program directors.

CEs are concerned that their contributions to the academic centers have not been recognized by their departments and promotion committees.3 Academic promotions are based predominantly upon academic productivity as measured by the number and quality of peer-reviewed publications in a faculty member’s portfolio.4 When we surveyed the promotion chairs in the United States and Canada in 1996, they claimed that promotion committees valued teaching skills and clinical skills as the most important contributions of CEs job performance. By and large, the committees expected about half the number of peer-reviewed publication from CEs (mean 5.7 papers) as compared with clinician-investigators (CIs) (10.6) for promotion to Associate Professor.5 Our second study of department of medicine chairs in 1997 demonstrated that they had different expectations and views toward the promotion of CEs as compared with the promotion committee chairs.6 As Levinson and Rubenstein have stated, “Just as researchers excel at the discovery of new knowledge but have little time for writing and clinical care, clinician-educators excel at teaching and clinical care but have little time to conduct research. Accordingly, one would expect institutions to recognize clinician-educators for achieving the highest standards related to their principal responsibilities and consistent with their institution’s mission. But is that the case?”7 This study attempts to answer that question.

The Prospective Study of Promotion in Academia (PSPA) is a part-retrospective, part-prospective cohort study, designed to determine (1) the rate at which department of medicine clinical faculty in the United States are promoted, (2) if CEs are promoted to Associate Professor at the same rate as CIs, and (3) the variables (demographics, job characteristics, prior training, and motivation) associated with promotion of CEs.

METHODOLOGY

The methodology used to solicit participants, develop the entry and follow-up questionnaires, recode variables, and validate our measurement instruments has been comprehensively described in our previous papers.8,9 Relevant highlights are re-iterated below.

In November 1999, we used the AAMC Faculty Roster System Database to identify a population of academic faculty that joined departments of medicine at the Assistant Professor level from June to December 1995. As we intended to follow participants until 2003, this design allowed us to collect data about participant characteristics prospectively, thereby de-

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creasing recall bias. Also, because Assistant Professor medical school faculty are frequently reviewed for promotion after approximately 6 years at that rank, we identified the study population 3 years before the primary end point, promotion to Associate Professor, would be attained, thereby avoiding unnecessary prolongation of the study period.

Study Participants
In November 1999, the AAMC database contained 90,101 active, full-time faculty members. Of those faculty members, 604 had medical doctorate degrees, held primary appointments in Departments of Medicine, and had been appointed Assistant Professor between June and December 1995. We mailed an invitation and a baseline questionnaire to these faculty in February 2000 when they were on average 4.7 years into their appointments as Assistant Professors. For those who did not respond, 2 other invitation letters as well as a postcard reminder followed the initial mailing at monthly intervals. One hundred and twenty-nine of the questionnaires (21%) were returned to us without forwarding addresses, labeled “Return to Sender,” inquiry into one quarter of these demonstrated that these faculty had already changed jobs. Two hundred and ninety-two faculty (48%) did not respond to repeated invitations, thereby choosing not to participate. One hundred and eighty-three faculty agreed to enroll in the study (participation rate = enrollees/invitees − return to senders = 38%).

Questionnaire Development and Data Collection
A review of the literature revealed several variables that have been associated with promotion in previous studies: gender, race, fellowship training, specializations, and membership in Alpha Omega Alpha during medical school, class rank at graduation, and research experience during medical school. These variables were included in the baseline questionnaire along with other demographics, job characteristics, promotion-related attitudes and beliefs, a global job satisfaction measure, and the availability and utilization of 12 facilitators of success in academia (e.g., secretarial support, mentors, faculty development programs, and protected scholarly work time).

At an interim follow-up survey 1 year after enrollment, we used a 13-item modified “Rosenberg Occupational Value” scale to assess what motivated participants in their work. Factor analysis demonstrated 3 factors as being motivating: self-expression, helping others, and extrinsic rewards. Respondents also indicated the number of peer-reviewed, first-author publications in their portfolio at that time.

We assured the respondents that their information would be kept confidential and that data would be reported in aggregate. The St. Luke’s Hospital Institutional Review Board (Kansas City, Mo) approved the study.

Additional Characteristics
We used the U.S. Census Bureau’s assignment of states to particular regions: Northeast, South, Midwest, and West. The rankings for the amount of National Institute of Health (NIH) funding awarded to Departments of Medicine in 2002 were obtained from the NIH website. Assessments from the U.S. News and World Report website were obtained for the medical school rankings. The size of faculty at U.S. medical schools was obtained from the AAMC Faculty Roster from December 31, 2002.

FOLLOW-UP
From February to June 2003, we contacted all 183 (follow-up was complete) of the study participants either by postcard, email, or phone in order to determine (1) whether they had been promoted to Associate Professor, and (2) the month and year of their promotion. Eighty-eight participants (48%) had been promoted (Fig. 1).

Data Analysis
For the continuous variables, we examined frequency distributions and descriptive statistics for evidence of skewness, outliers, and nonnormality. Continuous variables were recoded generally into tertiles in order to facilitate the presentation of the bivariate and multivariable analyses. Several categorical variables were recoded based on sparseness in certain categories.

Three different criteria were used to classify appropriately participants as either CEs or CIs. First, we gave the participants operational definitions for CE and CI (adapted from the literature) and asked them to indicate into which category they fell (criteria 1). Components of these definitions were that CIs spend “more than 50% time in research,” and CEs spend “more than 50% time in teaching-related activities.” By this procedure, 72 physicians described themselves as CEs and 56 faculty members considered themselves CIs. Fifty-two participants categorizing themselves as “clinician” or “other” were assigned at the time of enrollment to CE or CI by the authors independently based upon cut points in the amount of research time (30% cut point—criteria 2) and clinical work in the presence of a learner (15% cut point—criteria 3) in which they

![Flow diagram of faculty recruitment into Prospective Study of Promotion in Academia study and follow-up.](image-url)