

## Facilitating Scholarly Writing in Academic Medicine

### Lessons Learned from a Collaborative Peer Mentoring Program

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**Scholarly writing is a critical skill for faculty in academic medicine; however, few faculty receive instruction in the process. We describe the experience of 18 assistant professors who participated in a writing and faculty development program which consisted of 7 monthly 75-minute sessions embedded in a Collaborative Mentoring Program (CMP). Participants identified barriers to writing, developed personal writing strategies, had time to write, and completed monthly writing contracts. Participants provided written responses to open-ended questions about the learning experience, and at the end of the program, participants identified manuscripts submitted for publication, and completed an audiotaped interview. Analysis of qualitative data using data reduction, data display, and conclusion drawing/verification showed that this writing program facilitated the knowledge, skills, and support needed to foster writing productivity. All participants completed at least 1 scholarly manuscript by the end of the CMP. The impact on participants' future academic productivity requires long-term follow-up.**

**KEY WORDS:** faculty development; mentoring; writing; scholarship; collaboration.

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Scholarly writing is a critical skill for physicians in academic medicine.<sup>1,2</sup> Although technology is changing the way in which physicians practice medicine, teach, and engage in research, "the written word remains one of the most important means for communicating that information to others."<sup>3</sup> An ability to publish clinical and research findings enables physicians to contribute to the field of medicine<sup>4,5</sup> and consequently improve patient diagnosis and treatment.<sup>6</sup>

Scholarly productivity is measured primarily by the number of articles published in peer-reviewed professional

journals.<sup>7-10</sup> High productivity helps faculty obtain extramural funding and realize career advancement,<sup>5</sup> promotion, and tenure.<sup>1,11</sup> Despite the pressure to publish,<sup>12</sup> faculty receive little instruction in academic writing.<sup>1,6,13</sup> Some faculty rank learning to write publications and grants effectively as their greatest career development need.<sup>14</sup>

Facilitating the development of writing skills and an understanding of the writing process can improve writing productivity among faculty.<sup>1,15</sup> We describe our experience with a writing project offered as a component of a Collaborative Mentoring Program (CMP) conducted by the National Center of Leadership in Academic Medicine at East Carolina University.<sup>16</sup>

### METHODS

The CMP was conducted twice over 2 academic years. Eighteen assistant professors from a single medical school participated. Nine clinical departments were represented: internal medicine (5), family medicine (4), pediatrics (1), emergency medicine (4), physical medicine and rehabilitation (1), psychiatry (1), pathology (1), radiation oncology (1); 39% (7) participants were primary care faculty. Sixteen participants held doctoral degrees in medicine; 2 held doctoral degrees in other areas; 50% were women. The program was presented in a supportive, collegial atmosphere that fostered peer mentoring and collaboration. After a 3-day introductory session, 6 monthly day-long (9-hour) sessions focused on values clarification, structured career planning, and the development of knowledge and skills in areas important for career advancement.

Seventy-five minutes of each day-long session were devoted to scholarly writing. A physician experienced in medical writing facilitated the writing component the first year. A professional medical editor served as facilitator the second year. Content and structure of the writing project were otherwise similar.

The writing project goals were to: 1) identify and minimize barriers to academic writing; 2) increase academic writing knowledge and skills; 3) formulate individualized writing strategies; 4) foster positive attitudes about writing; and 5) facilitate the writing process through peer collaboration and feedback. Learning objectives for goal 2 are listed in the Appendix. Specifically, the writing project helped students gain knowledge and skills in such areas as

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**Table 1. The Writing Project: A 75-minute Session Agenda**

15 minutes	Check-in. Designated author–editor dyad discuss with the larger group their individual roles and experiences with the writing/editing process during the previous month.
15 minutes	Large group discussion on selected topics, including overcoming writing barriers, personal strategies for writing, editing using a staged approach, and components of a research manuscript.
20 minutes	Individual participation in free and continuous writing.
15 minutes	Author–editor dyad for the coming month discuss with the group their writing projects and the feedback they will seek from each other.
10 minutes	All participants individually report on whether they successfully carried out their writing contracts for the previous month. Complete writing contracts for the coming month.

deciding authorship; identifying a topic and target audience, using strategies to overcome common barriers to writing, writing good lead-in paragraphs and abstracts; and deciding what should be included in each segment of a medical/scientific article. Participants were expected to submit a manuscript to a scholarly journal by the end of the CMP. A bibliography relevant to facilitating scholarly writing was provided.<sup>17-50</sup>

### The Writing Project Design

The structure of each writing project session is presented in Table 1. In keeping with the context of collaborative mentoring, during the introductory session participants formed dyads that worked together throughout the project. At mutually convenient times outside the scheduled day-long sessions, dyad members took turns as “author” and “editor” to review and provide focused feedback on each other’s writing. During each session, one dyad reported to the entire group their perspectives about the editing process and how feedback informed their writing; a group discussion would then ensue. Participants engaged in 20 minutes of free writing time and ended each session by completing a personal writing contract for the next month (Table 2). Apart from the author–editor dyads formed for the writing component, the CMP cohort worked together as a group.

### Project Evaluation

After each session, participants provided written responses to open-ended questions, inviting reflection on important or meaningful aspects of the experience. At the conclusion of the CMP, participants reported the number and type of manuscripts submitted to and accepted by

scholarly publications. They also answered open-ended questions about their CMP experience during audiotaped interviews. Two questions specifically related to the writing project: “In terms of confidence and competence, how did the writing project affect you?” and “What was your most important learning from the writing project?” Qualitative data were transcribed verbatim and analyzed according to a 3-part model of data reduction, data display, and conclusion drawing and verification.<sup>51,52</sup> Application of the analysis model involved an inductive, iterative process of data reduction involving coding and categorizing narrative data, identifying data categories and themes, displaying data in the form of visual networks to illustrate relationships among variables, and drawing conclusions by revisiting the original data and data display, writing and inviting peer review of preliminary findings, and finalizing the conclusions.<sup>51</sup>

## RESULTS

Overall attendance was 89%, with participants consistently demonstrating active involvement in the program. Reasons for nonattendance were clinical duties, illness, and attendance at national conferences. The following qualitative analysis findings, wholly consistent with program goals, are presented in the context of those goals.

### Goal 1: Identify and Minimize Barriers to Academic Writing

All but 2 participants’ narrative data revealed pre-existing barriers to writing. These included being a novice writer, lacking knowledge about writing for scholarly publication, experiencing writing-related anxiety, lacking confidence about writing, being sensitive or resistant to

**Table 2. Writing Contract**

This month, I contract with myself to:

Meet these writing goals:

(For example: schedule 6 30-minute writing sessions; write every morning for 10 minutes before breakfast; spend 1 lunch hour a week writing.)

Complete these writing assignments:

(For example: outline the methods section of my journal article; complete the final draft of my abstract; turn the outline of my discussion into a first draft.)

Follow through on these writing-related activities:

(For example: send the first draft of my personal essay to my editing partner for review; ask the Health Sciences librarian for help with a literature search; review back issues of several journals that might publish my writing piece.)

feedback on writing, and perceiving job-related expectations to write as “nice” but not necessary. In contrast, one individual held a long-standing view of writing as a pleasurable and continuing activity. Another person, comfortable with writing due to extensive writing experience gained during a fellowship, was primarily interested in learning more about editing.

As a consequence of the writing project, individuals began to see writing not as an elective activity, but as one that was integral to academic medicine and the evolution of their careers:

*I will start to think of doing the research and the writing more as part of a job instead of there's my job and this is additional extra work. It should be incorporated, enhancing my career plan.*

*(I now realize that) there are certain expectations from me if I'm going to continue...teaching. I think that the fact that we got started with the writing project, for instance, was a big step forward.*

## Goal 2: Increase Knowledge and Skills in Academic Writing

Participants generally valued the practical and written information and resources facilitators shared with them, and the insights and experiences they shared with each other about the processes of writing and editing for scholarly publication. Two participants commented that they “actually learned a lot about how to write an article” and had “a better idea of how to make things flow and how the articles work.” They also linked what they learned about writing to an improved ability to read the research literature.

Each participant completed at least one scholarly writing project consistent with her or his personal writing goals. Manuscripts included research and case studies, reflective journal articles, monographs, and book chapters. The initial cohort of participants had submitted or had accepted for publication 16 manuscripts, and the second cohort, 11.

Skills building occurred as a consequence of their work on individual projects and the feedback they received, primarily within their author–editor dyads. One participant advocated receiving more feedback, particularly from the facilitators, as work on the individual writing projects progressed.

## Goal 3: Formulate Individualized Writing Strategies

Participants indicated that one of the most meaningful aspects of the project was formulating personalized writing strategies. They were surprised and delighted by the results of the 20-minute free and continuous writing interval. As one participant revealed, they learned “just to do it (write), get it off my desk and do it,” rather than wait for inspiration or longer expanses of time. According to another participant, “I was really surprised at how much can be done in such a short amount of time.” Particularly valued was the discovery that “I could write any time and for any period of time instead of taking longer periods of time that I used

to consider...was necessary.” Thus participants learned to optimize their writing, despite short blocks of time and lack of inspiration.

In addition to realizing “it was possible to write” given an opportunistic attitude that took advantage of available time, participants tended to value the structure and deadlines imposed by the project and the monthly learning contracts they wrote. They recognized the value of scheduling time in their workday to write and, for some, the need for deadlines, albeit self-imposed. Several individuals indicated a long-standing propensity to keep their commitments and found that making a personal commitment or being accountable to someone else enhanced their writing productivity. In terms of personal commitments, for example, one participant remarked, “[I] made myself create deadlines for me, so that is why I was able to get a lot done.” Another began to implement strategies to integrate writing into their work-related activities by “alter(ing) my workday to be more in line with my values and also allow me to be more productive with regard to writing and other scholarly activity.”

## Goal 4: Foster Positive Attitudes About Writing

The writing project fostered the belief that “we can do it (writing), it's just a question of disciplining ourselves and perseverance.” Some participants perceived that the knowledge and skills gained in the program and underlying message of “all of us are capable of doing scholarly writing,” coupled with work on their individual projects, contributed to increased confidence in writing. As one participant suggested, “The fact that I know how to (write an article) means I can do it. I don't feel so intimidated to try it again.” Moreover, a change in the way participants received editing feedback occurred: “I have a lot of personal obstacles to really overcome (in writing but) I was able to de-personalize the feedback. To really reshape it. And I think in the long run, if I get rejected from the first article, I have three more journals ready.”

One individual, however, indicated such confidence was tempered by a “wait and see” attitude pending feedback on his or her manuscript from journal reviewers.

Participants came away from the project with a sense of accomplishment, a newfound pleasure in writing, greater consistency in their writing efforts, and the belief they could or would participate in future writing projects. As one individual recounted at the end of the project, “I felt better about my writing and, as a result, have enjoyed it more.” Increased know-how, confidence, and enjoyment of writing was seen by these faculty members as potentially contributing to their continuing engagement in writing. Only one person indicated that the writing project had little or no impact on her or his writing confidence or capability.

## Goal 5: Facilitate the Writing Process Through Peer Collaboration and Feedback

Participants valued the collaborative relationships they formed with one another and viewed their colleagues

as rich resources for their writing. They valued their writing-focused interactions and the feedback they received on the writing projects from their partners. They also appreciated and learned from the insights and strategies shared by their colleagues during large group discussions.

One participant responded to the question, "What was your most important learning from the writing project" with the following:

*For me the most important learning aspect is that I can do it. There were a lot of other aspects that helped me in that I had previously thought that I needed to seek out someone in the department who was the expert in publications to look at my stuff. Now I realize that my colleagues have a lot of really valuable input so I can get their help as well. Plus, I have a better idea of how to make things flow and how...articles work. I think it (is) actually helping me, too, with just reading articles and literature.*

## DISCUSSION

This project's structured but self-directed, collaborative writing process encouraged participants' scholarly productivity and self-acknowledged impetus to write. Consistent with adult learning principles, participants responded positively to self-determined writing goals and deadlines. They viewed the writing project as a challenging experience that helped them develop their writing skills, increase their self-confidence as writers, gain access to valuable writing resources, positively provide and respond to feedback, and recognize the importance of writing in academic medicine.

Limitations associated with this study include a small sample size nonrandomly drawn from academic faculty at 1 medical center in the eastern United States. Situating the writing project in the context of a larger collaborative mentoring program at a single institution limits generalizability and possibly program replication. It is not known whether a similar stand-alone writing program would be equally effective since group cohesion and collaboration was fostered in every component of the CMP program. Medical educators, however, could embed a similar writing project into a longitudinal program that centers on other content areas or skill sets, particularly if the program incorporated a collaborative, self-directed approach to learning. Participation in this program was excellent, with no significant problems or challenges encountered during either of the 2 years it was offered.

Scholarly writing is critical to faculty pursuing careers in academic medicine. Our experience suggests that offering a writing program in the context of a collaborative peer mentoring effort can facilitate the knowledge, skills, and support needed to support writing productivity. The impact on participants' future academic productivity requires long-term follow-up of this cohort.

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## APPENDIX

### Learning Objectives for Goal 2: Increase Knowledge and Skills in Academic Writing

Participants will:

Write for their audience by:

- Describing a typical member of their intended audience
- Outlining the audience's understanding of the author's writing topic
- Describing the relevance of the author's writing topic to the audience

Organize the content of their writing by:

- Stating the primary purpose of their writing
- Describing what is new, different, or important about their message
- Listing the main points of their message
- Identifying the background material the audience needs to understand the message
- Structuring the content in a way that facilitates connections between the main points

State their message clearly and effectively by:

- Limiting content to information that is relevant to their primary purpose
- Beginning new and summary sections with an introductory sentence or paragraph
- Presenting data, conclusions, and theories in a logical and convincing sequence
- Linking data, conclusions, and theories with plausible transitions

Enhance their writing productivity by:

- Scheduling a timetable for writing
- Developing strategies for organizing and drafting written materials
- Identifying resources for written materials