Institutional impact of a part-time faculty development fellowship program for osteopathic community-based physicians

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Faculty development programs designed for community preceptors and clinical teachers have primarily consisted of brief interventions such as 1- to 3-day workshops.1-3 Other interventions for community and clinical educators have consisted of 1- to 2-hour workshops on a regular basis throughout the year.4 Yearlong, ongoing attempts to address the needs of community-based faculty have been more difficult to implement. When such programs have been provided, self-assessments of competencies were addressed before and after the programs, but questions about carryover into everyday practice settings remain unanswered.5,6

The need for outcomes research on faculty development programs continues to remain a priority in medical education.7 How successful are faculty development programs in equipping physician faculty to become better teachers? What impact do these programs have on the institutions where the participants teach? Many yearlong, part-time and full-time fellowship programs have conducted pretest and posttest evaluations that assessed outcomes beyond the year of intervention.7 How successful are faculty development programs in equipping physician faculty to become better teachers? What impact do these programs have on the institutions where the participants teach? Many yearlong, part-time and full-time fellowship programs have conducted pretest and posttest evaluations that assessed outcomes beyond the year of intervention.7 However, evaluations that assessed outcomes beyond the year of intervention have been conducted much less frequently.

In 1990, McGahie et al8 published a comparative study of faculty development participants and non-participants. This study assessed outcomes of a paired, matched sample of academic faculty 1 to 8 years after fellowship completion. The primary outcomes measured (eg, scholarly activities and publication record) were appropriately related to their roles as academic faculty. Several other surveys of faculty development fellowship graduates also exist.7 However, in all instances, the study participants were academic faculty. The measured outcomes related to academic medical center roles (eg, scholarly activities and academic retention).7

The purpose of this article is to present and discuss the results of a survey that addressed questions of institutional impact of a yearlong part-time faculty development fellowship program for community-based physician faculty. This study of long-term outcomes was conducted in an effort to identify the impact of graduated fellows from the Statewide Campus System of Michigan State University College of Osteopathic Medicine (SCS MSU-COM) faculty development program on the educational process in their home institutions as well as the impact of the program on those fellows as medical educators.

At the time of this study, Dr Pinheiro and Dr Liechty were educational specialists at the Statewide Campus System of Michigan State University College of Osteopathic Medicine (SCS MSU-COM) in East Lansing. Currently, Dr Pinheiro is a research assistant professor in the School of Medicine’s office of educational development at the University of North Carolina at Chapel Hill. Dr Liechty is now the director of research in the department of family and community medicine at MSU-COM. In December, she will receive her doctorate in higher education with an emphasis in medical education from MSU. Dr Johnson is an assistant professor in the school of education at the University of Michigan-Dearborn. Dr Butler is an associate professor in the department of internal medicine at MSU-COM, and director of medical education at St John Oakland Hospital in Madison Heights, Mich.

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Evaluation of faculty development programs for medical educators has often focused on the satisfaction of individual learners. Long-term outcomes of skills and knowledge acquired during faculty development programs have been more difficult to evaluate. The impact on the institutions where the “developed” faculty teaches has been even less studied. This article discusses the results of a survey that focused on the institutional impact of a yearlong part-time faculty development fellowship program for community-based physician faculty.

The Statewide Campus System of Michigan State University College of Osteopathic Medicine (SCS MSU-COM) faculty development program conducted a survey of its graduates to ascertain the impact on the educational processes in their home institutions and the impact of the program on the graduates as medical educators. Responding graduates reported increased use of educational concepts and greater participation in the educational activities of their home institutions. The study demonstrates that a faculty development program addressing the needs of community-based physician faculty changes the perceptions of participants as medical educators and appears to have a positive impact on the educational process in their home institutions.

(Key words: education, faculty, institutional practice, medical education, medical staff, program evaluation, staff development)
Background
Michigan State University College of Osteopathic Medicine (MSU-COM) is a community-based osteopathic medical school. Affiliated hospitals in the state share responsibility for clinical training for students and residents. The Consortium for Graduate Medical Education and Training was established in 1989 to improve the quality of osteopathic medical education in Michigan. The consortium became what is now known as the Statewide Campus System (SCS) in 1998.

The SCS is a consortium composed of 20 member hospitals, one academic member (Kirksville College of Osteopathic Medicine), and the sponsoring medical school, MSU-COM. For the past 9 years, the SCS has conducted a 1-year, part-time faculty development fellowship program for its community-based physician faculty. The program began training primary care faculty but expanded in 1998 to include all faculty members.

To address faculty development needs within the SCS, a series of focus groups and surveys was conducted with SCS residency directors and directors of medical education in the SCS hospitals. Focus group participants repeatedly mentioned that the program must be:

- easily accessible,
- within easy “drive-time distance” (defined as no more than 2 hours),
- proceed for a longer time with no more than a 1-day-per-month commitment to being at the university,
- take place in the hospitals as much as possible, and
- include senior residents.

Faculty-development needs as identified by focus groups and surveys initially included basic presentation skills, clinical teaching skills, and computer skills. Based on a literature review, SCS staff further identified the need to address areas such as curriculum design, adult learning principles, learner-centered teaching approaches, cultural diversity, and professional academic skills.

Program description
The SCS MSU-COM faculty development program—partially funded with grant support from the US Department of Health and Human Services—Health Resources and Services Administration—uses a unique combination of program models. It combines monthly workshops on the East Lansing campus with on-site visits by faculty development specialists who are nonphysician, mostly doctorate-level medical educators.

The specialists conduct monthly half-day visits to each part-time fellow, providing on-site observations and feedback. Combining mentoring and educator roles, the faculty development specialist cultivates deep, on-going relationships with each fellow during the year. The program covers major curricular areas on faculty development including:

- curriculum design,
- teaching for understanding,
- evaluation methods,
- adult learning principles,
- professional academic skills, and
- computer skills.

Fellows create an extensive learning plan describing a personal development plan and a teaching project for the year. They also generate a poster for presentation at the annual SCS MSU-COM spring symposium that highlights the results of their teaching projects.

Methods
In the summer and fall of 1998, the SCS faculty development program division conducted a survey of all 54 community-based faculty who graduated from the fellowship program between 1993 and 1997. Until then, there had not been a follow-up assessment of the contributions of these graduated fellows to the mission of medical education at their respective institutions. The specific skills and competencies gained by fellows in the fellowship program have previously been assessed annually and discussed elsewhere.9-11 This survey was conducted in an effort to identify the impact of graduates on the educational process in their home institutions as well as the impact of the faculty development program on the fellows as medical educators. The survey was sent twice to the graduates, with a reminder postcard sent between survey mailings.

Participants
Sixty-three physicians were enrolled in the fellowship program from 1993 to 1997. Four physicians dropped out and five participated in the fellowship program for 2 consecutive years. Therefore, 54 faculty members who attended and completed a single yearlong program made up the total population of graduates eligible to participate in this study.

Survey instrument
The survey was first developed by conducting a literature review on program evaluation of faculty development to gather information on outcomes as assessed by other programs. Faculty developers and an advisory committee composed of physician and nonphysician educators collaboratively designed the survey to respond to the following question: In what ways, and to what extent, are fellows who graduated from the faculty development program participating in the medical education process at their respective institutions?

The survey asked each graduate to report the following information:

- current medical education status (ie, full professional title or titles),
- current and previous use of educational competencies as learned during the fellowship year,
- the extent to which he or she is disseminating these concepts to other physicians, and
- record of scholarly activity.

Graduates were also asked about the importance of the
faculty development fellowship program in preparing them for their role as medical educators and about their beliefs concerning the program’s value to community-based physician faculty. Data were analyzed using descriptive statistics. Qualitative comments were summarized and are reported verbatim.

Results

Thirty-six of the 54 eligible participants surveyed responded to the study instrument for a response rate of 67%. Of these, 22 respondents were in family practice, and 14 were in internal medicine (Table 1). Respondents were, in general, representative of the population of 1993 through 1997 fellowship graduates in terms of demographic variables, for example, sex (women, 28, men, 26) and area of specialty (family medicine, 29, internal medicine, 25).

Most respondents (33, 92%) were teaching and/or practicing in Michigan hospitals. Thirty-one (86%) respondents were working in SCS hospitals. Of the respondents who were teaching, 31 (94%) teach medical students, 27 (82%) teach interns, 26 (79%) teach residents, 3 (9%) teach attending physicians, 7 (21%) teach allied health professionals, and 3 (9%) teach “others.” Eleven respondents (30%) were working in at least one medically underserved site.

The results of our survey show increased professional participation and use of educational concepts among former fellows in the educational activities of their home institutions. Fellowship graduates were asked about the use of various educational tools before and after their completion of the fellowship program. The Figure outlines the results of these survey questions and illustrates an impressive increase in graduates’ use of important educational tools in their teaching practices. The four skills areas that are used by approximately 80% or more of the respondents are use of Microsoft PowerPoint presentation software, interactive teaching methods, adult learning principles, and goals and objectives development.

With respect to the importance of the faculty development fellowship program for their roles as medical educators and their beliefs about its value to community-based physician faculty, 33 respondents (90%) agree that they are more confident in the role of educator as a result of their completion of the fellowship program. Twenty-four respondents (67%) believe that their participation in the fellowship program increased their involvement in medical education. Twenty-nine respondents (81%) indicated that the fellowship program was worth their time. Thirty respondents (83%) agreed that the fellowship program is still needed for the training of community-based physician faculty. Thirty-two respondents (89%) would recommend the fellowship program to their colleagues.

Respondents were also asked if they had interest in follow-up fellowship programs. Seventeen of the 33 respondents (52%) who answered the question expressed interest in additional training programs, demonstrating continued support for faculty development programs.

Respondents also stated important ways in which the fellowship program had an impact on their day-to-day teaching methods:

- “The fellowship taught me the organizational skills I very much needed.”
- “My level of confidence has greatly increased because the fellowship helped me organize and refine skills I already had.”
- “[I] learned [how] to be a good educator [by understanding] learner’s roles and teacher’s roles.”
- “[The fellowship program] made me aware of how adults are different as learners.”
- “The fellowship improved my presentation skills, making me a more effective educator.”
- “[The program] increased my [technical] competency as an instructor (eg, computer skills, presentation skills).”

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. (%)</th>
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<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>16 (44)</td>
</tr>
<tr>
<td>Women</td>
<td>20 (56)</td>
</tr>
<tr>
<td><strong>Specialty</strong></td>
<td></td>
</tr>
<tr>
<td>Family medicine</td>
<td>22 (61)</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>14 (39)</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>6 (17)</td>
</tr>
<tr>
<td>Fellow</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Attending physician</td>
<td>27 (75)</td>
</tr>
<tr>
<td>Administrator</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (3)</td>
</tr>
<tr>
<td><strong>Title</strong></td>
<td></td>
</tr>
<tr>
<td>Clinical supervisor</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Director of medical education</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Preceptor</td>
<td>19 (41)</td>
</tr>
<tr>
<td>Primary care ambulatory clinic coordinator</td>
<td>3 (7)</td>
</tr>
<tr>
<td>Private practice</td>
<td>11 (24)</td>
</tr>
<tr>
<td>Residency director</td>
<td>5 (11)</td>
</tr>
</tbody>
</table>

† The authors received 46 responses for the survey item inquiring about respondents’ professional titles, indicating that some respondents had multiple titles concurrently.

* Percentages for “Status” are rounded for each option; therefore, the sum of the percentages for this characteristic does not equal 100%.
I have a more effective repertoire of interactive educational activities."

"[This fellowship has] improved my self-confidence as a teacher and mentor."

"[It impacted my] academic career move [as] director of medical education."

Although research training was not a major area of focus in the fellowship program, the authors assessed the participation of graduates in scholarly activities. Graduates were asked about their research and publication activities since graduation (Table 2).

Graduates reported active involvement in the educational processes of their home institutions. Thirty of the 36 respondents reported having one or more medical education responsibilities. Two were directors of medical education, 5 were residency directors, 3 were coordinators of a primary care ambulatory clerkship program for medical students, 6 were clinical supervisors, and 19 were preceptors. Eight respondents assumed new leadership roles in medical education since the fellowship program. One was a director of medical education, 3 were residency directors, 2 were clinical supervisors, and 2 were primary care ambulatory clerkship coordinators.

In addition to teaching medical learners, respondents reported that they teach the concepts and skills they learned during their fellowships to their colleagues (Table 3). More than 50% of the respondents report mentoring their colleagues in presentation skills, computer use, and preparation of curriculum vitae.

Faculty development program participants were asked to develop and implement a teaching project in their respective hospitals or clinics during their fellowship year. Sixteen respondents (44%) were still teaching their fellowship project at the time of the survey. Half of these respondents had updated their projects. Finally, responses to the question, "How has your current hospital benefited from your participation in the SCS MSU-COM faculty development program?" included:

"I'm regarded as a resource person for educational program support and coordination."

"There are [now] better presentations, and more humane teaching."

"There is a growing movement to enhance didactic teaching and encourage learner participation."

"Much improved lecture program overall."

"As a full-time faculty [member] in a clinic setting, the fellowship has made me a more effective educator."

"Improvements have been made in the family practice program and many more [physicians] are showing a sincere interest in teaching because of the fellowship itself and my involvement."

"Presentations by faculty and residents have become more formal, more current, and more computer assisted."

"My current hospital has now implemented a morning report program since I've been here."

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**Figure.** Usage levels of educational competencies as evaluated before and 1 to 5 years after participants graduated from the Statewide Campus System of Michigan State University College of Osteopathic Medicine faculty development program.
studies analyzed by Reid et al., lowship program as an important component in the training medical educators and they saw the faculty development fellowship graduates felt much more confident in their roles as teaching these educational tools to their colleagues. Finally, fellowship graduates have also contributed to their institutions by the fellowship program in their current teaching practices, activities in their institutions. They have been involved in teaching a wide range of health professionals at their respective institutions. They have introduced new programs and raised the quality of educational activities in their institutions.

In addition to using the knowledge and skills gained in the fellowship program in their current teaching practices, graduates have also contributed to their institutions by teaching these educational tools to their colleagues. Finally, fellowship graduates felt much more confident in their roles as medical educators and they saw the faculty development fellowship program as an important component in the training of community-based physician faculty.

These findings are consonant with the results of several studies analyzed by Reid et al., which showed that faculty development programs for physician faculty are generally effective in developing participants’ educational skills and are received positively. However, this study adds to the literature on evaluation of faculty development program outcomes by providing new insights concerning community-based physician faculty and their perceived impact on their home institutions.

When discussing the results of this study, it is important to acknowledge some of its limitations. As Anderson et al, suggest, while data collected through written, self-reported surveys does provide quantitative information, it does not allow for an assessment of the quality of fellowship graduates’ performance as teachers or their contributions to medical education in their home institutions. Although the qualitative comments in the survey provided clarification of the graduates’ perspectives on the program, they are not sufficient for assessing the quality of program outcomes. Second, the self-reported nature of the information only provided the perspectives of the graduates themselves. In order to gain a richer understanding of graduates’ contributions to their institutions, further data should be collected from other stakeholders, such as graduates’ supervisors, colleagues, and learners.

Despite these limitations, the study demonstrates that the SCS MSU-COM faculty development program, which addresses the needs of the community-based physician faculty, was successful in increasing the contributions and confidence of these medical educators. Additionally, participants’ new roles, topics, and teaching strategies appear to have a positive impact on the educational process in their home institutions.

**Table 2**

<table>
<thead>
<tr>
<th>Activity</th>
<th>No. (%)*</th>
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<tbody>
<tr>
<td>Presentation</td>
<td></td>
</tr>
<tr>
<td>Regional/national conference (research papers, workshops)</td>
<td>6 (17)</td>
</tr>
<tr>
<td>Medical professionals</td>
<td>15 (42)</td>
</tr>
<tr>
<td>General public (patient education)</td>
<td>10 (28)</td>
</tr>
<tr>
<td>Poster</td>
<td>4 (11)</td>
</tr>
<tr>
<td>Publication</td>
<td></td>
</tr>
<tr>
<td>Peer reviewed</td>
<td>4 (11)</td>
</tr>
<tr>
<td>Local or hospital</td>
<td>4 (11)</td>
</tr>
</tbody>
</table>

* The percentage given for each activity is the total percentage of the 36 respondents reporting participation in the given scholarly activity since graduating from the fellowship program.

**Table 3**

<table>
<thead>
<tr>
<th>Skills</th>
<th>No. (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td></td>
</tr>
<tr>
<td>Curriculum design</td>
<td>8 (22)</td>
</tr>
<tr>
<td>Adult learning principles</td>
<td>14 (39)</td>
</tr>
<tr>
<td>Presentation skills</td>
<td>19 (53)</td>
</tr>
<tr>
<td>Clinical teaching skills</td>
<td>14 (39)</td>
</tr>
<tr>
<td>Interactive teaching techniques</td>
<td>12 (33)</td>
</tr>
<tr>
<td>Evaluation methods</td>
<td>5 (14)</td>
</tr>
<tr>
<td>Professional and scholarship</td>
<td></td>
</tr>
<tr>
<td>Computer skills</td>
<td>20 (56)</td>
</tr>
<tr>
<td>Curriculum vitae writing</td>
<td>20 (56)</td>
</tr>
<tr>
<td>Portfolio development</td>
<td>10 (28)</td>
</tr>
<tr>
<td>Poster presentation skills</td>
<td>14 (39)</td>
</tr>
</tbody>
</table>

* The percentage given for each skill is the total percentage of the 36 respondents reporting that they have since shared a given skill learned in the fellowship program with colleagues at their respective home institutions.

**Comment**

Based on data presented here, the SCS faculty development fellowship graduates influenced their home institutions in several important ways. Graduates have assumed new medical education leadership responsibilities since graduating from the fellowship program and believe that they are regarded as educational resources in their hospitals. They report using effective educational strategies and tools learned in the fellowship year in their current teaching practices. They have been involved in teaching a wide range of health professionals at their respective institutions. They have introduced new programs and raised the quality of educational activities in their institutions.

“I have implemented MSU-COM Primary Care Ambulatory Clerkship with confidence and received very positive feedback from participants.”
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References