Resident Physician Mentoring Program in Ophthalmology

The Tennessee Experience

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Objective: To establish a mentoring program to provide resident physicians in ophthalmology with career guidance in practice management and to identify new and creative ways to involve future eye physicians in the legislative and political process.

Methods: A multicenter prospective study was conducted of the mentorship experiences of 24 (88.9%) of 27 resident physicians in Tennessee during the 2000-2001 academic year. Participants were assigned into 1 of 3 groups: an active mentorship group, a passive mentorship group, and a no mentorship group. The active mentorship group participated in preceptorship activities with “mentor” community-based eye physicians and scheduled meetings with state legislators and regulators. The active mentorship and passive mentorship groups attended a 1-day practice management seminar, but the no mentorship group received no formal mentorship during the 4-month study period. A survey instrument was given to all participants before and after the 4-month study period.

Results: Following completion of the mentorship program, the active mentorship group had favorable changes in perceptions and attitudes toward medical organizations ($P<.03$) when compared with baseline prementorship responses. Compared with the no mentorship group, the active mentorship group also reported an increased willingness to make political campaign donations ($P<.05$) and expressed an increased desire for the Tennessee Academy of Ophthalmology to offer practice management programs ($P<.02$).

Conclusion: A short 4-month mentorship program can elicit favorable changes in residents’ perceptions and attitudes toward medical professional organizations. Additional opportunities may lie with a lengthier and more intensive mentoring program.

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membership among young practicing ophthalmologists. This article assesses the ability of mentoring programs to alter the perceptions and attitudes of resident trainees as a prelude to willingness to act and hence change subsequent behavior.

**METHODS**

The program participants were resident physicians-in-training in Tennessee during the 2000-2001 academic year, which spanned from July 1, 2000 through June 30, 2001. The academic training programs included the departments of ophthalmology at the University of Tennessee–Chattanooga, University of Tennessee–Memphis, and Vanderbilt University in Nashville. In addition to the enthusiastic support and cooperation of the program directors and chairpersons at the academic institutions, the mentorship program had the full support of the Tennessee Academy of Ophthalmology (TAO) and American Academy of Ophthalmology.

A unique part of the mentorship program was the establishment of preceptorship experiences between resident physicians at 1 of the programs (Vanderbilt University) with “mentor” community-based eye physicians. The volunteer mentors were active members in the TAO and had practiced in the Nashville metropolitan region for 4 or more years following their last year of formal training.

The program schedule was conducted during the time period of February 1, 2001, through June 15, 2001. The program consisted of one-on-one meetings in the clinic and operating room between the resident physicians and community mentor ophthalmologists. In addition, supplemental activities included a 1-day practice management seminar for resident physicians sponsored by the TAO in early February 2001 and continuing medication education and coding seminars. In addition, the resident physicians were introduced to and met with state legislators and regulators to discuss issues that were mutually important.

The study was designed to enroll residents involved in training during the 2000-2001 academic year. The 3 academic programs were stratified into 1 of 3 groups: active mentoring (AM), passive mentoring (PM), or no formal mentoring (NM). One of the resident physician groups was placed in the AM group (12 of 12 residents enrolled, 100%). This group attended the 1-day practice management seminar sponsored by the TAO and also received the AM program throughout a 4-month period (February 15, 2001, through June 15, 2001). A second resident physician group was stratified into the PM group (4 of 6 residents, 66.7%). The physicians in this group attended the TAO-sponsored practice management seminar but did not receive additional formal training. The final resident group was the control NM group and did not receive any formal mentoring during the corresponding 4-month period (8 of 9, 88.9%).

A 42-question survey instrument (available from the authors on request) was formulated during November 1 through December 31, 2000. This questionnaire used a 7-point scale system to detect alterations in perceptions and attitudes of the resident trainees as a result of the mentorship program. In early January 2001, the surveys were administered to attending ophthalmologists at 1 of the centers (Vanderbilt University) and then repeated 1 to 3 weeks later. The reliability of the questionnaire was thus confirmed.

The survey was then administered to all 3 resident groups at 2 points during the 4-month study period. The first point was in early February 2001 just prior to attendance of the 1-day practice management course, and the second point was in late June 2001. The survey results were then compared using a 2-tailed t test (P<.05 criteria).

**RESULTS**

Survey results were received from the 24 (88.9%) of 27 residents in ophthalmology training programs in Tennessee during the study period. The results were tabulated and initially compared the prementoring and postmentoring responses within each study group. No differences in responses were noted in either the PM and NM groups (on all questions). However, in the AM group, there were several significant changes between prementoring and postmentoring responses. The statistical differences observed revolved around favorable changes in the respondents’ perceptions and attitudes toward medical organizations (P<.03). The specific questions involved perceptions of their state medical society, perceptions of the level of their acceptance in medical organizations, and perceptions of the level of support provided to them in joining medical organizations.

The survey results were then compared among the groups. Because there were insufficient data in the PM group to warrant rigorous statistical analysis, the comparisons were performed only between the AM and NM group responses. These comparisons yielded statistically significant differences in a limited number of questions. In fact, the changes observed were the same ones observed in the within-group comparison of the AM group.

A couple other differences were noted between the AM and NM group responses. The AM group expressed both a willingness to make political campaign donations (P<.05) (Figure) and an increased desire for the TAO to offer practice management programs (P<.02). In addition, there was a favorable tendency in the AM group toward increased membership in both the TAO and American Academy of Ophthalmology.

**COMMENT**

To our knowledge, this is the first published study describing a resident mentoring program in the field of ophthalmology. In other fields such as obstetrics and gynecology, professionalism education in residency training has largely been conducted through faculty example and mentoring. In psychiatry, factors that influence career selection by resident physicians involve educational exposure to the clinical discipline under optimal educational circumstances (positive clinical experiences and excellent supervisors).

Paller et al described the Physician Management Pathway to develop leadership and technical skills and provide career mentoring in the context of an academically rigorous internal medicine residency program. The Physician Management Pathway curriculum consists of monthly seminar series, a preceptorship experience in the second year of residency, and a supervised project in the third year. The Physician Management Pathway program was not designed to provide competency in management but rather provides an opportunity for the new physicians-in-training to explore options in the new medical paradigm.
Mentorship in residency programs was studied with a 21-item questionnaire sent to all physical medicine and rehabilitation residents in training in US residency programs in May 1993. Although the response rate was only 36.2%, analysis of the results indicated that 97.3% of respondents were interested in mentorship programs. However, only 28.1% had a mentor at the time of the survey. Success of existing mentorship programs significantly correlated \( (P < .001) \) with frequency of communication between mentor and resident, but sex and ethnicity had no discernible effect.

Limitations of our study include the limited number of training programs and resident physicians enrolled. Also, the mentoring period was short (total duration of mentorship involved 4 months). We did not also demonstrate the validation of changes in residents' perceptions and attitudes by documented actions. However, an expressed willingness to perform an action is a prelude to subsequent action. As such, we are hopeful that the changes in attitudes will, at a minimum, increase the likelihood of subsequent behavior changes. Only additional longer-term studies will verify whether the favorable attitude changes are long-lasting.

A short, 4-month mentoring program can elicit favorable changes in residents' perceptions and attitudes toward medical professional organizations. This manifests in an increased willingness to make political campaign donations and concrete behavioral changes (increased membership in professional organizations such as the TAO).

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### Table. Resident Mentoring Project Survey by the Tennessee Academy of Ophthalmology, Selected Questions

<table>
<thead>
<tr>
<th>No.</th>
<th>Question</th>
<th>Response Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is your perception of medical organizations in general? (AMA, AAO, etc)</td>
<td>“Extremely unfavorable” to “extremely favorable,” 1-7</td>
</tr>
<tr>
<td>6</td>
<td>What is your perception of how welcome you feel when you want to participate in organized medicine?</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>What is your perception of how your support is welcomed when you participate in organized medicine?</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Have you ever received any communications from your state society?</td>
<td>No or yes</td>
</tr>
<tr>
<td>11</td>
<td>Has your Department Chair or Resident Coordinator spoken to you about state society membership?</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Are you aware of the specific member benefits your state society provides? If yes, please list.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>What is your perception of your state legislature?</td>
<td>“Extremely unfavorable” to “extremely favorable,” 1-7</td>
</tr>
<tr>
<td>18</td>
<td>As you understand it today, does your state legislature have any power or control over the way physicians practice medicine?</td>
<td>“Very little” to “a lot,” 1-7</td>
</tr>
<tr>
<td>24</td>
<td>How likely are you to make a campaign donation (given money) to your legislators (state or federal)?</td>
<td>“Not likely” to “have already given,” 1-7</td>
</tr>
<tr>
<td>26</td>
<td>How important is it to have routine staff meetings?</td>
<td>“Not important” to “extremely important,” 1-7</td>
</tr>
<tr>
<td>30</td>
<td>Do you feel comfortable and knowledgeable in building referral relationships?</td>
<td>“Not comfortable” to “very comfortable,” 1-7</td>
</tr>
<tr>
<td>31</td>
<td>What level of knowledge do you have in regard to the day-to-day running of a practice?</td>
<td>“Little knowledge” to “very knowledgeable,” 1-7</td>
</tr>
<tr>
<td>32</td>
<td>How important is it to you for your state society to offer practice management programs?</td>
<td>“Not important” to “extremely important,” 1-7</td>
</tr>
<tr>
<td>33</td>
<td>How important is it to you for your state society to offer coding seminars?</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>How important is it to you for your state society to offer continuing medical education programs?</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: AAO, American Academy of Ophthalmology; AMA, American Medical Association.

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![Figure. Likelihood of participants making political campaign donations as expressed in the survey (active mentorship group vs no mentorship group) \((P < .05)\).](http://archophht.jamanetwork.com/pdfaccess.ashx?url=/data/journals/ophth/9951/)
Furthermore, additional opportunities may lie with a lengthier and more intensive mentoring program.

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REFERENCES